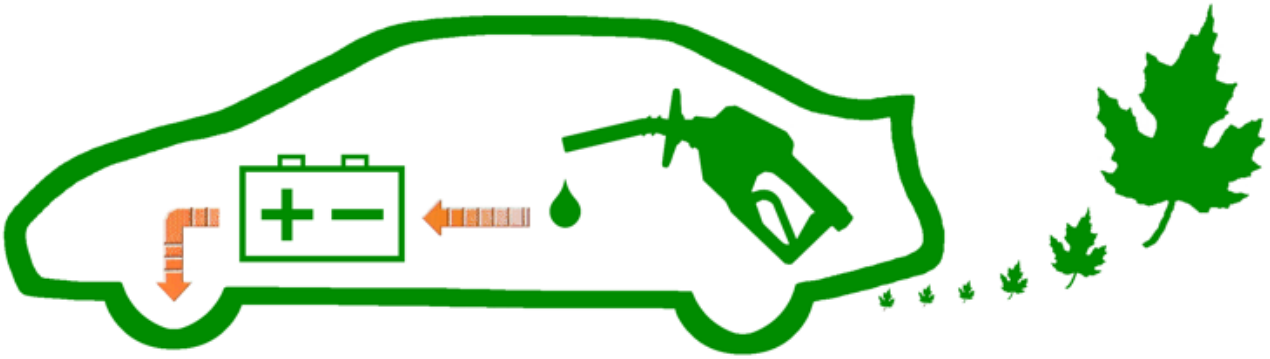
john1701a's
Personal Log Book



I purchased a Classic Prius (hybrid-electric, fuel-efficient, super-ultra-low-emission vehicle) back on 9/9/2000 and drove it in Minnesota until I replaced it on 10/23/2003 with an Iconic Prius (which was even cleaner and more efficient). Then on 5/26/2009, I upgraded to a 2010 Prius (for amazing efficiency). Following that on 2/29/2012, I got my first plug-in model (pushing MPG significantly higher). The big upgrade happened 4/01/2017, when I replaced the PHV with a Prime, trading 11 miles of EV driving for 25. This book documents those personal thoughts & experiences.

From: **8-03-2007** to **2-24-2011**

Bookmarks:

Tire Upgrade Replacement
Tire Upgrade Snow Driving

FOB Battery 1
FOB Battery 2

Oil Change: 98,000 Miles
Oil Change: 106,375 Miles

Grille-Blocking Sub-Zero
Grille-Blocking Warmer
Grille-Blocking Unblocked

Routine Service: 100,000 Miles

8-03-2007 **Pizza Delivery.** I see Prius being used for courier services all the time. That use makes plenty of sense. But those are business owned vehicles, part of a small fleet. Pizza delivery is not. Personal vehicles are used for that instead. The driver is the owner. So, seeing my first today (a White Classic model Prius) was pretty exciting... especially the second time. Spotting twice while running errands this evening was quite vindicating. The versatility of the design is being well proven, one owner at a time. Patience is really paying off. Thankfully, I realized it would take an entire decade for the mainstream mindset to change. Now 7 years into it, evidence of that indeed happening is all around us. Yippee! Hooray! Sweeeeet!

8-04-2007 **Bridge Collapse.** Two days ago, the big highway bridge disaster occurred here. A major corridor through Minneapolis collapsed into the Mississippi river. It's absolutely awful. My take on it is anger. The governor recently vetoed a bill to increase the gas tax... for you guessed it, highway funding. I was upset then, knowing that upkeep is essential. You can only delay routine maintenance for so long, and when that happens the need for replacement comes sooner. Needless to say, we really need to reevaluate our priorities. This is proof that the consequences of cheap gas now can require us to pay dearly later.

8-04-2007 **63 F Degrees.** The much needed rain for us here finally came today. So rather than the usual temperatures in the upper 80's and lower 90's, it is only 63. Conditions are no longer optimal for efficiency. Looks like I'm going to have to settle for just above 50 MPG until the warmer weather returns. Oh darn.

8-04-2007 **New Technology.** On rare occasions, I do actually stubble upon a constructive comment. That happened today, with this: "I believe that I read somewhere that the Prius will not be using any "new" technology, they are just going to add a larger battery or additional battery and a plug to the Prius." My response... That's correct. The current hardware *ALREADY* supports the ability. Revised software and additional battery capacity with a plug is all that's different. Of course, this discussion is rather silly since range is only a matter of battery size. You add more, you go further. The penalty is cost. A "full" hybrid can make due with a smaller battery-pack, which reduces cost significantly. A "series" hybrid is at the mercy of size, not being able to scale back much for a lower cost.

8-05-2007 **Some Advice.** Having observed the same pattern on several different forums, I felt very comfortable contributing this advice to a newbie today (who was already feeling the pain which comes from being objective, rather than just agreeing with the masses)... My first 100 posts were without an avatar. All was civil. Then immediately after revealing my identify, the attacks began. Being straight forward and clearly stating you are in favor of just "full" hybrids but from any automaker has been practically pointless. Some choose to see only Prius no matter what you post. It's actually rather amusing, especially when they drop bait and get frustrated when you don't bite. In other words, watch out for those trolling for trolls.

8-06-2007 **Defecting.** This is the worst fear of certain antagonists. They realize that the appeal of super-efficient cars will draw appeal away from the already struggling guzzler SUV market. Obsession with using trucks for non-utility use is quickly wrecking the potential for large SUV hybrids. Opportunity is fading and their desperation is beginning to show. The shift from truck to car was inevitable anyway. That cycle is human nature. Craving the opposite, going from large & bulky to smooth & sleek, was quite predictable. How long the shift would take was the only unknown. The sudden spike in gas prices has revealed that it will happen relatively quick. Concern for emissions (both types: carbon & smog) is helping to accelerate that. Rather than just buying a more efficient version of the same vehicle they already had, people are choosing change instead. They are defecting. Loyal shifts are the ultimate scorn. What will they do? The dinosaurs are dying off.

8-06-2007 **Electric Whir.** There are still a few die-hard enthusiasts that claim there is nothing like the feel of a manual transmission on an open road. While that literally might be true, it is definitely not the only sensation that will generate enthusiasm I love to briskly accelerate with the Prius. That instant response from the electric motor is smooth and delivers an ever-so-subtle whirring sound. The moment before the engine joins in is definitely unique. It breaks from the silence of stealth. And the following sound & feel from two devices each contribute to a behavioral effect that simply can not be described well with words. You have to experience it. Some owners don't. They think being generous with the pedal will result in a efficiency penalty. Clearly, I haven't observed that. Averaging over 51 MPG for the past 3 months is on the high side of average. My desire to not have to drive slow is certainly fulfilled. Of course, that was true way back with the Classic Prius... which didn't have an electric whir like the HSD Prius does. Did you know it makes that subtle sound when braking too?

8-06-2007 **More Photos.** They speak for themselves. Now having exceeded over 300,000 miles with his Prius, we're in uncharted territory. Even the most stubborn of naysayers are at a loss when it comes to a real-world example of such magnitude. The "little car that could" is still going and going... owner: jesse 4

8-07-2007 **Arrogant.** That's the latest personal attack attempt. It feel on an unreceptive audience though... because the person making the claim is quite guilty of that very thing. Sound familiar? To draw attention away from yourself, accuse someone else of the very thing you've been doing. It doesn't always work, as in this case. He's strongly against hybrids, posted an ignore-list in his signature, and regularly insults others with words like "*idiot*". So his integrity was lacking. And knowing my credibility includes 7 years of hybrid study, over 142,000 miles of hybrid driving experience, and a large collection of publicly available data, it made me a prime target. But right away, his attempt was thwarted. It wouldn't have mattered much anyway. Being so vague leaves people wondering now. Unlike the past, they are now beginning to demand detail. Online participants are growing aware of deception techniques. Yeah!

8-07-2007 **Never Thought About It.** The well-being is hybrids is very much like other topics of great attention. I see parallels to politics all the time. Seemingly situations are often filled with unseen complexities, so conclusions are commonly draw with incorrect or misunderstood information. The most intriguing example I've come across lately that has nothing to do with either hybrids or politics is HD. High-Definition is clearly not well understood. People are get the impression that it simply is just that, seeing greater detail. The thought never occurs to them that the format will be different too. In the case of HD, the camera can pull back without sacrifice. You no longer have to accept close-ups... something you've had to live with for decades from standard television, because they only delivered low-resolution and they were physically very small. Times change, whether you like it or not. Mindsets unknowingly get stuck in the past. Did you realize HD could be fundamentally different like that? What about politics? I bet your children have a very different view of the world. Makes you wonder about hybrids, eh?

8-08-2007 **Final Slander.** The EPA numbers are about to change. Those wanting to harm Toyota by making MPG claims are scrambling at this final opportunity. The report I read today was written by a large SUV owner, who proudly displayed photos of his guzzler at the top of the webpage. The current Prius window-sticker big numbers were repeatedly used as the source of the supposed controversy, without any mention of the little numbers. You were just allowed to believe they were intend to represent real-world conditions. It was the same old focus on those misleading estimates. What I got a kick out of was how he pointed out that 48 MPG was the average owners were actually getting. That number is higher than what the EPA will supply as an average for the 2008 model Prius. But that was never mentioned, nor anything about the tests being ideal-condition measurements or how adjustments are necessary to compensate for that. It was just a final attempt to slander the automaker reputation.

8-09-2007 **Crosswalk.** Today was one of those days when crossing a major road downtown wasn't going to be easy. Traffic simply did not want to yield, despite both sides having pedestrians waiting to cross. I made a comment to the woman next to me, mentioning out how you never can tell what vehicle will finally decide to give you the right-of-way. All it takes is one vehicle to slow down for the rest to acknowledge that they are supposed to stop. And sure enough, we witnessed it. Of all things, it was a Silver Classic Prius. Sweet! Pointing out that it was a hybrid which finally took the initiative didn't appear to be needed either. She responded with a smile. Interesting, eh?

8-10-2007 **Gas Prices.** The price of oil has settled at $71.47 per barrel. Strangely, the price of gas doesn't reflect that. It's only $2.67 per gallon. Why? That really doesn't make much sense. How come there is such a disconnect? Have refineries somehow found a way to refine more at lower cost? If so, what's the tolerance? Supporting higher capacities had been a struggle. With an ever-growing demand, the supply will eventually become a problem again. I suspect a sudden spike will come. Are you prepared for that? It shouldn't be a surprise. The odds are not in our favor.

8-11-2007 **Hybrid Challenges, Lithium.** A few days ago, Toyota announced a delay with their rollout plans to adopt lithium-based rechargeable battery-packs. The hope was to make the move away from Nickel-Metal Hydride with the introduction of the next-generation models. Safety has begun to dominate attention, growing beyond the concern of expense. That's a big deal. Notebook computers have had their share of battery troubles. Overcoming that has been slow, so you can imagine just how much more of a challenge it is for cars. Those batteries will work harder, will be exposed to much greater temperature extremes, and will have to last even longer. The switch over to lithium, which will ultimately deliver larger capacity at a reduced weight, is proving to be quite a challenge for the hybrids.

8-11-2007 **Hybrid Challenges, Plug-In.** Adding a plug to the equation raises expectations even higher. The want for significantly better efficiency than what a "full" hybrid alone can deliver is what will drive sales... and the almighty hype & marketing efforts. Most consumers seem to have abandoned the misconceptions involving of battery-life. That's contributed to the growing talk about plug-in designs and aftermarket augmentation. Years ago, people didn't care. Now, they do. How long it will take to deliver that ability is becoming a hot topic. Thank goodness. The result is loss of interest in gas-guzzlers. Fulfilling primitive desires of size & power are subsiding. Our teenage society is finally starting to show signs of maturity. Overcoming this challenge will be proof of success.

8-11-2007 **Hybrid Challenges, Bragging.** This is by far the biggest problem. Some believe the challenge is to simply deliver a technically better product. Whether or not it can be produced or sold in massive quantities gets dismissed. All certain enthusiasts care about is saying their engineering is the "best" to hit the market. They don't care whether or not the technology actually makes a difference. The just want bragging rights to spite competitor supporters with. That's pathetic. Concerns about our dependence on oil are the very thing they center arguments on, but the thought of a hybrid that everyone could own repulses them. It's that niche mentality. To be special, the vehicle must remain rare. How does that actually help?

8-11-2007 **Hybrid Challenges, Price.** How come so many don't understand just how much of a challenge making hybrids affordable really is? They expect some type of magic break-thru to suddenly deliver a solution. The computer industry has been struggling with battery development since the early 90's. Advancement has always been in small steps, despite such a heavy investment in research efforts. Progress has been slow. How is that abruptly going to change? Just coming up with a robust, long-lasting battery that delivers a dense energy capacity is hard enough. Making it affordable too really is asking for miracle. Expectations are not realistic.

8-11-2007 **Hybrid Challenges, Type.** It's quite obvious that the midsize-car has been neglected by the domestic automakers. Family sedans simply aren't sexy. They are all over the place, practical above all else. Making them affordable means small profit-margins. So their mentality has been: Why bother? That's sad and quite disappointing. Nonetheless, that has been the world we had to cope with. They didn't invest much. As a result, little has come in return. Now many are suffering... and that doesn't look to change anytime soon. Toyota will continue expand HSD, which is well suited to serve the midsize-car market. Ford could do the same with their design, but plans to do so are very uncertain. GM is basically up a creek without a paddle. Their "series" hybrid is simply too expensive, especially if the vehicle is larger than a compact. Their "full" hybrid design (called Two-Mode) is too expensive also, which makes scaling it down from large truck-based vehicles a daunting challenge. So what will they do? They bulk of the need comes from low-profit, regular looking cars. A paradigm shift in the market is inevitable.

8-11-2007 **Hybrid Challenges, Generations.** There's this strange mentality that a hybrid technology must be replaced with each new model, that multi-generational existence wouldn't make any sense. Since when? The manual transmission still exists to this day. Why can't various degrees of electricity use be offered? Some offer plugs with high-capacity packs, some don't. Traditional vehicles come in different packages, so what would make that inappropriate for hybrids? It basically boils down to not understanding how the hybrid works in the first place. Spreading that knowledge is the challenge. Confusion is obvious from posts on forums. Not even being aware of what there is to learn is a big problem. Far too many simply make assumptions and jump to conclusions. So naturally, the arguments about next generation designs get blown way out of proportion... some of which comes from dismissing facts about the current generation, since they figure it will be discontinued soon anyway.

8-11-2007 **Hybrid Challenges, Market.** Ignoring the rest of the world is a frightening reality. Far too many never consider the worldwide market, placing focus entirely on their country only. In other words, those American blinders once again are leading to trouble. Being proud of one's own country is great, but at the expense of workers losing jobs isn't. No where else is there such an obsession with the SUV and massive Pickups. Here alone we make up excuses for driving such large & powerful vehicles, gross overkill for the tasks they are actually used. It's perfectly fine when you have the need. But a great majority don't; instead, it is a want. There's a big difference. To survive in the worldwide marketplace, too much emphasis on that comes with severe penalty... not having anything for consumers to buy. And now that gas is getting expensive here, fewer here still have the want. They admit to not having the need. That means offering hybrid cars... a product that can be sold around the world in large quantities. It's what an automaker must do to survive... whether they like it or not.

8-11-2007 **53 Cents.** I enjoy watching reruns of the television show CHiPs. It was a very different time back then. The cars & highways were very different. So it's rather entertaining observing history from that perspective. Popular culture's documentation presents the past in a manner prior generations simply didn't have the opportunity to experience. But this one can... and I take full advantage of it. Today, as I was indulging, I couldn't help but to be amused by seeing "53" on a gas station sign. There in big numbers, the price of a gallon of gas back in 1978 was proudly displayed. Just imagine what that would have been like. Only a few years later, the price nearly tripled briefly and never returned that low. Of course, seeing it just under $1 per gallon was what I got use to paying in my early days of driving. Those days are long gone too.

8-11-2007 **Assist Silence.** Have you noticed how the "assist" hybrid supporters are now totally silent? Heck, even reporters aren't writing about them anymore. You'd think that since GM just expanded their GreenLine offering, more would be heard. Instead, just the opposite happened. It kind of looks like they shot themselves in the foot. By placing so much attention on the upcoming "series" hybrid, allowing claims that it is superior to the "full" hybrid (with no regard to cost), the "assist" slipped into a grave surprisingly quick. That was quite unexpected. With such a minor MPG improvement and no smog-related improvement at all, I figured we were going to have to deal with lots of disingenuous supporters. Turns out, no new battle needed to be fought. Back when Honda first offered them, it was too little too late. Now, many years later, the writing was already on the tombstone. Motor & Battery technology has moved beyond just the occasional assist. Much more electricity emphasis has become the expectation.

8-11-2007 **Mature Status.** Reading the never-ending hype from GM enthusiasts supporting Volt, which is still just a concept vehicle, has grown tiring. It's the same old spin. But this particular time, clarity finally hit me. My response to their attempts to degrade Prius... I've read so many posts at this point declaring "*obsolete*" status that they have become propaganda. Pushing a conclusion prematurely is usually a sign of attempting to conceal or mislead. And sure enough, I finally uncovered the true word those claiming "*obsolete*" are hoping to avoid: "MATURE". That's a bitter pill to swallow. When a technology reaches a point where it is proven robust, affordable, and popular, the technology that came before it is actually what becomes obsolete. In other words, non-hybrids. Put another way, those who cried "*obsolete*" did it one too many times. Now I'm going to respond with "MATURE" every opportunity they provide.

8-12-2007 **Mature Attitude.** It is rather enticing to watch the smug label lose its relevance. But with the hybrid ownership base rapidly expanding and the incidents of that old attitude declining, the emergence of the new becomes obvious. In other words, the silence is vindicating. So now I find myself seeking out new examples. But sadly, there aren't many. Few consumers ever participate in an online forum to discuss their vehicle. It just works. They're happy. From their point of view, the technology is already well proven. Why spend time restating the obvious? So the scope of troublemakers really doesn't reach far, even when they focus entirely on Prius. Ignoring the success of Camry-Hybrid actually makes the situation even worse. But they won't admit it. Resistance to the very end. Never admit defeat. Keep fighting change. That's not a response which reflects a mature attitude. Perhaps, given enough time, they'll figure it out. Then again, maybe not.

8-12-2007 **Green Driving.** The traffic and stoplight activity was perfect for generating electricity today. I got onto the lonely country highway with the charge-level in the green (7 of 8 bars). It was a great opportunity to observe what driving with a plug-in hybrid would be like at fast speeds. Rather than the usual contribution from the battery-pack dropping off to numerous brief moments after acceleration, there was a steady stream of electricity. That, combined with the electricity generated on-the-fly directly from the engine, provided a glimpse of remarkably high MPG those driving augmented models have reported. It was pretty sweet seeing that coming from my Prius which is already 4 years old. Talking about a designed well suited for future needs. No wonder some find me frustrating. Toyota really did plan ahead. That's proof.

8-13-2007 **Actual sales is how success will be measured.** That comment is really upsetting certain people. It's extremely objective and unbiased. It's clear and to the point. It's concise. It leaves antagonists with nothing to spin. So, they absolutely hate it. No amount of hype can hide limited sales. Volume is obvious. Seeing several Prius on your daily commute is a great example. The numbers have grown so large there nothing is left to debate. That hybrid has become mainstream. Only purchases can achieve that status. Actual sales for Volt won't begin for years still. They have nothing to compete with. Do you think they'll learn some maturity in the meantime?

8-14-2007 **Makes No Sense.** I really enjoyed reading the following today: "*this sort of reply makes no sense if you're really concerned about the environment*". It was posted in a message directly responding to my "Actual Sales" comment. Clearly, some haven't considered the entire situation. A few token vehicles won't make a difference. You have to consider the whole picture. Looking at the entire market reveals a very different situation... especially when you consider how long that new purchase will remain on the road. A solution offering "most efficient" or "cleanest" isn't necessarily the best choice... because there is usually some type of catch. Cost is a big problem for plug-in hybrids of all types. That much battery is very expense. Access to a plug is obviously a problem for some too. But rather than mentioning that or placing emphasis on efficiency, I chose to focus entirely on smog-related emissions for my short response, here: What don't you understand? Selling 1,000,000 SULEV & PZEV hybrids will make more of an impact than just 10,000 of the plug-in type and 990,000 LEV & ULEV vehicles. I think you may be forgetting about what is purchased if the plug-in isn't chosen.

8-14-2007 **Winning The Race.** The Volt enthusiasts certainly keep pushing the propaganda. This was the quote that most captured my attention: "*GM could win this race after all.*" The context presented a sincere tone, but there simply wasn't anything to actually support it. Makes you wonder what the next few years of promotion-without-product will bring. This is how I sounded off: Which one... to claim the title of highest MPG or to sell more hybrids? There's a huge difference (as proven by Insight). Comparing a plug-in Prius to Volt should be interesting, since prices could be similar. Real-World MPG is what will likely drive consumer interest, though interior-space & reputation will obviously be influences. Advertised MPG will pretty much be worthless. Factors like heater use and driving beyond the charge range will skew efficiency so much that it cannot be realistically estimated. Comparing Volt to the non-plug Prius is absurd. Yet, some are trying anyway. With such a drastic price difference (roughly $9,000 expected) and the fact that plug access & frequency will play a big role, the appeal obviously won't be the same. In other words, this is a multi-tiered race.

8-14-2007 **Strange Sign of Hope.** When they attempt the same old deceptive tricks with a new audience, it's a strange sign of hope. The antagonists have run out of ideas. So to cause trouble, repetition is all that's available. Fortunately, posts like that are easy to detect and fewer are mislead nowadays. Today, it was clean with no regard to efficiency. Remember that same nonsense 4 years ago? Anywho, it was a lame attempt to brand PZEV traditional vehicles as an option environmentally minded people should endorse. I sounded off my lack of acceptance and disapproval with this: Better for the environment doesn't mean being selective, which that very misleading previous post attempted... but failed. PZEV rating = smog reduction. MPG improved = carbon reduction. In other words, whatever the new technology is *BOTH* criteria must be satisfied to be a valid solution.

8-14-2007 **Renting the Battery.** What a truly bizarre concept. Yet, that is what GM has suggested doing for Volt to get the "consumer cost" down to under $30,000. The devil is most definitely in the details with this situation. What happens if you miss a rent payment? Will the rent ever increase? How would you go about selling the car later? Under what circumstances would battery replacement occur? And most importantly, how would this business-model earn a profit for the automaker? It sounds fishy, like those "free" computers people used to get tricked into by making an internet service commitment.

8-15-2007 **Only Some Symptoms.** The ridiculous argument of smog *or* carbon emissions makes me crazy. Why must we chose between one *or* the other? I want *both* types of emission to be reduced. It's an easy idea to prove absurd too, just use the analogy of a doctor not treating all of your problems. You're brought into the hospital after experiencing an accident. They stop your bleeding. Then you are released. The fact that you also have broken bones isn't their concern. Losing blood was a major problem, which they fixed. Considering that enough is what they are attempting... just like the automakers. Also fixing the other problem requires more resources. They don't want to bother. You'll just have to accept the choice they made for you. Treating only some symptoms isn't a proper solution. It's totally inappropriate to pretend a need doesn't exist. Life is complicated. That means the steps you must take won't always be simple.

8-15-2007 **Understanding Need.** It's really hard sometimes to tell from some what their intent really is. So when I come across a question like this, determining whether it is just a setup or actually sincere is a challenge: "*Why so negative about the Volt?*" Hopefully, starting my response with as blunt of an answer as possible make the point painfully clear. Here's my attempt... COST! Prototypes of "series" hybrids have been around for decades. None ever progressed beyond just an engineering dream simply due to the battery cost being so prohibitive. This isn't rocket science, it's economics. The "full" hybrid (aka: parallel) advanced to a mainstream vehicle because it can get by with a much smaller battery. That dramatic reduction of price for the consumer makes a dramatic difference. At some point, an affordable threshold will be reached. But with a projected debut price of $30,000 plus battery rental, Volt won't be the solution to our emission & consumption problems for quite awhile still.

8-16-2007 **Flamers!** I discovered that internet term today. It's what online dwellers call those that intentionally stir discussion trouble. They are basically bullies, preying on those that can easily be made into victims. Being an outspoken Toyota hybrid owner passively participating on a GM forums paints a rather large target on me. Excitement comes from them getting people to respond to their flame bait. It's like the polar opposite of a troll, where they are on the side of the majority. Their posts are carefully constructed to provoke you into taking a stance that pushes you into the minority, causing you to unintentionally single yourself out. Avoiding those traps are difficult. The thrill they get from catching you is a delight to them. They crave it. But unlike trolls, they are not outsiders. So dealing with them is next to impossible, especially since some are extremely active message posters. Whatever the case, I am pleased that identification of this newer type of online troublemaker exists. That will make it harder for them to conceal their activities, knowing the behavior pattern.

8-17-2007 **GM's Surprise, part 1.** Was it? For me, no. A new review of Two-Mode was published this evening. Opinions were mixed. The technology itself was labeled as having the potential to be a "*game changer*". I most certainly agree with that. But what the outcome actually will be remains a big question. Sadly, the writer didn't have a clue how the hybrid system worked. His description of motor & engine relation were quite incorrect. Closing the article was a comment how GM doesn't plan to deploy Two-Mode into any sedans, just SUVs and trucks. Needless to say, there were lots of responses to that.

8-17-2007 **GM's Surprise, part 2.** This was the response I chose to chime in about: "*Actually, it's smart of GM to sell the SUVs with the hybrids systems first...*" Notice how the enthusiasts never look beyond the debut? Too bad, I'm going to start forcing this to finally consider the big picture. Success of Two-Mode in large guzzlers should lead to rollout in more practical-sized vehicles too. Here's my input to that comment above... Ok. That's fine, now in 2007. But what about 2010? There is growing market for a car priced in the low 20's that delivers around 50 MPG, especially when you look outside the United States. What will those consumers be offered?

8-18-2007 **GM's Surprise, part 3.** My post resulted in this rather brash comment: "*In 2010 you will have the Volt which is better than an Hybrid.*" Thankfully, what followed was an attempt to acknowledge market need. But it wasn't constructive. Maybe this will invoke that... During my 7 years of online discussions about hybrids, I've observed price as being the foremost purchase factor. The typical joe-consumer only wants to pay a small premium for a hybrid above what they already pay for a traditional vehicle. That's where the bulk of the market is. Volt does not fit into that category. It is simply too expensive in the configuration proposed. A target price of low 20's is a reality some enthusiasts just don't want to face. True, GM could scale back battery dependence, relying more on the engine and still deliver greatly improved efficiency. But that would be totally counter to the current promotion of electric-only range. It would lower the price to meet that target though. The full-hybrid, like Two-Mode, can easily get by on a small battery: the most expensive component. Being affordable is a really big deal for the vehicle to be able to sell in large quantities. Again, this is an economic issue, not engineering. So what is considered "better" won't be something those interested in the highest MPG and those interested in mass penetration will agree upon.

8-18-2007 **GM's Surprise, part 4.** The problem should be obvious. Those enthusiasts don't find the ubiquitous family car exciting. They want something big & powerful to stand out, not anything that could potentially be labeled as ordinary. And as we all know, that most certainly isn't Camry or Fusion or Malibu or Aura... See the point? The article put it best: "*What a better way to assuage SUV guilt?*" Some will use the new technology as excuse to continue using a vehicle not being used for the purpose it was designed. Driving a large SUV on your commute to work is absurd. That's what those family cars are for. Practical isn't sexy, but it sure is a whole lot more affordable. Having a requirement of price in the low 20's shouldn't be a surprise. Why do some continue to refuse acknowledging what the market actually needs?

8-19-2007 **Nothing Left.** It looks like I've milked the other forums for all their worth. There doesn't appear to be any constructive information left anymore. Too much speculation without supportive data makes being objective pretty much hopeless. Waiting to hear about real-world experiences is what remains. That's going to take awhile. In the meantime, there are some that sincerely believe a battery break-thru is near. Wouldn't that be amazing! Someday, the miracle solution will happen... where price, power, size, weight, durability, and safety criteria are all met. In the near future, that's not realistic. We can hope though. Bet don't bet the farm on it. The pursuit of the perfect chemistry has been going on for decades already. Patience. Current discussions about technologies that won't be available for awhile border on greenwashing... which I don't want any part of. There's too much troll & flame activity with that anyway.

8-19-2007 **Hydrogen Fantasy.** Ever wonder what happened? With all the anti-hybrid propaganda we had to endure years ago, you wouldn't have expected it to fade away almost entirely already. But that's exactly what's happening... before any delivery date arrived. I believe it's the outcome of ethanol & biodiesel rollout that has lead to the growing silence. If neither of them (which have both been around for quite awhile now) have shown mainstream success nationwide, how in the world would hydrogen do better? Remember, it has to be pure. Blending isn't an option like the other two. It has to be affordable and conveniently available too. We'll still get the platform itself, a "series" hybrid. But a combustion engine will be substituted for the fuel-cell and there will be much more emphasis on battery use. In other words, hydrogen is a whole lot further away than what they were convincing us to hope for. It's one of those fantasies that has the potential of becoming reality, but will take waaaaay longer than what anyone wanted.

8-19-2007 **63 F Degrees.** That was the daytime high temperature this weekend. Too cold for August is putting it mildly. What the heck happened to the Summer? It's gone already! Fortunately, the weather hasn't actually affected efficiency much. Here in Minnesota, that's still quite pleasant compared to what will come a few months from now. So I can hardly complain. But then again, there isn't much to complain about in January... other than it is basically impossible to keep the Prius clean then. Winter performance is fantastic, especially when it comes to starting the engine after sitting in the frigid climate for hours. But there's no need to rush. I can wait for that. Being able to Rollerblade outside is my priority now.

8-19-2007 **Discussion Observations.** The GM enthusiasts certainly provide entertaining reading. There are actually a small number of them who attempt to make the discussions worthwhile, but that effort immediately gets mocked & dismissed. It boils down to being too vague and not understanding how the various hybrid types & configurations actually work. Those design differences are simply too confusing to easily explain within the context of a brief message post. It's a shortcoming of the forum structure. A great example of the problem came today from the repeated claim that Two-Mode was "*less complex*" than HSD. Even the simplest of diagrams confirm that isn't true. But how would a typical forum member provide that information? The scariest example today was this: "*They should make the BAS system standard on all 4-cylinder cars if they can do it without raising the price as compared to a regular 4-cylinder.*" That doesn't make any sense at all. Upgrading the alternator and adding a battery-pack most definitely raises the price. Why is that so difficult for them to figure out? Needless to say, I don't have high hopes for a quick epiphany. Change will take quite a bit of time still.

8-20-2007 **Sales Numbers.** Well, what do you know! GM is now publishing sales numbers specifically for BAS. I wasn't expecting that. I figured they'd would be the same as Honda, where monthly statistics were never divided between traditional & hybrid. Getting only a sum of the two is worthless. So getting specific counts is great. And for July, we actually did. There were 177 Vue-Hybrid purchased and 133 Aura-Hybrid. Those are obviously extremely disappointing amounts. But that type of disclosure does earn credibility for the automaker. Hopefully, it's an indication that consumers are waiting for the better hybrids instead. They're worth it.

8-20-2007 **Ignoring Emissions.** It's the same old drivel we've heard in the past... new technologies are promoted based on a single factor, like MPG alone. That's very frustrating. Concept vehicles offering significant efficiency improvements only are not worthy of such praise. Emissions are important too. What comes out of the tailpipe and how the electricity is supplied simply isn't getting any attention. That's wrong. I want to see mention of the emission rating. Including that in the list of things we should consider would be a great improvement. That would give some credibility to the hybrid hype currently being published. Because without that, it's basically just propaganda pushing a product not actually earning the credit it was given.

8-20-2007 **Incorrect Info.** Now things are getting interesting. The creation of a new thread today on the big GM forum opened with this: "*Since I am SICK of all the incorrect info about Two-Mode...*" That was followed by a complete scan of a German pamphlet about Two-Mode with English translations included. In other words, it appeared to be a genuinely sincere effort to help clarify. A better understanding of how the hybrid actually works is helpful to all. But do you think questions that follow will be answered too? The brevity of the post message and the emphasis on the word "sick" made me wonder. So, I started out with this note of encouragement to find out... Just wait, those intentionally attempting to mislead haven't joined in yet. So far, it's only been those sincerely trying to understand but are confused by the numerous new concepts. I've been dealing with incorrect info for 7 years already. It's quite frustrating. The therapeutic response I've taken is to compose illustrated documents that explain how the hybrid system actually works. Good luck.

8-21-2007 **Greaser Story.** Not all diesel engines can be converted to use WVO (Waste Vegetable Oil). And sadly, one owner found this out the hard way. It took 57,000 miles before the big problems crept in. The engine was a mess. After a series of expensive repairs, he gave up and swapped in a different engine. What a pain. But worse is the tarnishing this could do to the reputation of bio fuels. Diesel faces many challenges to overcome still. It can though, if people are properly informed. Too bad this guy didn't study more before the conversion. Some vehicles quite simply are not capable of supporting that big of a change. Design really does vary more than people realize. Just look at how much incorrect assumptions supposed automotive experts make about hybrids.

8-21-2007 **Kia Rio-Hybrid.** 2 years ago, the chief executive of Kia announced they were accelerating the development of their hybrid program. Now it looks at though they will indeed deliver quickly. The Rio-Hybrid will come with a 1.4 liter engine, a 12 kW electric motor, a CVT transmission, and a 144-volt battery-pack. In other words, it's an "assist" hybrid similar to Civic-Hybrid. There are no plans yet for availability in the United States. But the Korean Ministry of the Environments has ordered 3,390 more. I have no idea how many they started with. More is good though, especially in developing markets. I wonder what consumers there will think. Hmm?

8-22-2007 **Unexpected Outcome.** I've haven't found it productive to spend time anymore on the daily banter & propaganda from certain enthusiasts... that are way too enthusiastic without a reason to be. My interest in GM hybrids has dwindled down to just learning more about Two-Mode. So that new thread started the other day had me captivated. There and on another thread internal clutches had been mentioned, both claiming there were 4. A new one? What the heck? I asked what it was for. The only response was an empty sarcastic one. Having including a schematic showing only 3 with my question must have struck a nerve. How ironic. Those attempting to end the spread of incorrect information had apparently done that very thing. My best guess is that they had misinterpreted information in the original promotional pamphlet without ever questioning it. They when I provided detail from a published study about hybrids, they realized there were in error... hence refusing to actually answer me and faced with a credibility issue. That was quite unexpected of an outcome.

8-22-2007 **More Propaganda.** Would you recognize it when you see it? Try this opening statement published in an article about Volt today: "*It has been leaked that General Motors plans on selling as many as 60,000 Volts in its inaugural year on the market. That's about four times the sales of Toyota's Prius when it made its U.S. debut.*" And this is the sentence it closed with: "*While the market is more acceptant of fuel-efficient vehicles now, it took the Toyota Prius nearly 5 years to reach 60,000 in annual sales.*" I find them totally misleading. They make no mention of how cheap gas was way back then and how few actually cared about either type of emission. The world was most definitely a different place from the time Volt will finally debut in late 2010... which will be an entire decade after Prius here. And how come the first year of the HSD model Prius was ignored entirely? Could it be that it was an attempt allow you to assume incorrectly by not presenting all the facts? I think so... since 60,000 of them were sold then, making its debut even more impressive since that occurred so much earlier. See why this is becoming such a source of irritation?

8-23-2007 **Weakness Discovered.** I wasn't even looking for one. But that's how they say discoveries most often happen. Anywho, I was trying to learn more about Two-Mode. The most obvious difference is the clutch which allows the engine to disengage. Next is how the 2 motors and 2 planetary-devices connect & interact. They are clearly different from that in Camry-Hybrid. But the GM enthusiasts simply don't care. Understanding detail on that level isn't helpful for conquest of forum threads. Quibbling about whether the second planetary provides "mode" or "speed" operational variation doesn't seem matter either. It's the existence of that part itself. I had no idea just pointing out that there was a second planetary-device would cause such upset. It certainly did though. In their mind, it makes them too similar. They don't like that at all.

8-23-2007 **Undermining Two-Mode.** The ability for GM to self-inflict wounds is truly amazing. Their concept "series" hybrid vehicle is getting so much attention now that their soon-available "full" hybrid is struggling. The reason should be obvious. People aren't interested in a hybrid that promises to deliver 25 MPG. Regardless of size & power of the vehicle, a number that low simply doesn't offer much appeal... especially when compared to the touted 150 MPG potential Volt could deliver. People see an "only" associated with the 25 MPG. Because at $3 per gallon for gas, the financial pain which comes from filling the tank has become quite intense. They are undermining their own success by focusing so much on specific vehicles. A super-efficient sedan offering Two-Mode would easily overcome that previously counter-productive hype, but the automaker has shown no interest nor the majority of supporters. It makes me wonder what's going to happen in 2 months with Tahoe-Hybrid. The situation closely resembles Accord-Hybrid already... an opportunity lost by not targeting the largest demographic first.

8-23-2007 **Highway To The Future.** The Toyota hybrid tour that's been traversing the country is currently making an appearance at the Minnesota State Fair. So today, I got to play. It was a heavy reinforcement for everything I've been doing. Their many interactive multimedia presentations covered the very same topics I have over the last 7 years. I felt quite vindicated... but very much alone. No one their had anywhere near the experience as me. But that really didn't matter. The point is to teach newbies about the hybrid technology and the goals it was designed to achieve. It was obvious how realistic that purpose had become, simply by looking at the 3 hybrids on display outside the exhibit. They weren't concept vehicles loaded with hype. They were all vehicles you could purchase later that same day at your local dealer. I bet that exhibit will make a strong impression on some people.

8-24-2007 **Assist verses Full, competition.** They needed a reminder of what the competition actually is... When Camry-Hybrid debuted, the hybrid system was labeled as the same as that used in Highlander-Hybrid which was described this way by Toyota itself: "*Power from the gas engine and MG2 is distributed to the drive wheels via a planetary gear-type continuously variable transmission, which eliminates specific gear ratios. Two planetary gear units are used in the system. The Power-Split unit divides the engine's drive force two ways: one to drive the wheels and the other to drive MG1 so it may function as a generator. The Motor Speed Reduction unit reduces the speed of MG2 and increases its drive torque, significantly boosting acceleration performance.*" That natural next step in the "one-mode" hybrid improvement freaks out the "two-mode" enthusiasts quite a bit. Why? All along I've been stating my favor for FULL hybrids, which puts both designs into the same category. They could leverage off of the success of the other while the uniqueness of each still being understood. Read my blogs. Over and over and over again I state the benefits of two electric motors and the ability to split power as a major advantage over the other type of hybrid. That still holds true. What's the problem?

8-24-2007 **Assist verses Full, need.** I wonder how my question will be responded to. Their hate for Toyota is blinding them from the reality that new ASSIST hybrids are popping up in markets outside the United States. The smaller foreign automakers (like those in Korea, India, and China) see that one-motor direct-integration design as a low-cost, easy-to-support solution. So, they don't see enough reason to risk an investment in FULL hybrids. That safer choice does take a step forward... but not one big enough to solve our problems. It's like bailing water out of a sinking boat too slowly. You can still lose a war despite victory from individual battles. The need is there whether they choose to acknowledge it or not. Cooperation is required to overcome the true adversary.

8-24-2007 **Assist verses Full, purpose.** Some are clearly losing focus of the point. It isn't to prove who has the most complicated hybrid system. It's to deliver a product that significantly reduces emissions & consumption in a reliable & cost-effective manner. The idea of new technology being grouped into categories is intolerable to them... but it makes sense. Having each automaker being totally different does not. Obviously one design will be better than the other in some aspects. But why is that a problem now? Automatic transmissions for traditional vehicles have always varied greatly. No one took issue with that though. It wasn't a big deal. Consumers recognized that there were differences. Why wouldn't that be true for hybrid systems too?

8-24-2007 **Assist verses Full, conspiracy.** Remember that whole "*not the same*" fiasco? I kind of feel like I'm on the other side of that now. Only with this, there is not a profound operational difference. The behaviors of the hybrids are indeed the same, much more than just fundamentals. But when dealing with certain individuals on the verge of panic, forget reasoning. All they see is conspiracy. Somehow your ultimate purpose there is to cause harm. So they use circumstantial actions as evidence. After all, it's against the laws of nature for a foreign automaker and a domestic automaker to agree... right? That determination to prove you wrong prevents them from seeing reality. In other words, this is a rather strange example of how the fear of change can manifest itself.

8-25-2007 **Assist verses Full, clarity.** The mess started with my response to the "Incorrect Info" thread. Before that, no one had been asking questions. The Power-Split diagram I provide doesn't illustrate Speed-Reduction. That's mostly because it has never been a source of confusion. The passing of power through another planetary device to alter speed is no big deal. It's easy to understand. But the Two-Mode design includes that feature within the transmission housing, so enthusiasts want to make it a big deal to stress the complexity aspect. They want to count it as a feature of Two-Mode without admitting that the newer models of HSD also have it, but in a different place. I tried to get them to divulge that, since being clear about how Two-Mode actually works was the topic of discussion. They'd rather withhold certain facts. I'm not surprised. In the past, the same type of response came from certain Honda & Ford enthusiasts too. Oh well.

8-25-2007 **Assist verses Full, effort.** Why do they refuse to acknowledge the big picture? I realize it's a normal human response to be driven by the "team mentality" mindset. But this isn't a game. The well-being of the planet is a very real problem. So even if the intent is to protect your employment to support your family, the children will later pay the penalty anyway. Why delay dealing with the solution until the need is urgent? Embrace it now. Make this into an effort where a new team can form, one based on merit rather than automaker. The measure of MPG improvement, emission reduction, and affordable pricing isn't difficult. Remember how well the computer upgrades during the height of the development period (late 90's through early 00's) worked? That was enormously successful and most of the players ended up winners. We all benefit from shared effort like that. They need to see that is what I'm striving for. The FULL hybrids are the platform which the upgrades will come from.

8-25-2007 **Declaring a Winner.** Participating in the HD-DVD verses Blu-Ray history has been interesting. It provides an intriguing parallel to that of hybrids. The winner will be declared the same way. Replacement of DVD will come naturally, when a high-definition disc format is delivered for only a small price increase above what consumers are currently paying. It should be pretty easy to see that being the same way for hybrids. People pay a certain amount for traditional vehicles. Some enthusiasts expect a paradigm shift, where consumers end up spending substantially more upfront for significant fuel savings later. I don't. That's why my hope for HD-DVD is a long-term expectation. Victory touted in current press-releases are just battles, not the war as a whole. Until either new format has a very direct impact on the standard-definition disc itself, the high-definition market remains only a niche. See the similarity to hybrids? Replacement is the key. It's that "mainstream" classification which ultimately matters. Very large sales numbers are the only way to achieve that.

8-25-2007 **Corrected EPA.** Some of those I had been struggling with deserve the label of antagonist. They outright lie. I got a reminder of that this afternoon. He claimed Toyota ignored the needs of rural residents by not providing a hybrid that delivered an efficiency improvement on the highway. Those of us that drive a Prius know that simply isn't true. Heck, my trip to Chicago two months ago was almost entirely highway driving. The average calculated to 52.4 MPG. That improvement is undeniable. Yet, they still attempt to deceive anyway. The old EPA estimates contributed to that, since it became common knowledge that they were not accurate. But what about the new EPA estimates? How will those be perceived by consumers? Will the troublemakers still somehow mislead with those too? Owner real-world efficiency will exceed those numbers, revealing that the corrections to be conservatively low. But I bet they will still find a way to protect their interests... especially since being dishonest hasn't a problem for them.

8-25-2007 **Fuel = Hybrid.** I was rather concerned. My aftermarket scantool device (ScanGuageII) for the Prius stopped working. Moments after starting to drive, it would die. I had forgotten about having unplugged it earlier. It took me awhile to figure out that every time the engine shut off, it did too. That's the way it's supposed to work for traditional vehicles. When the engine isn't running, it shouldn't either. But in a hybrid, the engine is often off while driving. So... you have to change a setting to inform it to go into sleep-mode based on different criteria. Specifying "hybrid" as the fuel type does the trick. Remembering that the setting is reset to default (non-hybrid) when the plug is removed probably won't be anywhere near of a challenge next time. But this time, I'll admit to struggling for an answer. Oh well. Live and learn...

8-25-2007 **$71.09 Per Barrel.** Yup, the price of oil still remains high. Gas (which is actually E10 here) is selling for less than expected, about $2.80 per gallon. Our state tax for it will inevitably go up, due in large part to the attention the Minneapolis bridge collapse has brought to our underfunding of road support. But the long-term, wide-scale effect remains uncertain. A quick glance survey of the nearby parking lot reveals far fewer large vehicles than in the past. Will hybrids (any technology that improves both emissions & efficiency) become the norm relatively soon, or are we in for a painfully long wait?

8-26-2007 **Nothing To Buy.** Late 2010 is when Volt is expected to finally be available for purchase. That's over 3 years from now. Yet the way certain people talk, you get the impression thousands have been sold already. They also lead you to believe nothing else even remotely appealing will be available then. What about the 2 new models of Prius with a third on the way? What about the "full" hybrids offering larger capacity battery-packs and a plug? What about the million of hybrids already on the road? Reading comments posted on the forum created exclusively for news about Volt, you see just how absolutely desperate GM supporters are to get over the embarrassment of history having repeated itself. The automakers in Japan once again caught the automakers in America totally unprepared for an abrupt intense concern for fuel efficiency. In a way, that is a very good thing. They are most definitely looking forward rather than sulking. But there still won't be anything to buy for quite awhile. And if the hype continues to grow, supply will be far less than demand. You could end up on a waiting list for a long time, just like when Prius was introduced- here. What the heck are we suppose to do in the meantime?

8-26-2007 **Hybrid Price.** Honda unexpectedly provided a reminder of its importance today. The business plan for their next hybrid states it will be a 5-passenger family-car priced under $22,000. That's the very market segment I've been nagging about. The more expensive ones are important too, but they aren't what the bulk of the worldwide population would buy. Honda recognizes that. After all, there's a wide selection of traditional vehicles priced for less. An appealing hybrid choice needs to be available. If they don't offer it, of course something else will be purchased. It makes you wonder just how smart the consumer will become. The internet is empowering. Chat about upcoming technology is growing intense. Expectations are becoming clear. Meeting them by affordable means is critical. How much do you want to pay?

8-26-2007 **Thought Provoking.** It's nice to run into the rare post that actually makes you think. Today I was lucky enough to do exactly that, with this: "*Bush is wrong. We do not need to fight the terrorists there so we don't fight them here. We need to fight them here, at home. It is easy. We will start in late 2010. We will give them a 60,000 Volt shock.*" That makes sense too! Over there is the bandage approach, just trying to heal open wounds. Over here, we can try to prevent injury in the first place... or so it would have been if everyone joined the effort back in 2000 when hybrid sales began in the United States. 10 years later is obviously a reactionary response. But it is better than continuing to ignore the problem. And hopefully, the thought provoking messages will help with the effort to reach a wider audience.

8-27-2007 **Perspective.** I've been reading a lot about Toyota supposedly resisting the idea of plug-in hybrids now, actually wanting them to fail. Since when? What's changed? The wait for *affordable* batteries and *clean* electricity is the same now as it was back before the Volt concept vehicle first debuted. If anything, there's been progress forward. Revealing details and video about their testing currently taking place is evidence of advancement. Normally they are very quiet about stuff like that, not saying anything until the production date nears. Just look at events of the past and market attitude for perspective. Obviously, the bashers aren't. Their judgment is rendered solely on recent events. Makes you wonder what will happen during the long upcoming wait, eh? The hype in the meantime is really going to get annoying. But I suppose that still could be considered better than previously, where most hybrid-related content was instead frustrating.

8-27-2007 **Gathering Location.** 6 years ago, I searched for a scenic & isolated place with a large parking lot where hybrid owners could get together and swap stories. On that hunt, I took photos of the potential candidate to later solicit opinions from others with. It was so perfect of a choice, I essentially abandoned the photos... and forgot about them until recently. That means I now have something "new" to add to the collection... featuring my Classic Prius! After all this time, I hadn't expected to publish anything else with that green guy. But here's a half-dozen more featuring it... photo album 122

8-27-2007 **HCCI, again.** 2 years ago, it was a Honda prototype. Now, it's a GM prototype. Problem is, no one seems to remember what already happened and the lack of progress since. For that matter, they don't have a good understanding of how it could be used either. Anywho, HCCI is the technology that makes a gas engine behave like a diesel. Rather than using a spark to invoke combustion, compression is used. The result is higher efficiency. Unfortunately with gas (which is cleaner), it only works at slower speeds. 55 MPH with a light load is currently the maximum. Beyond that, the system has to revert to a spark instead. So the benefit is limited to city driving. It's likely not to be compatible with the alternative pumping cycle hybrids already use (Atkinson-Miller) to improve efficiency for both city & highway driving anyway. But if it's inexpensive, the extra weight of the heavier engine doesn't have too much of a negative impact, and smog-related emissions aren't increased, it could be a decent solution for non-hybrid vehicles... though, I wonder if clatters like a diesel.

8-27-2007 **"Generation" Problem.** Now the very same criteria shifting we've seen from both Honda & Ford is coming from GM too. I was quite correct with my push to recognize the transition from Original model Prius to the Classic as a generation... because all 3 of those other automakers have labeled their less significant changes as a generation. I saw this coming years ago, but few listened. Now what? Knowing their self-promoting was going to undermine wasn't enough. I should have fought harder. But way back then, the internet was less developed and simplifying for the sake of immediate benefit outweighed consequences that could follow. Oh well. The other benefit my over 25 years of computer-programming skills for planning ahead have taught me is: You can't win them all. With limited resources available, you have to choose your battles carefully. Perhaps enough will study hybrid history and uncover the "generation" problem on their own. Anywho, an upgrade to BAS is expected next year or two.

8-28-2007 **Market Need, towing.** That's the only purpose I can imagine a 6-cylinder engine being needed for with a hybrid... and that's only when the trailer weighs more than 1,000 pounds. A decent 4-cylinder can handle towing a smaller load just fine. That will out accelerate its traditional counterpart too. The highway efficiency of Vue-Hybrid with 6-cylinder Two-Mode is expected to be very similar to Escape-Hybrid, which uses a 4-cylinder engine. Towing will basically be the only true advantage if city efficiency is similar too. Cylinder-Deactivation is the primary difference. So it begs the question whether or not Two-Mode will just will be offered with 6-cylinder engines. Asking that really upsets the GM enthusiasts. My guess is that they figured out a "full" hybrid option is needed for smaller vehicles. The 4-cylinder is obviously less expensive (much fewer parts), especially without special mounts to cushion deactivate vibration.

8-28-2007 **Market Need, plugging.** The introduction of a concept model "series" hybrid has dramatically increased the discussions about plugging in. With an augmented "full" hybrid, the plug was considered more of an option than a requirement. It wasn't that big of a deal. Think of it as a 25 MPG boost, when desired. But with the "series" type, the expectation is to use as little fuel as possible by plugging in as often as you can. Think of that as an electric-only vehicle. Such a big difference is drawing focus to those living in apartments & condos where a plug won't be available. What will they buy? If GM isn't planning to offer a regular "full" hybrid for Prius sized cars and smaller, nothing is a bit of a problem. Paying for a large capacity battery-pack you won't be able to take advantage of doesn't make any sense. Reduced capacity in a "series" would though. But all the "*40-mile range*" advertising is preventing serious attention being brought to that.

8-28-2007 **Market Need, substance.** There isn't any. For merit to be earned, something must actually be delivered to consumers. Nothing has yet. All we are getting is propaganda, where claims are made about Toyota struggling to catch up to GM. Since neither automaker has a plug-in vehicle available for purchase yet, the market status is equal. Of course, I could point out that Prius already supports an EV mode and aftermarket battery augmentation does increase MPG substantially. But I won't. That's something more appropriate for owners taking advantage of the design to gain benefit... since that too could be considered hype. For it to be credit worthy, we need substance... like purchase numbers or real-world data.

8-28-2007 **Kleenex of Hybrids.** You just can't deny the humor in certain analogies. They're clever ways of getting a point across. This recent comment from the senior VP of Honda (John Mendel) qualifies for that distinction: "*The Prius has become synonymous with hybrid; it's the Kleenex of hybrids*." When you say the word "Prius" now, people know exactly what you're talking about. None of the "who makes it" or "what does it do" questions come up anymore. It's the undisputed leader, by a rather large extreme. Allowing the practical aerodynamic hatchback shape to define a unique look and discussions of MPG to define its purpose proved to have an industry-shaking outcome... and that's without usually any mention of smog (breathing related) emissions, which would also make for a good "*Kleenex*" reference.

8-28-2007 **Holiday Gas Prices.** I wonder what the Labor Day holiday weekend will bring. Hmm? Some stations around here are now selling gas for $3.09 and other are still at $2.95 per gallon. A price jump was expected. This is the final opportunity to enjoy Summer. The warmth is already fading away and the daylight available is definitely decreasing. It's almost over. Fall is nice, but saying goodbye to the high temperatures is tough... especially when it comes to the MPG difference that makes. Oh well.

8-29-2007 **Volt Details, opposition.** I am quite impressed with the emerging effort to find & share details about the upcoming "series" hybrid from GM. Naturally, it's taking place on an entirely new small forum. The old big one is so entrenched with those protecting their favorite automaker's reputation that progress is seriously impaired. Staring over is sometimes the best approach, and this seems to be proving that. It's interesting. Those in support of Volt are delighted with the level of electricity reliance. They place heavy emphasis on the large size of the electric motor, pointing out its impressive power available. From Two-Mode support, you get the very opposite. They stress the benefit of two small motors instead, claiming an advantage over the One-Mode hybrids... but at the same time it puts them directly at odds with the others cheering for GM success. In other words, the detail avoiding we've seen from the GM "full" hybrid enthusiasts is very much what the GM "series" hybrid enthusiasts are against.

8-29-2007 **Volt Details, percentage.** As for the detail itself, let's start with "long-life" capacity. This is the electricity supply range utilized during normal operation. It is the portion available for use that puts the least amount of stress on the battery-pack, allowing for maximum year/distance operation. 80-percent will be considered "full". 30-percent will be considered "empty". In terms of the energy itself, that should be about 8 kWh of electricity for the advertised 40-mile electric-only driving range.

8-29-2007 **Volt Details, replenish.** The purpose of the engine appears to be just to maintain that minimum charge-level of 30 percent. Capacity beyond that will be replenished by the external plug after driving has completed. The battery-pack will not be recharged while on the road, as some overzealous enthusiasts had assumed. (This is redeeming news for those of us with thermal limit concerns from heat caused by recharging to quickly.) So there is indeed a dependence on plugging-in, which makes proper energy consumption estimates at least somewhat more accurate. Though, draw from the Heater and A/C remain a mystery still.

8-29-2007 **Volt Details, misconceptions.** Concern about incorrect information being spread was a rapidly growing. The claim that irritated me most was that Volt would entirely recharge the battery-pack using the engine while you drive in just 30 minutes, allowing for 40 miles entirely with electricity following that. My experience with hybrids immediately raised warnings. That didn't make sense. But the guy was so smug, it was well worth waiting until later when it was easy to prove. A dose of humility should help to prevent such erroneous posts in the future, which unfortunately lead to the spreading of misconceptions. So today, I finally responded with this... As with the "full" hybrids, recharging is limited to thermal restrictions. Faster results in more heat. Heat damages the chemicals within, causing them to age quicker (and in extreme cases explode). So for the longest possible battery life (very important for hybrids), slower is better. GM has chosen the slowest approach for their first "serial" hybrid. The gas engine will only be used to supply electricity for immediate use and maintain the minimum 30-percent threshold. It will not replenish. That's what the plug is intended for.

8-30-2007 **Volt Details, definition.** The nonsense continues. Some supporters of Volt have become quite adamant about not calling it a "hybrid". Instead, they want it to be considered an electric vehicle with a range-extender. In other words, they are changing a definition to fit their needs. That's something the anti-hybrid tried all the time. Now, it's more a matter of marketing. "Electric Vehicle" apparently sounds more impressive. Anywho, I responded to that silliness with this... SAE (Society of Automotive Engineers) has been using the "*series*" classification type for over a decade now. They clearly label Volt as a hybrid with this: "*An electric drive vehicle equipped with a heat engine.*" Changing a definition to suit needs is inappropriate. Some people aren't going to like hearing it. But that's the way it is, from a credible and well respected source. And if they don't care for the technical approach, there's the dictionary which also classifies Volt as a hybrid with this: "*Something of mixed origin or composition.*"

8-31-2007 **Volt Details, charging.** What the plug will actually look like remains a mystery. None of the automaker designs have ever been in the form of a conventional cord & socket. All have been a propriety adapter, a paddle or nozzle shape coming from an off-board transformer. That makes a huge difference in how recharging takes place. The propriety approach is favored due to liability concerns; it also eliminates the issue of storage space and weight burden. But those hoping to charge up the battery-pack at work or a friend's house would be out of luck. Enthusiasts have yet to even acknowledge this issue. When do you think we'll get some automaker detail?

8-31-2007 **Summer Stats.** Statistical data for the warm season is looking pretty good. True, my Prius actually delivered higher MPG averages the first 2 years of ownership. But at least this year is working out better than the last. May through September are the months which reflect the closest to ideal possible here in Minnesota. The calculated results so far are: 51.3, 51.4, 51.2, and 52.0 MPG. I have absolutely no idea what to expect in the coming few weeks. But I'll make the most out of it. Cold is on the way.

9-01-2007 **100,000 Sold.** That's the hybrid milestone now being celebrated for Europe. In that land of diesel, it's a really big deal. Gas is quite a bit more expensive there. So the financial appeal of diesel has out weighed the emission penalty for a long time. Overcoming that is a challenge. But those tired of the smog problems are deciding to try the newer technology. It's no longer a choice of diesel or traditional. The option of hybrid changes everything. Sweet!

9-02-2007 **Eerie Quiet.** Many of the Volt enthusiasts have grown silent since the recent release of those details. Why? Their hype was clearly based on incorrect information. So could it be that they've come to terms with that reality? Or could it be that they have finally realized just how long 3 years really is? The 6-month wait for Prius that the first owners had to endure was horrible. In fact, helping to ease their pain was a fundamental reason for establishing my website. Those hoping for Volt have a significantly longer test of patience. How in the world are they going to tolerate it? Seeing Prius everywhere in the meantime could bring about a mild psychosis. The rollout of the new Prius will make that even worse. This calm is bound to transform to sometime. I wonder what?

9-03-2007 **30 Years Later.** Pathetic is the only way to describe the situation. Remembering back 30 years ago, I recall talk of the new Dodge Omni. It was an economy car designed to be practical, affordable, and efficient. With MPG in the low 30's, that was indeed what the market needed. Fast-Forwarding to today, we are still accepting the low 30's for MPG. Why? Now vehicles are cleaner, safer, and more powerful, but no improvement whatsoever with respect to filling the tank (dollars per distance) is... *pathetic!* After those 3 decades, you'd think all of the improvement criteria would have been met. So what if the EPA estimates for Vue will increase from 23 to around 32 going from traditional to hybrid. Low 30's isn't something we should have to settle for anymore. Having to accept that in the 21st Century would have been horribly disappointing news for those back in the 1970's looking forward to advancement. This is the time which 50 MPG should have already become realistic. Clearly, some automakers don't want consumers to realize that.

9-03-2007 **Forums & Blogs.** Since the very beginning, we knew they were be monitored. Of course, back then there were two executives that actually participated in discussions and the word "blog" hadn't even been coined yet. The point was that our candid comments made their way to people with decision-making power. So when that reality was printed in an article published today about Toyota, it shouldn't have been a surprise to anyone. In fact, enthusiasts would have been disappointed if somehow their voices weren't being heard. Whatever your perspective, the concern is how literally some people take what's written. Believing everything you read verbatim isn't smart. There's always a degree of distort. Some is an innocent a matter of brevity, simplification for the sake of clarity. Some is intentionally being vague, with the hope to mislead. Can you tell the difference? Most people can't... hence the monitoring. When incorrect information gets out of hand, an official response of some sort is released... as we very recently witnessed from GM for Volt. The auto industry isn't in a "business as usual" mode anymore. Change is here. It's good to see efforts like this to embrace that.

9-04-2007 **NOx Awareness.** Discussions about diesel now include the issue of NOx levels, whether supporters like it or not. In fact, concern of smog-related emissions now sometimes include mention of NMOG levels too. So even though there is still quite a struggle for constructive contemplation of the different hybrid types, the topic of diesel is maturing. It's about dang time! I was tired of diesel enthusiasts misleading by only saying emissions are significantly improved compared to the past. That is true, but it most certainly is not the whole story. The part they don't tell you is NOx and NMOG emissions, as well as PM (Particulate Matter), are still sub-standard. That emission rating of "*Tier-2 Bin-5*" is only a minimum, not even remotely close to the clean delivered by the "*PZEV*" rating. And fortunately now, use of those identifiers have become common. Awareness has been raised.

9-04-2007 **August Sales.** Prius remained above the threshold, easily on the way to meeting the 150,000 goal. The count was 14,055 sold, which represents a 25.7 increase over the August of the previous year. Camry-Hybrid remained strong, coming in at 4,284 sold. That pretty much keeps it on par for the anticipated sales goal of 60,000 for the year. With success like that, I'm starting to grow impatient for a 4-cylinder non-car hybrid from Toyota. In Japan, they've had the Estima minivan available. But the United States market is fickle, not widely embracing minivans or small SUVs. Evidence of that should be obvious, with the availability of Two-Mode in the very large SUVs next month. Next year brings the 6-cylinder version of Two-Mode. Willingness to accept change is minor. Fortunately, slow is still acceptable. Progress is easily validated by the sales of Prius & Camry-Hybrid.

9-04-2007 **Facing Reality.** Toyota made a strategy presentation to investors yesterday. The GM supporters went nuts over that, concentrating discussions on bragging rights by claiming the "better" technology will be coming from Volt. They refuse to face reality that an automaker's primary purpose is to sustain business. That means high-volume production. The concept "series" hybrids we've seen so far is small & expensive. Decent sales will be the result, but nothing on the industry-changing scale. The "full" hybrid with a plug option is what has potential to reach a much larger consumer base. There is less reliance on a plugging in and the battery-pack size can vary with little alteration to the system itself. In other words, platform flexibility is what will lead to mass quantity... the very thing needed for survival over the next decade. Afterward, things could be entirely different. But that's not what will allow the automakers to be financially stable in the meantime.

9-05-2007 **Business Goals.** They just plain don't understand. Toyota's presentation highlighted their next planned stage for hybrids: annual sales tallying 1,000,000. That has little, if anything, to do with the overwhelming hype coming from Volt right now. GM is planning for production of 60,000 the year of general availability. It's just one vehicle though, with the hopes of becoming a platform for others later. Toyota has already delivered a platform and is working to expand its use. Those business goals are very, very different... yet the enthusiasts absolutely refuse to acknowledge that. It's much like the computer industry, where the technology has matured and now efforts are focused on making the product widely appealing and very affordable. Immediately jumping to another technology usually isn't wise. You need to build up a steady revenue source before investing even more capital. In this case, the "series" hybrid will initially be small & expensive. So what are they going to sell in the meantime, while waiting for it to advance? Selling lots and lots of "full" hybrids at a reasonable profit makes sense. It's a sound plan that doesn't require much risk, something that audience of Toyota investors were likely very pleased to hear. What is GM telling their investors?

9-05-2007 **Parallel Hybrid.** Lately, that's what most of the people arguing against the Prius in favor of the "series" hybrid have been using to identify HSD. It's a term that has never been correct, because that's actually the type of hybrid from Honda. In fact the confusion is what lead to the term "full" hybrid being coined... since Prius delivers operational behaviors of both the "parallel" and the "series" hybrid types. It was a best-of-both-worlds design advantage that obviously paid off significantly. But some people dislike using "series-parallel" label. Others don't want to admit anything in common with a competitor. Whatever the case, the use of "parallel" for HSD is totally incorrect.

9-06-2007 **20 to 25-Mile Range.** The importance of price is finally being acknowledged by the biggest of aftermarket upgrade promoters. They got the message. Yeah! Quite a few of us had complained that the $10,000 to $12,000 price for battery-pack augmentation was unrealistic for the typical Prius owner. Price needed to be less, even if that meant a reduced electric-only range. Now there's talk of a new configuration offering a range of 20 to 25 miles for $6,000 to $7,000. That's still a bit high, but far more likely to reach a decent sales goal. The cost-prohibitive nature of the original configuration didn't make a strong case from a business-sustaining perspective. This change will definitely improve the success potential.

9-06-2007 **Superior.** The meaning of that has been perverted to insane proportions over the past 24 hours. Because the specific adjective of "*superior*" was used in that investor presentation to describe the approach chosen for widespread market penetration, Toyota must now suffer... according to the big GM forum and the one dedicated to Volt. Simply achieving a technical triumph isn't enough. Their hate has grown to the level of wanting pain for the competition. That's why I left. It didn't take much to see this coming. Continued discussion participation there was pointless. They simply don't care about economics or sustaining the business. Reputation is all they focus on. It's pretty obvious too, just by reading comments to the identical topic posted on two neutral automotive forums... ones that don't have allegiance to any particular automaker and make a sincere effort to avoid bias. The difference in reader responses there is truly remarkable. The meaning of "*superior*" varies significantly depending on who you ask. Thank goodness there are some that understand the importance of delivering large volumes of hybrids at reasonable prices.

9-07-2007 **Interesting Twist.** This was quite unexpected, though eventually inevitable. That "*40-mile*" electric-only range was squashed. Volvo revealed their concept vehicle, one that could deliver a "*65-mile*" electric-only range. In other words, the building of reputation by press-release is starting to get nonsensical. Range is arbitrary. It depends upon how much you actually want to pay. The danger of thermal-runaway can be overcome by isolating cells and providing individual controllers or through the use of new battery chemistry. None of that has proven affordable though... a gotcha the enthusiasts are too distracted about to acknowledge. Technical triumph is their obsession. Whether or not joe-consumer's budget will allow them to purchase the vehicle is not their concern. Fortunately, I am concerned and will continue to point out the importance of keeping cost low.

9-07-2007 **Electric-Only Range.** It has become obvious that when referring to any distance value, proper representation would be to use quotes. For example: "*40-mile*" range. Those numbers are only rough calculations based on battery-pack capacity and approximated consumption durations & rates. In other words, they have even more potential mislead than the EPA estimates. After all, no criteria for measurement has been disclosed by GM. Fortunately, we do have Toyota working with the Japanese government to help establish testing standards. Hopefully, that will lead to the same effort here in the United States too. Otherwise, those numbers being promoted are pretty much just arbitrary and without regulation. Your mileage will most definitely vary.

9-08-2007 **Dismissing Two-Mode.** That divide I eluded to months ago is no longer visible to just an educated eye. Its existence is easy to see now. Those supporting the "series" hybrid have turned against the "full" hybrid, not wanting anything to do with them... especially the plug-in configuration. Two-Mode has been deemed a solution for large Pickups & SUVs. They completely dismiss it as something to compete with Prius or Camry-Hybrid. Remember that episode of South Park? The effort (praised in the end) was to get everyone driving hybrids. From Volt supporters, you definitely don't get that. Discussion of price and production volume get you branded as traitor. There is no place for that with technical triumph. They simply aren't interested in the numerous smaller steps required to change the majority, hence such cavalier dismissal.

9-08-2007 **All Bark, No Bite.** There isn't even a hint of temptation to respond to their bait dropping anymore. That complete lack of concern for the financial well-being of their favored automaker is quite obvious now. A beginning economics student would quickly detect the absence of support for the big picture. It's an obsession with "superior" that has blinded them from the need to sustain the business itself in the meantime. A strong financial foundation comes from offering large-volume products that are somewhat vanilla, the kind of vehicle you see very frequently everywhere you go. That isn't sexy. That isn't exciting. It is good, solid business though. With that comes stability, allowing you to invest in long-term ventures... like Volt. In other words, Volt is just a lot of talk now with no chance of mainstream status for the platform until many, many years from now. What about the time leading up to that? How will the automaker pay their bills?

9-09-2007 **7-Year Anniversary.** It was 7 years ago today that I was handed a set of keys for my first Prius. I still remember the awe, knowing very well that the automotive world was entering a new age. Within a month of that, it became apparent that I would be playing an active roll in the foundation of hybrids. Since then, quite a bit has happened. Resistance to the technology grew intense and a standard industry approach is far from being agreed upon. We are still very much in the "lots of untapped potential" stage. Reaching mainstream volume is currently the biggest challenge. Prius is still setting sales records, but the competition has shown no interest in production on that scale... let alone the substantial increase Toyota is striving for. Oh well. At least people now understand what the heck a "hybrid" is now and the fact that they don't require a plug. Lots of the original misconceptions have faded away too, like concerns about battery-life. What will your thoughts be after 7 years of Prius ownership? I'm quite certain year 8 will be very exciting. Stay tuned.

9-09-2007 **$76.70 Per Barrel.** Watching the price of oil continue to rise but gas prices remain stable doesn't inspire confidence. Pressure has to be building somewhere. When will the breaking point be hit? Paying $2.93 per gallon for gas ($3.04 per gallon for diesel) is just like when oil was quite a bit cheaper. Why? Are we back to delivery lag like in the past? Whatever the case, an average of around $3.00 nationwide has become the norm and guzzling now considered politically incorrect. The coming year should definitely be interesting.

9-09-2007 **Afterthoughts.** I posted this in response to the responses to my 7-year anniversary post... Back in 2000, based on my extensive experience with new computer technology adoption, I braced myself for a 10 year wait with hybrids. And so far, it sure looks like that expectation will maintain the schedule. I'm hoping by 2010, the choice will be obvious... where people ask themselves how there could have been any doubt that hybrids like Prius were the next large-scale natural step forward for the automotive industry. In fact, the ultimate vindication will be when someone argues with me, claiming my example of past resistance couldn't have actually happened. We'll see. In the meantime, Prius is well on its way to solidifying undisputed mainstream status.

9-09-2007 **35 MPG.** What do you say to someone when they boast about getting 35 MPG? That's the question a friend of mine asked me, one who owns a Prius. A coworker telling him about that efficiency was proud of what driving his motorcycled resulted in. When you average MPG in the upper 40's from the comfort & safety of a midsize hatchback, that comparison is rather disappointing. Technology has obviously surpassed what a very small vehicle with a very small engine can deliver. Needless to say, my friend just nodded and smiled. Polite silence was all I could suggest as well. You really don't what to offend, but then again, the most influential of discoveries stem from intense emotional events. Who knows. That may have been the ideal opportunity to introduce that person to Prius. Oh well. Perhaps the next encounter like that will be the time to respond differently.

9-09-2007 **To The Bank.** We've all heard that expression before: "*I bet you laugh all the way to the bank.*" This evening, I heard that when making a candid interjection about owning a hybrid. The conversation between salesperson & customer was about impressive new technologies. I could help but to respond. And since it was only a few minutes before the stored closed, they didn't hesitate stopping everything to ask me about the Prius. That really caught me off guard. I hadn't delivered a spontaneous mini-presentation in ages since the most understand the basics of hybrids now. Needless to say, their desire to learn more was surprisingly intense. The topic of saving gas has obviously become quite popular.

9-09-2007 **2008 Model.** Forgot to mention... the first delivery took place a few days ago! The 2007 Prius is now a chapter in history, no longer the newest available. Cool! Its model-year statistics should prove very interesting. Naysayers never believed progress this far was possible.. and the previous year was just building up of sales momentum. The likelihood of slowing isn't realistic. Many factors indicate strong demand will continue. Sweet!

9-09-2007 **Seeking Fine-Print.** I wasn't expecting to actually find any. But well aware that important facts tend to get overlooked, especially when the significance of such detail is not understood, I thought it couldn't hurt to look. After all, criticism is better when very well researched. To my surprise, the seek for fine-print was fruitful. Getting to the point... I wanted to know what the "*40-mile*" electric-only range truly entailed. In one of the very first articles written about the Chevy Volt, I discovered a note that the value was specifically for "*suburban*" driving. That's very important. Driving faster, as on the highway, requires more electricity... which shortens the range available. Continuing searches, I found another note stating the range was for "*city condition*" driving. That peaked my curiosity. More searching paid off too. On GM's own official website was this footnote about Volt, confirming those others findings: "*40-mile range based on EPA city cycle.*" In other words, certain enthusiasts have either been making incorrect assumptions or intentionally feeding a misconception. I had a hunch there was more to what they've been claiming.

9-10-2007 **The Competition.** To determine the objectivity of a potential antagonist, just ask them what the competition is. If they respond with a comment about who has the "*most advanced*" technology or "*having an edge*", making a genuine difference very likely isn't their goal. Our dependence on resources must change; oil was just 30 cents shy of the all-time record high yesterday. Our attitude toward the environment is changing; smog & carbon concerns are growing dramatically. Our economic foundation has become unstable; the typical consumer cannot afford a vehicle well above the $21,000 average. That means help is needed now. Efforts to deliver significant emission & efficiency improvement at a reasonable price in large quantities should be the goal. In other words, the competition is traditional vehicles... not bragging rights for the superiority.

9-10-2007 **Technical Triumph.** That's the term I recently tested out in the hostile forum. No one came up with a rebuttal. It seems as though that is the terminology which will help us overcome all the hype. Replacing traditional vehicles with cost-effective hybrid technology should be what we're striving for. Vaporware is often the result of soundly designed new technology failing due to reasons outside of the engineering itself. So the terminology we should be drawing attention to is "*Market Penetration*". Because even if a new technology actually is delivered, that doesn't mean it will ever advance beyond the realm of being only a niche.

9-11-2007 **Opel Flextreme.** Yesterday marked the debut of this newest concept vehicle. It's supposed to be the European counterpart to the Chevy Volt concept. I don't see that though. The electric-only range is "*34-mile*" estimated and the engine is diesel. If it were just those differences alone, that could be deemed close. But the passenger doors are swing the opposite direction, so there's no center pillar. The vehicle is a hatchback instead. The back opens with two gull-wing doors and it has a center pillar. The roof has two long, wide glass panels. All the mirrors are replaced with cameras and video displays. And there's special storage in back, with doors & ramps for two Segways. In other words, this is a rather extreme concept vehicle... one that goes well beyond just offering the "series" hybrid system. Being that radically different has always resulted in much publicity but very little for actual production. It most definitely won't be competing with any of the upcoming three Prius models or Camry-Hybrid. Price will be significantly more. Of course, there's no talk of getting it in the United States anyway.

9-11-2007 **Broke the Silence, confronted.** That same guy spreading incorrect information about Volt in the past was at it again today... which officially makes it misconception spreading now, since he was already directly confronted about being erroneous. I wonder what the response will be this time. He claimed: "*You figure you'll run the engine for 30mins every 40 miles.*" So I sounded off, despite wanting to remain silent there, by pointing out how that is not how the system will be configured along with this... Please read the details GM has published. They clearly state the purpose of the engine is only to maintain the 30-percent minimum charge-level. That's it; otherwise, the point of the plug would be lost. Rapid recharging shortens the life of the battery too.

9-11-2007 **Broke the Silence, undisputable.** Well, what do you know! His tone wasn't cocky anymore. It was polite like mine tried to be. That sure was refreshing. I guess the release of facts from GM pretty much makes certain things undisputable now. What else can we now overcome now that hybrids are no longer supposed to be scorned? Of course, no everyone will expect the spirit of cooperation. How they can dismiss the reality that traditional vehicles are still a problem is beyond me. I guess they either don't take the overall problem seriously or fail to realize just how long change can actually take.

9-11-2007 **Broke the Silence, insulting.** Someday I'll look back at these personal log entries with delight. Documenting examples of some of the nonsense I had to deal with will help, like quoting certain forum messages from troublemakers. This one fulfilled that desired role perfectly: "*GM is delivering one that is superior. Go back to your Pious.*" They interpret everything you say as spin. Even though they can't figure out why. They just assume you must somehow be defending Toyota. It's a paranoia you almost have to witness to believe. My guess is that they have never found a vehicle like Camry, Malibu, or Fusion appealing, so they never paid attention to the impact on the market they make. After all, when all your attention is focused on flashy niche vehicles that capture headlights, that does make sense.

9-11-2007 **Broke the Silence, competition.** Since sales were brought up as the ultimate determination of success, I could resist chiming in with a reminder of what the purpose really is. Competing against traditional vehicles is something they are absolutely refuse to accept. So, with a hint of spite, I posted this... The ultimate irony would be for GM to be a victim of its own success, where sales are so strong they have no choice but to reduce production of their old-school traditional vehicles to support capacity for an unexpectedly large hybrid demand. Some here mock Prius for being both different & successful. It was easy to make fun of at first. But all the attention backfired and helped push it into the top-20 sales list... qualifying it for mainstream status... making it no longer different. Just wait for the waiting-lists to expand and the impatience to become unbearable. The label of hypocrite is harder to deal with than smug. At some point, they're going to realize the actual competition is non-hybrids.

9-11-2007 **9/11 Reshaping.** How much of the domestic population paid attention to politics before the 9/11 attacks? How many took an active role influencing political change here? For that matter, how often was it that they looked beyond our own borders? That tragic day is reshaping our population for the better. Today's anniversary made that clear. I was really pleased with some of the comments those I work with made. Before those horrible events took place, their interest in our nation's well-being wasn't something they often thought about. It's much like the new vehicle market... many didn't pay attention until they get close to the time to purchase one. But that's changed. The much higher gas prices and the changing climate has raised awareness significantly. Interest is growing. And that's a very good thing, as 9/11 continues to remind us.

9-11-2007 **48 F Degrees.** Seeing that on the Multi-Display this evening pretty much ended all hope of seeing Summer temperatures anymore this year. It's over. Fall has arrived. That goodness the seasonal MPG decline is subtle, not the dramatic plummet Winter can sometimes bring. But then again, this year I have a ScanGuageII connected to the Prius. Having more data always available will allow me to experiment with grille-blocking in a fashion that could deliver quantifiable efficiency results. Others have noted improvement, but not enough to provide a solid expectation. With me on the other hand, I have already accumulated 4 years of data to compare to. Overcoming vague observation entirely realistic. So I'm growing excited about the upcoming colder weather.

9-12-2007 **It hit $80 today.** That's the highest daytime price ever. $79.91 per barrel is what it closed at, breaking the previous record by $1.70. It has become a new market. The United States appetite for oil is being dwarfed by the rapid growing demand from China and India. We most definitely have a big problem to deal with. History will no longer sight "peak" as the greatest concern anymore. Instead, it's "supply" being insufficient. Our consumption is way beyond what it should be... and we are about to pay the price... figuratively & literally. The situation is starting to get ugly. Judging by the sheer number of mini-cars being announced, it's easy to predict that the non-service guzzlers are about to become extinct. Denial isn't an option. Waiting isn't an option. Solutions for the masses are needed now.

9-12-2007 **Losing Money.** It should be no surprise that Bob Lutz (GM vice-chairman) confirmed the fact today that they still don't know how much the battery-pack for Volt will actually cost. So the fact that Volt could initially lose money shouldn't be a surprise either. When a modest profit will be possible was a big deal for the rollout of Prius. It was a factor that limited the production volume for quite awhile. Overcoming cost isn't a quick process... making the enthusiast declarations of quick high-volume availability for Volt just propaganda. I wonder when the reality of that will finally sink in? Being objective requires acceptance of facts.

9-12-2007 **Plug-In Vue-Hybrid.** Unexpectedly today, we got a new details about this forthcoming hybrid. Now they're saying 2009'ish, which isn't a surprise to anyone. What's new is hearing that the hybrid using the Two-Mode system will offer an electric-only "*10-mile*" range. With all the hype about "*40-mile*" for Volt and the negative banter that came from supporters about the plug-in Prius prototype being road-tested, how will the news of this be received? I bet it will drive the wedge between "series" and "full" hybrids even deeper. The degree of dependency on a plug is the key operational difference, but obviously price is going to be the most noticed. The reduced expense from not using as large of a battery-pack will end up influencing market penetration rather significantly. Things are definitely getting interesting now.

9-12-2007 **Progress.** There is some aspect of hope coming from our government. No, not the federal level. They've been counter-productive or status-quo for years, depending upon the particular emission or efficiency problem. It's the individual states. More and more of them are challenging the powers that be. They want to establish their own standards for greenhouse gas emissions... which translates directly to MPG improvement. Today, it was Vermont winning the challenge. Automaker claims that their 30-percent by 2016 reduction requirement wasn't possible got rejected. Knowing the success of Prius wrecks the argument that it is unrealistic. Yeah!

9-13-2007 **First To Market.** Today came a reminder that first to market doesn't necessarily mean much. It came in the form of an article describing Insight, its introduction, and the quick fade to obscurity that followed. Better packaging of Prius was the primary reason given. How do you think Volt will compete? The only model expected is a sedan with 5 less inches in back for seating than the current Prius. That's different enough. But the whole plug requirement (for touted efficiency) puts it in a unique category. Even the plug-in "full" hybrids won't stand out in consumer choice that much. So I'm curious as heck what a retrospective article like the one today will say about the debut of the "series" hybrid later.

9-13-2007 **Assist Status.** Have you noticed how references to hybrids don't include "assist" anymore? All this recent attention given to electric-only propulsion has pushed them out of the spotlight entirely. Sales aren't making much of a difference anyway. I wonder what the business strategy will be for them going forward. Hmm? Honda seems to be refocusing on specialization for IMA, rather than rolling it out as a fleet-wide option like a transmission choice. GM hasn't seen any real success with BAS, especially since there are people like me who continue to point out the very disappointing emission rating. Directing funds elsewhere makes sense. Too much diversification can be a bad thing, hence the cliché: Spreading yourself too thin. So I think this new status a step in the right direction.

9-13-2007 **Biodiesel Problems.** I haven't mentioned diesel for quite awhile. Enough in general had been said already. But now, there's a specific update to point out. The city of Vitoria-Gasteiz in Spain had been using B20 (that's a 20-percent biodiesel blend) for most of their bus fleet starting in 2005. That caused engine problems... just like we saw here in Minnesota. So they switched to B12 instead. The very same problems continued to plague them, even in new buses purchased in 2006. Now they are downgrading again, to just B5. I wonder what the outcome will be. Hmm? Biodiesel is inherently problematic due to the fatty substance from its vegetable source, having the potential to clog lines & filters. Ethanol is precisely the opposite. The fermentation process creates an alcohol, which is corrosive. In other words, blends of ethanol will clean out lines & filters.

9-14-2007 **Liquid Cooling.** That's what both the upcoming electric-only Tesla will use and it's already what Escape-Hybrid uses. Keeping the battery-pack from getting hot is a very big deal, since that's what helps ensure its long life. Toyota found a way of doing that without liquid cooling. Ford basically had no choice but to provide it (even without offering electric A/C), since the D-Cell inherently has thermal issues compared to the modular designs. As for Tesla, the engineers have flexibility since the extra cost wasn't a concern. Volt won't have that luxury though, but such heavy dependence on the battery-pack requires something. What does GM have planned?

9-15-2007 **Advertising Volt.** It's still 3 years away, how is a person suppose to interpret seeing television, magazine, and banner advertisements for it already? The enthusiasts have very opposing opinions. Some love it. Some hate it. The expectation being built up is intense. GM is setting themselves up for a either a huge success or a huge failure. There won't be any in-between with so much time before delivery. Of course the problem of price still isn't being addressed directly, only vague mention with a "wait & see" attitude. Not targeting it to share a similar base as the popular midsize sedans is a big mistake from my experience. After all, that is what Volt will be competing against. Whatever the case, advertising green solutions has clearly become good publicity.

9-16-2007 **Facing A Problem.** It's like that Opel Flextreme concept vehicle has disappeared from existence. The fact that it looks so similar to Prius must be a devastating reality. Of course, most of the Prius enthusiasts have known for many years that any other extremely aerodynamic hatchback with a second row of seats would share the resemblance. So, we aren't surprised in the least that Volt enthusiasts are now facing a problem. What do they truly support, the vehicle or the technology? I hear claims that it is the technology, but have yet to find even a single example of wanting it in an vehicle body other than Volt's. Imagine Malibu available as a "series" hybrid. That's not the slightest bit unrealistic. The very same thought was posed years ago about Camry being available as a "full" hybrid. Now it is, and the success of the platform extends well beyond the debut vehicle. They have a very real problem to deal with. What will their choice be?

9-17-2007 **Stating Goals, part 1.** Being clear about intent is vital, yet some still refuse to. Here's my last effort to raise awareness for Two-Mode supporters, providing one last opportunity for someone to finally speak out before sales begin... The subjective measure of "*better*" gets thrown around a lot around here and the effort to avoid quoting any actual number has become quite obvious. Taking discussions seriously is difficult with such lack of devotedness. Without setting a goal, it's basically pointless. Vehicles [specifically SUVs] as large & powerful as Tahoe simply won't sell in the same volume as a family sedan or hatchback anyway. So you really need to say what the expectation for the hybrid ahead of time. It's easy to prevent spin when you are extremely clear about intent beforehand.

9-18-2007 **Stating Goals, part 2.** The next morning, nothing constructive. So... Setting annual sales expectations has been the norm for ages. You judge results on whether or not that target was met. But no one here has been willing to even propose a generic platform benchmark without a timeline. Nothing. That means interpretation afterward is an invitation for spin, since no basis of measure was established beforehand. Genuine change doesn't come from be unwilling to take a chance. To reach beyond just the immediate cheering audience, you actually have to accept some risk. Study hybrid history so far. Specific annual sales goals of 60,000 Prius here and 300,000 hybrid worldwide were set and clearly achieved by the stated date. That's basic economics, not rocket science. Now the bar has been raised. The short-term (this year) 150,000 Prius sales goal here will easily be met and the long-term (within 5 years) 1,000,000 worldwide is well on its way. At least with the Volt enthusiasts, we get a vague 60,000. But from Two-Mode supporters, just mocking. So much for taking the effort to make a difference seriously.

9-19-2007 **Stating Goals, part 3.** A day later, still nothing. So... How will "success" be judged? If only 10,000 are going to be produced initially, is that a lot? People have been trying to discredit Prius for years because only 60,000 of the new model were initially being sold here annually. The older model was limited to 20,000 and fierce arguments about "niche" status ensued as a result. It wasn't until recently when the 150,000 rate was achieved that serious acceptance of "mainstream" status occurred. Again, what is the goal? History has already labeled 10,000 as too few. Are the supporters of Two-Mode going to label that same outcome for their preferred technology differently? Knowing what the expectation is *before* sales begin is the key, as we have already seen in the past.

9-19-2007 **Stating Goals, part 4.** Betting on a horse after the race has begun isn't allowed, since it's unfair. The same is true for changing rules after game play has begun. Yet, those particular Two-Mode supporters are taking that inappropriate action to a whole new level... by declaring a winner already. All the "*superior*" claims most definitely put them in the smug category, since sales haven't even started. So this attempt to get them to try to be objective is a genuine effort to get lurkers to take them seriously. Because right now, forget it. Stating goals will provide that turn around. Knowing what's realistic for an expectation is not unreasonable. But they still refuse to contribute.

9-19-2007 **Stating Goals, part 5.** With all the experience that automaker (GM) already has from Two-Mode being available on the commercial-scale for buses since 2003, you'd think this debut of the consumer version would be at least somewhat competitive. Hybrid volume from Toyota is already over 30 times greater. So it isn't absurd to expect more. Remember all the arguments about Prius sales compared to the 16.7 million new vehicle annual market here in the United States? Stating a goal that will actually make a difference should be considered sensible. It's not unreasonable for hybrids capture a majority over time, right? After all, oil is now over $82 per barrel. The need should be obvious. 10,000 is the slowest possible start I can imagine. What should are expectation be?

9-19-2007 **Stating Goals, part 6.** How about that! The push for constructive comment offered a glimmer of hope. Someone asked why the push. That's progress, though barely. But I took it. Here was the response... How many times has an automaker come to the conclusion that their was too little demand to continue or even start production? After 7 years and over 144,000 miles of driving a hybrid, how would you expect me to react? The technology obviously works. Why the must we tolerate a minimal amount? A tiny percentage of overall production is just a token gesture. We want serious commitment. Where is it? A true hybrid fan wants the majority of vehicles to use the technology... and apparently I'm the only one here because no one else is pushing for more. Status quo is unacceptable. Genuine competition is a must.

9-19-2007 **Stating Goals, part 7.** Nope, it fell apart surprisingly quick. The response was: "*Two-Mode is not going to widely used...ever.*" I guess that declaration pretty much negates the mainstream hope and invites niche status. Makes me wonder how the press is going to react. Anywho, an expectation was provided too: "*E-Flex will be more widely used, and it will be that "all out" effort you are looking for.*" So I posted... You support the "niche" category for Two-Mode. Ok. Effort will be on the "series" hybrid instead. But what does "all out" actually mean? How many after how many years? What percentage of overall production? Isn't the point to move away from 20th Century technology? If so, what will the replacement be?

9-19-2007 **Stating Goals, part 8.** So, what is the goal for E-Flex? We are once again going in circles. Focus got changed and the same question remains. What are we to expect? The intent should be stated... but still none. Waiting for the unknown inspires little hope. Will GM supporters be content traditional vehicles until... when? How will success (progress) be measured?

9-20-2007 **Stating Goals, part 9.** The Two-Mode supporters here didn't realize there was a dependency relationship with the battery supplier. That explains the impracticable responses. Deep down I was hoping we'd undercover a fundamental misunderstanding. (Perhaps discussions can finally be constructive!) Ford, Honda, and Toyota have all been tied to third-party contracts for batteries, only able to offer a fixed number of hybrids as a result. It simply didn't make any sense that GM wouldn't be in the same situation. That's why when I asked for a goal to be stated, it shouldn't have been a big deal. The automaker doesn't have the option of quickly responding to demand change. It's a harsh economic reality those that studied hybrid history would already be aware of. Now those new to the business of hybrids are too.

9-20-2007 **Stating Goals, part 10.** Another thing those new to the business of hybrids need to know is how crazy the monetary discussions will become once sales begin. The price paid and real-world MPG will overwhelm threads, making the big picture extremely difficult to see. It's quite an unfortunate step backward that will occur due to the lack awareness. That thread made it overwhelmingly clear. Way too much assuming takes place. They jump to conclusions without having a good understanding how the market responds to things. Studying hybrid history is very important. Stating goals is basically like providing a hypothesis. Making a well-educated prediction is quite different from the passionate cheerleading I've been tolerating. How long will it take those economic realities to finally be realized? Seeing that abrupt change in discussions should be a wake up call.

9-20-2007 **One Speed Transmission.** Questions about Two-Mode came up on the big Prius forum. I was quite curious how that would turn out. It ended up being much more civil that those on the big GM forum would lead you to believe. I wonder how much this contribution I provided to the thread made... Some of the discussions turn pointless debates with the greatest of ease. Sticking to the real-world data really ticks some enthusiasts off, but it is the obvious best approach. So semantic issues like "speed" and "mode" don't hold much water. MPG, PRICE, and SALES are what ultimately matter. That's genuine merit earned.

9-21-2007 **War About Oil.** That has been a underlining motive speculated about since the beginning. Iraq is loaded with a massive quantity of high-grade oil. Losing their contributions to our demanding appetite was a growing concern. Openly accusing those responsible for the war about that hasn't happened much though. Fortunately, Alan Greenspan (chairman of the Board of Governors of the Federal Reserve from 1987 to 2006) confidently did exactly that in his new book, saying: "*I am saddened that it is politically inconvenient to acknowledge what everyone knows: the Iraq war is largely about oil.*" It should be obvious that eventually something would have to be done. Supply is limited. Worldwide consumption is rising rapidly. Change is difficult. Those in the oil industry were never going to give up without a fight. We anticipated the reaction to be figurative, not literal. But we indeed end up with actual fighting rather than a stubborn transition to alternatives. What's next? Ending the war doesn't solve the problem.

9-21-2007 **The Prius Look.** Now Ford has a concept model that looks like Prius too. The practical nature of the hatchback shape is becoming apparent to others in the automotive industry. Prius used to really stick out in the crowd simply because it was the only midsize hatchback on the market. All the rest were compact wagons. But that vertical window in the rear isn't as appealing as the soft transition from roof to window that the horizontal provides. Also having a look people will desire helps quite a bit. Just look at how the minivan is shunned, despite how incredibly practical it is. And fortunately, the height inside Prius is proving enough for most cargo anyway. So now we have both Ford & GM looking into offering hatchbacks too. Cool!

9-21-2007 **$83.32 Per Barrel.** That was the all-time highest closing price for oil ever, reached yesterday. Today's end-of-week closing was $81.62. I have a feel the tread of being in the 80's has begun. There doesn't appear to be any economic recovery factor to change that. In fact, the only reason gas is relatively cheap now ($2.79 per gallon) here is that reserves were built up. Apparently those refining it saw these high prices coming. After all, the cold season alters their production. Being prepared helps. Cost is clearly become a concern for everyone involved.

9-21-2007 **Series & Hydrogen Advertising.** The big Prius forums is obviously watching the market closely, most noticeably is what we're currently now seeing in print. Here's my sound of to the latest thread... All this recent advertising of concepts, rather than actual vehicles you can buy, isn't just making the Prius supporters crazy. Someone on the big GM forum provided a very fitting summary of the situation, along with some advice: "*Another name for "transparent development process" is "engineering by press release." Just shut up and make the car already!*" It's propaganda, making vague promises that will be extremely difficult to fulfill. The "series" hybrid will carry a hefty premium compared to the "full" hybrid, similar to the aftermarket augmentation price for Prius. Do those seeing the advertisements really understand that? Do they understand just how complicated making hydrogen readily available and cost-competitive with gas really will be? And what about reliability concerns? The consumer apprehension delay caused by waiting for real-world data impairs large-scale rollout plans for years. Then there's the issue of Two-Mode. Isn't this series & hydrogen advertising wrecking their own emerging market? It seems to sour the appeal of their upcoming plug-in Vue-Hybrid even before it debuts. And it certainly puts the GM community at odds with each other. Oh well. At least it gives us quite a bit to discuss.

9-22-2007 **Ethanol Advertising.** Fortunately, it is settling down. In fact, the new EPA estimates now include sticker values specifically for E85. I wonder how many people were aware that there was an efficiency difference. And of those, I bet very few had a good idea what the real-world MPG actually was. That advertising that mostly served to repair image, rather than promote the actual use of ethanol itself. Buy a vehicle capable of using it doesn't mean you ever will. But the reputation boost results in increased sales, so they consider it well worth the money... whether or not that actually makes any difference. Hopefully it will. But in the land of ethanol (Minnesota), I rarely ever see anyone using the E85 pumps.

9-22-2007 **Halo Effect.** That's the official term to what GM is attempting to persuade us with. If they were actually selling those vehicles, some merit would be earned... and in fact, well deserved. But with nothing but concept vehicles still years away from production, it's just the "green" effect. You are made to believe the company is making a difference. That "feel good" attitude leads you to check out their current offering. You purchase one, even though it has absolutely nothing to offer that is actually "green". Needless to say, I am indeed now turning against them. A year ago with Two-Mode offering so much potential, I was thrilled. But as time progressed, they have abandoned those plans. Instead, we get nothing but advertisements for vehicles you can't buy.

9-22-2007 **Hybrid Effect.** The label of "hybrid" also provides a good feeling for owners, even if their vehicle isn't actually green. But instead of advertising, it's just a small badge. People see that on the vehicle and assume emissions are lower. That's not always the case. The nature of the "assist" design does nothing to reduce smog-related emissions. That motor providing thrust at times of inefficiency for the engine only reduces carbon emissions. For that other type to also be reduced, separate design features are needed. But the automakers can save money by not including them. Honda did that at first. Disappointed supporters made it clear that decision was unacceptable. Thankfully, the outcome was positive. The same situation is now playing out with GM. Their "assist" vehicles all only provide an improvement to carbon. The newest are Aura-Hybrid & Malibu-Hybrid. Both only earn a LEV rating from CARB, the same as the traditional design. That's very, very disappointing... not at all what you'd expect from a hybrid. SULEV and PZEV are the truly green ratings. Don't make the clean assumption.

9-22-2007 **Growing Problem**? Is the continued incorrect use of "*parallel*" label a sincere misunderstanding of the technology or yet another example of how antagonists mislead about hybrids? On the new forum dedicated to Volt, I posted the following with the hope of the positive & constructive response... Parallel? Please correct your labeling! A parallel hybrid is the "ASSIST" type, where the motor & engine are physically integrated and operate in parallel fashion. A series-parallel hybrid is the "FULL" type, where the engine and multiple motors are not directly connected. Instead, a power-split device is used to allow for a variety of interactions.

9-23-2007 **Sports Car.** For quite some time, I've been curious about how the 21st Century sports car would be defined. With the family car now taking on aerodynamic curves that were once only found on the sports car, something else is needed. What will that look be? Talk online of traits to make it stand out will continue to be a front-seating dominant interior and extremely large wheels. That gives it a bulk type look, resembling a muscular build. Unfortunately, that makes the vehicle somewhat impractical. Cramped back seats are obviously a problem. The weight & circumference of the wheels reduce city efficiency. And large tires can make driving in snow more difficult. That's not too practical. Of course, being practical is what defines a family car. So I guess it all makes sense. Watch for those traits in some concept vehicles.

9-23-2007 **Courier Prius.** They've upgraded! I wondered when the local Prius fleet grew old what the owner would decide upon for replacement. Buying the new model Prius is a fantastic endorsement. They were obviously positive outcome from the Classic. Now with the HSD, I wonder how the driver's will respond. It's a pleasing step forward.

9-23-2007 **Prius Comedy.** It only took 59 seconds in the new Jeff Dunham special for him to mention hybrids... and of course, Prius was the one. Attention from comedians is great. They blow perceptions way out of proportion, stretching reality to silly extents. It's quite humorous. I laughed along with everyone else, despite the fact that he was poking fun at Prius. His comments about Hummer balanced out the act quite nicely. Life isn't fun if you take it too seriously. He certainly doesn't. The audience didn't either. It was very funny... and an interesting insight to our culture, since comedy topics usually reflect what our culture deems important.

9-24-2007 **Climate Change.** Wow! The topic sure is getting a lot of attention now. I wonder why the sudden change. Hmm? Whatever the case, it's good for everyone. So, why not try? Whether we have overwhelming evidence or not is beside the point. Our children will be disappointed with us later learning that we had technology available to overcome the problem but dismissed it as necessary... so we didn't bother. They'll wonder why the heck we were so resistant to change. Their generation embraces it. Those fears the old-school businesses still have simply won't make any sense in the world they will become part of. Innovation leads to opportunity. Why do the minimum all the time? After all, that certainly isn't what the children are taught in school. To get an "A" grade, you really have to try.

9-25-2007 **Spinning the Spin.** This comment today really cracked me up: "*They normally don't exhibit this type of behavior*." It was in response to a Toyota quote in response to the Volt hype. Or as I call it, propaganda. Needless to say, I had to post a comment of my own. So I did, with this... Normally, there's an actual vehicle to compete with. When production rivals current popular vehicles, then merit has been earned. Genuine change requires action. In the automotive world, that means consumer purchases. You can spin the spin all you want. Hype all you want. But when it comes down to making a difference, look in the parking lot. What you see there is what matters.

9-26-2007 **Floor Mat Recall.** We were correct! On the big Prius forum, we dismissed the odd claims that Prius suddenly surged with acceleration resulting in the two highly publicized crashes. It seemed way too outrageous. How come none of us had never experienced anything even remotely close to what kept getting so much attention by that website sponsored by lawyers? It seemed way to suspicious, with rather transparent motive. Our hunch was that the floor mat simply slipped forward, preventing pedal control. And sure enough, that's exactly what the investigations ended up showing. So this new recall issued through NHTSA (National Highway Traffic & Safety Administration) by Toyota doesn't surprise us at all. It's really unfortunate that any news involving Prius gets the spotlight. When will focus shift to the hybrid technology itself instead?

9-27-2007 **Spending Perspective.** The DOE (United States Department of Energy) pledged support of $20 million toward research efforts for plug-in hybrids. Put bluntly, that's pathetic! 500 times more (yes, $10 billion) is spent on the war each month. And currently, the administration is requesting $190 billion to continuing funding the fight against terror. What kind of investment is that? Where's the balance? Winning the war but not having anything to drive afterward isn't exactly what you declare as victory. And what about the $45 billion in health care spending for poor children that has been threatened with a veto? It sure puts the priority on hybrids in perspective. That $20 million is nothing but a token gesture, a minimum given with the hope of avoiding further pressure.

9-27-2007 **Two-Mode EPA Estimates.** Purchase decision is a factor heavily related to MPG. Two-Mode has been promoted all along as a more efficient solution for highway driving than one-mode hybrids; however, the EPA estimates now available don't actually reflect that for two-wheel drive. How do you think consumers will respond to finding that out? The MPG improvement is just 10 percent, from 20 to 22. Compared to the Camry-Hybrid 18 percent, from 31 to 38, you really have to question what the heck they were considering for competition. The four-wheel drive improvement is much more impression with 30 percent, from 14 to 20. But that wasn't the way the technology had been touted. The number of powered wheels was never mentioned.

9-28-2007 **$81.66 Per Barrel.** Remember when it was only $40? That seems like ancient history now. I wonder what next year will bring. Worry about $60 was intense. Cuts in business where made to compensate. Can they continue to reduce overhead at $80 too? And what about the consumer? Goods & Services are more expensive in addition to paying for gas itself at some point. Change is inevitable, a matter of survival. The good old days of generous profit are gone... unless you are in the oil business.

9-30-2007 **Northern Minnesota Trip, MPG.** The Prius was very happy with me. We got the opportunity to escape for a few days. Road Trip! The 699 miles of almost entirely highway driving still impressed, despite colder Fall temperatures. The calculated average (weighted, since the first 134 miles on the tank were before leaving) came to 49.5 MPG. That's well above the new "revised" estimate from the EPA of 45 MPG highway. Heck, even the 48 MPG city isn't that high. Needless to say, I was delighted with the results. The trip itself was great too, lots of impressive sights to see along Lake Superior.

9-30-2007 **Northern Minnesota Trip, hypocrites.** Sometimes, you just have to call it like you see it. I ended both evenings of my 3-day excursion up north with time online. That's a good way to wind down. If you didn't guess yet, my choice of discussion group to silently observe was the big GM forum. Their propaganda war sure is wrecking their credibility. Watching them do that is rather intriguing. I wonder how far it will go. Hmm? Anyway, they praise GM for the promise of a small number of Two-Mode vehicles and scorn Toyota for the number of HSD vehicles... even though Toyota's is significantly larger. My hunch that they'd attempt a double-standard has been confirmed. The way they misrepresent Prius, everything from size, to price, to actual efficiency is becoming an obvious problem. And the way they simply dismiss Camry-Hybrid is obvious denial. It's taking smug to a whole new level.

9-30-2007 **Northern Minnesota Trip, paranoid.** Their postings have become quite amusing. Taken as entertainment, you could really enjoy yourself. In fact, I've been told they don't take what they say seriously. That little smiley-face at the end of a post is supposed to render all of what they say into sarcasm. I don't buy that for a moment... since rather than a spirit of cooperation, they want the competition to suffer. They somehow figure only a single automaker can be successful. That means progress from any other is something to fear. They see conspiracy in the most benign comments. You sometimes just have to shake your head in disbelief. Yet, there it is. I found plenty of examples while on my trip. I don't mean to mock. But they make it so darn easy. So I refrain in the forum, but note it here... because, you just never know what their paranoid mindset will come up with next.

9-30-2007 **Northern Minnesota Trip, emissions.** That topic simply isn't getting proper attention. From the Two-Mode hybrids being introduced in November to the oldest still on the road, carbon is pretty much the only mention ever. I did quite a few searches during my late night vacation surfing, only one recent hit addressed the smog type. And it was from Europe. Here, absolutely nothing. To make matters worse, that just happened to be when President Bush addressed the United Nations on the topic of global warming. His new proposal was even more disappointing that his original "*self regulate*" nonsense when he refused to adopt the Kyoto Protocol. This time, he stated a goal for 2050. That's absurd. We need results far sooner. Needless to say, emphasis on the SULEV and PZEV ratings is obviously still required. The purpose of hybrids is assumed to be efficiency alone... which would be an incomplete solution. Too bad so few realize that there's more.

9-30-2007 **Northern Minnesota Trip, sightings.** For some odd reason, there are way more Prius up there than what we have around here (South-Central Minnesota). I was absolutely shocked by seeing them every couple hundred feet in the popular locations. There was no way of knowing how many were actually local to the area, but it was quite a thrill nonetheless. Sightings were plentiful. Out on the open highway there were quite a few too. In fact, the Camry-Hybrid count was rather impressive as well. I suppose with that area having a population that's more spread out, which means more driving, having a hybrid makes even more sense.

9-30-2007 **Northern Minnesota Trip, teeny-tiny.** You don't realize just how small a car can be until you see a Smart up close. With a trip taking you just 30 miles from the Canadian border (a country where they are available for purchase), chances are better that you'll actually get to. And lucky for me, I did. The interior may be tall, but the entire vehicle is way shorter than you ever expect. I makes Prius look absolutely enormous in comparison. Talking about a weight reduction. There's nothing to it... basically you only get two seats. The rest of the car is missing! No wonder efficiency is so good with just a traditional engine.

9-30-2007 **Northern Minnesota Trip, elevation.** That was exciting! There's a 600-foot climb in that part of the state I visited. It had been 7 years since my previous visit, when my Classic Prius was just 1 month old. So this time was the first for my HSD Prius and a long overdue experience for a owner who lives in farm & lake country, which is quite flat. I watched the battery-pack charge-level climb into the green and fill all 8 bars. The spin-up of the engine by the smaller motor to consume the unneeded electricity was fascinating. I didn't realize it would sound like that. My only witness in the past to that was brief and while stopped. This was quite different. Shifting to "B" for engine-braking was too. That Prius was happy. MPG was great, despite the climb up initially. I can't wait for the next opportunity to do that.

9-30-2007 **85,000 Mile - Oil Change.** This time, I was on a driving vacation when the extended 7,500-mile change interval arrived. But I knew that was going to happen. I also knew that it's smarter to avoid interfering with a perfectly running system during a critical time. So I did. After all, I was quite curious what the oil would reveal with those additional miles anyway. And of course, there's been anecdotal evidence that aging oil gets thinner when not contaminated or burned. Since Prius is so easy on oil, could I actually proved what I've casually observed in the past? Turns out, I can't... too many variables... though MPG from the trip was outstanding and the condition of the oil afterward was indeed thin and surprisingly translucent, despite the 7,884 miles on it. Whatever the case, I was pleased with the decision to wait to do the change afterward instead.

10-01-2007 **Tax Credit Expired.** It's gone now. The phase-out process is complete. You don't get anything back from the federal government when purchasing a Toyota or Lexus hybrid anymore. Both the sales & time limits have been exceeded. Now what are the antagonists going to claim? Their spin is annoying, but they rarely fail to present a view contrary to progress. This time though, it's going to be tough. The final phase wasn't that much money anyway. Someday they'll accept change. When is hard to tell. In this situation, I'd expect silence to be an indication of that.

10-01-2007 **Excluding Highway MPG.** This time it was Abdullah Bazzi, manager or the Dodge hybrid vehicle program, saying: "*I measure success by the end result - a successful launch of the Durango hybrid and Chrysler Aspen hybrid next year, each delivering around a 40 percent improvement in city mileage and 25 percent improvement in combined highway and city mileage.*" Notice how he, just like the others associated with Two-Mode, doesn't mention highway MPG anymore. A year ago, they were demeaning the competition by making claims of how their technology would offer an improvement. Turns out, that didn't end up being the case. So, they are just pretending that topic was never of any importance by ignoring it entirely. Interesting, eh?

10-02-2007 **2008 Sighting.** I spotted my first today. It was that great new blue color, still on the delivery truck. So... does that count? It physically wasn't "on the road" yet. Whatever the case, that officially puts the spotlight on year number 5 now for the HSD Prius. We can close the chapter in history that marked the 2007. The next should be interesting. My hunch is the dual existence will begin with the 2009, introducing a smaller model while also still offering the current one... until the following year. Then after that, the third (and largest) will arrive. Seeing a line offered should be quite exciting. In the meantime, enjoy this history in the making... back when only one Prius size was available.

10-03-2007 **They Still Don't Get It.** Yesterday was yet again another attack on my credibility rather than actually considering what I said. They just dismiss my statement: For a hybrid to successful, it has to sell in quantities like the traditional vehicles. Certain enthusiasts are so obsessed with the "*leadership*" title that they absolutely refuse to acknowledge the difference between engineering accomplishment and accounting accomplishment. Why are some so pig headed? Geez! The reality is that non-hybrids are the competition, not other hybrids. Automaker rivalry is preventing objectivity. Consumers want that choice today, not several years from now. Credit for innovation will be given based on actual merit earned. In other words, purchase counts. When I mention 100,000 annual sales (per vehicle worldwide), I get accused by the GM supporters of a "*double standard*" attempt... even though I hold Toyota to the very same criteria. Now that the reputation of hybrids are established and most of the misconceptions dispelled, why wouldn't genuine competition with traditional vehicles make sense?

10-03-2007 **The Rebuttal.** Devoting attention to personal credibility attacks, the biggest of the troublemakers missed the obvious. I was more than happy to point it out saying this... To recite what many others here have stated countless times already: Price will go down as production volume goes up. So not pushing for a large quantity quickly simply does not make any sense. ...along with a redundant reminder that I was far from alone and the importance of price. Needless to say, there was no response. My efforts to propel hybrids into the mainstream are clearly in support of what other members have voiced as a need. Sales are what counts. The nonsense about reputation are blinding certain individuals from seeing what's actually needed.

10-03-2007 **September Sales.** They were outstanding! Prius enjoyed a pleasing gain of 23.8 percent over the previous year's. This September was 12,494. That's just 6 sales short of the monthly minimum to achieve the 150,000 annual goal. But others were way over that already, so it's not a big deal anyway. The fact that the goal is proving to be realistic is though. It helps to reinforce newer hybrids, like Camry-Hybrid... which saw an 8 percent gain. Growth is always encouraging... since the wait for additional sippers (as opposed to muscles) is a long one. The current stage we are in is development and ramping up production. That means Prius & Camry-Hybrid are the emphasis here for the time being.

10-03-2007 **Government Support.** The Japanese are taking the need for hybrid battery advancement more seriously. They had a pledge of their own today, $215 million. That's quite a bit more than the $20 million from the US. I wonder how it will be spent. Hmm? Here, there's always the problem of patent ownership. Who has the right to produce a product based on research paid for by the government with the intention of it being shared? Production contracts become a legal nightmare. The PNGV program exposed that problem. Do those in Japan have potential for similar complications? And what about Japanese vehicles that are built here? Too bad engineering is so easily impaired by issues of politics & economics.

10-04-2007 **Being Constructive.** On a rare occasion, it happens. Unfortunately, a positive outcome means the death of the thread. No further discussion is the silent nod of acceptance. That was the case today. I was unexpectedly delighted. The request was: "*I would love to hear your explanation of how non-hybrids are going to be the Volt's direct competition.*" And my response... The question of whether or not a consumer wants to purchase a hybrid comes way before the choice of which one. With so many non-hybrid models available, the odds are in their favor unless emissions & efficiency are a very high priority. For the past decade, that reality was quite obvious. But now that the hybrid market is about to expand, remembering to consider the big picture is clearly becoming a problem. Put another way, new vehicle purchases this year in this country will be roughly 16,500,000 million non-hybrid and around 300,000 hybrid. That's a 55:1 ratio, something which simply cannot be dismissed if the point of hybrids is for them to become the mainstream choice.

10-06-2007 **Tahoe-Hybrid Commercial.** I saw my first on television today. Unfortunately, I only caught the very ending, so I have no idea what was said on video. But in the world of writing, it's not at all what had been expected. Throughout the time leading up to now, there was always heavy emphasis on how superior Two-Mode would be to the "full" hybrids that only had a single mode... due to the benefit it offered on the highway, from a purely engineering standpoint. But in its implemented state, that anticipated gain is absent. With so many factors at play, we'll probably never know why. Towing capacity is reduced due to limitation of the cooling system. No one expected that either. Whatever the case, attention has been diverted to city efficiency instead. Highway isn't talked about anymore. It's as if none of that hype ever happened. Interesting, eh?

10-07-2007 **Ironic.** I've attempted to point out the irony in the situation several times now. Certain individuals just don't get it. I bet the typical lurker does though. In fact, I would think they'd clearly see what's going on. It got out of hand back when that first "superior" reference was made. Taken out of the investor context, it became fuel for GM supporters to fight with Toyota supporters. Focus of the true competition, non-hybrids, was lost. Now at this point, that original objective has been totally abandoned. Efforts to label HSD as "*outdated*" are easy to find. The amusing part is those arguments are used to call the Prius owners smug. See how ironic that is? Claiming their "full" hybrid technology is better, rather than recognizing the goal to achieve mainstream production levels for competition with traditional vehicles, makes them smug.

10-07-2007 **Starter Battery.** A general article about winter preparedness for vehicles was published today. In it, there was a section about the problem with hybrids. That intrigued me! The writer clearly had no idea what he was writing about. It was a strange mix up of "*starter*" battery and "*hybrid*" battery references, including talk of an ability I have never heard of. Too bad he didn't mention the source of the battery drain during extended parking... the keyless system, which can be disabled just by pushing a button. He never mentioned that the 12-volt is nothing but a source of electricity for computer & relay either. But I bet he didn't know that. He seemed to assume that small battery was what actually started the engine. It's not. He implied that a special technician was needed for a jump too. That's not true either. You just connect the wires exactly the way you would with a traditional vehicle. Wait a few minutes for recharging to take place, then remove the wires and start. It painted a very, very misleading. I wasn't happy reading that.

10-07-2007 **He's At It Again!** There's one particular Detroit publication writer that does everything he can to undermine the success of hybrids. It's not a misunderstanding or confusion like the other article I read today, because this guy does it routinely. Those of us that follow his writing cringe just by the sight of his byline, well aware of the reputation he has for professional antagonism. It's not like enthusiasts that cause trouble. He's actually paid for it! Anyway, today's article used Insight as the source of ill intent, sighting battery-pack problems with it to lead you to believe other designs suffer the same fate. They don't. They take preventative measures to ensure deep-discharging doesn't occur. That particular model didn't. But he was so vague, I'm sure many readers won't realize how obvious of an attempt that was to mislead. Arrrgh!

10-07-2007 **Better Comparison, engine.** Unfortunately, even the sincere attempts to be objective lack information to be accurate. Hopefully, the points I contribute to clarify will be helpful to those with open minds still. Like this response... You can't make generalizations like that either. Direct comparison of Camry to Camry-Hybrid is misleading too. The hybrid system allows an automaker to downsize the engine, which reduces consumption. Toyota chose not to for that particular configuration though, but could have. The result was the hybrid gaining horsepower to make a model that was easier to market. For Prius on the other hand, Toyota did downside. Even though Prius is a little bigger than Corolla, it does indeed have a smaller engine. In other words, the equation isn't as simple as you believed.

10-08-2007 **Better Comparison, cooling.** Had a smaller engine been used for Camry-Hybrid, there would have been another benefit. Downsizing means less surface area is required for cooling, allowing for a more aerodynamic front. That type of gain is often overlooked when when discussing hybrids. For that matter, so is the fact that additional models can be offered later with different engine sizes. I have no idea how to spread knowledge like that. Too bad understanding such design aspects is so difficult. People simply weren't interested in the past. Thankfully, times are changing.

10-09-2007 **Hybrid Cars Make No Sense.** Remember that quote from a certain GM executive in early 2004, less than 3 months after the sales of the HSD Prius had begun? The article containing very negative remarks about hybrids was quite clear, stating how bad of a business choice producing hybrids would be. GM had declared their position... strongly against hybrids. Needless to say, it makes perfect sense that they don't what Volt to be called a "*series*" hybrid, despite the term having been around for decades to describe that very type of system. By using the newly coined term "*electric vehicle with range-extender*" instead, they are hoping to avoid being identified as having a complete attitude reversal. Such a drastic change in stance is hypocritical, and they know that. It's why I get labeled as a troublemaker. No matter what I say, the die-hard GM supporters are always on edge expecting me to point out that there is no guarantee until a vehicle is actually delivered. GM could easily change their stance again.

10-09-2007 **Sensible Question.** This unfortunately revealed that the casual forum poster still has no idea that there are different types of hybrid: "*Now on the highway, without regeneration, if the electrical motor were activated the batteries would be depleted with no way to recharge them. Can you explain that? I would really like to understand where the energy to crank the electrical motor comes from.*" And the following response generated no feedback, leaving me to wonder if it was understood... The ASSIST hybrid design is what you have described. It only has a single motor. Its electrical system is passive. The FULL hybrid design has virtually nothing in common with the ASSIST... hence all the confusion. It is quite the opposite, very persistent. With the FULL, electricity is being generated 100% of the time the engine is providing thrust to the wheel, since there is a second motor as part of (but not integrated directly to) the system. In other words, please study the PSD (Power Split Device). Seeing how components within are spinning all the time makes its role in electricity transfer rather obvious. The switch from consume, to recharge, to both at the same time, to another 10 to 20 times per minute is no big deal. It's just a matter of changing electric activity based on the ever changing road pitch and traffic conditions. Another way of putting it is to point out how the "depleted" state never actually happens. On the highway, the battery is continuously being topped off by that second motor as you drive... without you ever touching the brake.

10-11-2007 **Silly Question.** The timing of this question was remarkable: "*This may be a silly question: Can a non-hybrid gasoline vehicle with similar EPA ratings, "pollute" more than a Prius?*" It was followed by a comparison between Prius and Yaris. Before I could even finish typing a response pointing out emission ratings, someone already did and a troll scanning for the word "Yaris" picked up on that. Proof of the situation came so easily! Anywho, here's the message I intended to share... Silly? Most definitely not. The SULEV and PZEV emission ratings exist to answer that very question, since is MPG not a measure of smog-related emissions. Only carbon emissions have a tie to efficiency. Put another way, if you ask that same question to a different audience, you could get a very different answer. Watch out for those that focus entirely on MPG. Passionate supporters of other hybrids, alternative fuels, and economy cars have a bad reputation for dismissing concerns about smog. So naturally, they absolutely hate when you remain objective by sticking to the emission ratings saying their preferred efficiency technology is welcome as long as it meets that smog reduction criteria. It makes your purpose clear, identifies the truly clean vehicles, and reveals their disingenuous intent.

10-11-2007 **Cheap Gas.** Even though oil prices closed at $83.08 per barrel this evening, we are seeing $2.69 per gallon of gas here. Why it has been so "affordable" lately has become apparent. It is an over supply issue as some, including myself, had suspected. The reason why was unexpected. I had forgotten about the E85 pump hold up, where the EPA halted new licenses due to safety concerns. That saturated the market with an abundance of ethanol. E10 can be pumped anywhere and used in any gas vehicle. So it was. That 10 percent mix became the miracle fix for gas demand. Supply went up, price went down. But now that the ethanol pumps have recently received a UL approval, the sale of E85 will be allowed at new locations. Gas supply will shrink again. Brace yourself for the return of higher prices.

10-11-2007 **Expensive Diesel.** The current abundance of ethanol has no effect on diesel, since blending is only with gas. As a result, its price remains high at $3.13 per gallon. That is roughly what I should expect to be paying when filling my Prius tank... and probably will be by early next year. It's a good reminder of what forces influence price. We're fortunate for the moment. But reality will come crashing in. As the population grows, supply will become more and more of a problem.

10-12-2007 **Rivalry Discussions.** Having stepped back from participant to observer, it has become quite obvious that delivery of a vehicle which doesn't draw a lot of attention simply isn't of any interest. Some people thrive on hype. It's why the stubborn individuals on that big GM forum never wanted to discuss Camry-Hybrid. Being designed for typical consumer appeal, combined with the fact that it has been selling well, makes it a undeniable winner... putting them on the perceived losing side, since they actively seek out confrontation. Joining another automaker in pursuit of a technological step forward is against their core principle. They are supposed to be the competition, not dirty gas-guzzlers. The concept of an outside ally simply doesn't make any sense to them. That's sad.

10-12-2007 **Nobel Peace Prize.** The United Nation’s International Panel on Climate Change awarded Al Gore that prestigious prize today. His efforts to raise awareness about the environmental consequences of our choices have gotten important worldwide attention. Conditions on the planet are changing whether people agree about the causes or not... and it will attempt to rid itself of the problem: *Humans!* Accelerated and more extreme weather cycles will affect our way of life. What the former vice-president has done is raise our awareness of the situation. Sharing that knowledge is a big step forward. His efforts have definitely helped, hence the prize.

10-12-2007 **$83.69 Per Barrel.** This week's oil closing price is a record high. We've never seen anything so bad... and there's nothing in place to keep it from getting worse. Those days past where we were carefree and wasteful are becoming memories of a very different time. The obsession with ever larger vehicles is only for the deepest of deniers. There's an overwhelming number of studies proving they are not the safety choice they had once been touted as. And the operating expense is horrific. It's over. Yeah! Makes you wonder how the debut of the monster-size hybrid will go, eh?

10-12-2007 **Non-Hybrid Comparisons.** We're seeing that quite a bit more now. Unfortunately, rather than using the more objective class average, they compare to a specific vehicle. And in the case for some, their traditional counterpart was a terrible guzzler... among the worst in their class. So naturally the percentage of improvement for the hybrid option will be impressive. That's a simple statistical trick... an easy way to mislead. Instead, why not just look at the MPG numbers? For example, the 2008 Vue-Hybrid is being hailed for delivering a combined city/highway estimate of 28 MPG. Since when is that good? Look at all the non-hybrid advertisements hailing 30 MPG as great. How come this is greater consumption is acceptable if the vehicle has a "hybrid" label on it... especially when emission rating is rarely considered?

10-13-2007 **What About Emission Rating?** That question is finally starting to raise interest. With all the hype surrounding MPG from hybrids and concern about climate change, all the benefits are now being discussed. In other words, there are a whole lot more people getting ticked off when I ask that question. Follow that up with a "*Is the air really as clean as you'd like your children to be breathing?*" and they'll immediately surrender. They know quite well how the increase in population will just make our already bad situation even worse. Those air quality warnings issued throughout the summer will continue to become more frequent. Status quo simply isn't enough. Cleaner is necessary. And thankfully, the hybrids that don't actually deliver an improved emission rating are beginning to get acknowledged as unworthy.

10-14-2007 **Ending with a Question.** Just like the anti-hybrid troublemakers in forums, some reporters do what they can to prevent you from drawing a conclusion too. The trend is increasing. I'm seeing more articles that end with a question, making you wonder. So as sincere as what was written up to that point seemed to be, that final interjection of doubt reveals a different intent. It's similar to sarcasm. And thankfully, some of the enthusiasts have caught on. They see that despite so much real-world data, there are people who refuse to accept the facts. Remind you of anything? Study the history of the tobacco market.

10-14-2007 **Morning Surprise.** As my garage opened, the scene in the driveway across the street that came into view included a Prius! It's as close to home of a sighting that you could possibly hope for. I most definitely wasn't expecting that. Seeing other hybrids in the neighborhood is a very welcome change.

10-14-2007 **326,333 Miles.** What more can you say? When a Prius reaches distances that extreme still using the original battery-pack, you can't help but to hope his voyage exploring North America continue. Keep on driving! The newest photo he's shared with us clearly shows an odometer at that astonishing distance... owner: jesse

10-14-2007 **User-Guide Updates.** There's not much revising required anymore, just the occasional tweak for clarification. But today, I had new information about efficiency estimates and emission ratings to add. It's good that detail about those topics is needed now. Observations of online discussions clearly show struggles to understand those topics. I hope the latest update helps... User-Guide (HSD)

10-15-2007 **3,500 Pounds.** That towing capacity is what "Class II" hitches are rated for. It's a category which has been around for ages... since it is all that's needed for the typical big trailer. So this hype about GM doing best by serving the largest first is very, very misleading. Few people actually need "Class III" capacity of 5,000 pounds. And how many do you actually see using the "Class IV" towing a trailer even heavier? Their first Two-Mode system is overkill, serving an extremely small market. HSD already supports the ability to tow 3,500 pounds. But those obsessed with more being better simply don't want to accept that and GM doesn't want to offer an equivalent hybrid yet. In other words, I'm speaking of the size vehicle of Highlander-Hybrid... since it does indeed support "Class II". When will production of hybrid vehicles that can be sold in mass quantities finally become a priority for them? The consumer desiring a mid-sized, mid-priced hybrid isn't being taken seriously. The extremes draw far more attention.

10-16-2007 **40-Mile Backfire.** Discussion of the plug-in option for Two-Mode came up today. It was immediately soured by the fact that range is expected to be less than 40 miles. Originally, we got the impression it would be 10. Now the rumor is 25. Whatever the case, that is way under the distance GM has been promoting as important. So naturally, disappointment is should be expected. It's the false expectation problem. Keep telling people they "need" something that isn't actually necessary and the "want" will eventually take over... like acceleration-speed or towing-capacity. It's that "more" mentality at play. Marketing toys with your sense of desire, convincing you to not be satisfied with anything less... which means any attempt later to sell you less (something more affordable & practical) could actually backfire. It's a risk they likely shouldn't have taken.

10-16-2007 **Volt FAQ.** The very thing the Two-Mode supporters have fought intensely against is exactly what the Volt enthusiasts now want, a collection Frequently Asked Questions. Sound familiar? This is yet another example of history repeating itself. The Ford hybrid supporters wanted one. The Honda hybrid supporters didn't. What did we learn from that? It should be obvious. The sharing of information is required to advance forward. Without it, progress is impeded. Put another way, what knowledge do they hope to suppress? Remember how much resistance I faced when trying to learn details about Two-Mode? If the design is superior, why wouldn't you want to provide the reasons? A descriptive explanation sells itself. There's no hype involved when reading through operational detail... which is exactly what the Volt enthusiasts now seem to desire. They have already grown tired of the propaganda. Taking this next step is a sign of hope. I wonder they'll come up with. Hmm?

10-17-2007 **AdBlue Freezing Point, surprise.** Do a search through my personal log for "*AdBlue*". You'll find a hint of the nasty struggle I had with the diesel supporters fiercely defending the use of this product. It's substance similar to ammonia that's sprayed into diesel exhaust as a chemical after-treatment to reduce the level of NOx (smog) pollution. They were very much in favor of it, claiming that was the practical solution to clean up their preferred technology to make it competitive. Needless to say, I didn't agree. A whole year later, I still don't. But now I have new very surprising information, the kind they won't be happy about. So, I posted it this way... What is the penalty (cost, space, efficiency) of requiring a heating unit to warm AdBlue when the temperature drops below -11°C (+12°F)? The northern states see colder temperatures on a very regular basis.

10-18-2007 **AdBlue Freezing Point, outcome.** If you didn't guess already, they were absolutely furious with me for having discovered and exposed such an ugly shortcoming. What did they expect after so many hostile posts in the past? They fed my determination to research all new technologies. After all, hybrid engines could use diesel for fuel... someday, when battery improvements allow the engine to be downsized quite a bit. But for now, no way. Just barely able to achieve a "*Tier-2 Bin-5*" emission rating is awful. Where's the SULEV and PZEV diesel systems we have already been shown prototypes of? Why isn't that level of clean being delivered? They can attempt to persuade that cleaner isn't necessary, but who's going to accept that? Air quality continues to grow worse. How is adopting technology dirtier than most of the non-hybrid gas vehicles people already drive going to help? That's a step in the wrong direction.

10-18-2007 **$89.47 Per Barrel.** Closing prices for oil continue to climb. Remember $39 per barrel? I do. Back then, the popular enthusiast magazines mocked hybrid technology, stating it simply made no sense with gas being so cheap. Boy, do times ever change quickly! The situation is quite different now. Gas is already expensive and it is about to become even more so. Taking preventative measures and investing in the future is obviously a new concept for some. I sure hope certain automakers get their act together very soon. It's about to get ugly. The market will begin demanding large volume production of super-efficient vehicles.

10-18-2007 **Hybrid Reliability.** Consumer Reports just posted their latest ratings for family cars. Two of them were hybrids. Number one was Prius... of course! Camry-Hybrid came in at number four. The others were Accord, Sonata, and Fusion (respectively). That's pretty cool when a hybrid gets such favorable attention for something that has absolutely nothing to do with emissions or efficiency.

10-19-2007 **EV Limits.** Pointing out a double-standard labels me as a troublemaker. Oh well. I suppose that's life. Facts shouldn't be ignored. In this case, certain enthusiasts praise the EV limit of Volt for offering the maximum (fastest legal limit) speed while at the same time scorn the HSD system design for topping out at 62 MPH using only electricity. That sounds reasonable until you discover that those very same people continue to demean by insisting Two-Mode is superior, even though it's upper electric limit is only 32 MPH. They're contradicting themselves... and get very upset when I point out stuff just like that. What the heck! So, I guess it's true. Darned if you do. Danged if you don't.

10-20-2007 **One Year Ago.** Remember what was happening then? The diesel enthusiasts were cheering the nationwide availability of clean diesel (ULSD) and patiently awaiting the debut of those cleaner new diesel vehicles. Well, they're still waiting. It looks like an entire year delay. Turns out, meeting the minimum emission criteria is more difficult than they had thought. Also one year ago was the hope that talk of Two-Mode rollout to compete directly with Camry-Hybrid would emerge. Instead, it was just the opposite. We found out the design is too expensive for that class vehicle, leaving us with nothing to look forward to. Though, if you are interested in a smaller vehicle that's extremely efficient but very expensive, there's the "series" hybrid coming. In other words, quite a bit has happened over the last year. Makes you wonder what will happen over the next...

10-21-2007 **Fuel Economy Guide.** New for 2008, we get this publication from the EPA... http://www.fueleconomy.gov/feg/FEG2008.pdf It's surprisingly thorough. I'm impressed. We went from living in the dark ages with very misleading estimates to a genuine attempt to bring some order to the chaos. I sure hope it does. The first few pages cover the classes of vehicle, types of fuel, and type of propulsion systems, in addition to the usual detail about how the measurements are actually taken. Following that is detail about every vehicle available as 2008 models. I wonder how much of a difference having that handy of a resource available now will make. Hmm?

10-21-2007 **Plug-In Hybrid, interview.** We got to hear 11 minutes of interview with Bob Lutz today. That was interesting. It started with discussion about the design of Volt by absolutely insisting: "*The IC engine is simply an emergency generator.*" I have no idea how to respond to that. Apparently, if you drive further than 35 miles between plugging in while using A/C or the Heater, it's an emergency. Hmm? He belittled the augmented "full" hybrid by claiming they only offer: "*8 to 12 miles of range electrically*". What the heck is that suppose to mean? Range is a matter of battery-capacity choice. There's no technical limitation. He made no mention of battery price either, but there were plenty of complaints about the cost of raising efficiency standards. Sadly, that reinforces the observations that his solutions aren't going to be offered on the grand scale. Affordable and large volume aren't in the plans. And of course, talk of emissions entirely absent.

10-21-2007 **Plug-In Hybrid, option.** I absolutely love the approach of offering plug-in augmentation as an option. You produce a large volume of "full" hybrids and allow the consumer to choose whether or not to get the factory upgrade too. As an automaker, that reduces your risk. If the market for plug-in hybrids is soft initially, you aren't stuck with inventory. Too many factors could influence acceptance. In other words, the gamble is only a small part of the vehicle, not the whole thing. Price can also be lower, since it will share virtually all of the same components as the regular "full" hybrid except the battery-pack. It's a good business strategy for quickly spreading new technology to a very big number of consumers.

10-21-2007 **30 MPG Advertising.** The flood of advertisements featuring vehicles that deliver 30 MPG, highway-only of course, has come to an end. The new measurement standards effective for 2008 have dropped quite a few of them below that supposedly magic number. Seeing a real-world average of 48 MPG for Prius is put into a whole new perspective. I like that a lot. It was very irritating having to deal with all the deception which came from those grossly outdated EPA estimates. Those tests had lost accuracy well over a decade ago, not at all a reflective of driving conditions & behaviors people actually encounter anymore. Thankfully, they are now much closer. Antagonists and those still against hybrids won't like that at all. Well, too bad.

10-21-2007 **Semantics.** Whenever talk of a new vehicle technology emerges online, we get the same old antagonistic posts. Today, I responded to that with this to-the-point message... Debate semantics all you want, the typical consumer won't care anyway. The nonsense around labels makes no difference when people are looking at purchase price and operating cost.

10-22-2007 **Reporters.** It's not just me. Now I'm witnessing others sounding off against the old-school reporters. Those that have been in the industry for decades have little credibility now compared to owners of older hybrids. Traditional markets don't resemble the world emerging now. Reducing emissions & consumption weren't much of a priority in the past, back when those reporters were highly regarded. Their loyalties are well documented in their own collection of articles. We aren't seeing them change. More of the same isn't a good thing... which the discussions online are pointing out more and more. Interesting, eh?

10-23-2007 **True Colors, emerging.** The division among the GM supporters is becoming quite obvious. Some are clearly voicing their opinions against "full" hybrids in strong favor of the "series" hybrid instead. It's putting Two-Mode in an ugly place... something I saw coming, hence trying to abandon those discussions before rollout begins. Well, it turns out the conflicts have already gained quite a bit of traction. Not agreeing upon goals is the problem. The debut of that "full" hybrid design will be soured by some of GM's own fans. What happens next?

10-23-2007 **True Colors, purpose.** What a plug is suppose to deliver isn't suppose to be a topic of debate. I clearly disagree... Toyota already has a platform available to support plug-in augmentation. For around $3,000 a second battery-pack with plug can be added and the software updated to increase electric-only speed to 62 MPH. The target market for large-scale acceptance is a price in the low 20's. Toyota is working toward reaching that goal soon. Volt will work just fine, but price will be much more due to the battery requirements. Selling many to that market is the true measure of success. Right?

10-23-2007 **True Colors, choices.** There's nothing at all wrong with offering a large electric-only range. But when the promotion of it shuns anything less, then we have a problem. Why the heck can't they just offer it as an option instead? Having a choice like that is well accepted for traditional vehicles. Upgrades of sport or luxury versions has been a business practice for ages. Not also doing that for hybrids simply does not make any sense. Yet, some argue that consumers won't be interested. Do they have any understanding of how the automotive industry operates?

10-23-2007 **True Colors, real-world.** Sometimes, you have to explicitly explain purpose. Whether the antagonist accepts it or not is beside the point. Lurkers will. So, here's what I posted... The [full-hybrid battery] augmentation is a MPG boost. Stop implying a different purpose. Again, the point is to sell lots of hybrids. Bragging about "the most" (like fastest or furthest) doesn't actually make a difference. Google's mini-fleet of robust upgrades (large Li-Ion battery) boosted the real-world efficiency by 20 MPG. The much less expensive upgrade (second NiMH battery) should boost efficiency by somewhere around 6 to 8 MPG. What's the problem with an affordable plug-in Prius that delivers a solid annual real-world average of 55 MPG?

10-23-2007 **True Colors, diesel.** Delivery as promoted hasn't happened. That reality is a bitter one to accept. In a way though, it is for the better. Rather than just releasing a product that meets only the minimum criteria, waiting for something actually competitive could pay off in the long run. But then again, hybrids are a moving target. As time progresses, hybrid technology improves. The non-hybrids won't fair too well against that. Seeing a tiny diesel engine in "series" hybrid instead become more and more likely. Traditional designs, even much cleaner, won't be able to compete with that eventually. In the meantime, we unfortunately are getting a lot of dismissal toward the importance of smog-related emissions from the diesel supporters.

10-24-2007 **Avoiding Hype, actual data.** Today, the "New York Times" published a top-10 lists of websites you can go to for information about hybrids without hype. Until now, that had always meant sticking to real-world data. Facts about actual vehicles on the road allowed objective sharing. That is apparently no longer the case... since the list included a website about a concept vehicle, a design that will admittedly change by the time production finally begins. So much for the purpose of avoiding propaganda. This very well could stimulate the problem, making the already growing confusion even worse. There's a big difference between what is technically possible and what is practical for a business... something often forgotten.

10-24-2007 **Avoiding Hype, hybrid type.** No matter what those hard-core enthusiasts attempt to sway us with, the popular media simply doesn't care. We keep hearing cries from those hyping Volt that it is not a hybrid, that the proper identifier is an "*electric vehicle with range-extender*". Today's article proclaimed Volt as a hybrid. Escaping that label is a futile endeavor. When will they learn from the Prius owners that certain things are inevitable. You have to choose your battles. And that one simply isn't worth it. To the typical consumer, any vehicle with both an engine and a battery-pack is a "*hybrid*" of some type or another.

10-24-2007 **Avoiding Hype, pure EV.** This is among the worst hype lately. Rather than focus on actual efficiency, gallons consumed, arguments are fed with declarations of purity. Why must acceleration and cruising be all electric all the time with no consideration of how much that actually costs to implement? That's what the Volt craze has resulted in. It's somewhat similar to comparing a Corvette to a Camry. Sure, the Corvette scores much higher in some categories. But price shouldn't be one of them. Battery technology simply isn't there yet. And it begs the question, how much is truly needed? What should the upper limits of speed & range actually be for a hybrid?

10-24-2007 **Avoiding Hype, assuming design.** Clearly, the majority of consumers have no idea how a hybrid actually works... hence so much hype. Just ask them for details about an automatic transmission. Even the concept itself remains a mystery, despite being around for decades. So expecting much different for hybrids simply isn't realistic. Knowing that, finding out that a majority of the "series" hybrid enthusiasts are making incorrect assumptions about the design of "full" hybrids shouldn't be a surprise... to anyone except themselves. Pointing out errors currently leaves them dumbfounded. I wonder how long that will last. Hmm?

10-24-2007 **Avoiding Hype, production cost.** Sales price can vary wildly. After all, hype is the very nature of advertising. Unfortunately, far too many focus on that anyway. Look at production cost instead. The upcoming models of Prius will feature the next generation design... which focuses heavily on cost reduction. That translates to a stronger business case for production expansion with less at risk. The transition from modest profit to one similar to traditional vehicles of the same class is a really big deal. It increases choices for both dealer & consumer. This is the phase of rollout that makes the number-crunchers excited... not the popular media. So naturally, the automakers just beginning to offer hybrids are really going to feel pressure to move forward quickly. Whether or not anyone else notices will be interesting to find out.

10-24-2007 **Snowflake.** It's getting colder. Of course, for Minnesota seeing that "road may be slippery" indicator illumination doesn't mean much. 37 F degrees is still warm as far as we are concerned. For me personally, I don't even consider it cold until the temperature drops below 25... since seeing temperatures 30 degrees colder is quite routine here. Anywho, it came on today. That's like watching the trees turn color... another seasonal cycle taking place. After awhile, it will come on and stay that way for weeks. Eventually though, temperatures will warm again to make it go away. I look forward to those changes.

10-26-2007 **$91.86 Per Barrel.** Makes you wonder how much worse oil prices will get, eh? Expecting this new reality to be reflected in gas prices a few weeks from now should be what's on people's minds. Unfortunately, the timing of that coincides perfectly with the upcoming holidays... which will naturally bring about higher prices anyway. Obviously, consumers will have what's going on pointed out to them by the end of the year. That's when the Auto Show circuit kicks off. I wonder what the reception to hybrids will be then. Waiting for the competition to deliver something equivalent to Prius or Camry-Hybrid will be an interesting topic. The higher prices go, the less patience people have.

10-26-2007 **Projector-Beams.** That was interesting. I drove next to a car equipped with projector beams instead of reflective headlights this evening. Over those few miles, I clearly saw just how much the HID technology trumped what once used to be praised as the next standard. (I installed a pair on my first car, back in the early 90's.) The projector-beam used a lens & shield to create a highly focused beam. Using 55 watt bulbs, the illumination was much less than the 35 watt bulbs in my Prius. Isn't it amazing how technology improvements come about? The new, more efficient lighting system does a better job. I wonder what the cost difference is.

10-27-2007 **New Calendar.** Adding to the collection of four calendar templates that were already available, I created an entirely new one this week. This calendar should really make 2008 refreshing for those looking for a twist on the Prius photo album. Rather than like those collages from the past, this one was built with the brand new document format from Microsoft. It provides a wealth of special-effect tools that simply weren't available in the past. The result 12 pages are something I'm quite pleased to share. It was a lot of fun reminiscing through those old photos. Hope you like looking at them throughout next year... Calendar "E"

10-28-2007 **Wallpapers.** Reusing the 12 new calendar pages, I converted those printable formats to files that can be used as background images on your computer. Being able to offer such a variety of Prius stuff that features history long past is very exciting. I can't imagine what it will be like looking back at all this many years from now... wallpapers 4 & wallpapers 5

10-29-2007 **Prius Wagon.** The latest concept vehicle to get attention by the press online is a future wagon model of Prius. For the services industry, there's lots of potential. Fleet hybrids with tall cargo areas are a sensible approach for both automakers and businesses. I wonder how that will actually play out. There's always waiting involved though. But we have already seen a sedan and hatchback Prius. So later... why not a wagon too?

10-30-2007 **History Reminder.** We need to be reminded of Prius history now that Two-Mode production has begun. The Original model (1997-2000/1) was not profitable. It's an aspect of the Classic model (2000-2003) that most people often aren't aware of. That upgrade repositioned the technology to a state which could justify mass production. In other words, it was no longer a money loser... and the following HSD model upgrade obviously proved that. How long it will take GM to achieve the same vital stage is the big question. Lutz has repeatedly stated (his CAFE increase argument) that their current design is way too expensive for the general market. So all we get for now is limited volume rollout. The challenge to overcome that is the next step. How aggressively will that be pursued?

10-30-2007 **Just Kidding.** It's easy to accept that response in the Prius forums. Unfortunately in others, it's not. Rather than acknowledging how much fuel is actually being USED in the first place, those others focus entirely on what will be SAVED instead. That sure sounds like an excuse to continue guzzling. After all, it still boils down to whether or not a vehicle is driven for the purpose it was designed. Are they really towing trailers that large? Driving a monster-size vehicle to the office empty simply doesn't make any sense, especially at 22 MPG. What you consume is the proper measure. But the joking attitude toward dismissal of that is troubling... and still quite easy to find examples of.

10-30-2007 **Detroit Spin.** The ending of a seemingly positive hybrid article today was great: "*In light of all this, it seems as though hybrids are definitely still fighting an uphill battle to prove themselves as the near-term fuel-efficiency technology of choice.*" Pretending there isn't enough data available yet to draw a conclusion with is a popular antagonist technique. But it simply won't work anymore. There are too many Prius on the road now. In fact, it has already begun year 5 for the HSD model. That means the coveted 100,000-mile mark will be hit by owners on a routine basis. When will they finally accept that hybrids will have a strong presence in their future? Their resistance to change is counter-productive.

10-31-2007 **LOD.** Playing with my ScanGaugeII aftermarket add-on device that plugs into the ODB-II port to display system data normally not available to drivers, I stumbled across the option to monitor Engine Load. I was immediately fascinated. With a PSD, the engine RPM has no relation to how hard it is actually working. MPG is the clue. But like gears in a traditional vehicle, even knowing vehicle speed too isn't enough. That value is unique. Now I can see it. I wonder what it will end up teaching me. Hmm?

10-31-2007 **German Cities.** Next year will bring a ban to older diesel vehicles in central areas. An option available to allow use of them still is to install particulate filters. The cost of that is subsidized, but owners will have to pay higher road taxes. That sounded like an acceptable approach... until testing of some filters revealed that the minimum of 30 percent particulate removal wasn't being reached. Instead, scores were from 10 percent to no improvement at all. Needless to say, installations have been halted until the situation can be resolved. In other words, the long time acceptance of diesel there is waning. After decades of tolerating those smog pollutants, appeal for the European equivalent of SULEV is now growing. And fortunately, that cleaner market is exactly what the hybrid system is designed to target. Good timing, eh?

10-31-2007 **Pretty Prius.** A press release from GM today included a comment about the production model of Volt looking different from the concept. They said it would be toned down, to more closely resemble the looks of the current market. Suddenly, the look of Prius was no longer ugly. Quite a number of Volt enthusiasts started posting messages saying how they like it. That is a very, very different message from what we heard last spring... a complete reversal, in fact. No more mocking. Now they welcome it. Isn't that the definition of hypocrite? Personally, I don't care how they finally see the light. I'm just glad they are no longer focusing so much attention on look. It was a huge distraction away from the goal of improving emissions & efficiency.

11-01-2007 **Following That Success.** This quote from they latest GM hybrid advertisement has some of the Prius owners shaking our heads in disbelief: "*Three years ago, Chevrolet introduced the world's first full-size pickup with a hybrid powertrain. Following that success, three new hybrid models are scheduled for introduction in 2008 and 2009 model years.*" How do they define success? It was a complete flop as far as standard industry measurement is concerned. Sales numbers were well below the norm and the vehicle was discontinued shortly after release. They must really be setting expectations low to give it such a positive spin.

11-01-2007 **Here's Some Perspective.** Camry is the industry leader. Last month, there were 33,728 non-hybrids purchased. Corolla sales were strong too, in the top-seller list at 25,815. To reach that magic 100,000 annual level, an average of 8,333 must be sold monthly. Prius easily made it with 13,158. GM's popular Impala did too with 20,791. But then their numbers start to thin. Tahoe was obviously a candidate to be hybrid at 16,066. But how many will truly be interested in that option? The 3,511 Camry-Hybrid sales last month were less than 10 percent overall. That's puts weak sellers like Vue at 5,995 in a position of obvious struggle. Malibu is a problem too at just 5,975. Aura is even worse with only 4,425. How much advertising of the new models coming out that will also offer a hybrid option will be needed to draw enough consumers to justify production? Heck, only 10,805 of the much talked about G6 were purchased. Needless to say, wanting annual sales of 100,000 for Volt is going to require quite a bit of change. It won't come easy for an automaker so heavily focused on aspects of appeal not related to efficiency.

11-02-2007 **$95.93 Per Barrel.** Reality is beginning to come crashing down. With all vehicles suffering an image problem due to EPA estimates now being lower, there's a new factor at play. It gives the rising gas prices more potent of an impact. (Here, we are now at $3.09 per gallon.) So the attitude on the big GM forum is changing. They look at efficiency in the mid 30's as a proud achievement. Needless to say, nothing I could attempt to say there would be interpreted as constructive. Having a Lifetime MPG value of 48.4 puts me well beyond anything they could hope to achieve for the next few years. Their automaker of choice did not take the warning signs seriously. In fact, it was less than 4 years ago that GM spoke out against hybrids, declaring they don't make sense. Isn't it amazing how the higher price of oil is influencing what's deemed important?

11-03-2007 **Grille Blocking, temperature.** Living in Minnesota and having already experienced 6 Winters driving a Prius, it was hard to take comments about "*cold*" temperature concerns seriously. Other owners have a much warmer definition than I do. And having no season-related Prius problems whatsoever, I saw no reason to experiment. But upon closing of the 7th Winter, things changed. ScanGaugeII became available. Owners now had a very convenient way of monitoring the cooling system. We had a coolant temperature reading, clearly showing how little help from the radiator the hybrid system actually needed. Experiments began. But it warmed quickly. Spring thaw came too soon.

11-03-2007 **Grille Blocking, experimenting.** When daytime high temperatures dropped to 50 F degrees a few weeks ago, I got excited. By extraordinary coincidence, my prior two tanks both calculated to 46.8 MPG after driving 376 miles. That remarkably consistent data was my queue. The opportunity for comparison had come. I began with blocking the upper-grille. Just one dollars worth of 1/2-inch pipe insulation foam squeezed into the two slots was the extent of my first attempt. 10 minutes of work for each, with nothing but a knife for a tool. Now when driving, just like those first owners last season, I was observing a surprisingly stable temperature on the gauge... and a very intriguing increase in MPG.

11-03-2007 **Grille Blocking, aerodynamic.** With the exception of a single day of "Indian Summer" bringing a daytime high close to 70 F, all the others during those first 2 weeks were colder than the prior 2. Yet, the MPG was higher. I was most definitely captivated by those results. But that wasn't from the cooling benefit of a less air blasting onto the radiator. It had become evident that it was mostly from aerodynamic improvement. Blocking the upper-grille created a seal, allowing air to flow smoothly over the car. Nothing was going inside from above the bumper anymore... and the data was clearly showing an efficiency gain. I was delighted.

11-03-2007 **Grille Blocking, data gathering.** Now, I'm curious as ever what the real-world long-term data will reveal. The Multi-Display is currently showing a 52.6 MPG average after 242 miles, despite it being cooler. That's what I'd expect to see during the Summer, not Fall. How much influence is the warmth from that foam making? There must be some due to the temperature now being 10 degrees colder than that first week of blocking. Perhaps air-intake for the engine is warmer. I have no idea, nor a way to find out. All that's available is the coolant temperature shown on the ScanGaugeII, which confirms all is well. Most of the time, it reads 186 F degrees. At times, the thermostat will open when the occasional spike to 193 F occurs... just like in a traditional vehicle. I suspect that will happen less often as Winter approaches. For now, Fall data gathering continues. In about 6 weeks, temperatures below what the other states experience could arrive. Then I'll know. This 8th Winter driving a Prius will likely be unlike all those in the past. I'm very excited.

11-04-2007 **Production Plans.** The numbers from GM are now available. They are planning for 10 percent of their Tahoe & Yukon production for 2008 to be hybrids. The enthusiasts haven't voiced an opinion yet... possibly because I did ages ago. That volume is like Camry-Hybrid, not revolutionary as they had taunted. Making a difference takes time. Their expectation of overnight success is totally unrealistic. Fortunately, Ford isn't following suit. The upcoming debut of Fusion-Hybrid has been long awaited and quite void of hype. It's a family sedan. For that consumer base, there's the potential for strong sales long-term. But that type of vehicle isn't sexy. Being practical doesn't generate a whole lot of attention. Buyers won't care though. That hybrid will reduce consumption & emissions while also targeting the majority market. The nonsense from GM focusing on expensive niche vehicles is disturbing. When the heck will we finally get a "full" hybrid version of Malibu or Aura?

11-04-2007 **EPA Approval.** How is that going to happen for hybrids with a plug-in option? There is no standard criteria for their usage. What will be measured? Emissions could vary tremendously. That in itself could delay introduction. There is probably some type of liability concern as well. And what about warranty coverage? Lots of questions. No answers yet. I wonder when we'll actually hear something official. Hmm?

11-04-2007 **Hybrid Type... Again!** It won't really matter. By being so vague, they are actually undermining their own success anyway. So I just kept my response to their rhetoric short... The series-parallel design doesn't work like either the parallel or series type hybrid. So comparisons are non-constructive. Why keep feeding the hype? Augmenting a Prius boosts MPG. It's that simple. You'll pay a few thousand more for the upgrade option to get higher efficiency.

11-05-2007 **CAFE Standards.** They will eventually get raised. To what level is the question. More numbers were thrown around today by Senator Hillary Clinton... and they were big, quite different from what this current administration has ever discussed. I sure am glad this topic is getting so much attention. The stupid loophole in the previous standards allowed SUVs to be produced in large quantities without consequence. Now their numbers are included. And going forward, fleet requirements aren't modest improvements anymore. Looking to 2020 and 2030 levels is a popular thing to do now. It's about time. The rest of the world is setting new regulations. We should be too.

11-06-2007 **Grille Blocking, snowflakes.** The temperature here continues to drop. We got our first snow yesterday. My commute home has dropped from 52 F degrees to 34 (snowflake illuminated on the dash). I'm still not seeing any upper-grille efficiency benefit caused by increased warmth though. Discussions online always implied having more heat available was the reason for the higher MPG. That now appears to be just circumstantial evidence. My observations lead me to believe it is almost entirely a matter of improved aerodynamics. Genuine cold should reveal how much of what factors are really at play. Later on I'll block off some or all of the lower-grille too, since warmth is harder to retain then. Perhaps that data will indicate more. Whatever the case, this current tank is reading 51.8 MPG after 343 miles. I'm absolutely delighted by that.

11-07-2007 **$97.87 Per Barrel.** That was the highest I saw it in overnight futures here. In Japan, oil exceeded $98. What should we expect for resulting gas prices? How will that indirectly affect us, from hidden costs coming from the food & services industries? Plastics are derived from oil. So the goods we purchased will see an impact too? This isn't good. Not having a solution readily available will make matters worse. I sure hope people are preparing to face that reality.

11-07-2007 **Denial.** It's getting really bad. GM's investment in the future is great, but their heavy advertising of a product that still won't be available for almost 3 years is crazy. There's simply no way they can satisfy demand once production begins. To make matters worse, it won't be priced at a profitable level. They can't afford to lose any more money. And how the heck are they paying for the advertisements now? Remember how Prius owners got grief for years about how a hybrid needs to be available at a Corolla price? Volt is most certainly not in that category, even with lower fuel expenses.

11-07-2007 **Want.** It was quite a surprise the other day, when I actually got this constructive feedback from a Volt enthusiast: "*We just want a car that gets 40 miles electric and then 50 mpg at a price under $30,000.*" Unfortunately, that's the best I have ever been provided. What if GM offers a model that makes more sense from a cost perspective, one that offers a 20-mile electric range? Many "series" hybrid supporters have already sounded off against anything less than 40... knowing that "full" hybrids will target consumers wanting that.

11-07-2007 **Grille Blocking, disagreeing.** I did some searches today. There were only 4 references to aerodynamic benefit. All claimed there wasn't any. I disagree... with reasoning that should be difficult to dispute. My daily commute starts with 3 blocks of city, then an uphill ramp onto a 70 MPH highway. That's normally pretty rough on the efficiency... but not as much anymore (about 5 MPG better). I have seen an improvement. Temperature really doesn't play a role in that equation. The blasting air against the front of the vehicle is the dominant factor in that circumstance. I don't suspect many of the other owners testing the difference experience that particular situation. So what I've witnessed may be our missing clue. Whatever the case, I'm telling others that upper-grille blocking in the 50 F degrees to freezing temperature range provides a gain mostly from aerodynamics; a warmth difference won't emerge until it's colder out.

11-07-2007 **Grille Blocking, real-world.** I refilled the tank today. It was at the same pump. So the calculated result of 51.2 MPG after 383 miles should be pretty darn accurate. Considering the reality that the temperature was now at freezing (32 F degrees), I'm quite pleased. That's a MPG improvement which is pretty easy to see based on data collected from the previous 4 Novembers that I've driven this Prius. Naturally, I'm somewhat upset that we didn't make this discovery sooner. But then again, most people still don't even have a Multi-Display. So the benefit of a simple & affordable device that shows you ODB-II data which is normally hidden is well beyond what any of us expected. Better late than never, right?

11-07-2007 **Hybrid Types.** The lack of understanding differences between them is really becoming a concern. In years past, it was isolated to supporters causing trouble on forums. Now, it's more a matter of consumers making assumptions based on nothing but generalizations and never participating online. It's a disturbing trend emerging. The absurd advance promotion of vehicles that are still only concepts is really causing confusion and setting up totally unrealistic expectations. Of course, hype does tend to help to apply the "obsolete" label to outdated technology. In this case, it paints an unpleasant picture for non-hybrid vehicles. So maybe there will be some type of twisted benefit. But I do still worry about people making purchases based on misunderstanding then being disappointed afterward. Disenchantment can be a very bad outcome.

11-08-2007 **EV Mode.** It is truly bizarre watching television and seeing a commercial featuring the EV button on Highlander-Hybrid. Not only is it available, it is now having attention drawn to it too. That's a change I hadn't expected yet. In time, I knew Toyota would point out that design feature. But I always figured it would be with the introduction of the next generation design... saying it isn't new, that all the HSD models have always supported it. At that stage, aftermarket options would be available to take advantage of that. But with all the crazy EV hype coming from GM now, it would seem the time has come to start educating consumers about this next level of hybrid ability.

11-08-2007 **GreenLine label is gone.** That was the comment from an administrator on the big GM forum today. It sounds as though the lack of any smog-related emission improvement is finally getting noticed. Calling that system "*green*" was never appropriate. Those focusing on the CARB rating system knew it... and spoke out with disappointment. Greenwashing is difficult when the simple identifiers like SULEV are available. GreenLine scored two levels worse, nothing to be proud of. So drawing attention to it with "*green*" implications was a bad idea. I'm curious to see how this plays out now. Will this change actually happen?

11-08-2007 **Late 2010.** A comment from an interview this week with Frank Weber, the E-Flex global vehicle-line executive and chief-engineer, stressed how Bob Lutz is demanding delivery of Volt by late 2010. It underlines just how complicated the process really is... and how much of a risk GM took by not investing sooner. They are definitely paying for their attitude of the past. I sure hope it works out. But the risk of convincing consumer not to settle for electric-only range less than 40 miles is probably going to backfire. Why aren't they focusing on kW instead? After all, that isn't much different from the horsepower or towing-capacity obsession. That doesn't undermine the "full" hybrid coexistence either. Whatever the case, we still have 3 years of waiting (and hype) to endure.

11-09-2007 **Among The Worst.** Now that production of Two-Mode has begun, there is a noticeable increase in hybrid articles being published. Today I read one of the worst I have ever encountered. It was packed with facts that lead you to believe that information was true for all the hybrids. There were lots of generalizations. It was terrible. You were lead to believe that driving slow was the only way to achieve high MPG, which simply isn't true. You were lead to believe that only the largest hybrids could tow anything, which also isn't true. You were lead to believe bio-fuels would later replace hybrids, as if the two were mutually exclusive. You were lead to believe that the fastest electric-only speed was around 25 MPH, even though Toyota's have been up to 42 MPH since the very beginning. There was no mention of advantageous hybrid-only features either, like electric A/C. And of course, there was absolutely nothing about emissions. If you hadn't guess already, it was written by someone in Detroit. Why are they sabotaging their own success? All that misrepresentation sets up false expectations and quickly disenchants after people discover the differences.

11-09-2007 **Choices.** We needed to provide some perspective on a Two-Mode discussion thread in the big Prius forum. This quote from the start of a response is confirmation of how well the greenwashing is going: "*So, as long as folks are going to buy big vehicles (for whatever reason)...*" Some of us totally disagree with that. We watched the silly promotion of monster-size SUVs under the guise that they were safer, which turned out to be quite incorrect for both people inside and the vehicles being crushed by it. But rather than complain about disingenuous intent, we say focused on need. Did I do that well with this reply... If they don't offer it, of course we won't buy it! By not producing it, they make the decision for us. Watch how consumers flock to the midsize choice once it is finally available.

11-09-2007 **Different Approach.** Today, Toyota shared detailed plans to study consumer demand here for a plug-in option. Bob Carter, who heads the Toyota brand in the United States, said "*Before we bring it to market, our customers always expect a level of quality and reliability, value and cost. It's critical that we understand the expectations of the consumers.*" That sounds profoundly different from the GM approach. One automaker is asking, the other is telling. I can't stress how important proper expectations are. Price is a very big deal, as history has clearly revealed. Just look at how much conflict has stirred from the augmentation efforts that strived for maximum efficiency without regard to cost. Fortunately, the base platform itself is already well established... and profitable. Now it is moving forward another step. The University of California, Berkeley and the University of California, Irvine were both recipients of Plug-In Prius test models from Toyota. The resulting feedback provided should be quite intriguing. I'm curious as heck how much electric capacity they recommend. For those with mixed driving, it's the resulting MPG that reveals the true need... not a statistical distance.

11-09-2007 **Grille Blocking, colder.** So far with this tank (189 miles), the temperature has been 10 F degrees colder. With only a brief trip at 44, all the rest of the driving was a variety of 30's. Watching the gauge, I've seen remarkable stability. Other than during acceleration & stealth, it is basically constant. That is definitely different from the ups & downs when it was warmer. Fortunately, the efficiency isn't. The average is currently 51.4 MPG. That's amazing compared to what I had experienced in prior Fall driving. Yeah!

11-10-2007 **Parking Lights.** Like any other first-time removal, it was quite a challenge but would be no big deal doing it again later. They were in really tight. I wasn't entirely sure how to actually remove them. The fact that there was almost no room at all to work didn't help either. But that small area in the corner of the light assembly widens a decent amount if you disconnect the upper bracket... which thankfully is very easy. Unfortunately, I dropped the screw bit into the dark depths below just moments after finding that out. Needless to say, it's amazing what you can retrieve with a long screwdriver and a wad of duct tape. So after a bit of a struggle and $2.04, both parking lights in front (those smallest orange ones) are now working again.

11-10-2007 **5 Prius.** There were 5 Prius parked within just a dozen spots of each other. That was the place to be. I was in the coffee shop at that strip mall. Where did you think the other owners were? It was rather tempted to just yell out "*Prius!*" to see who looks. After all, if you see someone look up with a smile on their face after you yell "*Yata!*", you know they are a Heroes fan.

11-11-2007 **Catalyst.** I loved reading this today: "*The Prius was the catalyst for the entire hybrid phenomenon...*" And I bet few, if any, will like my response since it is so easy to prove that my support was always there with that very perspective in mind from the very beginning... I said that back in 2000, when Prius was already 3 years old. The result was getting mocked by those supporting the other automakers. What now, 7 years later? Will we get only minimum token gestures? How long do we have to wait before top-20 production volume is delivered? Remember, there are some still against hybrids entirely. That lack of focus from within will impair progress. Not getting agreement on direction is a big problem. Achieving mainstream status is a significant challenge.

11-11-2007 **Realistic Questions.** There is evidence that the hype around Volt is starting to subside. I wonder how the upcoming Auto Show announcements will change that. Hmm? Anywho, the questions being asked now are fairly realistic. Unfortunately, they are coming from an audience that is totally unaware of how many of their answers are already available from the design choices made for "full" hybrids. Many of those very same considerations of motor & battery usage apply the very same way as with the "series" hybrid. Interestingly, talk of reduced capacity models being available are surfacing more often too. If the system is that efficient anyway, why not offer one with a shorter electric-only range? Needless to say, with 3 more years of waiting still, observing how things mature as education grows should be very interesting.

11-11-2007 **Wild Questions.** Naturally, those continue too. But that has been relatively constant throughout the years. When a person takes no consideration to risk or cost factors, the comments are fairly absurd. You also get the occasional conspiracy claim. It's quite entertaining... no reason to get all worked up about. Logistics of production and concerns of priority tend to drown out chaos like that anyway. I do get frustrated though. There's a big difference between a half-hearted effort and a no-turn-back commitment which isn't discussed. Far too often, we get the dismissal of "*good enough*" rather than a more serious attitude. So I suppose the wild questions can be a way of keeping perspective... a reminder of how the market in general doesn't pay close enough attention to detail.

11-11-2007 **Green Television, Climate Change.** The debate is over. Last week was a "green" blitz on NBC. This week it is on The History Channel. That misnomer term of "global warming" is dead. Most people are recognizing that it is actually climate change... where weather systems are affected in a very negative way. Humans have been identified as major contributors to that. We are amplifying & accelerating cycles that are normally destructive anyway. It's making a bad situation even worse. Fortunately, that is being acknowledged. Just like with smoking, there are a few that still deny the undisputable evidence long after the debate is over. But their voice is now hard to hear in a crowd of growing concern. The vehicles we drive are the most obvious contributions to the problem. So it only makes sense that change for the better begins there. Watch how the reception to change improves over the next year. Those other automakers are finally reading the writing on the wall.

11-11-2007 **Green Television, Hybrid Commercials.** Talking about a prime opportunity for promoting. GM bought a ton of advertising time to take advantage of this current "green" blitz. They figured the audience would be quite receptive to their "less bad" products. I wonder how those commercials were actually perceived. Hmm? Volt still won't be available for years, so seeing in featured in 30-second spots only seemed to undermine the fuel-cell promotion just like that in the past. The advertisements for Tahoe-Hybrid was demeaning to all smaller hybrids. That still sounds to me like GM shooting itself in the foot. Personal choice means being responsible for our own actions. Hopefully at least being better aware of the choices will have some type of positive outcome. That still remains to be seen though. There's a big difference between concept/niche products and those produced at mainstream volume. You can't buy want isn't available.

11-12-2007 **Calling Shenanigans.** At some point, you just have to. Years ago, we had a small number of people that intentionally misrepresented the "assist" hybrids. They expended great effort to lead you to believe those were just like the "full" hybrids. It was very frustrating. But knowing their disingenuous motive, the persistence to expose them came easy. In other words, Honda supporters attempted claim their preferred hybrid was THE SAME as the competing Toyota design. Needless to say, it wasn't. Now some cheering for Chevy are trying to do the very same thing by grouping them all into the "parallel" category. It's very frustrating. Their technique is to be vague... because if you provide detail, the real story becomes obvious. Well, too bad! I will. Prius uses a 50kW motor. That's not "*small*" like they imply. And when the engine spins, it may not be using any fuel. So the "*kicks in*" references are definitely misleading. Whatever the case, it isn't just a parallel since attributes like stealth & reverse operate like a series design... hence Prius actually being a "series-parallel" hybrid.

11-12-2007 **Looking Back.** I hadn't realized until that "catalyst" comment that clarity has come from time. My purpose may have been difficult to see back then. But now as other automakers join in and declare their objectives, identifying goals that match is pretty simple. My engineering friends taught me well. But it's my college business professors would be pleased. I was obviously paying attention... despite what those grades for my non-computer related classes actually showed. The roles that economic & accounting factors play are significant when trying to expand from niche success to mainstream. My underlying principle was time... back when we had it to spare. Now oil is approaching the $100 per barrel mark, triple what it was when I got my first Prius. Speed is of the essence. Profound change is required within the next few years. Keep looking back to see how my purpose remains on target.

11-13-2007 **Now What?** Today we found out what emission rating for the first Two-Mode hybrid would be: Bin-5. Not only is that the worst allowed, it is also dirtier than the non-hybrid version of Tahoe. A step in the wrong direction like this wasn't something I expected. Talking about a inarguable not-green move. Both Ford & Honda recognized the importance of smog-emission improvement by following Toyota's footsteps. What the heck is GM thinking? Different is not good in this case. In fact, with emissions that bad, the argument for just buying a diesel instead is pretty convincing. If you didn't understand why I got grief on the big GM forum, now you should. I've been singing the same song of objectives for years now. It's totally inappropriate to improve efficiency at the penalty of emissions.

11-14-2007 **Found Out.** Perhaps I shouldn't have asked that "Now What?" question. Quickly finding out the answer made me sick to my stomach. They've lost all objectivity. See, yesterday just happened to also be the day the first Two-Mode pickup truck was announced. GM enthusiasts declared victory... even though it won't be available for a whole year still and no production volume intent was provided. It really is a technology bragging contest to them and they consider the other automakers to be the competition, not non-hybrid models that very same vehicle. Hopeless is a fairly accurate description at this point. Converting a large chunk of new vehicle sales over to hybrids makes no sense to them.

11-14-2007 **Mega Disasters.** Last night's episode on The History Channel was titled: "*Oil Apocalypse*". It focused squaring on the mess we are in right now. They stated it is already too late for a "soft landing". In other words, the transition over to more responsible energy use won't be seamless. That opportunity to embrace change has already come and gone. Our addiction has created a very real problem. The abundant smooth flow of cheap sweet crude is wavering. Demand is outpacing supply and the supplements we are choosing are more expensive. Goodbye monster-size vehicles used for silly purposes. Denial is a dangerous thing. And unfortunately, they pointed out how much of it still persists. It's a disaster in the making. They are still moving too slow to provide a genuine remedy. Remember how we were amazed when gas his $2.25 per gallon? The anti-hybrid fiercely argued that would never happen. Obviously, it did... and then some!

11-15-2007 **Casting Doubt.** That antagonist technique was alive & well yesterday. In an act of true desperation, we got to read quite a few new posts with dead misconceptions in them. The person pretended answers had never been found. At this point, I really doubt any of the forum readers buy that nonsense. Unlike in the past, data proving the claim is false can easily be found. But when you've got a vendetta against Toyota or you fear change (it's really difficult to tell in this particular situation), you're willing to say just about anything to undermine. And... we got plenty of fresh examples of exactly that.

11-15-2007 **SUV Standards.** Reading this today sure made me happy: "*The 9th U.S. Circuit Court of Appeals ruled that the National Highway Traffic Safety Administration failed to address why the so-called light trucks are allowed to pollute more than passenger cars and didn't properly assess greenhouse gas emissions when it set new minimum MPG requirements for models in 2008 and 2011*." That places the responsibility to correct (and blame) directly on the Bush administration. Many of us were pretty upset when the pitifully tiny increase (from 22.2 to 23.5 MPG) was proposed. It was considered an insincere token gesture. In other words, nowhere near enough. Fortunately, that needs to be properly dealt with now. Yeah!

11-15-2007 **Cruel Disappointment.** That's how Lutz described the wind-tunnel testing results at a dinner event for the press about Volt the other day. What in the world was he expecting? The front of that concept vehicle is shaped like a wall. There's was way more flat surface area than you would ever want on a car optimized for efficiency. Needless to say, it will be reshaped rather dramatically for the production model. Many enthusiasts felt let down. Their obsession with the vehicle looks, rather than the technology, is already proving unwise. Personally, I was shocked to learn that no wind-tunnel testing had been done yet. How the heck did they calculate electric-only range if they didn't have a drag-coefficient available?

11-15-2007 **Tired of Greenwashing, perspective.** Sometimes newbies aren't aware of the whole situation... One automaker is showing little concern for emissions & cost, focusing almost entirely on efficiency alone. The other is seeking improvement of all 3 criteria, but not getting acknowledgement of that harder challenge. Praise for technical marvel should still be given when achieved. But to actually make a difference, the majority must be served. That is not the market for monster-size hybrids. The streets are dominated by not-so-sexy practical-size cars. Knowing that there are over 60,000,000 new vehicles produced worldwide each year, why wouldn't we get upset? Think about how many times we've had to endure the "gallons saved" argument. The greater savings is revealed by looking at the entire picture. 10 Prius will be purchased for every 1 Tahoe-Hybrid. Those Prius will end up saving more overall.

11-15-2007 **Tired of Greenwashing, numbers.** Sometimes claims like this are actually greenwashing techniques: "*The fact is, the hybrid Tahoe will save much more fuel over its lifetime than a Prius ever would.*" Because when you look at all the numbers, rather than just that selected data, the outcome is quite the opposite. Given 20,000 miles per year... going from a 15 MPG average to 20, the gallons saved would come to 333 for Tahoe-Hybrid. From 30 MPG average to 45, the gallons saved would come to 223 for Prius. The next step is to take vehicle production quantity into account... $50,000 hybrids are not going to be produced or sold in large volumes. $21,000 hybrids will. So for the next year 15,000 Tahoe-Hybrid = 4,995,000 gallons saved. 150,000 Prius = 33,450,000 gallons saved. That clearly reveals how Prius ends up providing greater savings, by a very large margin. Isn't it amazing how different the story is if you step back and consider the entire picture?

11-16-2007 **Tired of Greenwashing, analysis.** Sometimes you just happen to have chosen a career that's perfect for the support of your crusade too. I'm a lead programmer. Part of my responsibility is to make sure the system overall is best served. Tahoe-Hybrid is like a resource-intensive webpage. It will end up consuming more than 10 of the efficient Prius like webpages. In most cases, that means you want to limit use of it to prevent the entire application from suffering. So, use it when there is a genuine need is just fine. At other times, it's a bad idea. When there's only a finite amount of resources available, you absolutely must consider how that choice will affect your processing as a whole. There's nothing wrong with special-use features. But the consequences of using them too frequently will do far more harm than good.

11-16-2007 **Trash Talk.** This morning's article about what happened at the LA Auto Show yesterday was pretty entertaining... since I have logs noting what originally happened. Remember how that investor presentation had a quote taken out-of-context which completely ignored the aspect of large-scale production? They tried using that spin again. Of course, some of the suffering on GM's part was self-inflicted. They were too vague about intentions with Volt at first. So... even sincere attempts to clarify now are met with skepticism. Allowing false expectations to grow wasn't smart, especially when the heavy advertising campaign for Volt still lacks detail. Fortunately, it sounds like plans to rectify are in place. The end of first quarter next year, they will deliver "*street-drivable*" prototypes. Yes, I realize that in itself is vague. But at least it is solid enough of a milestone to keep the trash talk from getting too far out of hand.

11-16-2007 **Adequate Acceleration.** Some of it is well-deserved venting of frustration. Back when the HSD Prius first debuted, the 10.1 second 0-60 acceleration speed was mocked as a considerable shortcoming. But now that the mild hybrids are pushing their way into the market and fuel-cell prototypes are being demonstrated, slower rates are deemed "*adequate*". Some attempt to conceal their hypocritical stance change by arguing semantics. What a pain. Apparently, taking 15 seconds to reach 60 MPH is no big deal... now. Figures.

11-16-2007 **Court Ruling Talk.** There's been quite a bit of discussion about that light-truck ruling yesterday. The Bush administration is really in trouble. On NPR (National Public Radio), they pointed out how the court focused on the failure to take climate-change into account. No consideration of that whatsoever makes it pointless to try to overturn. By ignoring carbon emissions entirely, it branded them as not fulfilling their responsibility to account for all factors of influence... a gross oversight. Now they have to correct their negligence with a more strict efficiency improvement requirement. And to make matters even more pleasing, their attempt to categorize SUVs as "utility" vehicles was deemed inappropriate as well. Since over 70 percent of them are never taken off-road, that qualification is null without any need for further argument. In other words, since they are almost always used as if they were a family car, it is no longer proper to allow greater emissions as if they were a truck for work use. The judicial branch is fulfilling its duty to keep the executive branch in check. I'm very happy!

11-16-2007 **Naive or Smug?** I would like to know how to interpret the new attitude emerging on the big GM forum. They figure their new monster-size hybrid is the answer to our problems. No expansion to smaller vehicles is necessary. Because it saves so much gas, there's no sense in producing a vehicle like Prius too. Don't they see that the ship they are partying on is sinking? Perhaps, they do know and simply don't want to wreck those final moments. Whatever the case, the concern about climate-change is growing rapidly and the price of oil closed this week at $95.10 per barrel. Reality will come crashing in on them if they ignore the signs. Don't they realize how many years it takes to develop a hybrid in the first place and how many years behind they still are to competing directly with Camry-Hybrid? The threads there have turned into a feel-good post for enthusiasts not interested in constructive discussion. Sound familiar? A very similar thing happened on the Escape forum, where discussion about the hybrid was quickly pushed aside in favor of the traditional model. That's sad.

11-16-2007 **Prototype Battery.** GM does get credit for keeping us informed... now. Prior to this is a different story. Anywho, today's new details painted a fairly decent picture of the situation with the timing of Volt production. None of this will surprise any of the Prius supporters. We know all about the concerns of high-power, high-capacity battery-packs. The first thing is that Toyota prefers to avoid liquid-cooling. GM doesn't... but never said that until today. Arrgh! This prototype uses that. So overheating is far less of a concern... but it makes the battery-pack much larger & heavier, as well as more expensive. Weighing in at 200 kg (441 pounds), the t-shape 16 kWh prismatic assembly is 6 feet long, 3 feet wide, and 1.5 feet high. No wonder they want so much time to continue research & development. That's a really, really big battery!

11-17-2007 **Actual Sales.** The talk of "most" advanced engineering and "most" model quantity is gaining traction. Unfortunately, that's a clear indicator of hype. They are just things you read about, only words. Enthusiasm alone isn't enough. It's actual sales. That's what truly makes a difference. Hearing about something you can't buy doesn't do any good. To be the traditional vehicle replacement, it actually has to replace. I'd put that penetration level somewhere around 60 percent. Both Toyota & GM produce over 9 million new vehicles annually. That's an expectation of around 5.4 million hybrids from each, each year. Shouldn't that be a realistic 10-year goal to set? Imagine what the oil-supply and climate-change concerns will be a decade from now without any action. Not setting a production goal would make you wonder, especially since they have to commit to supplier agreements anyway. This is a serious need. Actual sales is an appropriate gauge of progress.

11-19-2007 **Liquid Cooling Considerations.** Hearing that Volt will use liquid cooling for the battery-pack is in interesting twist. Toyota always went way out of their way to avoid that. Risk of getting too hot is less in a "full" hybrid anyway, since it depends less on the battery-pack than a "series" hybrid would. So the extent of need for Volt operation in extreme heat is hard to identify, but the expense, weight, and space penalties should be obvious. What about in the extreme cold? We're talking January in Minnesota, where temperatures routinely drop below 0 F. With a battery-pack encapsulated in freezing cold coolant, operational heat from the battery itself will be leeched out. The liquid cooling would likely have a negative effect in that situation, making warm-up take a very long time. Do you think GM would choose to startup the engine then? At some point, there is likely a tradeoff to consider. I wonder how enthusiasts will react if a low temperature threshold emerges, where the system is better off just running the engine initially. Hmm?

11-20-2007 **No Direct Electricity.** That particular rumored Volt design really caught me off guard. Supposedly, electricity from the generator will never be sent to the thrust motor directly; it will always pass through the battery-pack first. Why? That seems rather strange converting from AC to DC then back to AC again. It's unnecessary aging of the battery which could easily be avoided, and is by the "full" hybrids. That explains why it will be require liquid cooling for Volt. Needless to say, not having actual detail available doesn't help. Rumors like this need to be officially responded to, especially since so few understand how the competing designs work. It allows for speculation that misconceptions thrive on.

11-21-2007 **Artificial Barriers.** GM argued that their recent action with Volt was in response to a "*not possible*" claim Toyota made. Back when I first heard about a response coming, I wondered what the heck GM was talking about. I certainly never heard that. But like on the big GM forum, supporters hear what they want... not what you actually say. So without providing any detail to this, you can easily surmise that it's a way of stirring to pot to draw attention. After all, they still won't have anything available for sale for at least 3 years still. Starting a controversy by inferring a vague comment actually meant something else would be an effective way to stall, keeping focus on them in the meantime. It's an interesting way of setting up artificial barriers. They can claim a challenging milestone was achieved, even though no one doubted that could be done. Isn't all this hype fun? Thankfully, the population of Prius and Camry-Hybrid will continue to grow while we wait... since they don't have any barriers.

11-22-2007 **Grille Blocking, warmth.** The daytime highs are now only in the 30's and the evening lows in the 20's. Those are temperatures cold enough to start collecting data from blocking the lower-grille too. With only the upper-grille blocked, there wasn't much need for extra warmth. Early in the season like that, I was mostly just expecting a benefit from the aerodynamic improvement. But now, it's colder. I suspect this additional blocking will help quite a bit with engine warm-up, since the amount of air allowed to squish through the radiator itself will be reduced significantly. Then after the engine has been running for awhile, the behavior of the thermostat should be more stable (like I've seen with only the upper-grille blocked in warmer temperatures) despite it being much colder. In other words, the MPG data 6 weeks from now should be very interesting. It will likely drop down to the usual seasonal low of -15 F degrees. I bet the results will be quite impressive. Too bad we didn't have an affordable & convenient way to monitor coolant temperature years ago like we do now. Oh well. Better late than never.

11-23-2007 **$98.18 Per Barrel.** Watching the price of oil continue to rise is troubling. This week's closing wasn't even peak. There was a brief time when the price was a dollar more. Concerns about the housing market and oil prices dominate talk of financial well-being. Those uncertainties influence other markets, raising business risk. We are not in good standing right now. That makes the spread of hybrid technology more difficult. That's bad.

11-24-2007 **Self-Destruct.** The big GM forum is dividing from within. Misconceptions are alive & well. There's a group fighting hybrids entirely. There's another absolutely obsessed with the biggest and most powerful hybrids, dismissing all others as a waste. There's a group heavily in support of the mild hybrids, focused entirely on price. There's another that views Volt as the ultimate answer, with no concern for price. They disagree on virtually everything, except emission rating. The unifying message is that they simply don't care. Now that the details about smog-related emissions from Two-Mode and BAS has been revealed, they're attempting to disregard it's importance. Ignoring a problem won't solve it. Too many choices are tearing them apart. That makes the most exciting topic the plug-in version of Two-Mode. Each group has something negative to say about that. What direction will the automaker take if supporters are sending so many different messages?

11-25-2007 **Sunroof Added.** Back when I owned a larger car with a smaller interior (a 1994 Ford Taurus), I really enjoyed having a roof that could be opened. But when I bought my Classic Prius, that option was not missed. The larger interior cancelled out the sensation of being cramped. So I never looked into adding an aftermarket sunroof, despite having seen two examples in person. Then when I upgraded to the HSD Prius, same thing. It would be nice, but by no means necessary. Now after so many miles already driven, that cost cannot be justified. But it is awful tempting asking myself if I'd do that with my next hybrid. Take a look what he had done to his Prius and you'll understand why... owner: Craig

11-25-2007 **Grille Blocking, User-Guide.** Now that it's colder out, the time had come to add a page for Grille Blocking. Along with two new photos, there's a summary of what to expect and when to actually do it. Hopefully, it's straight forward enough. But being clear is quite difficult when the topic itself is rather ambiguous. I suspect those without an aftermarket gauge will be somewhat intimidated still. Some that participate in online discussions are, despite be way better informed that the typical owner. It varies quite a bit depending on the region you live anyway. Here in Minnesota where the forecast for the coming week is highs only around 25 F degrees, the decision is obvious already. Even colder temperatures are on the way. In less hostile environments, I understand the apprehension. Heck, I certainly didn't see the need for the first 7 years of ownership. But now that I am so well aware of how the system operates, it's no big deal. There isn't a need, but the gain definitely makes taking that step worth it. You decide for yourself... User-Guide (HSD)

11-25-2007 **333,333 Miles.** Believe it or not, his Prius has traveled way beyond anyone's imagination... and still going strong with the original battery-pack! This is that magic data we have always desired, a way of absolutely squashing the distance misconception. Some people worried that lots of travel would spell certain death and inevitable replacement. Clearly, that's not the case. Those that drive long trips often don't have anything to worry about. You can squeeze out efficiency gain even from high-mileage needs. The amortization of cost can indeed be spread across longer than usual distances over a shorter than usual ownership time span. Needless to say, he sure is having fun with his Prius... owner: Jesse

11-26-2007 **New Owner Frustrations.** She asked how to respond to vehicle comparisons. Her examples were very much like what I've been dealing with for many, many years now. So, I chimed in with this advice... I typically don't respond. It's simply not worth it. Just ask the person what MPG they actually get. You'll quickly discover they don't have a clue. Their impression of efficiency is based upon just some crude one-time measurement, without taking into account any of the factors of influence we as Prius owners know all too well. Then there's other stuff Prius that is never given any monetary value for. The emission rating is almost always dismissed entirely. The Multi-Display, speedometer, and aluminum rims are ignored, despite all being obvious upgrades. The pleasure from stealth is overlooked. Most are totally unaware of how much smoother the engine in Prius is than that in Corolla. The list goes on and on. In other words, don't expect constructive discussions about hybrids. They are extremely rare. As a new owner, you just have to accept that smug smile that inevitably emerges. It sometimes takes a very long time for others to understand why you've chosen to take that step forward.

11-26-2007 **Purchase Justification.** A wonderful outcome of that new owner frustration thread was these questions: "*Why are we the ones who have to justify our purchase? How come they don't have to justify their emissions, their gasoline consumption, their funding of foreign government?*" That makes a lot of sense. We shouldn't have to explain why we did the right thing. We saw the need and supported it with our wallet. People rarely ever have to justify upgrade options for their vehicle purchase. Heck, the choice of automatic transmission is accepted as normal, even though it clearly is not the best choice for efficiency. Yet, people don't ever have to provide reasoning for that. After awhile, there will be no excuse for not getting the hybrid option. Continued improvement of the technology along with increasing gas prices should make that a no-brainer decision. But I bet there will be people to the bitter end that continue to fight progress. What do you think?

11-26-2007 **New Hybrid Interest.** Now that GM is finally getting into the game, their loyalists are writing articles favoring hybrids. That's quite a switch from the recent past. And yes, they still degrade and mislead about the competition rather than just saying they have joined in to compete. But none of that concerns me. It's the amount of incorrect information being published. There are errors within descriptions of GM's own offerings. Clearly, those writers have not studied the material yet. The most blatant never mentioning GreenLine, claiming that Malibu & Aura would be offered with Two-Mode then listing the GreenLine EPA estimates. Naturally, there was no mention of emissions whatsoever, neither type. Of course, the thing I find most amusing is the number of models being offered gets a great deal of attention... claiming that is the measure of success. You are given a false impression of what really matters. The actual production quantity is absent... which is what truly makes a difference. Though very confusing for consumers, new hybrid interest in this form is better than nothing. Two steps forward, one step back.

11-26-2007 **Disingenuous Compares.** At some point, it can be considered intentional misleading. Calling it "disingenuous" is being kind. You decide what's appropriate for this: "*The city mileage figure, 21 mpg for the two-wheel-drive GM SUVs, is a 50 percent improvement over that of gasoline-only versions and is on par with the EPA city ratings of popular four-cylinder midsize sedans such as the Toyota Camry and Honda Accord.*" I call that selective data sharing. Because if you also include the highway mileage figure, a different story is told. Those numbers are in favor of the non-hybrid. The 31 MPG highway estimate for Camry is significantly higher than the 22 MPG highway estimate for two-wheel-drive GM SUVs. But they never mention that. Yet, they make that "*on par*" comparison anyway. That is vital information absent from what is supposedly a trustworthy comparison. I consider that dishonest.

11-26-2007 **Enthusiasm.** It's quite impressive from the Volt enthusiasts... though, odd. At first, their comments reminded me of the past... an amazing 7.5 years ago. Now, it's just plain weird. The discussions on their dedicated forum are following the very same pattern. They are completely unaware of Prius history. In a way, that is good. They can experience the discovery process first-hand... just like we did. But to wonder about questions that we have long since found answers to does seem a waste. I guess that is progress. It's certainly not the way I would like it... because it is going to take much longer than just picking up where the competition had already progressed to. Oh well. At least there is support now.

11-27-2007 **Hypothetical.** In the past, discussions about vehicles that were not being produced yet had very little traction. There was simply no certainty available. How appealing a design looked on paper made no difference when it came to the reality of production, cost, supply, and support issues. But now that GM is pushing a product still years away from availability, concerns about being realistic get overlooked. Hypothetical is considered good enough. That lowering of standards is a risk we shouldn't accept blindly. That understanding of the difference is quite clear in the computer industry. When will the automotive industry, especially those feeding the hype by publishing idealistic articles, come to the same understanding?

11-27-2007 **SUV Comeback.** The thought was that dropping inefficient and rarely ever used aspects of the SUV, you'd have something that would appeal to those still wanting a large & bulky vehicle. It didn't turn out that way. That vehicle, known as a "Crossover", never really caught on. Sales have been modest compared to the SUV. Fortunately, that market overall is shrinking. But there are some that just don't want to give them up as one-person commute vehicles that never go off-road and never tow anything. And now with the introduction of new hybrid SUVs, the excuse to continue using them that way lives on. It's the sad reality we face.

11-28-2007 **New Low.** Sometimes you have to add a log entry just for the sake of documenting history almost too outrageous to believe. There are some that are dead set against Toyota, blindly supporting the competition without logical reasoning. Forums members notice that pattern after awhile. They eventually get exposed and lose all credibility. A rare few aren't though. These are the ones that helped cultivate the forum itself. Members are afraid to speak out against them. So, they basically get to say whatever they want. In this case, one of the top posters on the big GM forum absolutely hates discussing detail about hybrid design... knowing the facts are stacked against him. That has lead to this attempt to quickly change focus on that thread: "*For the last time, the Prius isn't a symbol of how smart you are. Rather it is a symbol of how DUMB you are.*" Needless to say, this is a new low. I never expected such childish insulting.

11-29-2007 **Engine & Motor Behavior.** It's quite refreshing when you hear a question like this from a new owner: "*Shouldn't easing off the gas cause it to slightly charge the battery?*" He had noticed the difference when traveling faster than 70 MPH. I pointed out... Nope, engine-speed relation to travel-speed isn't as straight forward as you would think. It's like when you accelerate while climbing up hill. You'd think the battery would always kick into heavy use. Instead, that only happens up to moderate power. When the need is high, just the opposite happens. The engine contributes heavily, resulting in the battery getting recharged instead of being drawn from. After awhile, the behavior becomes second-nature. But initially, it will leave you scratching your head. That's why so many attempting to compare hybrid designs guess incorrectly. What happens under the hood is not obvious.

11-30-2007 **Emission Type.** A frightening number of people still have absolutely no idea that there is more than one type. Many are under the assumption that improved MPG means lower emissions... which couldn't be further from reality. In fact, today's discussion about Two-Mode actually increasing smog-related emissions totally blew a few away. Even after providing an explanation of how that is possible, some were still in disbelief. Running the fuel mix a little leaner than normal. Cylinder-Deactivation preventing thorough combustion. Driving with a cooled engine, making the catalytic-converter less effective. There's a variety of possible reasons why. Whatever the case, the emission rating clearly shows that the hybrid is indeed dirtier... but you'd never know that from just looking at the MPG.

11-30-2007 **Annual Capacity.** Production of the new model Vue-Hybrid began today. The plant in Ramos Arizpe, Mexico has an annual capacity to build 6,500 hybrids. That's it! The United States and Canada will have very few available. Heck, that's less than 2 months of Camry-Hybrid sales and only 2 weeks of Prius sales in the United States. That's what I consider just a token quantity. Even the first year of Prius sales here, way back when gas was cheap and misconceptions plentiful, was double that amount. Why so few? You'd think this upgraded version of BAS is what they've been hoping to deliver. But the numbers certainly don't support that.

11-30-2007 **Multi-Stage Hybrid.** Camry-Hybrid differs from Prius by having a second PSD. The purpose is to enable delivery of a second speed, much like gearing. GM enthusiasts weren't thrilled to learn of this, especially after having discovered of the implementation of Two-Mode wasn't actually as efficient as the on-paper design implied. The Lexus LS600h takes that Camry-Hybrid design a step further... offering essentially a three-mode system. That second PSD divides the sun carrier into two pieces; one with a clutch and the other connected directly to the large electric motor. The planet carrier is doubled, serving as both input & output. The single ring carrier has a clutch on it too. The resulting configuration is three levels of user-selectable force: Hybrid, Power, and Snow. It's not cheap. But it is a threat to GM, ability that enthusiasts claimed wouldn't ever be possible. Hopefully, that is the formula for serious competition... a situation where everyone wins. Let's hope that's the case.

11-30-2007 **Grille Blocking, first month.** The results for November can't be used for much... bummer. The lower part wasn't blocked until the last week. The final fill-up of the month was affected by both bladder-effect and an overly sensitive pump (so it was under filled). And I was away from work for awhile, so there was no typical commute drive to compare with. Next week, I'll be away from work for a few days too. But, at least it's a start. The weather varies tremendously from year to year anyway. Nonetheless, even without being able to well quantify the results, it's still pretty darn obvious that there was indeed as efficiency improvement. This month's MPG average was most definitely the highest November ever for me. The whole Winter season will likely show that too. That's enough... well worth the $2 and 1 hour spent to do the grille blocking.

12-01-2007 **35 MPG.** It looks like the House & Senate are coming to an agreement about what the new CAFE standard should be. The current is 27.5 MPG for passenger cars and 22.2 MPG for light trucks. That's way too low. 35 MPG by 2020 should be realistic... especially since there has been no increase for cars for 22 years. Taking about not even trying. Details from the 1,000 page proposal have not be released yet. But there are some, like a 1.2 MPG credit for vehicles capable of using E85. Nothing has been said about support for E20 though. And there has been no mention of how plug-in hybrids will be measured. This requirement on the federal level would override the dozen CARB states that wanted a 30 percent carbon emission reduction, which translated to a 43.7 MPG standard for cars. So, there's a mixed feeling of both victory and defeat. It will be interesting to witness how this plays out.

12-02-2007 **Backlash.** Pressure continues to build. Resisting change like that makes for a tough market. It's a strong reason why GM is doing so much promotion for Volt already. Emphasis on such a small vehicle is quite contrast from their heavy investment with monster-size vehicles. Hopefully, the result will be wide acceptance with few misconceptions right away. After all, years of positive focus should prepare consumers properly. But there's no way of truly knowing. Then you've got the extreme to consider. There could be a backlash from being too successful. Consumers won't be thrilled by long delivery waits and high price markups. It's definitely an interesting situation that will unfold, especially considering what the automakers will be doing at the same time.

12-03-2007 **Scaling.** The belief that HSD wouldn't scale well has been the argument in favor of Two-Mode for quite some time. But now that it is proving to be false, the antagonists are switching their strategy to saying "*the simple hybrid system in the Prius*" instead... hoping you'll just assume it's all that's available. In reality, there are now 3 different configurations. HSD scales from a 4-cylinder compact car to a midsize SUV able to tow 3,500 pounds to a full-size sedan capable of 438 horsepower. Meanwhile, there's Two-Mode which scales from midsize 6-cylinder sedan to a full-size SUV able to tow 6,200 pounds. Look at the worldwide market. Consider what types of vehicles there are more sold of. One hybrid system can serve a much larger number of consumers than the other. The upcoming new higher CAFE standards are going to raise the importance of volume sales. Lots of 4-cylinder hybrids will be necessary to achieve that 35 MPG requirement. Two-Mode doesn't scale down to that size in an efficient & affordable manner... hence no plans to deliver it. What will GM sell for midsize cars?

12-03-2007 **November Sales.** Prius exceeded it's annual goal already... and there isn't even a tax credit available anymore. The number sold so far this year is 167,009. Sales for the month were up 109 percent over the previous November, at a very pleasing 16,737. Camry-Hybrid did pretty good too, the 5,118 sold in November represents a 65 percent increase. That brings its annual sales up to 35,409. Growth is slow, but the demand is certainly there. Seeing more on the road now helps. I bet many still don't know what to look for though, since the signs of it being a hybrid are far from obvious. Recognition of the subtle takes awhile to learn. In the meantime, continued sales at this rate will do. Reputation building takes time anyway.

12-04-2007 **Price Concern.** After a Volt comment like this today: "*The only question now is: How many will they build in year 1? I would assume that 60,000 is the going number, with potential to reach 100,000 based on demand.*" I had to interject a sense of reality... How come so many of you still ignore the issue of battery cost? Choosing to sell a vehicle at projected market value by accepting a loss initially is a really big deal. It could take years of production before modest profit is achieved. How much money is GM willing to sacrifice for the sake of establishing a reputation for the new technology? That "*nicely below $30,000*" target price is currently quite unrealistic, based upon the battery supplied by A123 for aftermarket augmentation of Prius. Do the math. Losing $3,500 per vehicle for 3 years at an annual production of 100,000 would be a loss of over 1 billion dollars! Meanwhile, you have to also consider the infrastructure cost. Training and equipping mechanics costs money. Sorry, but taking comments about status seriously is difficult when fundamental questions still remain unanswered.

12-04-2007 **Seasonal MPG Averages.** Tracking MPG based on Month & Lifetime averages has been a common practice for Prius owners. Grouping data like that makes sense. What hasn't captured much attention though is the perspective of Seasons. So, I took a stab at it today by grouping months together with like temperature ranges here in Minnesota. Having over 4 years of data already collected, I was intrigued to see what crunching those numbers resulted in. The graph I was able to build from my spreadsheet turned out great, simple & concise. Take a look at in on this webpage... personal data 11

12-05-2007 **Can't Take It Anymore.** I thought I could tough it out until sales of Two-Mode began. Getting thoughts & beliefs before that point is the best approach, since supporters tend get defensive and fixed-focused after product release. This has already revealed itself to be too late with respect to emissions. They have grown very irritated by that topic, choosing to ignore or dismiss rather than address. I wonder what's going to happen with real-world MPG data. Hmm? Many are now declaring victory, even though none are on the road yet. There's no aspect of cooperation. In their mind, the competition is other types of hybrids... not traditional vehicles. Don't they realize the type of resistance that will come from the anti-hybrid? That's why I hold hybrids to such a high standard. The under-qualified won't be able to survive attacks from antagonists. Oh well. I tried to inform.

12-05-2007 **Assist & Mild.** I read my first review of Malibu-Hybrid today. The comments about BAS were very much like that of IMA upon initial release. The electric motor provides only a modest amount of power and the state-of-charge for the battery-pack is usually low. This "mild" hybrid system is basically just a smaller version of the "assist" hybrid, so the same passive charging approach is taken. He complained that the engine didn't shut off that often at stops because electricity was in short supply. That's very different from the persistent nature of the "full" hybrid. As a result, the recommendation from the reviewer to upgrade the A/C to electric simply isn't practical. Basically, you get what you pay for. The low-cost BAS delivers minimal hybrid features.

12-05-2007 **Ethanol Efficiency.** Finally! Analysis of engine performance using ethanol blends higher than 10 percent for non-flex-fuel vehicles is coming to light. Good thing too, Minnesota has a mandate to increase to 20 percent in 2013... even though the data for E20 use is quite limited still. Many newly commissioned studies are in progress. But based on this one, the outcome should be quite favorable. Anywho, the choice of whether or not to use E85 is far from certain. Unfortunately, most flex-fuel owners choose not to. A mandate for all gas to be E10 uses far more anyway. That guaranteed demand will help fund programs to further invest in the expansion of ethanol produced from waste biological material, rather than a food product like corn. So it makes sense to study how realistic that is. Currently, no automaker bothers to certify (warranty) beyond a mix of 10 percent. Pushing for a higher blend to be certified now will help when it becomes required later... hence studies like this. Turns out that the Camry, Fusion, and Impala non-flex-fuel vehicles actually performed the opposite way they were hypothesized to. Since ethanol has less energy than gas, it was assumed that higher blends would result in lower efficiency... as we've witnessed with E85. That isn't the case for E20, E30, and E40. So not only is the vehicle capable of running using a higher blend, it is actually yields a higher MPG. How about that!

12-06-2007 **Top-20 List.** As of the end of November, Prius is ranked number 14 for the year in the United States. Sales strong enough to make the coveted top-20 list (for all vehicle types & classes) is pretty sweet. That most definitely ends any all doubt about hybrids becoming mainstream. It now has officially happened. Purchase quantity has risen higher than quite a few traditional vehicles. Using less oil and concern about the quality of our air is finally getting the attention it is due. Next year, things should get really interesting. Gas prices will likely rise. The presidential campaigning will undoubtedly address oil dependency concerns. Lots of HSD Prius owners will join the 100,000 mile club. Sadly, more evidence of climate change will emerge. GM hybrids will get reviewed... and hyped. Ford's new hybrid sedan will finally debut. There will be much happened. Hopefully, for the better. This particular milestone certainly was.

12-07-2007 **Website Cards.** I don't pass them out much many anymore. People are better informed about hybrids now; they tend to take advantage of the internet and search engines. So the need for introductions to the technology has dropped. The purpose of providing real-world data is still quite beneficial. So, it is best for me to keep that information up to date. Long overdue was my status, unfortunately. 7 months and 12,000 miles was a sign to finally update. Today, I did... website cards 13 website cards 14 website cards - print

12-07-2007 **Only CARB States.** In a rather vague article this evening, I read that Malibu-Hybrid will initially only be offered in CARB states. 11 out of 50 is quite disappointing. But at least there will supposedly be more built than Vue-Hybrid. The quote said "*10 percent*" of the annual production was expected to be hybrids. Unfortunately, we have no idea how many that is. 2008 is a new model. So guessing the demand based on the older model, that means somewhere between 15,000 and 20,000 hybrids. Do you think a mild hybrid only offering a 2 MPG efficiency improvement and none whatsoever for smog-related emissions is going to sell that well... especially with distribution limited at first?

12-08-2007 **200,000 First Year.** Honda is far more optimistic than GM. In fact, I was quite blown away by what I read this morning. Honda's upcoming (available in 2009) new dedicated hybrid (no traditional counterpart) will have a first year worldwide production of 200,000. That's impressive... and makes sense. It will cost less than Civic-Hybrid. It should get rather impressive MPG, being smaller and using the next generation of their "assist" hybrid system. It will be a very practical design too, a hatchback. That means it will appeal to a wide consumer base all over the world. Of course, the first of the new Prius models will be competing directly with it. Makes you wonder how many Toyota will decide to produce, eh?

12-08-2007 **Same Reason.** The decision of whether or not to choose Li-Ion batteries is a no-brainer for Toyota & Honda. Both sight the same reason for holding off for awhile: COST! They both same repeatedly have said: "*it's simply too expensive*". So when Volt enthusiasts dismiss that, I get frustrated. That goes beyond not being objective. It's just plain stubborn. To not acknowledge that is the reason is bad enough. But to not face the fact that the current pricing is indeed well above that of NiMH is just plain wrong. That harsh reality will hopefully change in the next few years. But right now, that most definitely is not the case.

12-08-2007 **$88.28 Per Barrel.** Same story as last week... lots of up & down, then settling below $90 to close the week. Gas prices remain relatively low ($2.69) per gallon compared to diesel ($3.49) here. There's no hope of the situation ever getting better. In fact, the talk of increasing the gas tax continues to increase. It's pretty obvious that the problem requires significant attention. Minimal efforts of the past clearly aren't enough. Consumption is too high. Dependence is too high. Emissions are too high. That's all bad, no matter how you look at it.

12-08-2007 **Grille Blocking, quiet.** I hadn't realized the effect grille blocking would make on the sound of the engine. It's almost stealth like. Getting out to retrieve my postal mail from the mailbox, that struck me like a brick. I looked at the ScanGaugeII as I was getting back in the Prius and noticed the RPM wasn't zero, despite not hearing anything. What a pleasant surprise! I wonder how many others have noticed that. It hadn't ever occurred to me that a benefit like that was possible. Inside the car sounds the same as usual. But outside, pretty much nothing.

12-09-2007 **Grille Blocking, 20 degrees.** Based on the efficiency improvement I've observed so far, it appears as though my 100 percent *upper*-grille blocking and 70 percent *lower*-grille blocking (the middle 3 rows which squish the outer 2 smaller, plus that normal blockage from the license-plate) has the effect of making the hybrid system work as if it is 20 F degrees warmer. Sadly, the temperatures here in Minnesota have been colder than normal. So without knowing that, you won't notice much of a difference in my spreadsheet data and graphs. Who knows, maybe we'll get warmer later. Whatever the case, I see the benefit. I feel it too, since it's easier for the heater to provide warmth now. So as I've said before, it would have been nice to make these observations years ago. Unfortunately, the tools for monitoring have only recently become simple & affordable. Oh well. As least we have that knowledge now.

12-09-2007 **Smart Sales.** They will begin in January. 70 dealers somewhere in the United States will "offer" them... though specific regions weren't mentioned, just 9 in the Chicago area from where the article was written. 30,000 deposits have already been put down. That means the waiting list is already a year and a half long, since only 20,000 will be imported next year from Daimler in Europe. So the word "available" will be quite misleading. Anywho, the MPG numbers are 15 less city and 5 less highway than Prius. That efficiency comes from non-hybrid design... weighing 1,100 pounds less than Prius, featuring a 3-cylinder 70 horsepower engine, seating for only 2 people, providing almost nothing for cargo storage, and no spare tire. The price for the basic model will be $8,000 less than Prius. The well equipped model will be $5,000 less. That sounds fairly appealing considering it from that comparison point of view. But looking strictly at the EPA estimates of 33/40 (city/highway), it could be a tough sale for those who would prefer more seating and a trunk.

12-09-2007 **Increasing CAFE.** This new Energy Bill was written to improve many things... including an increase from automaker efficiency averages to 35 MPG (a 40 percent increase) by 2020. It was passed by the House, despite the president's threat to veto. Unfortunately, the Senate didn't like it. Something will eventually pass. Nothing has been done for 30 years, so this is change long overdue. But it's hard to know what. How much long can we no do anything, especially when the need is so obvious?

12-10-2007 **Treehugger?** I got asked if I consider myself that. My response was the question: "What am I doing to qualify as one that you won't be doing a few years from now?" I'm driving a hybrid. With new Prius sales this year of over 170,000 and over 1 million already on the road worldwide, I part of a growing population not someone associated with a standout stereotype. My choice is simply being among the first of many. A view for perspective would be to consider the hybrid system like the automatic transmission. It will slowly become a standard for the majority. Remember how front-wheel drive and fuel-injection became the popular choices too? Same thing. We will all adopting the new technologies. Reducing emissions & consumption of vehicles will be thought upon the same way as recycling at home. It has become the norm, since sending that resource to a landfill simply doesn't make any sense.

12-12-2007 **Frost.** Today's commute was an exciting "warm" morning, where Winter frost coated everything. The branches on leafless trees looked spectacular. But it was the moisture suspended in the air still that I was most interested in. That's what was getting sucked into the engine, creating a more powerful combustion than usually. The result was higher MPG. I really look forward to those rare occurrences. This one totally caught me off guard... until noticing what was happening on the Multi-Display. That was sweet!

12-12-2007 **135 MPG.** Now that the evening temperatures are commonly in the single digits, I have grown curious what new stuff my aftermarket gauge may reveal. In the Summer, the decent into the small valley I live in is with the engine off. It's plenty warm for it to shut off anytime during that 30 MPH drive downhill. But now in the Winter with the heater, shutting off doesn't always occur as you drive. Coming to a brief stop is sometimes required. That made me curious just how little the engine could run. So at the conclusion of my errand running, I watch carefully as I approached the house. 135 MPG was the efficiency. The engine slowed to 992 RPM with a load of only 14, barely an idle. It would be difficult to observe much less operation. That's pretty much as close to off as I could imagine. Makes you wonder what the next generation system will offer, eh?

12-12-2007 **How Green?** An article from Fox was published online today. I knew it was going to be bad. And sure enough, reading it was like reliving what happened many years ago... lots of misleading using totally inappropriate reasoning. This was my favorite quote: "*Using Consumer Reports' estimates, a Prius, which gets about 44 miles per gallon, will use about $960 in gasoline per year (at $3 per gallon for 14,000 miles), while a Fit, at 34 mpg for the stick-shift edition, will use about $1,250 — a savings for Prius owners of only $290.*" They used the fairly realistic MPG data from Consumer Reports and compared that the highway-only estimate of a smaller vehicle value with a manual transmission. How is that is even the slightest bit sincere? The city estimate for the automatic transmission is 27 MPG. How come no mention of that? And why not use actual values from test drives for Fit like they did for Prius. Or why not use the estimates for Prius? Of course doing that, the numbers are different. The 31 MPG for the Manual Fit compared to the 46 MPG Prius boosts that $290 by $159 more. Comparing to the more appropriate automatic instead, that's an additional $38 for Prius. And why the heck did they use 14,000 miles in the first place? Everyone else calculates using 15,000 miles. Doing that adds another $35... giving a grand total of $522 savings per year... without ever taking into account the fact that the Fit delivers the worst emission rating and the Prius the best, which naturally was never given any acknowledgement in the article... despite the fact that the article was titled: "*How Green is the Toyota Prius?*"

12-12-2007 **Intentional New Misconception, part 1.** More and more, I'm seeing Volt enthusiasts using "*electric range*" as their reasoning for why it is the best vehicle choice, mocking the competition offering less battery-capacity. They don't want you to know that's an apple-to-orange comparison, that "*electric range*" doesn't actually mean as much for a "full" hybrid. In fact, they are now trying to prevent that knowledge from being spread. My post today was quickly deleted. But not in the usual way, where the content is replaced with a message from the moderator providing an explanation of some sort. It was removed from the topic entirely. As far as I have witnessed, that has never been done on that website dedicated to Volt. Posts with profanity remain, but not mine. It's been eliminated, as if it never existed.

12-12-2007 **Intentional New Misconception, part 2.** This is what got me riled up: "*Wow! Seven whole miles!!! I can't wait!*" It was in response to an article stating that was the anticipated range of the plug-in Prius now being tested that can be driven up to 62 MPH using just electricity. You can only read such obvious attempts to feed a growing misconception so many times. Others have responded in the past with subtle comments about that comparison not being as straight forward as implied, mentioning how battery and design differences make range comparing inappropriate. But they didn't get any attention among a crowd growing louder with chants of "*electric range*" being of paramount importance. Remember, this is the same group that also dismisses battery cost without any consideration. So, this didn't surprise me. It did inform me though that I'd have to be more than just passive if I wanted more than just being ignored. So, I went with an abrasive approach, polite yet a message crystal clear and with some discontent added. Unfortunately, it simply got deleted.

12-12-2007 **Intentional New Misconception, part 3.** Here's that message, which I had hoped would convey the point that they are not the same... This misconception is getting tiring already. That's not how the upgrade actually works. With a "full" hybrid like Prius, the increased battery-capacity and a plug provides a MPG BOOST. In this case, an inexpensive MPG BOOST. The primary point isn't to deliver exclusive electric driving, though it can. So rather than averaging 50 MPG, you get 60 MPG instead... a MPG BOOST. Get it? If not, I'd really like some help here explaining that "full" hybrids and Volt cannot be directly compared like that. The systems are simply too different. Each operates in a unique way. MPG BOOST not RANGE EXTENSION! MPG BOOST not RANGE EXTENSION! MPG BOOST not RANGE EXTENSION! MPG BOOST not RANGE EXTENSION! MPG BOOST not RANGE EXTENSION! Get it?

12-12-2007 **Intentional New Misconception, part 4.** Did you get it? I've been using the "MPG BOOST" references since this last Summer, fearing there were attempts to intentionally create a new misconception. This evening, I believe I have been provided with confirmation that those feelings were indeed correct. Disingenuous posts about hybrids are nothing new. They tend to stick out for the veterans, having so much practice detecting them in the past. You find out your initial assumption was correct by reading everything certain people say. Their true purpose is eventually revealed. It's the anti-hybrid techniques used for a different purpose. Being patient and attentive is all it takes. But for me, I sometimes choose to play offense. Don't think of the increased battery-capacity in terms of extending range; it is there to boost MPG. After all, isn't the point adding a plug to increase efficiency?

12-12-2007 **Intentional New Misconception, part 5.** By the way, did you notice how I inverted the meaning of the phrase "RANGE EXTENSION"? For Volt, that means use of the engine. For Prius, that could now mean use of the added battery-capacity. It was a intended to transmit discontent in a clever & subtle way. Perhaps that misuse of the term struck a nerve. Whatever the case, expect to see more "MPG BOOST" references. I'm tired of their misleading. Additional electricity does not necessarily mean extended range for Prius. Though some owners might be able to use it that way, most will instead experience an engine that doesn't run as hard. RPM will be lower due to greater contribution from the electric motor; consequently, MPG will be higher. Geez! Why do some fight you every step of the way? Whenever spreading information about of how the various hybrid systems operate is undermined, there's a problem. Some intentionally attempt to prevent certain knowledge from being learned... as I witnessed today. My advice to you: Read carefully and ask for detail rather than assuming... because sometimes, a person is hoping you won't question their vague comments.

12-12-2007 **Intentional New Misconception, part 6.** One final thought, how do you think owners will respond years from now when they discover: Your RANGE will vary? It doesn't matter whether you've got the standard 3 miles of electric-only driving or extend it to 7 miles. The realities of cold & hot weather along with traffic & terrain result in efficiency lower than the official estimate provided. The EPA doesn't measure extremes like that. They just cover the basics. My guess is that a great majority of those plug-in Prius owners will already be aware of that prior to purchase. But what about Volt owners desiring 40 miles of electric-only range after all those years of waiting? Running their heater while stuck in stop & slow Winter traffic could be a harsh reality learning event. Ever think about how much more headlights are needed in the north? During the cold season here in Minnesota, I use them almost constantly... quite unlike in the Summer. Simple factors like less daylight being available are often forgotten we considering MPG. Things like that are a big oversight when it comes to running a car relying on electricity. How much of a draw will that electric heater actually take?

12-12-2007 **Intentional New Misconception, part 7.** Well... how about one more thought? In what way do you think aftermarket sales for augmenting a Prius for plug-in will be marketed? That version will have a slower maximum electric-only speed, 42 MPH instead of the 62 MPH from Toyota. Measurement criteria for range will certainly be confused by that factor, especially since there are no current standards establish. Advertising capacity of the battery-pack would makes sense, but the current emphasis on miles could make that difficult. Advertising real-world data from actual owners is by far the best, but that's a problem since waiting for those miles to be driven takes a long time. My guess is it will come down to the same factor I've been arguing about for ages: Price. I bet people will place that on the top of their shopping criteria and weigh it against their wants & needs. After all, isn't that how people currently decide what model & trim-level of vehicle to purchase? Finding how to appeal to consumers could be quite a challenge with a market not keenly aware of hybrid type difference; however, advertising price is very well established practice... and the industry is very slow to change. Think about it.

12-13-2007 **Intentional New Misconception, part 8.** I have no idea what happened. It was there. It disappeared. Then it came back. My post had even been responded to in a constructive manner. Perhaps it was just temporarily suppressed for review. That makes sense. I suspect many don't know how to treat me, am I friend or foe. My intent is to inform. They have no clue what's to come. Too much passion has them caught up in the moment. Just wait until the nightmare of poorly informed reporters start writing reviews. My personal logs are filled with frustration of how they had absolutely no idea what they were talking about, or how they just guessed, or they were intentionally vague, or they defending the competition in an insincere manner... They past was quite cruel at times. I hope this better prepares them for it. Taking the time here to voice my thoughts & feelings sure was worth it. Perhaps some will read what I wrote to gain insight to my perspective. Whatever the case, I don't what inaccuracies to be the cause of trouble. Clear understanding is very important.

12-13-2007 **Intentional New Misconception, part 9.** This response followed that odd situation: "*I believe [he] was referring to the fact that the plug-in Prius will not have a very large electric-only range. It is not a misconception...*" I replied with this: Study hybrid history. The very same type of comparison mismatch problem grew between the "assist" and "full" hybrids. Those technologies were not the same either, yet they were treated as if there was little difference... which lead to misconceptions. How's this any different? Comparing electric-only range between a "full" hybrid and whatever you choose to call Volt simply is not appropriate. It is an APPLE-to-ORANGE comparison. The way they use electricity is not the same. So comments implying similarity are counter-productive. In other words, that post contributed to an emerging new misconception. You may not see it as one now, but it could easily become one over time with enough posts like that. Consider what it will be like 3 years from now when Volt is available, then you'll begin to see my perspective of 8 years. I bet you'll do all you can make sure all is clearly understood too.

12-13-2007 **Intentional New Misconception, part 10.** Then I added this in a second post following that shortly afterward... Anywho, I'm hoping to help prepare you for what's to come. The audience will later change from the small number of well informed enthusiasts here to reporters that don't have a clue writing for large quantities of newbies out in the wild. Based on the past, it will get ugly. We've seen it too many times already. Don't make the mistake of being naive thinking it won't ever happen again. You'll read articles that are totally wrong or extremely vague or not correct for that particular vehicle. It's very frustrating when they don't realize the differences in design and don't bother to include enough detail. So what you see as playful banter here, may contribute to something quite different out there.

12-13-2007 **$3.00 Lifetime.** Why do so many accept monetary arguments against hybrids with calculations that state a $3.00 per gallon price for gas throughout the entire lifetime of the vehicle? In the past, whether or not the price would rise as worldwide demand for oil increased was something you could debate. Now, it is not. Sadly, we've proven that refinery capacity prevents an increase in gas no matter how much the supply of oil is increased. That results in higher prices, since no gas solution comes without a cost penalty. And of course, the price of oil itself keeps increasing too. So stating that gas will always cost $3.00 throughout at least the next 7 years is absurd... not the slightest bit realistic, in fact. Remember 7 years ago?

12-13-2007 **Frozen Conversation.** I haven't had a gas station encounter in quite some awhile now. Much of that probably has to do with filling up the tank during busy hours, when there's no time available to talk. But this evening, only one other person there... and he starred down the Prius as I pulled up to the pump. Sure enough, as I began to fill he approached. It was 12 F degrees out with a horribly brisk wind dropping the wind-chill factor below zero. The temperature (or lack of) had that burning effect on skin. It was very, very cold. So what did the two of us do? We shivered through a frozen conversation. Had asked quite a few questions about Winter performance. His reaction to me handing him a card with my own real-world data graphed on the back came as a complete surprise. That was exactly what he wanted, but was the last thing he actually expected to get. Carrying detail like that for immediate sharing with others really paid off in that situation. It allowed me to quickly get back in the warm Prius without leaving him unfulfilled. Phew!

12-13-2007 **35 MPG Victory?** That Energy Bill passed the Senate vote today. They ended up stripping out most of the taxing. That means the oil companies retained their favorable standing and renewable sources won't get the help they could have benefited from. I figured it would come to delivering the minimum. Of course, the document is around 1,000 pages. So whatever else is in or isn't in there remains a mystery. It may still change anyway. Now the House needs to vote on these revisions... and there's still the threat of a veto... which seems unlikely with so much of the tax provisions untouched. We'll see.

12-16-2007 **Online Discussions, Introduction.** They take on many different formats, have many different sources, attract many different participants. I like that variety. The diversity helps to confirm the same topic is being similarly interpreted, having so many perspectives available. It great for identifying patterns too. But alas, all things change. We are now in a state of change again. The question of "if" has change to a matter of "when" for most. So taking a moment to document the now before it becomes history is worthwhile.

12-16-2007 **Online Discussions, Sudden Death.** These are the most popular of discussions. The draw is most likely due to the content always being recent. Something new is announced. It is discussed heavily. Then people move on a newer topic. The lifecycle is usually just two days. On that third, comments are rarely added. It's dead already, interest lost by those who usually participate. The website dedicated to Volt enthusiasts fits that type precisely. There's a forum there too, but that doesn't attract like the front page featuring recent news where comments can be posted. So unfortunately, constructive discussion is very difficult due to attention being lost so quickly. They certainly try though. At least it's a handy resource for keeping up to date.

12-16-2007 **Online Discussions, Arguing Semantics.** Sadly, this is the least constructive. Strangely, it doesn't affect the audiences you'd think. The website dedicated to Volt actually does remain relatively well focused on the actual products at hand. Their desire to deliver something viable (and fiercely competitive) helps tremendously. That big GM forum is the complete opposite. The loudest voices their couldn't care less about a competitive product. Their priority is bragging rights. A small quantity of vehicles with impressive engineering is all they seem to care about. It's very frustrating. Rather than the ultimate goal of replacing a large volume of automaker production with greatly improved technology, discussion about why you'd want to do that is all the further they seem to get nowadays... interjected with a congratulations for two-mode, despite no real-world data being available yet to support the claim or a single sale having occurred yet. Why are they arguing the merit of hybrids still? Semantics are pointless now that a hybrid has been maintaining a position in the top-20 sales list... especially in a world concerned about oil & pollution.

12-16-2007 **Online Discussions, Hopeful Future.** There are some that couldn't care less about the nonsense of the past, remaining 20th Century legacy will fade with inevitable "extinct" label to follow. Something better is guaranteed as far as they are concerned. These discussions are intriguing, quite compelling at times too... but not always thorough. My biggest gripe is the refusal to acknowledge all market aspects, cost/price/profit being the most important. Consumer appeal is far from the only factor at play; however, considerations about manufacturing & supplier capacities rarely gets ever attention. If you want cheerleading and a optimistic outlook, look there and bring a lot of patience. Ultimately, they'll get want they want, but it won't be without the realities of economics & politics slowing that progress in the meantime.

12-16-2007 **Online Discussions, Prius.** With 10 years of history already, discussions span the entire spectrum. You get newbie introductions followed by a post with details about what a long-time owner observed on their secondary gauges. There's a wide variety of topics to choose from, but they virtually all have one thing in common: Prius is now a mainstream vehicle. Misconceptions have been dispelled. There's no reason to question success anymore. Happy owners are plentiful balanced by a small number seeking advice for the occasional problem or those not understanding what the Multi-Display shows. Makes you wonder what discussions about traditional vehicles are like, eh?

12-17-2007 **Taurus X.** Ford discontinued the once very popular Taurus. Heck, I even owned one once. Consumers weren't pleased. It proved to be a bad choice. So, Ford decided to bring it back in some form. Today, I found out how. A new crossover vehicle shot by me on the highway. My eyes caught a glimpse of the nameplate. I dropped the pedal in the Prius to catch it. Moments later, to my surprise, I saw that it actually did say that. I could clearly see "Taurus X" on the back. Is that what the sedan/wagon has now become? Or is that "X" there to indicate a new line of vehicles, like Scion is and what Prius may become? Hmm.

12-17-2007 **Classic Commercials.** I bought a 2-disc DVD collection of very, very, very old television commercials. That blast back to the past had very disturbing start. The first dozen commercials were for cigarettes & cigars. Back in that age of black & white, smoking had little resistance. It was just what people did. In fact, that was extremely popular. Health warnings didn't come until decades later. Sound familiar? Worse yet, the commercials that followed stressed how more was better. Faster relief. Stronger strength. It was the birth of our obsession. 50 years later, we have now grossly exceeded the need and we are beginning to realize the resulting damage. Makes you wonder if those absurd SUV commercials for conditions owners never actually drive will be featured in a retrospective decades from now... or perhaps, sooner.

12-17-2007 **Sales Misleading.** It has begun. The very first report of a consumer getting Two-Mode information *first* from a salesperson was shared online this evening. He was told seeing as much as 28 MPG was possible. It was in a vague way though, so the fact that it was unrealistic would slip by without drawing attention. Sound familiar? Sighting an extreme and quite rare example isn't a lie. But omitting how unlikely it is allows for assumptions... something a salesperson can gain from. Thankfully, those in the forum burst that hope right away. Fortunately, they are aware that false expectations are harmful. I wonder what else they've picked up in preparation for the debut of Two-Mode. Hmm? Will we actually get real-world data reported in a proper on-going manner? That approach is the only sincere attempt to portray an realistic representation. We'll see. There's hope. That newbie was smart enough to ask online afterward if that information he was given sounded correct.

12-17-2007 **Wrong Thread.** It's extremely difficult to determine whether or not salespeople are poorly informed or intentionally allowing you to assume. In forums, the situation is quite difficult. Over the past few days, a long-time antagonist attempted to undermine a thread about Volt on the big Prius forum. He does everything he can to derail discussions about the competition. In this case, it was the technique of changing topics. Getting people to discuss something else sours the appeal of the thread, causing the constructive nature to be lost. Lucky for us, he picked the wrong thread. Choosing to force posts related to emissions made it worse. He tried to argue that more clean-vehicle choices (of the same size & type) was better. That tends to make sense for consumer shopping. But in reality, it's actual sales that make a difference. And sadly, those traditional vehicles offering PZEV emission ratings have not sold well... because few have actually be produced. Those models offered are basically just automaker trophies. They are not purchased much, in part due to being so hard to find. Prius on the other hand, is just a single model available in large quantities. Sales are record breaking as a result. One model... just like Volt will be. That's a very limited choice, yet it works anyway. Investing heavily in a small number of high-volume choices is often a better choice, as opposed to the risk of being spread too thin.

12-18-2007 **Frustrated.** There are some Volt enthusiasts now aware of my support for Prius, unfortunately they haven't bothered to research my background. So, just like I've seen in the past from other enthusiasts, they just assume I'm there to undermine. If I'm not there in support of a $30,000 Volt with a 40-mile electric-only range, I must be some form of resistance. Can I express to them how that specific configuration isn't the end-all-and-be-all solution? One that reduces price significantly by offering a reduced range, say 20 miles, would open up sales to a much wider market. Their purist mentality makes for quite a challenge to overcome. Using the engine is considered bad, period. Most there hope to rely exclusively on a plug, thinking of the engine as only an emergency backup. That isn't reality. It's an ideal. That plug will get used often, but the engine won't remain dormant as they hope. The diversity of Prius owners reveals that. I suppose this group of enthusiasts will become like the "hypermilers" of Prius... a small group clearly not representative of the typical owner. So, I guess there isn't much reason to be frustrated by their incorrect assumptions.

12-19-2007 **35 MPG is Official.** The House approved the revisions from the Senate and the President signed the bill. It's official. A fleet average of 35 MPG must be achieved by 2020 for each automaker. Details beyond that remain unclear. The effort is to reduce our dependence on oil and finally do something about carbon emissions. For such an industrious nation to take basically no responsibility in the past was embarrassing. We actually slipped backward, making the situation worse instead of better. But how will this "contribution" be received? The obsession with driving grossly oversized & overpowered vehicles on the daily commute to work was just plain wrong. The vehicle should be used for the purpose it was designed, which clearly wasn't happening. Remember the 80's, when people used their car most of the time and saved their truck for only when it was truly needed? Those times will hopefully return. It's too late for that to effect efficiency standards though. Abuse of the past wrecked that. Automaker profit compelled them to focus on size, neglecting efficiency as a result. Now all new vehicles will need to be improved, regardless of how they are used. What will that do to production plans? How will that effect inventory? When will automakers take new technologies seriously?

12-19-2007 **Cold Recharging.** My hunt for detail about battery development for the coming plug-in hybrids brought me to an interesting place yesterday. I found myself on Google searching for confirmation of a comment someone had candidly made. Sure enough, a large number of hits came back showing that it was indeed true. No wonder supporters are cautious about what they discuss. Without enough information, the point could be a source of great distress. So, let's see how I do... It turns out that "*cell impedance goes up and the acceptance of the ions on the anode is drastically reduced*" for Li-Ion batteries when the temperature is below freezing (32 F, 0 C). In other words, someone like me wouldn't be able to recharge the battery-pack from November to March. That is obviously a major stumbling point in the move to replace NiMH batteries. Think about it. When was the last time you plugged in your laptop outside overnight in January? Never! That's why there is no basis of comparison better typical consumer devices and hybrids. And remember, the hybrid battery components must work much longer in an environment with lots of vibration... and hostile temperatures. Needless to say, the plug for recharging will need to include a built-in heater for battery-pack. It is yet another hurdle to overcome, adding to the cost of the very expensive upgrade to Li-Ion.

12-19-2007 **Real Competition.** Honda president Takeo Fukui said this today at a year-end press conference: "*Until now, the hybrid vehicle business has been about creating impressions and images among potential buyers, and not about producing profitable vehicles at affordable prices.*" It's as though he's been reading from the GM playbook. Obviously, it is a stall tactic. The hope is to pretend Toyota hasn't already achieved that level of success with Prius yet. The reason for this denial attitude is simple. Next year will bring the debut of Honda's first mass-production intended hybrid-only (no traditional counterpart) vehicle. Insight never had that purpose. It was indeed just a showcase type effort. This new one will be quite different.

12-19-2007 **Doesn't Understand.** More from Honda's president were these comments... "*I do not understand why people see value in plug-in (hybrids).*" and "*I cannot understand the rational for (developing) plug-ins.*" Is that really negative propaganda, attempts to swing favor to "assist" hybrids impractical for electric-only drive? A future where plug-in hybrids become popular would put Honda at a competitive disadvantage. So it is very difficult taking what has said with any sincerity... especially since no reasoning was included. After all, the prototype Prius on the road are proving a very effective MPG BOOST over the factory model. How can he not understand how some would be interested in an augmentation like that?

12-20-2007 **Do Nothing.** Listening to the President's live address to the nation this morning was frustrating, as usual. When he got to the newly signed Energy Bill, there was nothing new. It was the same old set of excuses about Kyoto. Because a large & industrious nation like China wasn't participating, why should the United States agree to anything? Rather than suggesting an alternative, he decided for us to do nothing. That's what really gets me. How is that even the slightest bit constructive? Do nothing? That "why bother" attitude is just plain wrong. Look at how the bill itself came about for some perspective. Suggestions were passed back & forth for a very long time. Ideas emerged. Compromises were made. Eventually, the final strategy came about. It was agreed upon. But with Kyoto, no attempt of that nature was made. He simply wasn't interested in pursuing that. Heck, even antagonists suggest alternatives. Sadly, that has proven an effective way to undermine at times. With this though, the choice was to not acknowledge any effort to reduce carbon emissions... until yesterday. Now... it has become a priority. And frustratingly, the attitude being conveyed is one of starting from the beginning... as if the progress over the past 7 years never happened. Do something. But what?

12-20-2007 **Efficiency Estimates.** Now that topic is really getting attention. How will vehicles that take advantage of externally supplied electricity contribute to the 35 MPG requirement? This is what I posted as a comment on the Volt website, where they are especially considered but have little exposure to this topic compared to the long-time hybrid enthusiast... MPG has always been a misleading measure. The purpose doesn't make sense. Isn't the intent of a vehicle to get from location to location? How is that travel need considered? DISTANCE! That's why most of the rest of the world uses "liters / 100 km" as a basis to measure efficiency instead. At first, the two seem to be the same. But when considering how much easier it is to introduce other forms of energy into the distance equation, like electricity, it makes more sense. That type of calculation is clearly a better choice. Future estimates from the EPA will factor consumption that way, with respect to a standardized distance. After all, the same problem exists when trying to figure out efficiency rates of various blends of ethanol. That's the case for cold climate operation too. DISTANCE is the key. They may translate it into a MPG equivalent for those that don't readily accept change. But the underlying equation will have a basis centered around the purpose to travel a specific distance, not gallons.

12-20-2007 **The Struggle.** I've been watching Volt enthusiasts really start to struggle now. Some are genuinely trying to build credibility with constructive discussions... but are constantly facing misconception, without any strategy for combating them. I see that routinely with differences between the "full" and "series" hybrid types. But what's worse is not understanding the market in general. For example, this summarization comment: "*That is, pressure from consumers for affordable to fuel vehicles will be the biggest driver to higher fleet averages, not CAFE mandates.*" I pointed out how pressure from consumers invokes a REACTIVE response, after the need has already become obvious. Mandates, on the other hand, tell you what's coming and serve as a warning to invest in the need ahead of time. That PROACTIVE approach allows for well thought out plans. There is far less of a rush mentality. That's what Volt is suppose to represent. But few understand that still. Some of us are frustrated with the status quo already, tired of waiting. We at least expect an effort from online discussion participants to be realistic, acknowledging events of the past. Reasonable expectations cannot be formed without that. Take a look at the Prius community for an example of what to do while waiting for delivery of Volt itself. Of course, that means moving beyond the idealistic to become practical for mass acceptance.

12-21-2007 **Waiting For Details.** Finding out what the 35 MPG mandate really entails has been trying. The usual sources simply aren't providing any... except the fact that California was denied their waver request to the EPA, allowing them to regulate emission standards of their own. Ever since 1975, that type of request has been approved But not anymore. Governor Schwarzenegger said he will sue for that right. Shouldn't automakers accept some level of responsibility for contributing to climate change? Expecting improvement should be a given, not something we should have to fight for. How much longer must we continue to accept the status quo? Do we really have to wait until 2020?

12-21-2007 **Winter Humidity.** The Prius sure was happy today. MPG was outstanding due to the humidity. It was so thick there was a mist constantly obscuring the windshield. That level of moisture is something I didn't emphasize in the document about Winter misconceptions. Being practically desert-like usually, a commute like this morning is quite an extreme... but not that uncommon in the Summer, hence contributing to much better efficiency then. As I witnessed, the difference is amazing. Too bad all engines are affected the same way. It would be great if somehow a hybrid would be affected less. Oh well. I'll just enjoy occasional thaw and dream about Spring.

12-22-2007 **7-Speed DSG.** The arguments from VW supporters (specifically, diesel owners) was that the supposed higher cost & complexity of the system cancelled out any benefit which could be recognized by hybrids. So, I am very curious how this most recent announcement from VW will be responded to. Their DSG (automatic-shift manual transmission) will be offered with a 7-speed transmission. Is paying the extra 1,750 euros for that option really worth it? Hybrids continue to improve. They will become even more competitive. How will a VW compete with efficiency only, especially when you consider coming battery improvements and smog-related emissions?

12-23-2007 **Calling it "Dual".** There are quite a few members of the big GM forum that still don't refer to GM's newest hybrid technology by its official name of "Two-Mode". That makes me wonder what the heck the typical consumer will think. There will obviously be some level of confusion. As a newbie, I would wonder if there was some sort of difference I wasn't aware of. It simply doesn't make any sense to refer to a new product by a different name. That's terrible marketing too. Name recognition is a huge. Advertisers rely on that. So why aren't the supporters understanding that need? It's sloppy if nothing else, because searches won't be as effective. Whatever the case, I sure am glad Toyota promoted "HSD" labeling so heavily. That makes identifying the technology simple. No guessing required.

12-24-2007 **Rental Pickups.** The large hardware stores around here offer rental pickups. The first 75 minutes of use is just $18.95 which includes gas. So the need for a large vehicle where you'd rather do the delivery yourself is no big deal. Today, someone took that rental opportunity to the next level. Rather than seeing lumber or something hardware related in back, there was a new 56-inch television box. It was enormous! With an object that must be transported upright, the solution to get it home was clever. Why pay & wait for the electronic store to deliver when you can just use the truck at the hardware store? That's even cheaper than what the usual moving rental places charge. Having large vehicles available like that is great... when a hatchback won't do. But don't forget, I fit over a dozen large bags of leaves for composting in my Prius.

12-24-2007 **Pickup Purging.** Speaking of pickups, that was the big news this morning. GM is looking at a huge inventory problem... again. Next month will bring slowing of production and "fire" sales. Currently, there are $5,000 rebates available. That's what really means makes me curious. Just how drastic will these upcoming changes be? Fortunately, they are not alone. The other automakers are suffering too, just not as bad. The norm is to have a 60-day supply available. Silverado is worse sitting at 153 right now and Sierra at 150. So, they get the "over-produced" label according to the experts, who state this should have been foreseen. But under producing could means giving sales to the competition if predictions were incorrect. Old habits die hard. The market is shrinking. Will that lesson be learned this time?

12-24-2007 **Hill Climbing.** Again with the pickup stuff. This time, it was a personal observation. I was driving next to one towing a large 4-wheel recreational vehicle. There was no indication of trailer burden... until the hill. Whoa! The smoke that suddenly emerged from the tailpipe was amazing. There was a huge plume of black soot. Nasty! Until that moment, I hadn't ever considered how towing could negatively impact emissions of a truck even when a trailer is not connected. Strain from the occasional load obviously wears the seals on the engine. As I had witnessed firsthand, the piston rings allowed lubrication oil to squeeze through into the combustion area. Leaks like that will destroy the emission system, which unfortunately is something the EPA never tests for... and no one ever talks about.

12-25-2007 **Garmin.** Aftermarket add-on navigation systems are more popular than ever... so much so that they are becoming a common sight. Look back 7 years ago, how conservative of an approach Toyota took to delivering an interface that used a screen. That was unheard back then. There were very real concerns about safety, despite the fact that many premium radio systems actually delivered more complex displays. Now, you don't hear anything of a backlash nature. They are excepted as a normal upgrade feature. It's about time. Seeing dashboards without a screen is so 20th Century.

12-26-2007 **Snowy.** We sure are getting the snow now. Yippee! I enjoy the drastic seasonal changes here in Minnesota. That variety is very refreshing. I certainly enjoy & appreciate the kayak 6 months later a whole lot more. All this fresh snow today obviously makes the driving very different. Look & Feel are quite a change, even in a Prius. For one thing, you drive much slower from all the traffic. That makes up for the drop in efficiency the Winter climate brings. You don't even have to try to keep the car clean either; that's a futile endeavor. It's just what happens every year. I like it!

12-27-2007 **90,000 Mile - Service.** This was the "comprehensive" one. They did the usual "check everything" inspection. I was informed that the tires were down to the "better start thinking of new ones" level. But I already knew that. In fact, I didn't rotate last time intentionally so this would be the final until replacement. Fluids were topped off, which is good because I had a tiny gurgle from the heater due to the antifreeze being down just a touch. The rear brakes needed cleaning, but I knew that too. The report on wear was great. Both sets may actually last the entire lifetime of the vehicle. That's a nice money saver. Engine, Cabin (Air Conditioner), and Oil filter were not changed. I do that along with the oil myself at other times. The wait at the dealer was just an hour. They had wireless internet, television, and coffee there to keep me entertained. But naturally, I was most interested in the delivery of 4 new Prius and the other 2 Prius being serviced at that time. The bill came to $159.97 this time. That's pretty reasonable.

12-27-2007 **Oil Scare.** The assassination of the Pakistan leader, Benazir Bhutto, shook up the political world today. How much of that was genuine fear? The stimulus certainly wasn't entirely. It was one of those eye-opening experiences. For me, it was in the form of a national news network reporting financial reaction to the situation in the form of a 70-cent jump in the price of oil. I absolutely could not figure out how they could claim that. Nothing only was even remotely close. The source I check, Bloomberg Energy Prices, is refreshed every few minutes. They were reporting a 13-cent drop. It sure gave me the impression the news was not being honest. What do you think?

12-27-2007 **Prius Bashing.** The cheerleading mentally is starting to overtake constructive discussion. The webmaster of the website devoted to Volt enthusiasts sounded off today with hopes of circumventing that undesirable trend. He knows quite well how credibility is lost if that type of online activity gets out of hand. Discouragement was blunt, but kind. With so much time to wait still, I can't imagine how keeping focus on the ultimate goal can be achieved without embracing Prius. Mainstream success means years of appealing to the non-enthusiast... just like what Toyota has done. Look at how many Camry-Hybrid have been purchased, despite so little attention given to it. That's proof of new technology acceptance. You can't just have a single product. Volt can be a vehicle that draws the spotlight, but alone it won't be able to achieve widespread change. Something else has to be included. The bashers, those speaking ill of Prius, haven't accepted that reality yet.

12-28-2007 **$96.60 Per Barrel.** Oil is high. That puts gas (well, E10 actually) prices here at $2.99 per gallon. Diesel (which is actually B2) has been selling for $3.39 per gallon. Those days of cheap fuel are obviously gone. I simply can't imagine seeing much lower than $2.97 anymore... especially since this is as far from travel season as possible. Just imagine what the situation could be like by late May. Scary, eh?

12-28-2007 **Green Pulsing.** I've driven the same commute route over the past four Winters, plus this one, several hundred times now. So the fact that I experienced something new today was quite a surprise. Normally, the charge-level is at the top of blue (6 bars). On occasion, it will climb up a single bar to green. But that doesn't happen often. So the fact that this time it exceeded the highest level, all green (8 bars), and began the pulsing discharge caught me totally off guard. Being just a block from the parking ramp, I shut off the heater at the stoplight. The engine immediately shut off by doing that. But then, I saw the RPM go up... then down... then up. Huh? Not ever having witnessed that with a scan-tool, I had to step my mind back to just listening as in the past. Sure enough, it was pulsing to bleed off the excess electricity to ensure maximum battery-pack. (The motor revs the revs up to start speed, allows it to slow, then repeats the process until the charge-level gets below the optimal high of 80 percent.) That was pretty cool to see.

12-29-2007 **90,000 Mile - Oil Change.** Same old routine... other than it was cold this time, so I fired up the propane heater in the garage. The change was quick & easy. It's an opportunity to inspect the underneath of the car and get a very close look at the tires. All looked good... which is quite different from the experiences with my first car decades back. Things sure have improved since then. It was $26.13 for the oil, filter, and gasket.

12-29-2007 **Battery Differences.** This dilemma has been getting a lot of attention lately. Can a single provider produce enough battery-packs to satisfy demand? For Volt, there are two large companies striving to win a contract to do exactly that. If one gets it, what about the other? An automaker would introduce serious risk if they award contracts to both. Buyers may insist upon one or the other for their purchase... based on hearsay from other consumers, just like the computer industry has faced for years. Wanting an Intel or AMD processor is a great example of that. People don't care about the various minor components. But the heart of the product is an entirely different matter. And if the other provider doesn't get that contract, they will likely make an offer to the competition. An automaker could end up really regretting that prior decision to choose the other. So, what is GM going to do?

12-30-2007 **Reality.** The Volt enthusiasts are at a lost about how to promote. Approach varies quite a bit still. Naturally, there are some that bash Prius. Others, as in this case, just want to ignore that past and start fresh. Stating battery-pack life in terms of years only is what prompted this response from me... Study hybrid history. You're in for quite a surprise. Like it or not, miles will be required as a measure of lifetime expectation. The number of years or charging cycles is simply not enough. Volt will exist in a world dominated by non-hybrids for a very long time. You will have no choice but to convey information in terms that can be directly related. Achieving mainstream sales volume will require some ideals to be set aside until later. Reality is that emphasis of similarities to the traditional will accelerate acceptance. It's counter-intuitive to the enthusiast, but already well proven by Prius. Ask yourself what you truly want to promote... a vehicle that stands out or one that will be purchased in quantities so great it will just become a common sight?

12-30-2007 **Fines.** Figures were released today stating what the fines were for 2006 model year CAFE violations. DaimlerChrysler was fined $30 million, almost double that of prior year. That beat the previous record of $28 million by BMW in 2001. The upcoming new efficiency standards are expected to bring more frequent & larger fines. How much do you think some automakers care? I'm will to bet a few seriously consider just paying the fine rather than having to modify what they sell. That's a bad attitude toward change. Too bad status quo remains the production theme. Popularity is turning green, but that's only with respect to attention... not actual inventory.

1-01-2008 **Dwelling on Trivia.** Some are compelled to, forgetting what the word "trivia" actually means. The record highest price for gas is trivial. When the value of the dollar changes, so do the statistics. How is that helpful? Each article's so-called facts are totally dependent upon when you read it. Taken out of context, the numbers are worthless. Yet, the dwelling continues. I attempted to interject, but am not certain how that advice will be taken... "*Adjusted for Inflation*" is a red herring. What difference does that value from 1981 really make in 2008? It was a temporary spike, quite different from on-going high prices we are experiencing now. The supply & demand problem we face today has a permanent nature to it. Expecting a 50% drop afterward, like what happened back then, simply isn't realistic. So why waste time on the topic? Focus on the solutions instead.

1-01-2008 **Grille Blocking, first month.** December is over. The results are in. They were quite unspectacular. But then again, the holiday, vacation days, and temperature swings make it a month of variance anyway. The prior 4 years yielded December monthly averages of 46.5, 44.2, 43.7, 45.5 respectively. With a total of 6,948 miles, the resulting 45.0 MPG overall average should be representative of what to expect. So with grille blocking, I was hoping for more. Instead, it came to 44.1 MPG. The Multi-Display gives the impression that efficiency has been improved. But with so many variables at play, it sure is proving difficult to verify. I guess January will keep me quite curious.

1-02-2008 **Still No Two-Mode.** So where the heck is it? The "*late 2007*" delivery opportunity is gone. It's a different year now and still no sign of the hybrid for purchase. What happened? You'd think with the auto shows now taking place it would be the perfect time to have it available; instead, there's nothing but a growing bitter attitude against hybrids on the big GM forum. I wondered if things would get ugly as the urgency to take efficiency needs serious grew. The situation isn't looking good. Waiting 3 more years for the first major MPG advancement for cars from this automaker isn't going to fly well. People want that choice already. Focusing on a truck first was bad enough. But even that hasn't appeared yet. Why is there a delay?

1-03-2008 **2007 Sales.** Thank goodness the silliness of last year didn't repeat again. The popular media claimed sales were down, even though the difference was only a statistical anomaly caused by normal inventory handling. This time, Prius were being delivered based on demand rather than a fixed quota. That amounted to a very large increase in sales. That total was 181,221 for the year here in the United States. It officially earns this hybrid the title of "*mainstream*" no matter how the numbers are considered. Sales of Camry-Hybrid aren't being listed anymore. Toyota appears to be taking the "*just another model*" approach now. But by subtracting total monthly sales from that of Prius, the result reveals that sales of Camry-Hybrid and Highlander-Hybrid come to 10,057 combined. I don't see how that can be interpreted as bad, but I'm sure someone will figure out how to spin that. From my viewpoint, it was a very good year. I can't wait to witness what 2008 brings.

1-03-2008 **$100 Per Barrel.** During trading yesterday, the price of oil finally hit that magic mark. I sure am glad that's over, but the nonsense about "highest" certainly isn't. The obsession with that is amazing. Some people just can't get over the fact that it has little actual meaning. It's like reporting the highest MPG you've ever achieved with a Prius. That value means practically nothing compared to the lifetime average. And when you take the time to consider how much gas costs over any lengthy duration of time, it's the same situation. A spike really doesn't equate to much. On-Going activity is what truly matters... which paints a very troubling picture. The price of oil is experiencing an upward trend. Remember how seeing $2 per gallon used to scare people? Now $3 doesn't even have that shock effect. That's quite disturbing.

1-03-2008 **Small Pickups.** That market has been abandoned here. There is only one compact-size currently available, and it has already been declared dead. So the debut appearance of a concept model using HSD really had reporters at a loss. Predicting how consumers would react is anyone's guess. The obsession with massive & powerful made the once popular small pickup a product no automaker wanted to offer anymore. A comeback in the form of a hybrid seems like an incredible opportunity to me. What a great method of swaying people back to something more practical, not to mention affordable. It will be interesting to see what happens. Toyota's more robust hybrid (the two-stage design) currently available in a very expensive Lexus sedan is the likely candidate for large heavy-duty truck implementation. This 4-cylinder concept model would be the perfect for "*good fuel economy, advanced functionality, maneuverability, unique styling... and a durable package*", as the development team stated. We'll see. There's hope now.

1-04-2008 **Market Penetration.** Hybrids have quite a challenge. The need is to get a majority of the market buying a particular type of new technology. Brand and design particulars can vary, but operation must resemble a common goal. Without that, the market gets stuck in a chaotic state. History of the automobile shows that to be a fundamental of how success for the industry as a whole was achieved. In other words, there has to be some level of agreement. The computer industry has struggled with this. There are many examples of failed attempts to achieve a new standard. Eventually, something emerges. It has to. The entertainment industry faced that in a big way. For the high-definition disc market to advance beyond niche, a single format must be chosen. The battle between HD-DVD and Blu-Ray was seemingly won today when the biggest product division of Warner selected the latter for their exclusive support. Supporters declared the war over. People like me are responding by stating a harsh reality of the situation. The war is to replace DVD as the mainstream choice for consumers, not just studios siding with any particular format. Imagine if automakers all agreed about what hybrid type to favor. It wouldn't make any difference if only a small audience was served. Success is measured in terms of market penetration. When a large chunk of the population abandons an old technology adopting the newer as a replacement, then you know it is a true winner.

1-05-2008 **Two-Mode Confusion.** There hasn't been a review published for awhile. Today brought a new one. That fresh look didn't make the supporters happy. With this sentence in the concluding paragraph, I don't blame them: "*For now, we have this paradox, a fantastically fuel-efficient vehicle that's still a gas hog.*" But I do blame them for not being sincere. Tahoe-Hybrid consumes a lot of gas. Delivering better MPG shouldn't hide that fact. Supporters certainly try though. Remember back when trucks didn't pretend to be cars? They don't. So, I'm curious as heck how those buying Two-Mode pickups will react to this conflict with Two-Mode SUVs. The pickups are far more likely to be used for the purpose they were designed, things only trucks can do. Anywho, I got a kick out of reading this quote too: "*GM has made a fair amount of bubbles calling it a "two-mode" system, though I'm not clear even now what the two modes are. I count three: electric only; gas only; and/or gas-electric...*"

1-05-2008 **Gas Price Surges.** Last night, it jumped to $3.05 per gallon. Early this morning, it was back down to $2.99 per gallon. Why such a brief surge? Is this something new we will now have to deal with? If so, predicting it won't be too hard since yesterday was Friday. The sudden change seemed to be a maneuver to discourage the usual pre-weekend-travel fill up, as if supply was to small to handle the temporary jump in demand. Whatever the case, it seemed very odd for it to climb & drop in such a short amount of time. Of course, it could be that the impact of seeing a "3" on the sign is more frightening to people than is generally acknowledged.

1-06-2008 **Two-Mode Vue, part 1.** In an interesting twist, today brought an announcement about the hybrid model Vue offering Two-Mode. It sure was good to hear about a more practical-sized vehicle getting the technology. But it is difficult to say good things about it when the target market still isn't being addressed. Efficiency has been what people have been begging for. If better MPG can be achieved from a non-hybrid model, convincing them to purchase the hybrid instead will be quite challenge... one that GM has just accepted. Their primary argument is emissions (including smog reduction, believe it or not!) and power. I'm very curious what the reaction to this will be.

1-06-2008 **Two-Mode Vue, part 2.** This was my first post in reaction to reading the article... It's about dang time they take smog-related emissions seriously. BAS did nothing to improve them and the first Two-Mode vehicle actually made them worse. Finally hearing about something better than the traditional design is long overdue, especially since GM loves to promote so far in advance of the vehicle actually being available. Unfortunately, the article only made a vague reference to efficiency without actual comparison to the competition or even itself with a smaller engine. And since the title states "*World's Most Fuel-Efficient V6 SUV*", that lack of detail is reason to be concerned. How can they make that claim with only an "*up to*" percentage value? Why no MPG estimate of any kind? After all, that is the very thing consumers expect to be provided.

1-06-2008 **Two-Mode Vue, part 3.** This was my second post... Highlander-Hybrid offers a similar figuration; however, the vehicle GM will be competing more directly with is from itself. Once a consumer selects an automaker to buy from, comparing the models they offer is obviously the next step in the purchase decision. That will lead to intense scrutiny between the traditional 4-cylinder Vue and 6-cylinder Two-Mode hybrid. The price should make things very interesting. Of course, that wasn't mentioned either.

1-06-2008 **Two-Mode Vue, part 4.** Since most of the worldwide population will be buying a car (sedan, wagon, hatchback, or coupe), I'm still waiting for something like that from GM. Toyota already has both Prius & Camry-Hybrid topping that list for hybrids. Honda offers Civic-Hybrid with a new hybrid on the way. Ford will be offering Fusion-Hybrid soon. Where's the genuine competition from GM? I'm absolutely thrilled, more like relieved, that the Two-Mode Vue will deliver a PZEV emission rating. But no 4-cylinder option from any Two-Mode vehicle is troubling. What will people wanting great efficiency buy? How will GM reach that 35 MPG requirement? It sure looks like they are betting the farm on the "series" hybrid to fulfill that need instead of the "full".

1-07-2008 **Pulsing Discharge.** I witnessed it again. The first occurrence took years and was intentionally invoked. So the odds of naturally observing battery-pack charge-level beyond the upper-limit of 80 percent is quite rare here in the flat part of Minnesota. You may see 8 bars filled (all green on the Energy Screen), but exceeding that pretty much never happens. Yet, it did twice to my Prius within the same week. Is it possible that the climb to green (more than 6 bars) from the usual blues wasn't a software update? Could it have been part of the normal aging process of a hybrid... a type of late-life break-in that no one was aware of? Today's watching of the engine RPM climb & continue via electricity for the sake lowering charge-level certainly made me ponder that thought.

1-08-2008 **E-Flex Concept.** The fuel-cell promotion continues. Cadillac Provoq made its debut. This was a plug-in hybrid that had a hydrogen powered stack for secondary electricity rather than a combustion engine. Why are they showing it now? Building a green image is an obvious motive. But without any plug-in hybrids available yet, this could become a source of confusion or disenchantment. What will people buy in the meantime and how long are they willing to actually wait? The cliché label of "*all bark and no bite*" continues to be appropriate. People are looking for solutions to embrace now, not something their children might drive.

1-08-2008 **Aura-Hybrid.** I saw my first today. It was big deal, knowing how few there actually are... and may ever be. Unfortunately, the Prius was filled with my coworker's at the time. So they couldn't resist mocking me when I got excited by a competitor's hybrid that just shot by at a much faster speed. The fact that I was preparing to exit the highway didn't matter. It was getting away and I made no effort to chase it down. You just can't win sometimes. Oh well.

1-08-2008 **Basically Clueless.** It truly amazes me that there is little interest in Prius coming from Volt enthusiasts. They apparently assume that their hybrid will be so different that the market influences currently present won't matter then. Whatever the case, they clearly don't know how Prius actually works or even what components it uses. So, I finally had it and responded with this... All the guessing about how Prius works is quite troubling. If nothing else, for Volt credibility, it would be best to learn the facts, starting with these: Prius EV mode = 35 MPH. Prius STEALTH = 42 MPH. Prius PHEV max = 62 MPH. Faster than that, the engine can still shut off. The only requirement is that it spin to balance the RPM of the PSD (Power Split Device). STEALTH is EV too, but the engine-on threshold is lower. The big motor is 50kW. The small motor is 10kW. Maximum use is not the point, high MPG at the cleanest emissions is.

1-09-2008 **Best Intentions.** The circumstances influencing implementation & acceptance of advanced battery hybrids is far more complicated the Volt enthusiasts realize. Will they slowly catch on to that based on the hints I provide or will that fact suddenly come crashing down all at once? Today's discussion about the "*late 2010*" no longer being a true drop-dead release date definitely stirred concern. I wonder if this contribution I posted will make any difference... Even with well tuned engineering and best of intentions, the challenges remaining are almost overwhelming. Study hybrid history. You're in for quite a surprise. Certain decisions came about for very unexpected reasons. Concerns about whether or not Volt gets built at all is evidence that mainstream targeting isn't being addressed. High-Volume sales, what truly supports an automaker's well being, come from those so-called "boring" family vehicles. It's a fundamental dilemma for Volt. Some ideals will need to be side aside for the technology to quickly penetrate beyond just a niche. Remember the competition. Hybrids are grossly outnumbered by traditional vehicles, which are well proven and less expensive.

1-09-2008 **Recession.** That word is getting thrown around quite a bit lately. Questions about how to identify that unfortunate economic status are being replaced by concerns of regular remedies not being enough. I can't imagine what GM is thinking. With an 80% share of the large SUV market, what will they do? Putting lipstick on a pig won't make it more affordable. If you truly need a vehicle for work that big, a pickup is a better choice. They've expended so many resources making those SUVs act more like a car that the image portrayed has led to an actual self-defeating design. People are becoming keenly aware of that due to these days of growing financial gloom. Expectations of even higher gas prices are quite realistic. It has simply become too much of a risk to balance the fate of a business on the profit of such impractical vehicles. What changes will this new reality bring?

1-10-2008 **Explorer Sales.** Back in 2000, Ford's premiere SUV reached its height with sales now equal to that of Camry. But the obsession with size & power brought about its downfall. Concern about the environment and our dependence on oil started pounding nails into its coffin. So today's news of Prius now outselling Explorer was a big deal. The SUV which contributed most to the "*pretend this truck is a car*" craze has been passed by an "*egg-shaped*" hybrid. Things are obviously changing. The short-sighted madness of the past is slowly being replaced by sensible purchases. It's about time! Finally.

1-11-2008 **Impossible Electric-Only, part 1.** There was some strange report yesterday about a Vue-Hybrid being converted to deliver electric-only highway driving via augmentation using currently available battery technology. That obviously got the Volt enthusiasts all worked up. They were upset. I was bewildered. What was the purpose of reporting such a blatant impossibility? So rather than point out the fact that electric-only wasn't possible since engine motion is required for movement, I asked how such a tiny motor (actually just a large alternator) without active cooling could accomplish such a task. Nothing. No one there seemed to understand any of the problems. More and more I am coming across evidence of idealism, where they just plain are not interested in studying the challenges involved. Glossing over highlights is all they do. We basically only get cheerleading. Bummer.

1-11-2008 **Impossible Electric-Only, part 2.** I wonder if the report itself will ever get explained. Void of detail, there's no way of knowing what was truly done to that Vue-Hybrid. It just sounds totally unrealistic from an engineering point of view. Something must have been reported incorrectly. Adding quite a bit more than only a larger capacity battery-pack would be needed. But then again, why worry about it? That wasn't a journalist research project. The report was simply highlights for auto show promotion.

1-13-2008 **Less Hype.** Toyota's approach is quite different than GM's... so much so that only those seeking out information usually have it. The perfect example came this morning. A participant on the big GM forum made a comment that Toyota was planning to make their prototype plug-in Prius available for testing here in the United States. That already happened 3 months ago... but Toyota didn't make a big deal about it. The job still gets done, but with less hype. What purpose does lots of attention serve before product availability anyway? Too much of a good thing can become bad. Just think of how long delivery waits could be.

1-13-2008 **New Prius Commercial.** Dang! I wasn't expecting to see one... so I wasn't paying close attention, or recording. After hearing the words "*Toyota*" and "*Environment*", I quickly changed focus from the computer to the television. There was a framework shape of a Prius formed from tree branches. Double Dang! I obviously missed a great opportunity for digital capture. It was yet another footnote in history taking place. Rather than the promotion of efficiency, focus is being placed more and more on emissions. Yeah! What was once a characteristic of hybrids not given much credit now becoming a forefront topic. It's about time. I was tired of comparisons that neglected mention of pollutants, instead focusing entirely on MPG. Now we are getting that balance which should have been important to all since the beginning. "*Green*" will actually mean green.

1-13-2008 **Grille Blocking, Photos.** One month later, all is going just fine. The foam I squished between the slots of the grille hasn't moved. It's staying in place surprisingly well. The look is so subtle, it is basically hidden from notice. So, I took some photos as proof. The first was during snow flurries in the gray of winter, what it looks like here in Minnesota half the time. The other half is bright sunlight with a background of baby blue sky. Both clearly point out how discreet the look is. The heater cooks and the coolant temperature (monitored using an aftermarket gauge) hasn't ever climbed above the usual level. Efficiency gain is tough to denote, but what do you have to lose from trying? I definitely recommend it for those that live in the north like me. See mine... photo album 122

1-13-2008 **Impossible Electric-Only, part 3.** Details have been provided. That strange report makes sense now. The system in Vue-Hybrid wasn't actually altered; instead, an independent system was added. Think of it as a separate transmission. The approach taken for this prototype simply won't work with smaller vehicles, hence the SUV. It added 1,000 pounds to the weight of that vehicle. Fortunately, it has the suspension & space available for that. A compact car won't. Hopefully, the Volt enthusiasts will realize how important it is to question stuff like this right away. Prius supporters jump on reports like immediately. They are already well practiced with identifying solutions practical to the mass-market, those wanting family sedans & hatchbacks. Nonetheless, this is a curious twist on things. Success from any aftermarket provider would shake up the industry, even if it supports just a limited number of consumers. But unless they compete directly, I'm not sure what kind of change that will actually bring.

1-15-2008 **Hybrid Talk, misleading.** The last two days have been interesting. Yesterday, the Detroit Auto Show kicked off a flurry of hybrid talk. The announcements were no surprise... but all the spin certainly gave that impression. There was quite a bit of misleading, much of which was difficult to tell whether or not it was intentional. The best example was the number of forum posts that claimed the plug-in Prius would only have an electric-only range of around 10 miles, even though Toyota repeatedly stated that range would be greater with the availability of a Li-Ion battery rather than the NiMH they are currently using for testing. So if you aren't paying close attention, it's likely you'll get an incorrect impression.

1-15-2008 **Hybrid Talk, purpose.** There's a lot of "green" image quarreling. The fact many of the vehicles being shown are only concepts doesn't seem to matter. People are bragging anyway. It's absurd. Unless consumers are actually driving them, the purpose has not been fulfilled. To make a difference, change has to occur. Looking on the road a few years from now, how many plug-in hybrids will we really see? With annual sales in this country around 17 million, a tiny quantity simply isn't enough. Sadly, that reality isn't get much attention. All the hybrid talk focuses on how they will be different. You don't get any feeling of traditional vehicles being discontinued.

1-15-2008 **Hybrid Talk, price.** To my surprise, the concern I've had about how much large battery-packs would push the price beyond affordable was confirmed as realistic. Those Volt enthusiasts arguing direct competition with the standard Prius (starting at $20,900) have little to say now. That particular hybrid talk is over. They have to acknowledge what Bob Lutz said. After pointing out that the development team doesn't feel the $30,000 goal can be met from the first generation design, he provided this: "*I don't want to wait for cost optimization. I'd rather come out in 2010, and if it costs closer to 40 than 30, well, that's too bad.*" Thought provoking, eh?

1-17-2008 **Volt Disappointment.** The mood among enthusiasts has changed dramatically. The ugly reality of battery price simply being way too expensive has finally sunk in. They just did not want to let go of the ideal. We tried to point out how expensive that much capacity in sense a dense storage medium would cost. Not wanting to listen was what set them apart from supporters. Enthusiasm allowed impractical thoughts to flourish. Now they are dealing with that disheartening news. I wonder what will happen now. The thought of the first "series" hybrid having a price close to $40,000 is a bitter pill to swallow.

1-18-2008 **Plug-In Competition.** It didn't take long for a major publication to step in with more appealing hybrid news. USA Today started their article with this: "*Seventy-one miles per gallon. That's what the trip computer read after a 4-mile loop through downtown and a short freeway blast in a prototype of the Toyota Prius plug-in hybrid.*" Obviously, the perspective of MPG BOOST is beginning to take hold. I love it! The focus on electric-only range was very misleading, not helpful to the general market. But this new effort is. It's very exciting! The prototype is 1 of 8 already being tested in the United States. Next year, the worldwide count from Toyota will grow to 400. This modest capacity increase by adding a second NiMH battery-pack is the inexpensive approach is what I've been hoping for. Those wanting an affordable upgrade choice (much like when you order a premium package for traditional vehicles: leather seats, sunroof, etc.) has the potential to be a very popular choice for a hybrid like Prius. Yeah!

1-18-2008 **Relative Size.** Did you know that the GM forum I refer to as "big" really isn't? It's size is only a relative measure compared to the others out there. But for one that covers all topics related to GM, it's the biggest. There is one twice as large for only trucks; though, members aren't the slightest bit interested in non-truck discussion. So the fact that the "big" forum dedicated to Prius actually has more members (35,599 verses 33,301) should say something. Prius is only one vehicle. Prius isn't anywhere near as old. Prius obviously isn't anywhere near as common as the many decades worth of GM trucks. Yet, it has a strong internet presence anyway.

1-18-2008 **Grille Blocking, SubZero.** This evening was my first opportunity to see just how effective the grille blocking really is. Significantly reducing the air-flow hitting the radiator and passing through the engine compartment will obviously have a positive effect when the temperature outside is only -4 F degrees and you are traveling at 65 MPH. But I wanted to know by how much. With the upper-grille blocked entirely and the lower-grille about 70 percent, conditions were perfect. The ScanGaugeII was showing a coolant temperature of 177 F degrees. The air-conditioner was set to medium fan speed and maximum heat. To my delight, the conditioned air coming out of the vent was what anyone could easily qualify as "*hot*". Without blocking, you got a comfortable warm. This was different. It was genuinely hot, despite the frigid Winter night highway drive. Sweet!

1-19-2008 **Parked Idling.** I'm at the coffee shop typing personal logs. The temperature outside is currently -11 F degrees. The wind has a horribly cold bite. How many vehicles do you think that stop here will shut off their engines? Sadly, the answer is almost none. Just about every person coming in to pick up a drink leave it running. That waste is sickening. Just think of how much better they'd be with the simplest of hybrid features: Auto-Stop. Unfortunately, some automakers mocked hybrids for years... claiming they weren't worth it. This is one of many, many examples where that just plain is not true.

1-19-2008 **GM Cheerleading.** It's getting truly absurd. Reading some of their posts has become a hysterical emotional release. Where has the objectivity gone? On a thread mocking Toyota hybrids in favor of Two-Mode, they provide stuff like this: "*As batteries improve it'll just keep getting better... HSD is a second-rate system with no scalability and very limited electric-only range.*" It's tough to know even how to respond to that. Range is just a factor of battery choice, having nothing to do with the hybrid itself. And HSD has already been scaled. It's as if they believe saying whatever they want makes it true. Thank goodness the audience that reach is basically only those looking for some cheerleading.

1-19-2008 **Heater/Engine Threshold.** It is obviously 145 F degrees. Driving through the suburbs with the outside temperature at -9 F degrees, the coolant wasn't able to get as warm. In fact, with a number of stops and speeds only up to 50 MPH, the engine coolant only got up to 154 F degrees. So I had frequent opportunities to watch it drop while at a stoplight. The moment it hit that magic threshold, the engine started back up. Knowing exactly when that point occurs is pretty sweet. Too bad I didn't have an aftermarket gauge years ago. Oh well. I do now.

1-20-2008 **Revised EPA Estimates.** Now that all the 2007 vehicles are subject to the long overdue update to that quite obsolete measurement system, it's time to find out what people think. I don't expect to hear anything. That once misleading source for the anti-hybrid isn't valid anymore. It's the exact opposite in 2008. Rather than seeing real-world efficiency below for hybrids, we see it above. So any argument with regard to estimates is contrary to reality. They have lost yet another method of impeding progress. I'm sure they'll find something though. Undermining is their last stand. So many hybrids are now on the road that many claims of past simply won't work anymore. They've been proven false well beyond any doubt. Yeah!

1-21-2008 **Beyond Disingenuous.** This snippet about Volt really got me worked up this morning: "*the concept car had suboptimal aerodynamics*". I really struggled with how to respond. I finally decided upon... You've got to be kidding! At least Lutz gave it to us straight. Remember his take on the situation: "*When we put the concept in the wind tunnel, it was a disaster. We could almost put it in the wind tunnel backward and get a better result.*" He even found it amusing. For crying out loud, use of a term like "*suboptimal*" is sugar-coating no matter how it's looked at. Sorry, but sometimes you just have to accept the past. Most of us had a good laugh and moved on.

1-21-2008 **Lost Direction.** The recently news of Volt being far more expensive than most had hoped has fractured the once unified group into many different pieces. They are very contradictory now. My recent shot of humility had no effect either. It simply got lost in the chaos. So what direction emerges as the new voice for enthusiasts is anyone's guess. In the meantime, the role of Prius in automotive history continues to solidify. I was provided with a link to a video of a gathering in Tokyo. That was just plain cool to see. Eventually those struggling to support GM will find something too. But for now, it's quite a mess.

1-21-2008 **Fleet Plugs.** An interesting realization popped into my head today. Toyota's initial focus on fleet rollout for plug-in Prius addresses a concern everyone else seems to be ignoring... availability of outlets for plugging in. Businesses preparing to use them will go to the trouble of having them installed in their parking lots. Currently, that infrastructure does not exist. It's a big deal you simply cannot dismiss. I hear Volt enthusiasts planning to plug in at work. Where exactly will they be doing that if several employees all drive plug-in vehicles? Seeing how businesses deal with this problem will hopefully reveal some insight to how apartment landlords will provide outlets for renters. That's a definite benefit coming from fleet rollout first. Toyota will be able to get constructive feedback ahead of the consumer rollout. Cool!

1-22-2008 **Prius Questions.** I especially like this one posted today by a new owner: "*What is the one thing that you love the most about your Prius?*" My response may have made him think... Careful what you ask. For me, it's the fact that I've been driving one for over 7 years. Prius has overwhelming proven a wise purchase decision.

1-23-2008 **2007 Camry-Hybrid Total.** It wasn't published in the initial press release. But the number sold for 2007 did later emerge. I stumbling across that information today. The total count came to 54,492 ...making Camry-Hybrid number two for popularity among the hybrids currently available here. Of course, that shouldn't surprise anyone. Camry itself has captured the hearts of many for years, even before their was a hybrid model. This second success for Toyota is fantastic. The long wait for it to finally happen was well worth it!

1-24-2008 **Errors?** I'm going to consider them that. But after awhile, you have to ask yourself whether those claims are from being poorly informed or if they are intentional attempts to undermine. This was my post, giving those particular Volt enthusiasts the benefit of doubt, for now... The number of errors posted here is truly amazing. It's very clear that some have absolutely no idea what the difference is between a "parallel" and a "series" hybrid, because Prius is neither. Having 2 motors and a power-split-device gives it characteristics of both types. A "parallel" hybrid only has a single motor and it is bonded directly to the engine, lacking the ability for electric-only drive. Prius can drive up to 62 MPH with the engine stopped, so obviously it is not "parallel". Prius can't go backward using the engine at any speed; reverse propulsion is always electric-only like a "series" hybrid. As for efficiency differences, those having studied history are well aware of the fact that real-world implementation doesn't always match on-paper comparisons. Don't believe claims without actual data to support them.

1-24-2008 **Circular Argument.** Today was rather amusing. I watched the Volt enthusiasts argue themselves into a corner. Several attempted to lump both "assist" and "full" hybrids into a single category. In this case, it was the "parallel" design. They want to distinguish the "series" design from any other type. Diluting the perceived choices is their chosen promotional technique; however, that is ultimately self-defeating... as they rather abruptly figured out. To the typical consumer, any vehicle with both a battery-pack and an engine will be considered a "hybrid". So their very comments posted to combine the two types of hybrid currently available ends up applying to the upcoming third too. To my pleasure, I got to witness that conclusion as it formulated. Their argument was obviously not well thought out.

1-25-2008 **$90.71 Per Barrel.** All stock markets around the world suffered from economic uncertainty this week. Sadly, how much a barrel of oil costs remains quite predictable. It's still extremely high. We are now well into the "*won't happen*" realm now; proof that even the experts can be very wrong at times. Usually, that comes from not being able to take all factors into account. Just the automotive market alone is massive. Considering how a housing market slump could affect it defies any convention of accuracy. Bad things happen. Now good people are struggling to get by. The appeal of over-powered and over-sized vehicles is rapidly fading... and the price of gas is only a small contributor to that. Everything is more expensive now.

1-26-2008 **Better Than The Competition.** Hearing that constantly is very annoying. A good old fashion rivalry would be enjoyable. But their vehicle is still just a concept. Yes, it's those darn Volt enthusiasts again. They keep forgetting who the actual competition is. It's not other hybrids, it's traditional vehicles. Having a niche concept vehicle doesn't actually accomplish much. To make a difference, a bulk of the population must adopt the new technology. Accepting change is what it's all about. A vehicle that isn't available yet with only a small target market won't be able to do that alone. Why can't they see that?

1-26-2008 **Watching For 145°F.** Having discovered that magic temperature threshold (145 F or 63 C degrees) last weekend made the days following quite intriguing. There was no longer any doubt how long I could keep the heater running while stopped at a light. I knew exactly when the engine would start again. In the past, I was tempted to shut the heater off if the wait was going to be long. Sometimes I did. Others I just endured the uncertain consumption of gas. Now, I even know when the engine will shut back off, after having supplied fresh heat... and witnessed that yesterday at a horribly long stoplight. Who would have thought after 7 Winters with a Prius already, I'd learn something new new detail about how the hybrid system operates. That aftermarket gauge sure is informative.

1-27-2008 **Crude.** The "History Channel" sure had fun today. They aired a series of shows all pointing out how ugly the climate change situation has become. I wondered why such top-notch content was suddenly being broadcast. Then it hit me. Rather than waiting until after the "State Of The Union" to rebut the president's remarks, they were being proactive. Remember, that's where the "*addicted to oil*" statement came from. He said it. And since then, almost nothing has been done about it. Lots of talk with little action... Anywho, the prime-time show was titled "Crude". And you guessed it, the special was all about oil. The peak which some Prius owners have been expecting is right on schedule. The upcoming new decade will make it clear how difficult & expensive extraction has become. The analogy of "*squeezing the toothpaste tube*" is how they described it. Being easy & cheap are memories of the past. We are in trouble. And that's without even considering the environment damage to land, water, and air. Change needs to be accepted a whole lot faster than it is currently. The opportunity to a seamlessly transition has already passed. Oops!

1-27-2008 **On The Way?** Consider the next 4 years. What is the goal? Annual production of 1,000,000 hybrids is what Toyota will be striving for. That's 10 percent of their inventory being quite a bit cleaner and more efficient. Plug-In options will be introduced too. GM previously mocked hybrids, but now they are in the early stages of change. What will we actually get? For that matter, how much do you think gas will cost? Heck, what do you think the situation will be with concerns over climate change related to carbon emissions? Just image what the new administration will bring. There's no way to avoid hybrids now. They are most definitely needed. What can expect as a response from the market? Will they embrace the technology? Or will we continue to see some resistance still? Lots to wonder about, eh?

1-28-2008 **Sarah Connor.** That new "Terminator" television show had a pivotal moment in its premiere episode. The 3 main characters traveled through time, emerging naked on a busy highway. Vehicles slammed on their brakes. The car immediately in front of them was... you guessed it... a Prius! I saw that coming. It was the obvious choice for such an important scene in the story. Those distinct headlights illuminating the darkness were perfect. I loved it!

1-28-2008 **State Of The Union.** The President's remarks this evening were more of the same. It was the usual status quo. The position of "lame duck" is well established now. That "surge" was sold to us as short-term, but turned into a long-term commitment. Previous claims of coming improvement with respect to our oil addiction never materialized. None of that surprised anyone. We've learn to deal with it at this point. History will have an interesting story to tell about these times.

1-29-2008 **Change.** Some fear it. Others stay in denial. Whatever the case, the news today of Two-Mode rollout to other vehicles being delayed was received with mystery. Few had anything to say. It was odd. So, I interjected with the most constructive response I could muster. They were cruel to me in the past. Wanting to response the say way was awful tempting. But I resisted with this: Both Ford & Honda had rollout problems, some having nothing to do with the technology itself. Business needs impaired spreading their hybrid system to other vehicles. GM was in no position to overcome challenges of that nature either. So this news was to be expected. Of course, when I attempted to get supporters to look beyond just engineering considerations, the response was getting shunned... well, on this forum anyway. Now, the outlook is changing. What happens at this point?

1-30-2008 **-9 F Commute.** Winter was certainly obvious today. Unfortunately, the extremely cold weather forced me to fill up before the reaching the last day of the month, messing up the statistics. Oh well. I just had to yesterday. The risk simply wasn't worth it. Of course, next month could easily be this cold too.

1-31-2008 **HOV Lane.** Fortunately, there was never an HOV benefit here for hybrids. Wanting them to be abundant, like I do, that wouldn't make sense. But some states offered that to help stimulate initial sales. Did they realize monster-size hybrids would later emerge? Well, the fact that legislators in Ohio are now trying to disallow that for them, my impression is no they didn't. In other words, the Tahoe-Hybrid won't be able to drive in the HOV lane with only a single person inside. Yeah! That's not a vehicle which should be used for daily commuting anyway.

2-01-2008 **349,531 Miles.** Jesse's record-breaking Prius adventure came to a tragic end this week. Thankfully, he wasn't hurt... not a scratch, in fact. The airbags and seatbelt worked their magic to protect occupants. But the Prius itself was destroyed. A car failing to yield for a red light struck him head on. He was a victim of someone else's impatience. That's really unfortunate. Oh well. His next adventure will now have to begin. Here's photos of the damage... owner: Jesse 4

2-01-2008 **Two-Mode Fading.** Still nothing. But now their point-of-view is becoming crystal clear. That big GM forum was founded during the rise of SUVs, back when they were claimed as safer and portrayed as "*good for the economy*". Remember, back when Hummer became a consumer choice rather than military equipment and gas was less than a dollar per gallon? Times are changing. The world economy and sense of responsibility is different. It threatens the very core of their existence. Prius rose in stature during that same period. Now it is hailed as the prime example of success new thinking. That puts a monster-sized hybrid in an awkward position. It needs real-world endorsement to thrive. But so far, consumers don't have the option to buy one. Excitement is fading. Many niche products have failed to gain high-volume, profitable acceptance... including hybrids. Remember what happened to Insight?

2-01-2008 **Sales Statistics.** January was great! Prius sales were up from that month last year, which in itself was impressive. The number came to 11,379 sold in the United States. Camry-Hybrid did really well too, with 3,750 sold. I'm certainly pleased for a slower month (Winter is a tough time for the automotive industry) to do that. Just imagine what happens later when gas prices do the Summer climb! Of course, seeing more and more on the road in itself is a major contributor to continued strong sales. We have a lot to look forward to now. Momentum for hybrids is building!

2-02-2008 **Making Assumptions.** It's like self-inflicted undermining. The hype around Volt is causing people to assume more than ever that relying on electricity as long as possible is the "best" design. Using an expensive plug-in system with a large battery-pack, that makes sense. But with a battery-pack of limited capacity or a system without a plug, that doesn't. A combustion engine in its stride (an efficient RPM) will allow an accelerating full-hybrid to save electricity for more efficient use later, like stealth driving. Unfortunately, when a Prius owner attempts to explain the difference and how their system (which is much less expensive) must be selective for electricity use, it sounds like a defensive response. There's no real way of providing clarification for their incorrect assumption. The mindset on never using any gas ever is preventing constructive feedback. They simply don't what to acknowledge how using a small amount of gas could be better... allowing for a much wider market penetration of hybrids. What's wrong with an affordable PZEV emission vehicle providing a 50 MPG average?

2-03-2008 **Size Obsession.** Fortunately, it's dying quickly. Yesterday GM announced the Sierra pickup featuring Two-Mode, again. There was an immediate backlash. Truck people were defending the need... as if it were a matter of existence. In reality, the actual issue was size. Why must pickups be so massive? Why the heck do you need a 6.0 liter 8-cylinder engine to pull just a boat? What happened to buying only the capacity you actually need? Fortunately, those questions are getting hard to evade. More realistic sized pickups will inevitably gain attention. But for now, the giants are still being emphasized.

2-03-2008 **Diesel Absence.** The invasion never happened. Poor emissions, even with "clean" diesel, have prevented any type of progression forward. Just like the hybrid supporters had been saying for years, the emission equipment required to reduce the levels of NOx (source of smog) and PM (particulate matter) was simply too expensive for diesel to be competitive with gas hybrids. Of course, diesel efficiency (including the carbon reduction benefit) wasn't enough anyway. And now with so much attention being focused on hybrid plug-in options, even that is losing appeal. The MPG boost coming from greater electricity use easily exceeds the best case examples for diesel alone. Non-Hybrid choices won't be considered real competition years from now with the push of battery research & development continuing. I like that.

2-03-2008 **Non-Constructive Comparisons.** Today I had to endure number-crunching of a very non-constructive nature. They simply can't wait for real-world data. The "series" hybrid enthusiasts just arbitrarily come up with estimates and insist that 30 MPG should be the baseline measure. It's quite frustrating... though, I'm rather intrigued to find out if they can keep up such behavior for the entire duration until real-world data is actually available. Odds are some prototype numbers will just be accepted as an expectation, even though we know how unrealistic trial numbers can be. Think about it. A base priced 2008 Prius, plus tax, plus 150,000 miles of gas at $3.25 per gallon getting 48 MPG is still less than what Volt alone will cost, without tax or electricity. And by 2011, Prius should be more efficient and gas likely more expensive. There will be a plug-in available at some point too. Patience.

2-03-2008 **Denali XT Concept.** GM unveiled a new hybrid concept today. It's a bulky bodied pickup truck with a small bed, featuring Two-Mode. I'm not sure what to make of a unique looking vehicle, especially having 23-inch tires and a 4.9 liter engine. It certainly doesn't look like something you'd ever use for work. Isn't that the purpose of a pickup? For such a large build, it's rather odd that towing capacity is only Class-II rated (3,500 pounds). Interestingly, it is capable of using E85. Of course, neither price nor emission-rating was mentioned.

2-03-2008 **$88.96 Per Barrel.** That "recession" term is becoming more and more of a concern. The dollar is weakening. Economy fears are becoming a main election issue. And the price of oil has settled to an average around $90. That puts the price of a gallon of gas here at $2.99 and diesel at $3.29. Empty promises will now actually have to be fulfilled. More of the usual isn't on anyone's agenda except the President. His plan is to avoid making the situation any worse. Change is on the horizon.... patience in the meantime.

2-06-2008 **3 Classics.** Wow! That was truly an amazing coincidence. Within just a single city block, there were 3 Classic model Prius all driving by. I passed each with a silly smile on my face. Seeing such a sight is extremely rare. And as time goes on, that will become less and less likely. Ahh! Of course, at some point they really truly can be considered classic. Years pass by quickly. Excitement of new models escalates the status of the oldest. Cool!

2-06-2008 **Strangely Quiet.** News of Two-Mode and E-Flex is rapidly falling off. Of course, that shouldn't be any surprise. Without an actual product seen on the road, fading away with after the hype of the Auto Show kickoff makes sense. Really, what were they expecting? Heck, if I chime in it will just be misconstrued as being smug. So, they get nothing. Silence is awful. Not getting any attention is like a death sentence. What in the world does that mean they will do? Think about it. What happened Insight and Accord-Hybrid? Focus elsewhere caused them to slip away. Consider what the market truly wants. As for what I find strange, it's how quickly the quiet came.

2-06-2008 **Interesting Development.** Yesterday, I read something disturbing. Sure enough, my suspicion was confirmed today. It was too compelling to resist. The writer had suggested that the reason a back-up camera was now available for Prius was because it needed to compensate for a visibility shortcoming. This was my response to it showing up on the big Prius forum... I see the latest undermining effort is spreading. The idea came from a recently published article. It makes me wonder why it took the antagonists so darn long to think of it. Now we see the thing here emerging as a question from a first-time poster. An innocent victim following up on a rumor? Perhaps. But then again, Prius is hatchback. So of course visibility will be different. You can't cheat like you can with a sedan, relying entirely on the rear-view mirror. Using the side mirrors is required from time to time.

2-07-2008 **Upgrade Thoughts.** There's strong potential that next year I could be upgrading to a new Prius. Thoughts of the next generation design are very exciting. Just think of how rare of a position that puts me in. Very few have had the opportunity to live history the way I have. Sharing those experiences is quite fulfilling. I'm more than happy to take photos and document what happens. Never did I imagine being in such a situation. Of course, just think of the patience needed. I can't imagine what I'll feel like hearing details of the upcoming improvements... then waiting. Once again, I'll have to endure delivery anxiety. Oh no!

2-07-2008 **"Full" Term.** I was curious as heck how far that "parallel" nonsense would go. Thankfully, it is died out quickly. Having so well established the FULL terminology already, identification of hybrids like Prius using it has gone unchallenged. I love it! The Volt enthusiast attempts to undermine by lumping all prior hybrids into a single category failed. There is simply too much history noting how the FULL and ASSIST types are not the same. Accepting the SERIES term is next. Trying to call them "range-extended" electric vehicles is rather obvious marketing spin. Just call it what it is!

2-08-2008 **$91.77 Per Barrel.** An average of $90 is becoming the norm now. There is no reason to expect that to drop. Demand doesn't have a way of dropping. Population growth here is basically cancelling out the benefit hybrids are having so far. And of course, the less developed countries are growing at a much faster rater. The oil companies are definitely enjoying these profitable times.

2-08-2008 **Two-Mode Delivery.** A truck carrying 3 of them was spotted in Michigan. That supposedly was the first demo-models being delivered to dealers. In other words, none are for sale yet. I wonder why. Hmm? It certainly puts a damper on whatever excitement the SuperBowl commercial and game-winner gift may have generated. I doubt we'll ever find out if there were some last-minute updates delaying the schedule or it was a supplier issue. Whatever the case, the wait for real-world data is obviously going to require quite a bit of patience still.

2-09-2008 **Ugly Body.** A new member started a new thread on the big Prius forum a few days ago. It was highly suspicious. Seeing a first post that obviously negative is a warning sign. So my response was quite to the point. His argument: "*If Toyota would have used a regular body styling like the Camry they could sell more...*" made no sense anyway. Toyota did. Whatever the motive, he did apologize later... having no idea how much of a stir claiming Prius had an ugly body that would cause. My quiff with the situation is that he never acknowledged the fact of Prius is a hatchback. So it appears as though he simply doesn't like them. That's typical. It's just like an automotive publication that doesn't like any type of family car. So of course they are going to give a negative review of Prius. After all, controversy sells. But what was he thinking in the first place? How could an adjective like "*ugly*" not be taken as an insult?

2-09-2008 **Over Emphasizing.** A well known antagonist jumped on the opportunity to cause trouble. A report just published stating the price of gas could drop about 50 cents per gallon this Spring was simply too tempting to resist. But rather than being objective, he attacked with this: "*Some of you kill me with your forecasts of $5 and $10 per gallon gas. You need to go back to school and learn about supply and demand.*" There's always an insult too, hence the reputation. But the fact that he attempts to portray an attitude that all Prius owners feel that way is the problem. Most are prepared to deal with $4, which is quite realistic over the lifetime of the vehicle. That's it. We stay focus on true need. This is how I replied... Pretending that $2.65 is cheap won't change the reality that our country has a emission & consumption problem. In fact, many of us here just see that as denial.

2-10-2008 **Heater Data, last night.** That was interesting. After spending an hour and a half at the coffee shop, I jumped in the Prius. Being very windy with the temperature at zero, the hop onto the adjacent highway would be one to ponder. Rapid acceleration like that is by far the fastest way to generate heat, despite air slamming the front of the vehicle. And sure enough, that's exactly what happened. Comfortable heat is available when the coolant reaches 155 F degrees. That point was reached pretty darn close to the first bar appearing on the Consumption Screen.

2-10-2008 **Heater Data, this morning.** It was just plain too cold to go out. With the air temperature at -14 F and the windchill at -39 F, the decision to wait until lunch time came easy... though it had only warmed up to -6 F by then. It was a 10 minute drive through the suburbs. At a much slower speed than last night and with a few stoplights, it took the entire drive before the coolant reached 127 F degrees. That delivers warm air, not as comfortable as when it's at 155 F though and definitely not "hot" like you see at 177 F. Spring will come eventually, right?

2-10-2008 **Green Theme.** It's amazing how much times are changing. Those television commercials portraying totally impractical uses for a SUV are fading into nostalgic memories of the past, being replacement by those for hybrids. Smaller is drawing attention. Green is the theme. Waste doesn't make sense anymore. What was once deemed "*good for the economy*" is quickly becoming "*bad for the environment*". I'm so happy!

2-10-2008 **Smart?** Two seats and a modest amount of cargo space for an inexpensive price is attracting the popular media. I wonder how consumers will actually react. The entire annual supply of Smart vehicles is already spoken for, ordered long ago. BMW doesn't plan to increase production anytime soon either. Will people be willing to wait well over a year for delivery? When demand overwhelms the quantity desired to such a degree, it usually isn't a good thing. Without the ability to purchase on a timely basis, the attitude may be to dismiss as hype. That's how some become disenchanted. It makes you wonder why GM is advertising Volt so much... long before even the first is available. Is that smart?

2-11-2008 **$35,000 Price.** That appears to be the Volt target now, based on this from a GM spokesman: "*It's starting to look like it's going to be close to $35,000.*" I wonder what the heck the market will be like then. The struggling economy could actually serve as the kick the automotive industry needs. Refusal to change isn't worth the risk. But at a price that high, there is obvious concern. The premise of the vehicle is to deliver a 40-mile range. No compromise allows potential for the "full" hybrid plug-in options to make serious headway, since even range isn't the focus... it's boosting MPG instead, which is a much easier thing for consumers to embrace... with their wallet.

2-12-2008 **Tax Credits.** That has become a hot topic again. Unfortunately, the discussion got that way from a very unrealistic suggestion of $100 million per year, in the form of $10,000 per consumer for 10,000 vehicles. I responded, holding back some to be as polite as possible... So much for so few isn't realistic. Something like that simply wouldn't ever get passed. Our taxes are meant to server many. Toyota, GM, Ford, Chrysler, Honda, Nissan, VW, etc. would all want a share of that money, the same way credits have been available. That would balloon past $4 Billion for the first 60,000 per automaker. Then if you take into consideration a phase-out plan and some type of credit for less substantial hybrids, the price to the government grows beyond $6 Billion. In other words, your good intention calculation was off by a massive amount.

2-12-2008 **$39 Billion Loss.** That's what GM posted today. Nearly all of it was a one-time expense to cover their obligation to healthcare coverage for union autoworkers. In fact, with accounting adjustments, their loss for normal operation only came to $23 million. What's next, you ask? That's a buyout offered to 74,000 of their hourly workers. Recovery to where they should have been in the first place is well on its way. Dealing with new market pressures is still a problem though. Uncertainty of consumer wants is a mystery. Will the demand for SUVs continue to drop? If so, they are not prepared to offer hybrid cars. The near future for them could get ugly if gas prices continue to climb. Hopefully, battery advancement (mostly cost reduction) will come through. They are betting a lot on that.

2-13-2008 **Prius Bashing.** That website for Volt enthusiasts attracts all types. Some welcome other hybrids. Others are purists. The kind I prefer spoke up with this today: "*Is there some kind of prerequisite that we have to bash the Prius here?*" The hope was to be objective. So my contribution was... Notice how they avoid looking at the big picture. Not wanting to accept the reality that mainstream acceptance of the technology will require some compromise is the problem. They hold on to that ideal of never using the engine. Volt will be one of many vehicles offering some form of electric propulsion. That's the only way high-volume, low-cost production of vehicle-scale battery-packs will happen quickly. So, fighting Prius simply makes no sense. It's quite self-defeating. Competitor hybrids are the ally against the true enemy, traditional vehicles... which grossly outnumber vehicles that offer any form of electric-only propulsion. Fortunately, Volt enthusiasts still have plenty of time to figure out that they are biting the hand that feeds them. Becoming a genuine supporter of new technology means declaring a clear purpose. Offering an affordable solution for the masses to reduce their fuel consumption & emissions doesn't come without consensus.

2-14-2008 **Pure Insanity.** Happy Valentine's Day! It's hard to believe just how bad things have got. That's no my idea of love. Lutz stuck his other foot into his mouth this time by calling global warming a "*total crock of @#$%*". Naturally of course, that news caused an internet explosion. The numerous places to discuss this latest development had quite a bit to say. Posts were flying. What I found most interesting from that was how many are still making excuses. The implication is that if our influence on climate change cannot be proven, there's no reason to bother with any solution. It's the classic resistance to change, alive & well. That's really sad. Remember, this is the same automotive executive that repeated claimed hybrids "*make no economic sense*". So you can imagine how some latch onto his views to help slow the pace of progress. It's quite frustrating.

2-14-2008 **Climate Change.** The silliest arguments are with reference to "warming". They point out how some areas have grown colder, hoping you know nothing about how weather systems are influenced by warmer temperatures elsewhere. More storms and greater magnitude is the real problem... and we are definitely seeing that. But it's all beside the point. The automotive industry is so slow to change, waiting to react is far too late. People will continue buying dirty gas guzzlers for years still, expecting to use them for the decade that follows. We need to welcome the new technology, embracing it like the computer industry did... before they were desperate for it.

2-14-2008 **Ford Hybrid Improvements.** It was an exciting read. We got some details on the upcoming Fusion-Hybrid along with the upgrade to Escape-Hybrid. I love how Ford gives it to you straight, without any of the hype typical from GM. They stated their "series-parallel" platform for both will use a 2.5 liter 4-cylinder engine. Yeah! That works out for Fusion to an estimated city efficiency improvement of 60 percent compared to the non-hybrid 4-cylinder model and 80 percent to the 6-cylinder. The electric motors are switching to AC, including stepped up voltage. The Fusion NiMH battery-pack will be 275 volts, 5.5Ah, with 27kW of peak. Their battery-pack will switch to air-cooling now, rather than dedicated A/C like before. There are a bunch of various smaller tweaks to the system hardware & software too. In other words, they are very much following the track of Toyota. Heck, even the maximum RPM for the motors were increased. Put another way, GM will have a lot more to worry about.

2-15-2008 **Development Cost.** That was the Volt discussion topic today. There was nothing new. It was the same old stuff Prius supporters heard many years ago. Sadly, that was lots of resistance and distraction from the ultimate purpose. Oh well. I'm chimed in with this... Hybrids "*make no economic sense*" right? That's the nonsense we had to tolerate for years. At what point do we know they are finally being taken seriously? Refusal to call Volt by the official term used for decades to identify that design certainly makes you wonder. For me, achievement is measured by what you see on the road. Large volume production will be proof that change is indeed our future; otherwise, it's just good intentions without reaching the actual goal.

2-15-2008 **7-Year Loans.** This new trend is truly frightening. I was amazed when some people began purchasing vehicles with payment expectations 5 years long. But now with the economy struggling to keep momentum, dealers are pushing the idea of a loan for 7 years. It makes payments lower. That appeal may lure some to purchase more of a vehicle than they really need. Scary, eh? All that interest to pay owning a vehicle that offers little opportunity to sell means you're essentially stuck. It could make the current situation even worse over time. After all, isn't that similar to the mess the housing industry is now in?

2-16-2008 **Keeping Focus.** It's surprisingly difficult sometimes. The battle between Blu-Ray and HD-DVD is drawing to a conclusion... so some people are declaring the war over. Have they forgotten entirely that the point was to replace DVD with a HD format? It sure seems that way... despite the fact that prices aren't even remotely competitive. At double the cost, people will continue buying DVDs instead. Sound familiar? Some configurations of hybrid have the same problem. Price is a big deal. Until that is addressed too, it remains a battle yet to be won. The war isn't over until the purpose is fulfilled. Niche products aren't enough. Mainstream acceptance is required.

2-16-2008 **"Parallel" Greenwashing.** It continues! Some are lumping all hybrids currently available into a newly coined category called "*conventional*". The attempt to undermine is quite obvious to those of us that have been paying attention to the market. The most recent example came from a GM publication comparing the efficiency of E-Flex design to everything else. How is that even the slightest bit objective? Those mild "assist" hybrids are no where near as efficient as a "full" hybrid. They bring the average down, making the data appear to be less than was it really possible. And since when is comparing the 2011 Volt to a 2004 Prius proper anyway? Again, those of us paying attention to the market know that the 2011 Prius will deliver greater efficiency. But no, their selective & vague presentation never acknowledges any of that. It's greenwashing and I'm not at all pleased to have to deal with such nonsense.

2-16-2008 **Infiniti Brand Hybrids.** Remember how Nissan leased HSD technology from Toyota, saying they would be developing their own later? Well, that now appears to be precisely what they are doing for 2010. Unfortunately, it will primarily be used for their premium brand. So rather than seeing a Altima or Maxima like we had hoped, it is more likely to be in expensive luxury models. Why is it that affordable vehicles are not being targeted? Do we really have to endure the usual product-cycle delay before any chance of lower cost? I wish an aggressive attitude would be taken. The selection of really efficient hybrid cars priced in the mid-20's is going to be quite slim for the next 5 or 6 years still. Give people something to purchase. Stop focusing exclusively on just stuff outside of the typical budget.

2-17-2008 **More Greenwashing.** The article was titled "*Green goes mainstream.*" That seemed innocent enough; however, the disappointment began in the very first sentence. The claim was that automakers are now getting serious about hybrids... because Pickups & SUVs are now getting attention. Naturally, there was no mention that smog-related emissions aren't reduced at all by the newest hybrids. It progressively got worse, like with this quote: "*There are a lot of choices out there now.*" How do they figure? There is not a single hybrid car (sedan) available from a domestic automaker that offers a green solution... no substantial MPG increase and emission decrease. It then moved on to the "series" hybrid, which served only as a topic lead in to hydrogen. Yes, it was just propaganda for fuel-cells. The writer even went as far as saying it was the "*Holy Grail of automotive research and development*". I was quite upset. This constant downplaying of the importance of "full" hybrids is very frustrating. They are the answer to our affordable & abundant need we have now. Isn't that the point of mainstream?

2-17-2008 **So Shiny!** Sometimes, it's the simplest of things that please. The Prius had been covered with a layer of salt which recently developed into a crust. Not having washed it for well over a month will do that. What's the point other than to apply a fresh layer of wax? It's dirty again shortly after anyway. Well, yesterday was that day to finally wash. No more instant-freeze weather. So, I joined in with the rest of the population here to rid the paint of filth. That made this morning's sight in the garage quite a surprise. I wasn't expecting to see something so shiny! The day was definitely off to a good start.

2-18-2008 **Another Aftermarket Augmenter.** This one enhances Prius with a 200-pound lithium-phosphate battery-pack. That delivers 9kW for the price of $12,500. Makes you wonder how much Volt will end up costing, eh? Anywho, their claim is just like that others... it gives you the potential to achieve over 100 MPG. Expanding new opportunities like this should be a wake up call to those supporting hybrids no capable of electric-only drive and those trying to avoid hybrids entirely. The automotive market is obviously changing.

2-19-2008 **Hybrid Future.** It's becoming quite obvious that the status quo will no longer work. This line on the cover of a financial magazine summed up the situation rather well: "*Scarce crude and global warming force carmakers to change course.*" Knowing how long change actually takes, that synopsis makes sense. Investors simply can't afford to delay anymore. Waiting to react is a big financial mistake. After all, the error in judgment about market acceptance of Prius is pretty much impossible to dismiss at this point. You can see that in the online forums. Discussions of feasibility have vanished. Unfortunately, that absence hasn't been replaced by anything. On the big GM forum, there is little said about hybrids anymore. And now on the big Prius forum, we are getting inundated by newbies... some having no idea how the hybrid actually works. That future many of us had hoped for has arrived.

2-19-2008 **Winter Blues.** Last week, it warmed up to 10 F degrees below normal. This week, we'd be lucky if it got that nice. The temperature average for the month is way down... and so is MPG in the Prius. That sure makes Spring seem a long time from now. I remember two February 29s ago (8 years) wearing shorts. That's likely not going to happen this leap year. Tonight's low is forecast to be -11 F degrees. Winter here has its challenges. Oh well. Summer sure makes the times like this well worth it.

2-19-2008 **$100.01 Per Barrel.** The closing price of oil broke that magic barrier today. That situation years ago experts never said could happen did. Now what? We have entered territory only those silly made-for-television movies dared to toy with. Remember awhile back? That one showed chaos over the course of a year... with a happy ending, life was restored to the status quo. Reality is, that's totally dreaming. It takes a whole lot longer to deal with and the solution doesn't come without change. When are some going to finally face the music. Oil is peaking.

2-20-2008 **Gas Tax.** It's a hot topic now. A bill, much like we've seen in the past, is being discussed to raise much needed funds for upkeep on roads around here. As before, the governor is the source of resistance. He believes in absolutely no tax increases. So regardless of the situation, the answer is always the same. Only this attempt, party lines may actually be crossed. That's rarely done. In this case though, we pay less for gas than most everyone else in the country anyway. And the increase only 5 cents. Some claim this is a terrible time for that, I couldn't disagree more. How much longer can the inevitable be delayed? Routine maintenance is a whole lot less expensive than replacement. And obviously, gas will cost more later. Do the right thing now while it's reasonable.

2-20-2008 **Welcome.** I love how some newbies flip out when they discover what's actually going on. Today provided a great example with this: "*The Detroit News should go back and reports news not fiction. They are not in the business of judging technologies which they know nothing about.*" Hopefully they found a bit of relief in this reply: Welcome to the hybrid world. We've been dealing with that nonsense for many years now. Being so against hybrids for so long appears to have become a genuine problem. Old habits die hard. They really need to study the changes taking place. New technology does not fit the traditional mindset. It's not the same world they were used to anymore. Far too many make assumptions... that simply are not correct.

2-21-2008 **No FAQ.** Not having a User-Guide or any type of reference materials available is really starting to frustrate some, including me. Prius didn't initially. But then again, it wasn't hyped for years in advance like Volt is. There wasn't much of a need back then either. Gas was cheap and the rollout audience was the well informed. The large & diverse audience hadn't emerged yet. Things are quite different now. Someone needs to create & promote a FAQ. Too many are making incorrect assumptions.

2-21-2008 **The Lutz Blog.** He responds with comments of his own. This corporate executive has a voice where others aren't heard, so much so that what he writes will sometimes be published. That was the case today. My favorite quote was: "*The Volt is not a hybrid. It's an extended-range electric vehicle. Hybrids have an internal-combustion engine driving the wheels, aided by an electric motor. The Volt's wheels are driven by electricity, solely.*" How is saying that constructive? After all the negative things he said about hybrids years back, no one expects him to ever admit that Volt is a "series" hybrid. So why waste any effort drawing attention to terminology? Move on already! And what's the deal with the "aided" reference? That certainly isn't appropriate for a plug-in Prius driving 60 MPH with the engine stopped. Perhaps we should say that Volt is "aided" by an engine too. So what if a majority won't exceed the distance threshold. The same could be said for speed. Stop spewing marketing spin. Let us decide for ourselves. Focus on building the car.

2-22-2008 **Automotive Cheerleading.** The prior year brought lots of it from GM enthusiasts... though nothing never really ever materialized as a result. The undisputable milestone, owners speaking out, simply hasn't happened yet. That's a sharp contrast to what we expected. It's the most obvious measure of advancement forward. We know sales have been few. But why complete silence? Even those hyping Volt have grown quiet. Instead, we are seeing heated discussions about safety (size), shams (global warming), terms (ideology), and politics (taxes). What happened to the technology? Remember the intensity that once came from comparing design? That's gone now. Is it the reality that gas is already too expensive and there is no chance of it falling much anymore? That initial excitement from those supporting competitors has faded. No more cheering.

2-23-2008 **Television & Monitor Analogy.** It seemed to be a good one, with reference to battery cost dropping. But naturally, I had to point out something that had been overlooked... You missed a vital factor. The old market was abandoned entirely. Not producing the CRT anymore is what made a massive difference. They committed to the new monitor & television technologies as a complete replacement. That follow through resulted in massive price drops. Something similar must happen for hybrids too. Toyota is racing to switch over 10 percent of their annual product. GM will be struggling to hit 1 percent. Ford & Honda will contribute some as well. All that barely dents the overall worldwide vehicle production. In other words, its going to take a whole lot longer than you think. And all the negative talk about FULL hybrids here is impairing that progress. Slowing battery demand by insisting SERIES hybrids are the only worthwhile investment is counter-productive. Look at what is needed and how soon. Was the success of the new television market achieved by people waiting for the 50-inch 1080p LCD? No, of course not. Yet, that's what people are claiming should be done here by dismissing all other choices except Volt.

2-23-2008 **Ever Wonder?** I don't, anymore. It's quite clear at this point that the understanding of how "full' hybrids work is a complete mystery for some. They simply assume and never bother to verify if they are correct. Thankfully, I'm not alone. Others have noticed this disturbing trend too. In the past, you'd have to accept ignorance to a certain degree. But with such a large amount of money at stake, it shouldn't be taken too lightly... especially with them being available for so long now. Oh well. They'll eventually figure it out.

2-23-2008 **The Way I See It.** The founder of the Grist organization, Chip Giller, worded the situation so eloquently I couldn't resist mentioning it here: "*So-called "global warming" is just a secret ploy by wacko tree-huggers to make America energy independent, clean our air and water, improve the fuel efficiency of our vehicles, kick-start 21st-century industries, and make our cities safer and more livable. Don't let them get away with it!*" I love sarcasm. What a great way to get a point across.

2-24-2008 **Some Advice.** I wonder how they'll respond to this... How come none of the calculations here ever include interest paid? Most people take out a loan when purchasing a new vehicle. No mention of that extra cost originating from the plug-in premium is disingenuous. If you want people to take your effort seriously, you shouldn't do that. For that matter, you shouldn't do a 2011 comparison using the 2003 design of Prius either. Yet, we see it being done all the time too. Credibility is lost when that occurs. You are harming the chance of mainstream acceptance. Take this advice to heart; otherwise, it could become a regret later. The antagonists thrive on stuff like that.

2-24-2008 **First-Year Production, part 1.** The hope for 60,000 Volts being produced in the first year was pretty optimistic, requiring quite a commitment. There's risk too. Engineering alone is not enough. Training takes time. There's lots to learn. Being able to respond to customer needs requires time too. And with the annual seasonal cycle, reports of owner experiences won't come quickly or without skeptics. So it was hard taking claims that 100,000 initially could be possible. That's just not realistic. Needless to say, this quote from who else (Lutz) wasn't a surprise: "*Volt will be about 10,000 units the first year, just to make sure we're prepared for any issues that might come up, and then ramp up production from there.*"

2-24-2008 **First-Year Production, part 2.** This is how I responded online to reading his quote: Both BAS and Two-Mode rollout have taken longer than originally hoped. Learning a lesson from those experiences and planning accordingly makes sense... especially when you become aware of just how long that will make order delivery. Knowing ahead of time that you may see Volts on the road a whole year before you get your own helps. Just look at Prius history. The 6-month waits were a challenge for some and a deterrent for others. But at least they knew what they faced ahead of time. It's a bitter reality though.

2-24-2008 **First-Year Production, part 3.** Don't you love how the Volt saga is progressing? The plot continues to change. Both price & quantity have shifted dramatically. What's next? Purpose remains a mystery. It sure is entertaining, which I believe is the sensible way to look at it. Because if you take each bit of news to heart, it can get very frustrating. Looking back at these personal log entries years later sure will be interesting. Of course, it's a whole lot more exciting as the events are taking place. Afterward is different. You already know what hasn't been learned yet. Decisions seem fairly obvious later on than they do at the actual moment of choice.

2-25-2008 **Veto Override.** It's about dang time! The governor here in Minnesota pledged no new taxes, period. No matter how bad the need, he threatened to veto any attempt to raise funds for road maintenance. (Also, don't forget that we had a bridge fall here.) The budget is showing signs of struggle. The state deficit is near a record high. Money simply isn't available. Adding a few cents to our low (by national comparison) gas tax makes sense. What's collected will be used specifically for repair & upkeep of where that gas is consumed. But no. He vetoed the bill to do that. Fortunately, our legislators refused to allow such nonsense by overriding it. Some were shunned for standing up to finally address the need. That's sad. But at least the money will now be available.

2-26-2008 **Depressing Thought.** Ever wonder what happens to some of the gas-guzzlers people are parting with in favor of something offering better MPG? A small number use to emerge in the market south of the border. But not anymore. That quantity has increased rather dramatically lately. Great, eh? Rather than those SUVs turning into weekend excursion vehicles like they always should have been in the first place, they are remaining full-time use vehicles... being used for purposes other than what they were designed for continues. It never seems to end. What a depressing thought.

2-26-2008 **Encouraging Thought.** Fortunately, there is good news every now and then. Matsushita (Panasonic) is planning to increase battery-pack production to 800,000 in 2009. The source didn't state what the current rate is, but it did point out that 429,000 NiMH were produced by them for Toyota last year. It also said that a small number next year will be Li-Ion. Progress is being made. I can't wait to see the resulting increase in hybrids on the road.

2-27-2008 **Theory Chat.** Watching the Volt enthusiast forum lose focus so quickly has been quite interesting. At first, their purpose and direction was clear. But with 3 years until availability, it was a mystery how that could be retained for so long. Close to a year was actually longer than I expected. What will they do now? The lesson learned from Two-Mode is that without unity, not much will get accomplished. Their quarreling from within proved at too well. Focusing on theory of "best approach" hasn't been working for Volt. I've suggest study of hybrid history and education of how the current offering actually operates. That fell on deaf ears. The desire for the ideal doesn't take into account market realities.

2-27-2008 **Free Prius.** There's nothing like when a new owner introduces themselves by saying their decision to purchase a Prius was the discovery that they could get it for free by using the gas money that would have been spent on their guzzler to make payments on a hybrid instead. What more can you say to that? No other justification was necessary. It was that simple of a choice for them. Sweet!

2-28-2008 **Blog On, part 1.** That was the comment made today... on that forum which has recently lost its direction. But to my surprise, posting this was actually responded to positively, some agree: Hmm? The good old days when Volt was discussed seems to be long gone now. Stuff like… safety (size), shams (global warming), terms (ideology), and politics (taxes)... are all we seem to get anymore. What is the purpose? Clearly adhering to goal should be the focus. A united cause sure would be a whole lot more productive than repeating the same old stuff that has been debated for many years already.

2-28-2008 **Blog On, part 2.** This was the origin of it all: "*Here we are on the verge of another great engineering invention, and what do we do - immediately the worst is brought out...*" That's why I couldn't resist joining in with: My concern is how the purpose of being a great resource for Volt has become overrun with clutter. Normally, it's those fighting your cause the attempt to nudge discussions in a non-constructive direction. That's called undermining. But here, that damage is self-inflicted. What kind of impression does this make when someone does a search on Volt and discovers this website? The answer is they get turned off and leave, never to return. Some websites ban volatile topics (like politics) for this very reason. Sorry, but that's the reality of the situation. At this very moment, the price of oil is $102.95 per barrel. Higher gas prices are on the way... conditions perfect for promoting hybrids. Think about the competition... both other hybrids and the overwhelming force of traditional vehicles, as well as the forces trying to prevent change. It's your choice what to do. Choose wisely.

2-28-2008 **Early Adopters.** The spin some put on news is fascinating at times. That was definitely the case with the bill the House just passed. It proposes $18 billion over the next ten years to be used as tax credits for plug-in vehicles: $4,000 plus $200 per kWh above the required battery-pack minimum of 5kWh. Certain enthusiasts claimed it was a great idea since the tax credit has worked so well for early Prius adopters. I jumped all over that. Since when is 5.5 years after introduction considered "early" still? The actual purpose of that credit was to help the market move beyond just early adopters, to rapidly shift the position of hybrids into the mainstream. Those enthusiasts didn't like hearing that at all... since mainstream status is many, many years from being achieved for them. Lots of other plug-in hybrids will be using up that fund in the meantime.

2-29-2008 **$101.84 Per Barrel.** The closing price for the week sure paints a gloomy picture. Oil keeps going up. I was disappointed that I hadn't well documented things before the hitting of $50 per barrel. Was that ever a long time ago! Whoa!! Now cost of things certainly are getting lots of attention. The ugly situation high gas prices has on the economy is becoming something you simply can't avoid anymore. What kind of affect is this going to have? Just how seriously will the problem be taken? Are the solutions going to require years of waiting still?

3-01-2008 **Intentional Undermining.** I had wondered if one of the prominent supporters of the "series" hybrids was intentionally undermining the other hybrids by labeling both the "assist" and "full" types the same way. So, I gave him the benefit of the doubt. But after being confronted several times about doing that without any acknowledgement in return, that doubt vanished. Today provided the final confirmation. When reporting about an article that explicitly indentified a suppliers new lithium-ion batteries would be used for "mild" and "full" hybrids, he noted that as "parallel" instead. It's just another form of being vague. Avoiding detail allows you to assume incorrectly... so you ultimately draw the wrong conclusion. This is the same misleading that took place years ago when everyone else identified those two the same way. They don't anymore. In fact, the only time you ever encounter the "parallel" label is when Volt is being promoted. Interesting, eh?

3-01-2008 **Parallel Problem.** As I've pointed out countless times, the fact that Prius offers stealth scares the "series" hybrid supporters. The reality that the design currently provides the ability to drive at 42 MPH using only electricity, with prototypes already testing a new maximum of 62 MPH (100 km/h), is a problem for them. That's too much in common with Volt... which is why the proper label is "series-parallel". They don't like that at all. I try to avoid conflict by using the "full" terminology instead. I want mainstream, vehicles that everyone drives using new technology. They want their vehicle to stand out and be special... so they attempt to dilute by calling everything else "parallel". I have a real problem with that.

3-02-2008 **Plug-In Attention.** I wonder if they understand how important it is to first have a base to leverage from. It simply makes no sense switching directly from traditional engine-only vehicles to ones that rely almost entirely on a plug. What example can be named of such a profound paradigm-shift like that? Heck, just look at the transition of analog to digital. It took a decade and virtually all digital content was first viewed on analog televisions. Widescreen, high-definition, and digital viewing didn't come until long afterward. Then when you take cost of a vehicle into account, it's not something the mainstream will jump on immediately. Plug-In will be the domain of early adopters for awhile. In the meantime, that attention will translate to a different perspective on the self-recharging hybrids... a subtle "*they obviously work, now we are moving on to the next best thing*" type endorsement. People will buy what is already well proven. I like that, a lot. It will help make "full" hybrid production in the millions realistic.

3-02-2008 **Still No Two-Mode.** It boggles the mind that it is now March and reports of Two-Mode availability are limited to a just handful of dealers only offering test drives. Not a single one has been sold yet, as far as I can tell. None of the popular forums have mentioned anything with respect to purchase. What the heck? It's as if gas is still cheap and this is the first real hybrid ever offered... giving you the impression that the technology is just in time and a complete solution for all. I wonder what the next few months will bring. This certainly isn't what supporters expected.

3-02-2008 **Electric Heater.** We all knew it would be costly in terms of electricity consumption, but how much remained a mystery. Well, someone got smart and looked up info on the Th!nk, that all-electric car in Norway. The answer isn't pretty. The electric heater consumes half the supply. That cuts the 112-mile driving range down to 56 miles. For a small, slow, light-weight vehicle like that, it's tolerable. But for a vehicle like Volt, half is a very real problem. 20 miles is well under the range expectations that's been promoted. Heck, for that matter 30 miles is too. What will be the solution to dealing with this?

3-02-2008 **Grille Blocking, Warmer.** Neither in January nor February did I see any real efficiency benefit. It came basically just in the form of heater improvement. The thing most definitely cooked! But that's my take on blocking the grille... here in Minnesota. In environments where Winter doesn't get anywhere near as cold, you really do see a big difference. And now that it is finally warmer here, so do I. Unfortunately, the plan is to replace my tires this week. So the MPG gain from higher temperatures will get pretty much get cancelled out by the break-in. Oh well.

3-03-2008 **Lower Sales.** That's the big news today. Sales of Prius this February (10,895) were less than the same month last year. Don't you love how limited some people's perspective is? By only pointing out that particular statistic, it leads you to the wrong conclusion. That time last year was when the big sales blitz began. We saw a massive increase that continued all throughout the year, an event unprecedented in hybrid history... for that matter automotive history. For a model already available for 3 years to suddenly jump up and stay there like that is amazing. Settling down the following year isn't a surprise, especially since February is normally a tough month for sales anyway. Consider what happens the rest of the year. Will selling at least 150,000 annually continue? Yup!

3-04-2008 **Th!nk Ox.** The Norwegian automaker who took over efforts to deliver a two-seat electric car from Ford has been continuing along pretty well. Today, they revealed a 5-seat concept. Using a 60kW electric-motor, the range of the 3,300 pound 4-door vehicle is anticipated to be 120 miles. How much it will cost and when it could someday be available is a big unknown, but this certainly is enough to put pressure on the other automakers. Guzzlers are rapidly losing the spotlight.

3-04-2008 **Golf-Hybrid Concept.** VW has been showing off a new hybrid, one that of course uses diesel. MPG is expected to rival Prius, but naturally smog-related emissions won't. The system will rely on a 7-speed dual-clutch transmission. Combining those with an electric-motor and battery-pack makes it look fairly expensive. I wonder how that will play out. Those once against hybrids (you guessed it, diesel supporters) have now had a change of heart. But like I always say, don't award credit until merit is actually earned. Far too many concept vehicles and promises have fallen apart now to take them as genuine change. Believe it when you see it on the road.

3-05-2008 **E20 Study.** Remember the mandate passed in Minnesota to increase the blend of ethanol from 10 to 20 percent in 2013? That required research to prove that a viable move forward. Materials compatibility, drivability, and emissions were studied by two in-state universities, conducting tests over a 12-month period. So far, the first two aspects have already passed without any concern. From refinery to engine, there were no issues. Driving was consistent with E10 throughout the entire calendar year. So, that isn't a problem either. Emission testing is still on-going. We have to wait for those results before a final recommendation will be provided. With ethanol creation improving and still a number of years before the mandate, it looks promising.

3-05-2008 **Replaced the Tires.** Yesterday, I replaced my old HydroEdges with new HydroEdges. Even with the original softer treadwear rating of 760, instead of the current 800, they still would have easily made it to 80,000 miles just fine. The official distance I traveled with them was 77,558 miles. But with March sometimes being the snowiest month of the year and the reality that this new set will outlast my ownership of this Prius (looking forward to the upcoming new model), it made sense to go for it. So I did! The total came to $531.01, including tax & fees. And wouldn't you know it, we got snow right afterward. Wow! Brand new tread makes quite a difference. The drive this morning immediately brought back memories of how impressed I was with the tires first time around. I'm glad I decided to get them again.

3-05-2008 **Hindsight.** You know the cliché: "*hindsight is 20/20*". Well, there's a new twist to that now emerging. Rather than the number referring to an aspect of vision, it is beginning to represent time... as meaning the year. By 2020, expectation is growing that we'll be far enough past Peak Oil to look back and see just how naive & stubborn we really were. The fact that the price of oil reached an all-time closing high of $104.52 should be a clue. It is time to stop fighting change.

3-05-2008 **WWII Production.** Did you know that the United States government banned the sale of new vehicles starting in 1942? The automakers were given one choice, to instead produce military equipment. Since they were the only industry with the capacity to handle the needs of the war, they were forced to become the providers. And in the spirit of national pride, they embraced the opportunity as a loyal entity to fulfill that requirement. Workers were happy to do their part. Why isn't that happening now? The needs of this war is different, but we are indeed still fighting. We are continually told how dangerous our addiction to oil is, yet a mission to do something about it fails to emerge. During that other war, it only took a few months for priorities to change. Yes, months! Why now, after years of dealing with the problem, has so little happened?

3-06-2008 **Back To Basics.** My rather blunt criticism of the Volt supporters seems to have paid off. Stepping back to look at the situation, I think the leader finally realized just how bad it had become. And with a national gathering planned, now only 2 weeks away, something really needed to be done right away. Well, that happened. Discussions have gone back to the basics. Once again, they are posting messages about the vehicle itself. Those other unrelated topics, at least for now, seem to have been abandoned. Phew!

3-06-2008 **Getting Worse.** I was curious if there was any overnight activity for oil. Sure enough, hours before the market opens, the price has climbed quite a bit. It is now at $105.66 per barrel. The situation keeps getting worse. Of course, if you were looking for ways to promote hybrid technology, you certainly don't have to expend much effort. The problem is unfolding right before our eyes. Gas is becoming too expensive to deny. The damage caused goes way beyond our environment. Quality of life is beginning to suffer... and evidence of that is becoming way to easy to find. Should we resist by waiting for it to get even worse or finally embrace change?

3-07-2008 **T2B5.** That abbreviation is catching on. Yeah! Concept vehicles are immediately scrutinized now based on whether or not they deliver emissions rated better than the "Tier2-Bin5" maximum allowed. Since that is dirtier than the typical traditional gas car (like a Corolla), it is clearly a step in the wrong direction... hence the resistance. It makes no sense calling something "green" if it contributes to worse smog. I'm so happy to see this now. In the past, emissions were focused solely on the kind unrelated to how it affects what you breathe. That's not the case anymore.

3-07-2008 **$105.15 Per Barrel.** That was the closing price for oil this week. At one point, it actually broke the $106 mark. Between hearing that OPEC will keep with current production levels, the announcement that reserves are lower than thought here, and the reality that our dollar is losing value, it was enough to knock up the price to triple the level it was when you-know-who was first elected. Worldwide demand keeps going up too. Being told that our "*addiction to oil*" is being dealt with was disappointing. The speech was the same old, weak nonsense. Change is basically just in the form of token effort. The level we actually need still isn't being taken seriously. Small, slow steps continues to be the theme. It's definitely disappointing.

3-07-2008 **Only 1.** It's suppose to be 30 F degrees warmer this time of year. Instead, I got one whole degree above zero today, on both directions of my commute. I wasn't happy. Things aren't melting yet. The gray of Winter drags on. MPG is way lower than usual. Ahh! Spring will arrive eventually... but when?

3-08-2008 **Small Wonder.** That's how the Malibu-Hybrid was described in an article featuring it today. The reporter's thoughts illustrated the situation we currently face perfectly. Prius was mentioned 8 times. Camry-Hybrid was ignored, as if it didn't even exist. No mention at all. The traditional model competes with it directly. So, no inclusion makes for either a poorly thought out effort or one lacking a sincere approach. True, I did like the fact that it was a negative report showing how much better GM could have done. But I'd prefer the more objective approach of Malibu to Camry comparing. It didn't. But it did include displayed efficiency... the 100 miles of highway averaged 29.6 MPG and the city (non-highway) averaged 27.1 MPG. Camry-Hybrid delivers quite a bit better MPG, without question. Too bad the article portrayed the market as if that hybrid isn't available.

3-09-2008 **To Summarize.** A really well thought out article was written comparing the augmented "full" hybrid to a "series" hybrid. Someone posted a comment in an attempt to stir trouble with this: "*Try explaining how the Prius works in one sentence.*" It backfired. I love it! Someone else responded with this clever come back: "*It gets 46.4 MPG.*" Isn't that great? After all, what else needs to be said when you want to summarize? That's one sentence. It's very to the point. The objective of efficiency is clearly stated. What good would technical detail serve, since most people have no idea how a traditional automatic transmission works anyway?

3-09-2008 **Big Picture.** The problem is that some just don't look at it. They declare a winner without considering what's truly needed. Thankfully, all don't. There are others that are well aware of the need to deliver a technology to improve emissions & efficiency without much additional cost in the vehicle size/class they would have purchased anyway... like the choice of transmission. In other words, avoid paradigm-shift yet still change the world. I interjected that today, which most likely just fell on deaf ears, by posting: Engineering achievement is great. Volt will earn awards & praise. But don't make the mistake of forgetting purpose and the time available. Change comes from sales, since quantity on the road is a major factor in determining the amount of oil still being consumed. It's not the individual vehicle, it's the fleet as a whole.

3-09-2008 **Goodbye Dad.** 30 years ago, my father introduced me to the world of cars. It was very exciting! There was lots to look forward to. Eventually, I joined in that very future history he had described in a decade long past. It was an exciting reality getting to experience some of his dream first hand. What he had told me about with fascination was now in my driveway. But today, he too became history. His struggle with the battles of aging ended. That great guy named "Dad" passed away. I sure am going to miss him.

3-10-2008 **Still?** After all this time, you'd think comparisons of Prius to Corolla would have long since vanished. We haven't seen any in ages. Yet, one emerged this morning. The nonsense still continues. It started with a comparison of exterior length... an obvious misleading point, since the engine compartment for a hybrid can be much smaller. No other vehicle aspect followed. You were simply allowed to assume Corolla had a larger interior and all else was the same. That led to several paragraphs of number crunching which concluded it would cost much less to just buy a Corolla instead. Like in the past, there was no mention of smog-related emissions. Of course, it really didn't matter. The article titled "*Do hybrids actually save you money?*" was never concluded. The writing just abruptly ended.

3-10-2008 **CAFE Changes.** Those new standards are coming. They will cause change. Today, we got a hint of what's to come. Starting in 2011, that loophole allowing vehicles weighing more than 8,500 pounds to be exempt from MPG fleet averages will be closed. The Hummer H2 is 8,600 pounds... not by accident. That was quite intentional... and so was the announcement we just got about production ending in, you guessed it, 2011. I sure am glad the use of trucks for non-truck purposes is ending along with the obsession with size & power. It was a chapter in our history we won't be proud of later.

3-10-2008 **$109.36 Per Barrel.** That's what this morning's market check revealed. So, it was no surprise that the price of gas here jumped from $2.94 to $3.12 overnight. Diesel is now at $3.79 per gallon. The situation is undeniably bad. In other words, we have arrived. Cause really doesn't matter at this point. It's expensive, regardless of what factor you blame. Change is needed now.

3-11-2008 **Real-World Data Importance.** I can't stress it enough. This made me climb up on the soapbox again: "*I have to be extremely skeptical that anyone could ever come up with a Volt overall mileage estimate of only 100 MPG.*" That got this reply: Anyone claiming more than 100 MPG deserves the same skepticism. Only real-world data is acceptable, period. That's the only way to remain objective. Like it or not, the history of hybrids so far have proven that all too well. Those wanting to undermine just get selective about what they quote, sight special circumstance information, and twist what you say... leading to a false impression, and people assume it's true. They intentionally attempt to create misconceptions. Real-World data has been the only protection against that. They have a very, very difficult time disputing actual experiences. Remember purpose. 100 MPG easily achieves that. Don't provide antagonists with the opportunity to stir trouble.

3-11-2008 **Spring.** It has finally arrived. Yeah! Unfortunately, this beautiful warm & sunny day was clouded by memories of the past. The previous year, which came to a sad close a few days ago, was awful. The recent temperature change from -2°F to 52°F reflects the mood perfectly. It's hard to believe just how nice it is now compared to what it just had been. That will definitely be remembered as a horribly long Winter. The attitude of cold, gray, and without hope has passed.

3-12-2008 **Car Wash.** The experience was surprisingly refreshing. Rather than doing it by hand in the driveway, an excuse to enjoy the Spring weather, I drove over to Toyota to use one of my free car wash tokens. After getting in the long line, I spent much of the wait chatting with a friend about my dad's passing over Bluetooth. 25 minutes later, I was inside the car wash. That entire stop & slow drive was on electricity. There were 4 consecutive 100 MPG bars showing on the Multi-Display. What also showed was 2 pink SOC bars, showing the battery was due (at about 45 percent) for replenish. Just as I as checking, the engine started up. That was predictable, right during the high-pressure wash cycle. But to my delight, it had recharged enough before the conclusion of rinse cycle to allow me to drive out through the dryer in stealth. Cool!

3-13-2008 **All Good Things.** The wake, service, and funeral all went well. I choked up when saying my eulogy, though managed along. But it wasn't until they fired the guns in his honor (he was a veteran) that it sunk in just how final the situation really was. Bang! It's over. Suffering changed to peace. Father's Day will be a sad time for me. Since it was always close to my birthday, he and I used to treat each other to a day out at the State Fair... where there were several hundred classic cars gathered that same time every year. On the brighter side, it was his influence contributed heavily to my support for hybrids. So part of him will always live in the legacy I'm helping to build... Dad, I miss you.

3-14-2008 **Reminder.** Some appear to be forgetting that the efforts behind ethanol production was to continue the advancement of the fuel. We saw that here in Minnesota for over a decade. Most was locally produced for local consumption. Then the craziness of 2005 occurred. Focus on production from corn for distribution nationwide obscured those earlier efforts. Measuring actual progress became a confusing mess. Why worry about gas when you increase fuel supply by adding ethanol? It was a classic example of exploitation. Fortunately, the goal of using waste & unneeded biomass instead of corn hasn't been lost entirely. Some of us remember. Unfortunately, the reputation of ethanol is now tarnished.

3-14-2008 **Stop Gap.** That term continues to resurface. But have you noticed how no one has actually clearly defined what the heck "stop gap" actually means? It's a term coined with the specific intend of undermining the progress of hybrids. But at this point, it's pretty easy to argue that want having backfired. Using it originally implied a "temporary" solution. But now, enough time has went by since its origin that people are looking to replace their old hybrid with a new one. That transition to next generation wrecks the idea of being "temporary". Look at the economy now. Prius is already established as a mainstream solution. Sales will remain strong. Who's going to accept the idea that it isn't something which will continue to be available?

3-14-2008 **Sales.** Prius was deemed worthy of praise in an unexpected report this week. 33 out of the most recent 52 months were record making, where Prius was the "fastest selling" vehicle available in the United States. I knew overhead had been trivial, from dealers selling them as fast as they could be delivered originally. But I didn't realize that was still the case, especially with the significant inventory increase over the past year. No wonder it is a product loved by all. And now with the oil situation getting so ugly, I am expecting the trend to continue. It's pretty sweet!

3-14-2008 **Resale.** I had no idea the value of Prius would increase so much over time. Back when I sold my Classic model to upgrade to the HSD, the technology was not well known yet. So the price I got was fair. I was pleased with what the expenses of those first 3 years had come to. It was a good deal. But now, things sure have changed. By just storing it in my garage until, I could have made several thousand dollars. For a vehicle to appreciate that much is very rare. Who would have thought the demand could grow that much, especially for an older generation. But that is indeed what is happening. Classic Prius (2001-2003) are selling for a surprising amount of money. How about that!

3-14-2008 **$110.21 Per Barrel.** That was the closing price for the week. To my surprise, the price of gas went down here by 7 cents since that spike beginning this week, to $3.05 per gallon. I wonder why. Hmm? Diesel went up though. It is now 10 cents higher, at $3.89 per gallon. Needless to say, diesel supporters have grown silent. Any price advantage they may have been able to convince you of in the past is long gone. Next week should be interesting.

3-15-2008 **Tier-3 Emissions.** Commercial engine emissions are getting the attention already. I hadn't expected that so soon. But with many antagonists claiming Tier-2 is good enough, the cleaner standards coming in a few years are definitely worth pointing out now. 2012 is the target. Locomotive & Marine fuel consumption concerned have gained focus for the very same reason as passenger vehicles, the NOx and PM levels are simply too high. Smog is a very real problem still. Thankfully, the EPA is taking this matter seriously. Carbon emissions have recently caused a diversion, making some forget the importance of what we breath. It's the reason all along that I have pushed that *BOTH* emissions & efficiency be a requirement for green. Just one or the other is not enough. You can't ignore the reality that there are 2 goals... which some hybrids don't actually achieve.

3-16-2008 **Pizza Delivery.** I've seen a White Classic Prius delivering pizza around here for ages now. It's a frequent sight... that thankfully, didn't have an abrupt end. Today's encounter reveal a very unexpected battle wound. Both doors on the driver's side had large impact marks. Something had slammed up against it. Poor thing. But that does add to the credibility of the hybrid. Accidents happen. Prius is proving to be quite tough. Owners & Enthusiasts like that a lot.

3-16-2008 **Watching 145ºF.** When that magic temperature appears on my ScanGuageII, it always heightens interest. And being so close to Spring, that drop to it was uncommonly slow now. You are usually sitting at a horribly long stoplight in the frigid cold climate when it does, quickly. To instead be in motion for over a 1/2 mile while cruising along a flat neighborhood road at 35 MPH in stealth was a great change. (I love that silence & smoothness of driving without the engine in motion.) Its passive approach built up the moment. And sure enough, as soon as the coolant temperature dropped to that threshold, the engine started back up. I hadn't ever been able to witness that event under such conditions. It's great getting to confirm expectations like that.

3-16-2008 **Two-Mode Arrival.** Reports of delivery are finally starting to surface... but strangely, not on the big GM forum. Posts related to hybrids have been mysteriously absent there lately. On this other though, a few new owners have chimed in. It's pretty much as anticipated... except, believe it or not, those massive "HYBRID" decals from the autoshow model actually do come on the production model too. Needless to say, some are removing them right away. MPG so far is below the EPA estimates, which is to be expected for a new vehicle in the cold season. Warmer weather should make things interesting. It still makes you wonder though. How will improvement be gauged when real-world data for the non-hybrid model is for the most part non-existent? People obviously don't share such incriminating information. After all, it would give monster-size SUVs a bad name! So... what about the hybrid version? Efficiency around 21 MPG is still considered guzzling.

3-18-2008 **FOB Battery.** Mine finally started to wear down. The Prius would beep when shutting down, the indicator light on the remote wasn't illuminating, and the doors were slow to respond. It was time to probe inside... documenting my findings with a digital camera, of course. Now there's new material to add to the User-Guide. The entire process only took a few minutes... though I had to do it twice to confirm my findings. The beep ended. The light illuminates. Doors unlock quickly. I was back in business! 4.5 years for that battery is pretty darn good. At at a cost of only $3.49 to replace, newer owners can now rest assured. We keep doing our part to share our experiences. There's little to wonder about anymore. It's very exciting! Prius is proving to be extremely well thought out.

3-20-2008 **Egg On Face.** Remember that remark from Lutz last November? He stated the mules (vehicles used for testing new technology) for Volt would be available to prove feasibility by Easter. Well guess what. Easter is just 3 days away and we've been told that there would be a delay until July. That's no be deal. Delays happen. But it's hard to forget the attitude, especially with his quote: "*Let's wait for the Easter Bunny. Somebody's going to have egg on their face. And I don't like having egg on my face.*" It's also hard dismissing the big Volt gathering in New York City yesterday, sponsored by GM with executive participation and 300 attendees, as a mere timing coincidence. Obviously, it served as publicity to distract people from noticing where the egg ended up... and it makes for a great historical footnote in these personal logs.

3-20-2008 **All About Volt.** The theme of that gathering was "Volt Nation". It was the launch of a new effort to unite based on a single vehicle. I pointed out how they were following the history of Insight. They too had established a group of strong supporters, but showed no interest in spreading the technology to other vehicles. It was all about Insight. Only a single person sounded off that focusing on "E-Flex" instead made more sense. Quite a few others, respectfully, disagreed in a very blunt manner. It's intriguing watching them back away from the mainstream. That is very different from Prius supporters. All the other hybrids that use HSD are treated like family, each contributing their part in changing the market.

3-20-2008 **7-Speed Double-Clutch.** I stumbled across a diagram of that design employed by Audi & VW to improve efficiency. It's the most amazing transmission you'll ever see. The engineers seem to have pulled off a miracle. To get something that incredibly complex to work so well is quite impressive. But with that many interacting components, cost & reliability were obviously not high priorities. That is most definitely a step in the wrong direction if the goal is mainstream penetration. The "transmission" used by Prius looks like a toy in comparison, as if something was overly simplified or missing. But in reality, it's all you actually need... as the owners have clearly proved. I suspect 7-speed double-clutch transmissions will remain a niche offering as a result.

3-21-2008 **Bridge Closure.** Careful inspection upon a bridge here of the same design as the one that fell last Summer revealed buckling of gusset-plates, the very support-component they believed to have caused failure in the other. Needless to say, officials took the initiative to play it safe. They closed this one. Fortunately, the decision came easier due to the fact that money is available for repair or replacement. That gas tax, which required a veto-override, is helping to fund efforts that were previously hampered... just like this. It's really sad that it sometimes takes a disaster before proper action is taken.

3-22-2008 **Addressing Purpose, part 1.** On the big Prius forum today, this exclamation from Lutz caught some attention: He claims GM may have underestimated the popularity of plug-in hybrids and that sales of the Volt could top 500,000 units annually. That was stated in a Detroit published article, which didn't offer the exact text for me to quote. But you get the idea. My response was... Camry is the top-seller here, topping 473,000 last year. How could beating it, along with all the other competing vehicles, be accomplished? What about spreading the technology to other vehicles? Isn't betting the farm on just one choice, especially it being compact sized, rather risky?

3-22-2008 **Addressing Purpose, part 2.** On the forum dedicated to Volt, this comment came from the topic of anticipated sales: "*Yeah, well it is pretty discouraging. Even so, the trajectory of the Prius is instructive…*" There was no need to read any further. 2011 will bring increased demand for hybrids. But how will Volt alone compete with several those other systems, each available in a variety of vehicle size & type? Really wanting to know what their thoughts on purpose are, I provoked feedback with this... 54,492 sales of Camry-Hybrid here last year should make you wonder if the big picture is truly being acknowledged. It's not all about Prius as countless posts here imply. E-Flex, not Volt only.

3-22-2008 **Addressing Purpose, part 3.** The idea of a single vehicle taking a drastic leap forward has always been a compelling draw. That's why concept models have been such a big deal at auto shows. But how many of them actually deliver mainstream change? The thought is an oxymoron. If something stands out, then it cannot be in the majority. Sure, a vehicle can invoke the desired change. But it alone cannot achieve the purpose of moving the entire industry forward. Accomplishing that requires spreading the technology across a wide variety of vehicles. How come so few Volt enthusiasts address that? Waiting until after rollout begins is way too late. We already have emission & consumption problems.

3-23-2008 **Hybrid History.** Remember that "*up to the chore*" online debate that dragged on for about 2 years? Most don't, especially since it was removed from the discussion forum afterward. It got really ugly at times. Some participants were down right hostile trying to convince us that hybrids weren't. There were countless examples of misleading... and sadly, some dishonesty too. The moderators allowed it to continue though, since it made the topic a top attraction on the forum. But in the end, the conclusion they tried to avoid was finally drawn. Hybrids were. Debate over. However, the legacy still lives on. Recently, there was a question about "*hypermiling*". I provided a definition most we're even aware of. They had just assumed it originated from hybrid drivers, having no idea there was a history from non-hybrids before that. Needless to say, their definition was quite different. I hadn't realized so much history with hybrids has taken place that we now need to qualify a terms. Interesting, eh?

3-23-2008 **Hybrid Supporters.** Speaking of hybrid history, there is an interesting perspective emerging from those who participated in periods of the past. It's like a "*class of*" for owners who helped establish the discussion groups & forums when the HSD model debuted. These are the supporters that newbies turn to for information & advice. Those well informed owners are happy to provide that type of support. It's great! There is very much a community online for anyone wanting to know more about HSD. Then there's me. My history goes even further back, all the way to before the THS model rollout in the United States. The term accepted for my particular role is "founder". Now I'm looking forward to purchasing my next Prius, taking a third step in the generational history. I can't wait to provide support for that, but even more exciting is that I won't be so alone anymore. There is the potential for many supportive owners to also take a generational step. Yippee!

3-26-2008 **Hybrid News.** The last few days have been odd. Volt didn't make that Easter milestone, but the media didn't care. My guess is that it wasn't newsworthy since there isn't a production vehicle involved. Concepts typically don't hold much interest beyond their debut anyway... which explains the lack of attention with Two-Mode too. Since initial sales are stalled for some reason (perhaps a supplier problem), there's really nothing to report yet. At some point, we'll hear something. But when is anyone's guess. Meanwhile, interest in Prius is skyrocketing. The big forum is struggling with response time and User-Guide downloads have surged to record levels. The price of gas exceeding all-time highs is obviously a major contributor to that.

3-26-2008 **Payoff in 95 Years.** I wondered how long it would take before someone finally tried to undermine plug-in hybrids using actual data. Doing that gives the impression of credibility, but in reality is just misleading. Being selective & vague about what's included is how. In the case today using Prius data, they started by only including the price of an aftermarket conversion. Factory delivery would be cheaper, and that doesn't even include the fact that the original battery cost can be excluded too. In other words, the quoted price of $15,000 was way too high. I suspect a maximum of $8,000 is what the target would actually be set at by an automaker. Next was the fact that the upcoming generation design was never mentioned. Excluding those improvements, like the increase of electric-only speed to 62 MPH, allows for assumption. Following that came a blatantly incorrect price expectation for Volt. You guessed it, they quoted "*around $30,000*", which has been unrealistic for quite some time and highly publicized as such. Yet, that's what they used anyway. The most obvious misleading though was forcing the idea that a plug-in must pay off. Since when should the reduction of emissions & consumption be totally cost free?

3-26-2008 **Limiting Rollout.** A new interview with Lutz provided new information about Volt rollout strategy. It will begin in California exclusively. That will later be followed by Washington D.C. rollout. After that, it will be made available in Florida. This news was a disheartening blow to many enthusiasts... hoping for nationwide sales from the start. They seem to have forgotten entirely about the problem Li-Ion batteries have with cold temperatures. Remember how lower than 32 F degrees brought about significant recharging limitations? It's one of the major hurdles preventing the switch over from NiMH batteries. Seeing it used in genuine Winter conditions, basically any northern state, is a really big deal. Limiting rollout to climates that stay warm means one more original expectation not being met. Makes you wonder what the efficiency will actually be when parked in a Minnesota parking lot all day during the worst part of January, eh?

3-27-2008 **Spring hasn't Sprung.** Temperatures are still below normal. 30's this week and 40's expected next week aren't exactly encouraging. Snow is still a very real possibility too. My thirst for the return of warmer weather will continue to go unquenched awhile longer. I am so looking forward to higher MPG. Between the seemingly endless Winter and the break-in of the new tires, it will be a very welcome change. That magic efficiency I remember from the past isn't too far away now. And I will admit, I do enjoy the seasonal cycle. But this year especially, I would have preferred it being shorter. Oh well. That's Minnesota for you.

3-28-2008 **Misrepresentation, part 1.** Instead of the webmaster of the Volt blog using that "95-year payoff" data as it was originally published, he ignored their observed 44.6 MPG fleet average to 40 MPG... for the sake of argument. Needless to say, he got an argument back. With my calculated average currently at 48.0 MPG and the big online database at 47.5 MPG, the efficiency of a standard Prius in 2011 when Volt is available will clearly not be anywhere near that low. 50 MPG would have been a more objective value. But he didn't choose that. His decision was to misrepresent. I wonder how many others will be upset by this interesting turn of events. Hmm?

3-28-2008 **Misrepresentation, part 2.** His other choice may end up stirring the pot quite a bit too: "*Volt is not a hybrid, it is an electric car with a gas range extender. If one drives 40 miles or less per day, no fuel will be used.*" Do you really think the EPA is going to buy that line of reasoning? If you've read all 8 years of these personal logs, you're well aware of how strict emission regulations are. No use whatsoever during the entire 100,000 mile minimum is quite unrealistic. Vapor components and fluids age whether they are used or not too. There will be some type of routine housekeeping operation. Forcing the engine to run from time to time isn't the end of the world, but it does wreck the justification for calling it an electric car. The label of "series" hybrid cannot be shaken. He'll continue to try though. I'm saying that's misrepresentation.

3-29-2008 **Misrepresentation, part 3.** The 100 responses to the topic didn't result in much. That gathering didn't seem to generate any type of bonding effect. In fact, it may have served more to divide instead. So, my guess is the intended outcome from this was quite different to what he had hoped for. Price, Time, and Location concerns have made Volt rather chaotic discussion subject matter. I figured that would happen. The question was really only a matter of when. How could a new concept be promoted for 4 years and still meet every expectation from every enthusiast? Normally, excitement begins at product rollout and promotion builds throughout the lifecycle of that first generation. That way, consumers are yearning for the second with a solid idea of what it will deliver. But with this, there isn't even a market established yet and the attitude toward emissions & consumption is very much in a state of flux.

3-29-2008 **Greenwashing Terms.** The misleading continues. Newest among those false impression attempts is identifying a "series" hybrid as one without a plug and the "extended-range electric vehicle" as one with. It's a marketing twist, changing well established terms with no apparent benefit other than product promotion. "Plug-In" has always been the term for that. There is no need for the change. But then again, actual change doesn't always result in a properly informative term anyway. "Clean" diesel is the obvious recent example. True, it is clean compared to diesel of the past. But when consumed, the resulting emissions are still worse than clean gasoline. It's a misleading term that promotes incorrect assumptions. That's why diesel supporters absolutely hate using emission ratings, since they leave no doubt. "T2B5" is dirty and "SULEV" is what is genuinely clean, regardless of the fuel being used. "Plug-In" eliminates any possible confusion too; you know with absolute certainty that the term indicates the ability to connect to the electric grid for recharging.

3-29-2008 **Softened Sales.** Those publishing articles which contribute to undermining Prius are at it again. Production capacity grew last year, so sales increased then. This year, there is no opportunity for further growth... because battery-packs cannot be supplied any faster. That capacity will be limited until next year when the maximum expands. Until then, we're stuck. But rather than tell people that, certain writers give the impression that consumers are making the choice by sighting flat purchase statistics. Not seeing any growth portrays the illusion of softened sales. It's yet another example of greenwashing. I'm not happy that this nonsense lives on. But then again, it isn't a surprise. Until there is a direct competitor to Prius available in similar volume, this type of resistance will continue. Oh well.

3-30-2008 **Long-Ago Interview, introduction.** Years before the invasion of blogs, reporters were the on-going source of hybrid information. That meant I was often contacted as a part of their research... having one of the few hybrid websites available (and was fortunate enough to upgrade to the next generation model right away). It was a very different time back then. Consumer voices are much louder now and much further reaching. The market itself has changed quite a bit too. Anywho, I stumbled across one that had been conducted with me via email and found the answers an interesting look into the past (July 2004). So, I thought I'd share them here.

3-30-2008 **Long-Ago Interview, question 1.** "*Why did you decide to buy your first Prius?*" Back in the late 90's, I experienced lots of engine & transmission repair headaches... and two nightmares. That frustration sent me on a quest to find something better. As a result, I discovered Prius. It was a design that took a totally different approach propulsion, which as a result delivered cleaner emissions and greater efficiency in addition to the impressive engineering.

3-30-2008 **Long-Ago Interview, questions 2.** "*Did it live up to your expectations? Did it live up to the specs provided by Toyota?*" I studied Prius heavily for 8 months before taking delivery of my 2001 (coined "classic"). So my expectations were dead on with what the engineering taught me and what the comments from Japanese owners of the previous model (coined "original") had made.

3-30-2008 **Long-Ago Interview, questions 3.** "*What was the biggest surprise about the car? What kind of problems did you run into?*" I was quite surprised to discover how soft the rubber was on the OEM tires. "160" is significantly below what people expect for a family car, since that treadwear rating is almost always something for the high-performance vehicles... which have their tires replaced far more frequently. Fortunately the "classic" owners quickly discovered alternate tires were available. Personally, I ended up replacing those OEM tires with ones that offered a "560" treadwear rating instead. That resulted in tires that lasted significantly longer, didn't compromise MPG, improved handling, and even cost less than the OEMs! And fortunately again, Toyota stopped using those tires. The 2004 comes with tires quite similar to the alternates I bought for my "classic".

3-30-2008 **Long-Ago Interview, question 4.** "*What did your friends and family think of your purchase?*" It was a silent awe. At first, they thought I was simply obsessed with the technology, but then they quickly discovered it really did deliver as I had claimed.

3-30-2008 **Long-Ago Interview, question 5.** "*What compelled you to buy the next Prius*?" Safety, Hatchback, and many tech-goodies. My "classic" didn't have side-airbags, side-curtains, VSC (vehicle stability control), HID (high intensity discharge) lights. The 2004 did, plus it was designed to deliver a higher safety rating. The frame of my 2001 had been designed way back in 1995, so it was just average. My first car was a hatchback. I really missed that convenience. So the 2004 fit my desires quite well. Tech-Goodies are a must in my profession. I thrive on stuff like that. So features like SE/SS (Smart-Entry, Smart-Start), Bluetooth (cell-phone connection), and the DVD-based GPS Navigation System in Prius is a very compelling draw.

3-30-2008 **Long-Ago Interview, questions 6.** "*What are the differences? Are you pleased with the second one? More pleased than with the first one?*" The 2004 clearly out-performs the "classic". It's a new package full of upgrades everywhere. Reduced emissions, improved MPG, increased power & speed are differences that will appeal to all. That's a huge endorsement for the HSD (hybrid synergy drive), which will be available in more traditional vehicles like Highlander & Camry later. The other stuff is more of a Prius enthusiast draw. We notice every little detail Toyota has improved... all the way down to the elimination of the relay click (right before the engine automatically shut off) that only could be heard in below-freezing temperatures. So, the 2004 is more pleasing, though I will always have a fond affection for the "classic" model... which I'll get to see at auto shows for decades to come! And of course, our local gatherings include many "classic" owners.

3-30-2008 **Long-Ago Interview, question 7.** "*Have you had any bad experiences with the vehicle...especially stuff beyond your control?*" Nope. Though, hearing that really confuses people. That find it almost unbelievable that a vehicle can deliver that well. But it has. And all of my observations and conversations online confirm that it is an excellent design.

3-30-2008 **Long-Ago Interview, questions 8.** "*Why did you choose the Prius over other offerings? What about the second one? You could have purchased a Ford Escape that may have been better suited to your climate, what made the Prius your first choice?*" What other offerings? My hybrid shopping began back in January of 2000. Prius was only "full" hybrid in production. And now, 4 years later, it still is. "Assist" hybrids are very, very limited in their electric abilities (a must for moving toward fuel-cell technology). And I am well aware (having grown up in Minnesota) that a car like Prius can out-maneuver and stop-quicker on snow & ice than a SUV. So... Insight, Civic, and Escape simply are not for me.

3-30-2008 **Long-Ago Interview, question 9.** "*What is the biggest misconception about hybrids...both negative and positive?*" Negative is simple. Those without an engineering background (which is most of the population, unfortunately) are under the impression that the hybrid system is MORE complex than a traditional system. But in reality, it is LESS. The power-split device (Planetary-CVT) completely eliminates the transmission. No shifting. No torque-converter. Nothing. There are literally just a few power-carriers, permanently engaged and arranged in a method quite similar to a differential... an automotive device that rarely ever fails. Positive is difficult. A "full" hybrid like Prius offers quite a few improvements over traditional vehicles. So there are a number of favorites. But among those, I could point out the most common: "STEALTH". That's what owners have coined for driving using only electricity, up to 42 MPH without the engine running at all... even with the A/C on! The smooooooothness and silence is a pure delight to experience.

3-30-2008 **Long-Ago Interview, questions 10.** "*What should I know about your experience that I haven't asked you? Anything you'd like to add?*" You haven't asked my purpose! It's to gather & share real-world data about "full" hybrid technology, which will ultimately make the r/evoluationary step toward it being available in the vehicle type of your choice (car, minivan, truck, SUV). That will help us all reduce emissions and our dependence on non-renewable resources.

4-01-2008 **Missing Hybrid?** I'd really like to know what's going on. Rather than getting inundated by reports of experiences from new owners, we aren't hearing anything at all about Two-Mode. With so much passion for it expressed a year ago, you'd expect rollout to be a very big event. Instead, there's nothing. It's as if the hybrids were missing entirely. So, I returned to that source of all that prior emotion for answers, with this: Two-Mode production began October 29, 2007 with expectation of those new vehicles being available at dealers in December. 5 months later... What happened? Why aren't we hearing from Two-Mode owners? 20,635 Prius and 6,930 Camry-Hybrid were purchased in the United States last month. So, the market for hybrids obviously isn't softening. How do you expect me to react to this, especially after having endured so much hype last year?

4-02-2008 **Worth The Effort?** Once a product makes it to market, merit of the design can be well measured. Discussion of it before is an entirely different matter. Credibility lacks if the participants repeatedly post errors, which has been a serious challenge lately for Volt. These two separate examples from routine posters really got me worked up today: "*I am glad that GM didn't tool up with a dead end configuration like the Prius.*" and "*I do not know what you are calling a "full hybrid." There are two types of hybrids - serial and parallel.*" That first is just plain wrong. The enthusiast making that exclamation is in for quite a surprise when he confirms my reply about Two-Mode. As for the second, I've posted comments many times about "assist" hybrids (IMA and BAS) having virtually nothing in common with "full" hybrids. Yet, oblivious statements continue to emerge. Sadly, there are plenty of examples of being completely unaware of hybrid history too. It's as if some believe Volt is the first major effort to develop anything beyond Prius. They have no idea what has taken place over the past 8 years. That's scary. It allows for the same mistakes to be repeated, and perhaps some new ones too.

4-03-2008 **Perspective.** Taking a look into that diesel forum from long ago, I see that nothing has changed. It's the same old self-vindicating posts that don't accomplish anything. The constructive nature (anything that reaches out to gain new interest) is simply not there. That's what I envision happening to the Volt forum, especially without any owner contribution available. Discussing prototypes only goes so far, certainly less than with vehicles already on the road. Look at Two-Mode for a more recent example. Silence overcame all those loud voices quite abruptly. It's real-world data that build & carries interest. The enthusiasts are going to have to wait. Remember how long I had to wait for Camry-Hybrid. For years I could point out how the "full" hybrid technology could be spread from Prius to other vehicles, but those words had little effect until consumers actually saw it happen. Perspective comes from actions. That makes hype easy to distinguish.

4-03-2008 **Snow Driving.** I certainly have had my fill lately. With those new tires, I was hoping for just one last, big snowfall to play in with the Prius... not several! The white stuff certainly has been abundant lately. I ended up with quite a few opportunities to drive in demanding snow conditions. It was very exciting, if non-eventful driving is what turns you on. No slipping & sliding for this Prius! Those high-traction tires have once again proven an excellent choice. When the tread is deep, that special pattern really comes through. For me, that translated to 3 Winters of use. By the time the 4th came along, they already had 70,000 miles on them. So traction had degraded to just the adequate level. I didn't have trouble with them before replacement, but hill climbing certainly wasn't as easy. The recent improvement is quite impressive. The HydroEdges are definitely a good recommendation for owners looking for an all-season upgrade.

4-04-2008 **Sophisticated.** I can't help but to be amused how often those fighting the success of Prius play the "complexity" card. They clearly have no understanding what they are claiming. An automatic transmission in a traditional vehicle is more complex. But regardless of that reality, the perception of being more complex isn't taken as they hope. The antagonist wants you to feel it is a negative. Turns out though, the typical consumer sees that as the very opposite. To them, the technology is "sophisticated". That's a positive, a reason that compels them to purchase... not something that scares them away. Talking about a backfire! The outcome is exactly what they were trying to prevent. They are helping rather than hurting. I wonder if I should tell them. Hmm?

4-04-2008 **Dismissed Disclaimer.** Remember the fine-print estimating Volt electric efficiency as: "*40-mile range based on EPA city cycle*." Most enthusiasts just blew that off, arbitrarily dismissing the highway efficiency as not being much less. Having no real-world data available should have been a source of concern. It wasn't for them. Today, an interesting reiteration emerged... since it is quite important to prevent unrealistic expectations. An article featuring the recent PR blitz GM just offered (to feed the hype, of course) actually ended by quoting a disclaimer from the engineers: "*Without any braking, in perfectly traffic-free highway driving, the range would be closer to 32 miles.*" Interesting, eh? I never even expected it to be that low. Combining that with A/C or heater use on my 19-mile mostly-highway commute (which involves very little braking), you'd get efficiency results quite different from what had once been portrayed. I'm quite curious what the reaction to this from enthusiasts will be now. The suggestion of not putting so much emphasis on "*40-mile*" promotion may be taken seriously now.

4-04-2008 **Sales Volume, part 1.** They weren't at all happy on the big GM forum about my "missing hybrid" question. Rather than the usual flood of defensive responses, there was only one reply... which attempted spin (twisting of facts to alter perception). It backfired though, because I stirred the pot by encouraging more. That caught the attention of one well-known troublemaker. So to further emphasize the point, I added this: It all boils down to actual SALES. After all, they take into account the spin.

4-04-2008 **Sales Volume, part 2.** Making a difference means actually delivering something. Last year, they endlessly preached the benefit of first getting Two-Mode technology in the largest guzzlers. Supposedly, that would result in the most fuel being saved. Well, for that to be true, sales volume must reflect some progress. But so far, sales are heavily in the favor of smaller hybrids. To make matters worse, I made sure they knew those sales were despite the spin. Consumers are voting with their wallets. That sends a powerful message. In other words, the spin isn't working. People are figuring out the true situation on their own... which the count of sales clearly confirms.

4-04-2008 **Sales Volume, part 3.** The same message of sales being so important applies to new ventures for all automakers. GM gets the most attention because they desire it. Invitations to the press for tours in their development labs makes that pretty obvious. So, I feel free to chime in. And on that website devoted to Volt, the topic of sales is often discussion but rarely understood. Today it was this "*Great exterior/interior designs + solid, innovative engineering under the hood = smash hit car.*" that trigger my response of... No. That's the formula for a collector's item. You forgot to include volume. A smash hit, especially in these times, is a business sustaining product. Will Volt be produced at that high of a quantity? It means being such a good purchase choice that it's quite common. Mainstream volume does not sound like what the enthusiasts actually want. To be a supporter instead, it means embracing the practical. How popular do you want Volt to become?

4-05-2008 **Sales Volume, part 4.** Seeing beyond just a single vehicle is clearly going to be a challenge, as was quite evident this morning. Sound familiar? The same thing happened in the past with Prius. I kept saying that someday other vehicles would also use the technology, that is was in fact a vital part of its continuance. But that message was a struggle, even when Highlander-Hybrid finally debuted. Then later when Camry-Hybrid was rolled out, acknowledgement still didn't happen... for enthusiasts of the competitor's technology. Consumers had quite the opposite reaction, seeing it as a verification that the technology was indeed a new standard platform rather than just a specialty. Oh well. With volume comes vindication. It's tough to deny success when you see so many on the road everyday.

4-05-2008 **$3.29 Per Gallon.** That's at least what it should be with oil now at $106.23 per barrel. Makes you wonder just how high it will climb during the travel season, when demand for it will be quite a bit higher. This is when the dinosaurs start to die. The time for those giants has passed. They are from an age where large diets of abundance wasn't a much of a concern. Now it is becoming a very real problem. Those able to deal with this new environment will begin to thrive. Their time has finally come.

4-05-2008 **Complaints.** There's an entity with a growing reputation for publishing very, very misleading information about Prius. They find an extreme example of something and portray it as if that happens to many owners. On the big Prius forum, we all scratch our heads trying to figure out what their true motive is. Whatever the case, we certainly have more to work with now. They just published an article with a slew of problem messages from Prius owners attached. What they did was solicit complaints. Giving people a place to submit without any means of follow-up or respond is a recipe for disaster. For example, think about how many Classic Prius owners experienced rapid tire wear and HSD Prius owners losing traction... then complaining. If all that you see is the complaint, you get the impression there is no solution. But in reality, they just switch to a better tire. Problem solved. Then of course, there were countless complaints about EPA estimates... all listing, you guessed it, the original values. Exclusion of the 2008 revisions is blatant misleading. No perspective was provided either. You were just allowed to assume other vehicles don't ever have complaints, as if Prius is somehow an exception. In the end, I was frustrated but not at all surprised.

4-06-2008 **Name Spinning.** The Volt enthusiasts have recently abandoned the "*E-Flex*" brand identifier. A year ago, that was the hot name for the technology. They thought it would be great having a platform to promote instead of just a single vehicle. Over time though, it fell out of favor. My guess is the ethanol "Go Green, Live Yellow" fallout... since that also used a flex label, specifically "*Flex-Fuel*". Recently, they have turned to "*E-REV*" (Extended-Range Electric Vehicle) for a name. However, calling it an EV is now a problem... since the engine will be forced to run from time to time. It's an intriguing situation. By not being able to make up their minds, they are causing spin on their own. It's a self-inflicted marketing loss. No wonder Volt discussions continue to emerge on the big Prius forum.

4-06-2008 **Eighth Edition.** The User-Guide certainly is proving an excellent resource to spend time on. I had no idea it would continue to grow after all these years. But as each new need reveals itself, information & illustrations are added. And as we gather detail about older subjects, they are updated too. Both were definitely the case this time. There was also something out of the ordinary. I've been particularly frustrated with the misleading coming from certain Volt enthusiasts about how "full" hybrids actually work. So, I added a whole new section covering operational details. It's a great example of anger funneled to a constructive outcome. They make vague claims that are very easy to prove false when you have detail available explaining why. Anywho, here's a link to the latest... User-Guide (HSD)

4-07-2008 **Low-Grade Crude.** This problem is finally being talked about in the popular media. Whoa! Of course, the acknowledgement in general is pretty weak. People are still very much focused on oil quantity available, not the quality. The crude that's lower in grade is more expensive to refine. In many cases, it's also harder to extract from the ground too. All that adds up to higher costs. We seriously need to invest in ethanol... the kind that doesn't take away from food supply. That's where Minnesota efforts were heading back when ethanol was only a state mandate, produced in-state for in-state use. Corn & Sugar-Beets helped establish the source base, while production power & technique could become increasingly more green. Well obviously, the work to switch that source over to waste biomaterial now needs to be accelerated. More focus on the problems with oil should help.

4-08-2008 **$3.59 Peak.** That's what the government forecast issued today was for the Midwest. In other areas, it crack the $4.00 mark. Unfortunately, parts of California and most of Hawaii are already seeing that. So... what happens when worse case scenarios actually occur? In the past, there was "fear mongering" that poked at the possibility of a brief spike even higher. But staying at that level was never addressed. There wasn't ever any serious consideration of that. "Having prices that high always? No way! This is America!!!" Since when should we have immunity to worldwide supply & demand issues? Aren't we the ones fortunate enough to be able to lead the world to a better future? If so, why are so far behind? In other words, this is a wake-up call. We finally need to acknowledge the higher efficiency standards already in place by other nations... then do even better. Recognize the importance. Embrace the technology. Take the responsibility. Accept change for the better from anyone contributing to the effort. Cheap gas is long gone.

4-10-2008 **First Report.** Two-Mode efficiency has been an elusive topic lately. Being neither the warm season nor broken-in yet, real-world data will be skewed to the lower side. But nonetheless, real-world is still better than estimates. This was the very brief report we got: "*I am up to 20.7 MPG at about 1200 miles.*" That's not much to work with. Of course, it doesn't matter anyway. Even at 22 MPG, that's still guzzling. The fact that some vehicles that resemble a SUV are no longer called a SUV wrecks credibility when it comes to identification. It all comes down to the same thing: How much fuel is being consumed? And since this particular configuration (Yukon-Hybrid) delivers such a poor emission rating (Tier2-Bin5), technology really doesn't come into play either. That 35 MPG mandate doesn't succumb to greenwashing. Trucks will go back to being work vehicles, actual utility use rather than daily commuting. Purpose is coming back. Guzzling is simply becoming too expensive.

4-12-2008 **From Concept To Production.** I've included on-going ramblings of Volt knowing that the concept would end up baring little resemblance to the actual production vehicle. What was originally "promised" wasn't all that practical. But those first enthusiasts didn't care. Few would remember what was included in that initial debut anyway... unless someone takes the time to document those details, like me. It's my way of dealing with the frustration. They act as if their vehicle is winning the competition, even though none have been sold. A battle of hype is not for me. They pushed the advertisements promoting a "*640-mile driving range*" while at the same time gloated for being "*gas free*". Obviously, you can't have both. Either it uses gas or it doesn't. And now the engineers are sounding off about how a tank that large doesn't make any sense if only a modest amount of gas will be used. So naturally, the story we are getting from some has changed. Now only 300 to 400 miles per tank is just fine. What else do you think will change from concept to production?

4-12-2008 **Running Out Of Gas.** Some new Prius owners have. They attempt to push limits by ignoring the "Add Fuel" message & beep warning along with the flashing pip. Why wouldn't a Volt owner do the same thing? After all, a smaller tank means a smaller tolerance. So... what happens when they do? How will the vehicle respond? How will they react (both at the moment and afterward? It's an interesting situation. Logic and consumer expectations are in conflict.

4-12-2008 **$4.09 Sightings.** That sure is a strange sight. I knew the diesel supporters were in trouble with the national requirement of cleaner refining combined with the demand coming from the trucking industry. Supply was going to be a problem, just like it is for gas... only the supplementing isn't as easy. So, seeing it crack that feared $4 mark here isn't a huge surprise. The shockwave from it's effect is only now being realized though. Combining that with the reality that expansion to more passenger vehicles would push the limits even further. After all, a barrel of oil results in a certain amount of diesel (9 gallons) and a certain amount of gas (19.5 gallons) which cannot be changed.

4-12-2008 **Worst Conditions.** A fierce headwind, a bike on back, another bike inside along with a bunch of cargo, a passenger, new tires, and the temperature at freezing made it a saddening drive on the highway... for a Prius, anyway. I hardly think any other car under the same conditions would consider 37 MPG disappointing. But it's April, for crying out loud. Seeing that fresh new foot of snow isn't what I envisioned Spring to be. Fortunately, warmth is finally on the way. That will make for a very different drive home.

4-13-2008 **Not Mainstream.** It will be fascinating when Volt finally rolls out. The enthusiasts are clearly wanting it to steer away from the mainstream market, to make it stand out. But that contradicts the want to produce & sell lots of them. So, I'm not sure what the heck they are thinking. Being different to that degree is counter-productive. Fortunately, GM knows that and has been scaling back on some features. Of course, the production model wouldn't have resembled the concept all that much anyway. The enthusiasts should have accepted that reality from the start. For the development investment to be successful, large volume production of the technology is necessary. It needs to be part of the mainstream... a common vehicle.

4-14-2008 **Study The Past.** They don't, which is a big reason I'm drawn to the Volt discussions. They have no idea how much was held back from Prius for the purpose of appealing to an extremely wide audience. From their perspective, offering an elaborate interface makes perfect sense. They think it will draw in the masses. That's not what the everyday consumer wants though. A few new conveniences, like a FOB, are great. But beyond improving the basics, forget it. Just look at the luxury vehicles for perspective. Buyers are willing to pay, yet what's offered are only refinements to the existing features... in other words, unnecessary features are a tough sell. KISS works for good reason. Too bad they haven't studied the past which proves it.

4-15-2008 **Prius Comparisons.** The nonsense coming from Volt enthusiasts seems to finally be reaching a peak. Fighting from within has grown to a chaotic level (nothing constructive anymore). Rather than acknowledging need and agreeing upon specifications similar to or slightly better, there are some that absolutely insist they must be the extreme. The top arguments are range, acceleration, and price. It's sad. With the price of oil currently at $113.85 per barrel, a harmonious message of intent would obviously be helpful. What is the purpose? Who is the target? How many sales are expected? Fortunately, there is some hope. Prius is almost always used as the basis of comparison... though it is often misrepresented with incorrect information.

4-15-2008 **Face Reality.** The advice I posted... A barrel of oil is now $113.85. Gas prices are soaring. The market needs affordable & practical solutions. Automakers need steady & continuous profit sources. GM needs Volt to be a vanilla choice... appealing to a very, very wide consumer base. Enthusiasts here that desire more than what is actually required will do more harm than good. To sell a vehicle in large volumes, the design must be well balanced. In other words, too much power is just as bad as too little. There's a happy middle. Finding it means learning the difference between NEED and WANT.

4-15-2008 **Gas Tax Insanity.** Worse than facing reality is making a bad situation even more of a problem. The proposal has been made to not collect federal gas taxes during the Summer months to help relieve the pain on taxpayers. Since when is not collecting needed taxes helpful? Funding for programs, such as light-rail, come from that money. How will that be paid for? Talking about short-sighted! And how would paying 18.4 cents less per gallon of gas (24.4 cents for diesel) make much of a difference anyway? In the not too distant past (January 2007), gas was less than $2.00 per gallon. Now it is $3.39 here, 7 times more of an increase than the tax... and higher prices are on the way.

4-15-2008 **Production Shut Down.** Large SUVs aren't selling well. I wonder why? Duh! Anywho, GM's production facility for them in Arlington, Texas is being shut down for 3 weeks... hoping inventory will thin out in the meantime. They produce 900 to 1,000 vehicles per day there. Do you think that wait will be long enough? Take a look during your local commute. Where have the large SUVs gone? The number of those dinosaurs have dropped considerably. So, I wouldn't expect demand for new ones to recover anytime soon... or perhaps, ever.

4-17-2008 **Slow Start.** The official numbers are now available. 655 sales of Two-Mode occurred during the first quarter of the year. That's way below what we were led to believe would happen after debut. To make matters worse, only 188 of the BAS hybrids were sold. Neither is doing well based on purchases. Model-Year volume for Two-Mode is still planned for between 8,000 and 12,000 units according to GM's information included with that sales report. How will that happen, especially with the market for monster-size SUVs struggling?

4-18-2008 **$116.69 Per Barrel.** Staying above that "someday it may happen" level of $100 appears to be remarkably easy. This is very much uncharted territory, something only "fear mongers" would ever consider. Businesses never planned a strategy for dealing with prices this high for an on-going basis. Permanent damage is happening to the market for large guzzlers. Owners are flocking to tiny cars for refuge. The pain from filling massive tanks often hurts way more than they imagined. It's too bad that it had to come to this. But they were the very ones that professed gas would remain cheap the entire duration they owned their vehicle... a gamble that clearly did not pay off.

4-19-2008 **Best Approach.** It is intriguing when someone genuinely doesn't know how two automakers can both claim the same thing, yet be doing things to the point of almost contrasting each other. The final comment was: "*The Toyota paper says Toyota's approach is the best. GM also put out a paper, which says E-REVs are superior. Shocking, isn't it.*" And my response: Not at all. Toyota wants to sell lots and lots of hybrids. GM wants to brag about having the best. That fundamental difference is nothing new. Two-Mode followed that identical pattern. If you were serious enough about Volt, you'd realize that other vehicles using electricity for propulsion were not the competition… that the actual problem comes from those without battery-packs.

4-19-2008 **Slow Benefit.** Now that BAS has been available for close to a year and a half, reliability consideration is finally possible. But unlike those antagonists who never forgive for any type of problem whatsoever, I will. And with this situation, I'll do exactly that. Similar to what Honda experienced long ago, GM just did. Measure of voltage is difficult. Consequently, BAS required a post-rollout hardware update. By replacing the hybrid cassettes (components within the battery assembly), a problem was corrected where a tolerance was sometimes exceeded which prevented the electric motor from being used. Fortunately, because the market penetration has been so slow, very few will ever be effected by this.

4-20-2008 **Way Too Late.** Reality is crashing down. Affordable solutions are needed now. Waiting 2.5 more years for one to begin rollout is a big problem. Some hoping for it are finally realizing that, seeing recent efforts struggle and wondering how their chosen technology will fair. Others are in complete denial, insisting their design will be an instant success which crushes the competition worldwide. All I can do is shake my head. We saw this coming. Our efforts were mocked... back when there was still time. There isn't anymore. Now what?

4-21-2008 **Unblocked Grille.** The time had come. Temperatures were finally breaking the 50 F degree mark. I was curious as heck what the ScanGaugeII would reveal without anything blocking the grille anymore. That was easier said than done though. By pushing the foam so hard into the grille slots, it went deep enough to expand back to normal size in the interior behind. No wonder I never had any loss problems like some other owner. Those things weren't going anywhere. In fact, it took quite a bit of tugging to get all the pieces out. Needless to say, I found a great way to inexpensively block. It's all gone now. 6 months until any thoughts of doing that again. Goodbye Winter!

4-21-2008 **57kW Engine.** I answered the "*How big is the engine?*" question for the very last time today with a reference to volume. Classification in liters or cubic-centimeters simply doesn't mean much when it comes to hybrids... and I'm tired of catering to the traditional. It's time to nudge the older measures into the obsolete category. Now, my answer is with respect to energy available, in kilowatt units. Think about it. Size makes no sense when it comes to pumping-cycle differences anyway. So, when asked, the reply will be "*The engine is 57kW.*"

4-21-2008 **2-Mode Sighting.** There was a "green" event downtown, the day before "Earth Day". That included a dressed up Prius and a Two-Mode vehicle. I didn't know that. But the big black Tahoe approaching somehow caught my eye anyway. When I turned quickly to verify what was passing, it was difficult to miss the large "H-Y-B-R-I-D" lettering along the side. And by the time it stopped, I had already whipped out my digital camera and snapped a shot. I captured the back end, noting specifically that the emblem stated "2 MODE" rather than the "Two-Mode" identifier most people have been using. This doesn't truly count as a sighting though, since the vehicle was just a dealer demo model rather than one actually purchased by someone.

4-22-2008 **Smart Sightings.** You don't realize just how small those vehicles are until you actually see one amongst local traffic. Whoa! Today, I spotted my first here. It was only a block from where I work, so I'm likely to encounter it again eventually. No matter though. My second sighting came just an hour later at the grocery store by my home. This one was red. The other was black. That's two already! I wonder what others will think if sightings occur so frequently. They certainly stand out. You can't miss a car that tall and short.

4-22-2008 **2008 Highlander-Hybrid Sighting.** The new model silently rolled by us. Not recognizing that new larger body, my curiosity was peaked. Stealth (the absence of propulsion sound while driving) isn't something ordinary yet. So, I immediately scanned the vehicle for an identification label. It only took a moment to recognize the HSD emblem. I pointed and blurted out: "It's the new Highlander-Hybrid!" My friends smiled. They understood the importance of that moment for me.

4-23-2008 **Lost Purpose.** The Volt enthusiasts have fallen into chaos again, but even deeper this time. Earth-Day attention is what stirred the pot. Agreeing on purpose is an idea long lost now. Different people are declaring different goals and there is simply no effort to recognize there others. There is no acknowledge of smog pollutants (mainly NOx emissions) or the existence of Camry-Hybrid either. It's a mess. Watching what happens with that group over the next 2.5 years should be very interesting.

4-23-2008 **Best In Class.** Apparently, you can just dismiss hybrids for simply being different. This nonsense is really getting tiresome. GM advertisements for "midsize" cars simply ignored Camry-Hybrid, pretending it didn't exist. Now it looks like they are planning to do the same with "efficiency" cars, by not recognizing Prius. Fortunately, consumers aren't that stupid. They see MPG in the low 30's and know quite well that the upper 30's from Camry-Hybrid and the upper 40's from Prius are clearly superior. And that makes sense. What doesn't make sense is that GM also excludes their own Malibu-Hybrid. Why?

4-24-2008 **First Mule.** That's the hype today. None of the Volt enthusiasts cared that no detail was actually provided. Literally, the only bit of information told was that the new 16 kWh Li-Ion battery-pack was being field tested in an old Malibu body. That's it! Major questions remain complete mysteries still... like how will the heater work? It would actually be more efficient to use waste heat from the engine running rather than rely solely on electricity from the battery-pack... but then, that makes Volt even more of a hybrid and less of an electric vehicle. And what about the fundamental shortcoming of Li-Ion chemistry not being able to accept much charge in below freezing temperatures. How exactly is that problem being addressed?

4-25-2008 **Frustrated.** Objectivity was abandoned. The mule celebration yesterday was not counter-balanced with the type of questioning Prius owners have to deal with. How come? Why aren't those same real-world situations taken seriously for Volt too? Needless to say, I was frustrated by that. So, I posted this on the Volt blog... Credit for using less oil cannot be awarded until less oil is actually used. It's product delivery from which the measure of merit is determined. Automotive history has a number of examples of technical challenges overcome, yet that breakthru struggled to achieve market penetration. Details are sparse. It's all quite vague. The tough questions aren't even being addressed. That should be a concern to the true supporters. Be cautious about what you celebrate.

4-25-2008 **Selective Data.** It's sad when you find out facts stated in such a way were intentional. He simply didn't care that this was misleading: "*Which saves more fuel? 1.5 million Prius or 10K Volt?*" So I asked: What will the other 1,490,000 million people be driving? I know quite well those purchasing guzzlers as replacements were still a problem. That's the same deception Two-Mode enthusiasts tried to pull too. You can't ignore the market as a whole. It's why I want the technology to spread to other vehicles. Diverting attention away from the ultimate goal of making *ALL* new vehicles cleaner and more efficient won't work. Prius drivers won't let them get away with that.

4-25-2008 **Exceeding Worse Case.** I saw $119.07 per barrel at one point today. Oil prices have climbed into the territory no one ever took seriously as a long-term reality. The experts often speculated about the outcome of spikes to $100, but stayed away form any situation involving higher with no end in sight. But that's exactly where we are now... and it isn't pretty. They are concerns about higher food transport costs and the diversion of resources to corn-based ethanol making an already bad situation even worse. The housing market fallout and value of the dollar dropping aren't helping either. Meanwhile, demand for oil continues to grow. We are exceeding scenarios conceived to deal with "expensive" oil. Now what?

4-26-2008 **Snow!** Two days ago, I was out rollerblading after work wearing just shorts and a t-shirt. It was great! Now, the snowflake is illuminated on the Prius. The weekend was off to a white start. We woke up to snow covering the fresh green grass, followed later by thick flurries. What the heck? Seeing new snow falling is not my idea of Spring. Oh well. At least MPG has begun the warm season climb.

4-26-2008 **Propaganda War.** Despite all the attention Volt is getting, it still just boils down to hype, since there is little actual substance available. The enthusiasts are not happy when you point that out. So, they tersely rebutted against Prius hoping (or assuming?) information about the upcoming new model wasn't available. I responded with this easy-to-understand summary, followed by detail that they will likely regret seeing... The speed of stealth is expected to be increased to 100 km/h (62.1 MPH). The physical size of the hybrid components will be reduced. The production cost will be lower. Efficiency will go up. A123 supplies a 5 kWh, 140 pound, 7,000 full-cycle, Li-Ion Nanophosphate battery-pack for Prius plug-in augmentation, via the Hymotion upgrade for $9,999.

4-26-2008 **Subject to Change.** Remember the craziness a year ago? All the rage was Two-Mode. Now, that technology is struggling to draw attention. Volt is in an even worse position, which is why I've been documenting the happenings with it in detail. Enthusiasts had been praising the vehicle itself, not the technology. Expansion to other body sizes & styles simply wasn't addressed. To make matters worse, the market without outside plugs available for their vehicle were being ignored entirely. And the large price premium was being arbitrarily dismissed as if it had little influence on the purchase decision. Well, not anymore. Change has arrived. Alternate configuration choices are being asked about. The most obvious is eliminating the engine. Bob Lutz acknowledged this is indeed under consideration. Another option possible is to significantly reduce the size of the battery-pack. Enthusiasts couldn't agree upon goals before. Just imagine the chaos this news will bring.

4-27-2008 **Saved verses Not-Used.** The Two-Mode troublemakers continue to push this perspective, despite being well aware of how misleading it is. After all, the benefits of not using as much gas in the first place should be obvious. If not, they get a reminder every time they fill their tank. Anywho, I can play the "saved" game too... 15,000 miles-per-year divided by a 7 MPG improvement (from 14 MPG to 21 MPG) is a difference of 357 gallons. 15,000 miles-per-year divided by a 15 MPG improvement (from 33 MPG to 48 MPG) is a difference of 142 gallons. At the current monthly sales rate (about 20,500 to 250), Prius is outselling Two-Mode 82 to 1. That then means 11,287 total more gallons is saved by those Prius per year. For the favor to actually swing to Two-Mode (Tahoe & Yukon combined) instead, the difference would have to decrease dramatically, all the way to 2.5 to 1. In other words, selling 150,000 Prius would have to be matched by the sales of 60,000 Two-Mode hybrids. Do you think that will actually happen? What about the sales of Camry-Hybrid? What about those gallons saved too? And what about if even more Prius are sold each year?

4-28-2008 **Option, After-The-Fact.** Someday, a factory-configured Prius will be delivered with a plug-in option. The moment called "first" won't actually happen though... since many Prius on the road could also get the very same upgrade, after the fact. Support for the option will already be there, on the road, in enormous quantities. From the initial purchase, to any later desired time, it won't matter. Designed to handle those components, it will be no big deal using them regardless of when they are installed. From a business perspective, that's great for inventory handling and warranty exposures. Being able to deliver a basic and an enhanced model whenever desired, both from the same platform, reduces risk. That's especially important when large product volumes are involved. And we most definitely want lots to be produced & purchased. Just think of the bonus that gives to the resale value too. The potential for post-sales revenue is unheard in the current market. That's a very good thing for a struggling industry. The option opens up new opportunities.

4-29-2008 **Unintended Consequences.** Remember the "smug" episode of South Park? We all got a good laugh... since it was very easy to prove Prius owners weren't really like that. There were plenty on the roads simply blending into traffic to prove it. Volt doesn't have that. It only exists as a concept. So the words used to represent it have much more profound of an impact... and the idea is starting to get out of control. The superiority complex is giving those enthusiasts a bad image. Offering a better product, promoted in a mature manner was likely the hope. Well, the absence of detail makes "better" a very questionable assessment and repeated use of demeaning terms doesn't portray objectivity. I don't think GM was expecting that.

4-29-2008 **Job Cuts.** The news for GM keeps getting worse, I think. Overall, more buyouts (a large sum of money given to an employee if they volunteer to leave) could help ease the workforce pain. But it doesn't face the reality that reducing production of big trucks & SUVs (in other words, layoffs of 3,550 workers) still won't solve the problem of weakening demand. Interest for them is falling below a business-sustaining level. People don't want to pay the expense caused by driving them to work everyday. After all, they never should have been used for commuting in the first place. Cars are making a comeback.

4-29-2008 **$3.49 Per Gallon.** What more needs to be said? Once you hit a threshold like that, there's no turning back. No matter how much the price of gas may drop in the future, remembering the pain of it being so expensive will be far too easy. Owning a gas guzzler as a status symbol simply isn't worth it. Perhaps it will serve as a wake-up call, some finally discovering that the rest of the world looks at fuel consumption much differently... since their prices has been even higher for quite some time.

4-29-2008 **1701-A Sighting.** I was helping a friend out with her Prius. Catching a Classic & HSD model together is special in the first place. But of all things, at a gas station while driving a new Civic-Hybrid definitely made that unique. He drove up to us and eagerly yelled out: "*Are you John?*" I couldn't believe it. There was a Honda salesman telling me about all the people he's referred to my website. That was fulfilling. I try to keep a low profile. But in a case like that, it was fun to indulge in the recognition briefly.

4-29-2008 **Next Models.** Got any predictions how that's going to play out? Will the new Prius unveiled in early 2009 require a wait until year-end before they are available for purchase? Or will it only be a few months? Consider the planned production volume increase. And what about a hybrid truck? The new Highlander-Hybrid in pickup form would be an excellent balance of size & power, price for that matter too. Toyota has hinted at a dedicated model for Lexus and variations of Prius later on as well. There's lots to look forward to.

4-30-2008 **Superiority Complex.** Reality is crashing down on the Volt enthusiasts much faster than I had expected... overnight, in fact. The company that's been leading the headlines for development of the Volt battery-pack has also been developing an upgrade kit for Prius too. The enthusiasts weren't taking that serious though. They just brushed it aside, assuming that would never actually materialize. Why? If you develop a good battery chemistry & interface, you offer it to whomever would like to purchase it. That's the very nature of how suppliers do business. Volt enthusiasts don't like that idea at all. A third-party upgrading Prius isn't something they had considered. Suddenly, they are coming to the realization that competition is actually all the vehicles that don't use electricity for propulsion, not those that use it to a different amount.

4-30-2008 **Recovery Plan.** GM's expected American interest in expensive trucks to continue. They hadn't anticipated a sudden spike in oil prices that caused a defection away from them. But that's exactly what's happening. Those glory days are over. The automaker is once again losing money. Now what? Two-Mode wasn't designed to compete directly with 4-cylinder "full" hybrid sedans, like Camry. The next generation of BAS wasn't really either, and it's still years away. The only technology worthwhile is a scaled-back version of Volt. Offering a "series" hybrid lacking a plug with only a modest-sized battery-pack would be competitive for both price & efficiency. Do you think they'd ever give up that glory and go with a realistic configuration?

5-01-2008 **Stimulus Money.** How much of this money we get from the federal government will actually be used as intended? When the idea was first approved, there were worries about it being used just to pay off some debt. But now with gas prices skyrocketing, it is likely to just make up the difference. Neither will have the effect of stimulating the market. You actually have to buy something with it instead. But with times getting tough, that doesn't seem realistic for many. Next month should be interesting. I wonder what they'll claim happened. Hmm?

5-01-2008 **April Sales.** They were so good, nothing I could say to a GM enthusiast would be interpreted as constructive. That's why those patiently waiting for the new Ford hybrid are smart enough to stay quiet. Market factors are complex. Bragging about something before it actually happens, as those rooting for GM do all the time, isn't a good choice. Strange thing is, they don't understand why Prius owners aren't the same way. Why? Anywho, there were 21,757 Prius sold in April. Camry-Hybrid did really well too, with sales coming to 6,678. It was a very good month.

5-02-2008 **Oil Prices.** Closing for the week was $116.23 per barrel. Is that what we will see all Summer long? OPEC plans to maintain the current rate. The economic troubles outside of the oil industry won't be resolved anytime soon. Worldwide demand will continue to grow. Not getting any worse seems to be the best we can hope for. That's not too encouraging. I think it's a sure bet that interest in Prius will remain high. With so many people in the past that shunned the thought of ever owning a small vehicle, taking a look at hybrid options would now be more of a priority than ever. The time has finally come. That silly resistance to the technology is fading further and further away... with each fill of the gas tank.

5-03-2008 **Reporter Review.** Hybrids have been around for so long now, that there's simply no excuse for a paid professional screwing up terminology anymore. It's really sad when a reporter has absolutely no idea what they are writing about. This caption was under the big photo in the online article I read this morning: "*The 2008 Saturn Vue GreenLine is a 'single-mode' hybrid, meaning it can't move under electrical power alone.*" No where have I ever seen that definition attempted. It is just plain wrong... and he should have known that, since he stated the next step up in design is Prius. But then the term "*dual-mode*" was used to identify the next Vue hybrid model. He should have detected his error by not knowing what to call Prius. But then again, why was "*dual*" used? That is just plain wrong too. Needless to say, I am frightened by the kind of misrepresentation message this sends to readers. They are being fed incorrect information. I bet it doesn't make the GM enthusiasts the slighted bit happy either.

5-03-2008 **Editorial Response.** Fortunately, there are a few that get the opportunity to state their frustration with certain reporters. In this case, it was a claim that the fastest highway speeds offer no efficiency benefit at all. The editorial curtly contradicted that stating undeniably better MPG than a non-hybrid would get... and even went as far as adding: "*I have yet to find a Prius owner who has had different results.*" This was a Prius owner who had become pretty upset by that misrepresentation, to put it politely. I don't have though. I know the reputation of this particular reporter. He has consistently written negative articles about hybrids by misleading. Remember, selective data and being vague makes the person seem to have credibility. But when facts are checked, their story falls apart. Thanks for that editorial!

5-04-2008 **Gas Tax Sanity?** Using money from "windfall profit" taxes to compensate for those not collected from "holiday relief" makes sense to me. Funding that is depended upon will still be available. Isn't that ok then? After all, weren't efforts to deal with the overwhelming profits being made from skyrocketing oil prices supposed to finally be addressed? Wouldn't this do that? Or does political fighting pretty much means nothing actually gets agreed upon? Well, after the election there will still be plenty of opportunity to find out. I seriously doubt this is the only time the topic of gas tax will ever be a hot topic.

5-06-2008 **Getting Worse.** Yesterday, the price of a barrel of oil topped $120. Today, it hit $122. That's so high rounding to a whole number is just fine now, no need to mention the decimal part anymore. Heck, just saying "*too much*" works. Remember 3 years ago? We were just on the edge of breaking $60 for the first time. Now, it's double that. Makes you wonder where we'll be in 3 years. Those end-of-decade predictions that were deemed "*treehugger extremes*" are coming true. Turns out, a more appropriate label could have simply been "*market aware*" people. They saw the pressure building and looked for realistic solutions before the need became obvious, like it is now... and getting worse. What do you think they'll be called now?

5-07-2008 **Two-Mode Confusion.** It's becoming really difficult to tell the difference between a writer not understanding hybrid technology and an attempt to intentionally mislead. Today, we were told that the electric motor accelerates Prius up to about 19 MPH, then the engine takes over. But the Two-Mode system works differently by assisting the engine so it gets better efficiency on the freeway. That's such a confusing mess of so-called facts that I don't have any idea how to rebuttal. That most definitely is not how Prius works... but it certainly does give the impression that Two-Mode is the favored design. I wonder how long it will take for consumers to figure out what really happens.

5-07-2008 **6-Speed Automatics.** A way to squeeze out greater efficiency from a traditional vehicle is to increase complexity of their transmission. Isn't that a step in the wrong direction? If nothing else, it really makes the simplicity of the PSD in the "full" hybrids easy to argue in favor for. Anywho, Ford is pushing to significantly increase their production. The goal is to get 98 percent of the automatics switched over to 6-speed by the end of 2012. Anticipated efficiency improvement is 4 to 6 percent. Too bad increased cost was never mentioned in the article. Extra gears aren't free. And what the heck happened to using a CVT (the Cone & Belt type) instead?

5-09-2008 **$125.96 Per Barrel.** Whatever you want to call it, the oil "peak" has arrived. Whether that means these new high prices for fuel will plateau, go down later, or continue to climb up really doesn't matter. The point is that the past is now ancient history. Guzzling gas with the large SUV you bought to impress others in the name of "safety" simply doesn't make any sense anymore. The market has fallen apart. Death of the dinosaur is happening way faster than anyone had imagined. The smaller, accident avoiding, less impact to the environment, more responsible vehicles are taking over this newly emerging world.

5-10-2008 **Delusional.** I'm not sure how else to describe this comment made yesterday: "*But now the Volt is nothing less than the only hope for our country!!!*" Was he clueless or in denial? Full hybrids like Prius and Camry-Hybrid are already providing hope. By the end of the year, Ford's new Fusion-Hybrid will join in too. These are all clean & efficient vehicles that will appeal to a very large number of consumers. They are very realistic steps forward, products providing hope for our country. To believe that Volt is the *only* solution goes well beyond any smug we've heard about in the past.

5-10-2008 **Competition.** Some of the Volt enthusiasts still believe the objective is a trophy. For example: "*We will see if Toyota is really serious about improving their Prius in time to compete with the Volt.*" See what that portrays the word compete to mean? Like many of their statements, it disregards the need to serve many in favor of efficiency exclusively. They just figure the highest possible MPG will persuade consumers to pay extremely high purchase prices and the automaker to build in extremely high volume. Offering a vehicle as a hybrid with a plug-in upgrade option is dismissed as not being serious. I don't think they've studied economics. The extreme rarely ever equates to a large-scale business success. Competition requires balance.

5-11-2008 **Market Appeal.** With diesel 70 cents more per gallon than gas and the expected higher MPG from the upcoming new Prius, the "clean" diesel vehicles aren't expected to break out beyond just the niche market. The appeal for monster-size hybrid SUVs that deliver 21 MPG isn't anticipated to be anything beyond small either. Examples of new technologies like that simply don't inspire much hope. Designs that depend on dramatic battery capacity & cost improvements are struggling to retain consumer attention. People want better now. The nonsense about automakers quickly responding to a change in market appeal has proven to be a fantasy, not how things actually work. There is a very significant delay. We are going to have to tolerate competition disappointments for quite awhile still.

5-13-2008 **Seeing $3.69.** The effect that has is starting to show. Large vehicles are no longer king. In fact, even the so-called "midsize" SUV is dropping in numbers on the road. The price of gas & oil is obviously influencing the choice of what drive. New sales are dropping too. Focus on aspects other than size & power are finally getting decent attention. The nonsense of the past is over. In fact, the arguments against "global warming" have ended too. Whether or not there is a human influence on climate change is besides the point. Gas is expensive. Seeing that per-gallon number is all the debate that's needed. Nothing more needs to be said. Reducing fuel consumption is necessary, period.

5-14-2008 **AdBlue Pricing.** The problems for diesel continue to grow. Those systems designed to cleanse emissions using an after-treatment spray of urea are now facing higher prices. That essential chemical is required by the EPA. Without it, the system will shut down. That puts owners in the position of paying whatever it costs, regardless of price. So naturally, the supplier recently raised it. Anywho, refill is required every 15,000 miles or so with 4 to 5 gallons of AdBlue. That's not a big expense. But it is something that other vehicle owners never have to worry about. I certainly don't. Engines that use gas & ethanol are dramatically cleaner.

5-14-2008 **Specifics.** Not knowing what the business plan is for Volt has been the source of many problems since day one. What is the purpose? Striving for an ideal, that "best" trophy, is the mindset of the enthusiasts. So when you ask for specifics, they get confused and think you are asking for a list of components. The perspective of economics simply doesn't come to mind. In other words, they are caught up in the engineering combined with the emotion stirred by soaring gas prices. They still do not have answers from the automaker for these fundamental questions... What is the market price are they targeting? What vehicle types/sizes will use the technology? What efficiency goal do they wish to achieve? What will be sold to consumers without an outlet? How will this affect Two-Mode and BAS production? How will this change the traditional vehicle product line?

5-15-2008 **Knowing History.** Part of the problem with some Volt enthusiasts is they make assumptions, especially when it comes to hybrid history. A great example of this came yesterday, when trying to get them to look beyond just the vehicle. They had absolutely no idea that Toyota had declared sales goals years in advance. It was assumed that production decisions were made after the market was established, not volume being part of the establishment itself. Reading my personal logs clearly confirms that history to strive for increase, stating year & quantity goals. Last year's exceeding of 400,000 sales fell right into place, as planned. Next year's significant production volume ramp up is the next step. And by lucky coincidence, today's big news of over 1,000,000 Prius now on the road worldwide helps to confirm that too. I hope they start studying history. Knowing that is very important when it comes to understanding the automotive market.

5-16-2008 **16kWh Capacity.** Since the beginning, we've been told about the importance of the 40-mile electric-only range... to the point of it now becoming suspicious. For those with a much shorter commute, the idea of a much less expensive (lower capacity) option is simply being pushed aside as something to discuss after rollout begins. Well, if you want some thoughts about it now, think about the new Prius. It basically will be that option. No wonder GM is staying away from that; it puts them behind Toyota yet again. So, what if they took that same 16kWh capacity battery and put it in a much larger vehicle? At that point, it would no longer overkill. In fact, the weight, physical size, and price would be easier to deal with. But driving range would also be reduced to... you guessed it, that shorter yet still practical distance. That's an excuse to continue pushing large vehicles used for one-person no-cargo commuting. Interesting, eh?

5-16-2008 **Fuel-Cell Commercial.** Why the heck is Honda advertising their fuel-cell vehicle? What purpose could that possibly serve for consumers? It's portrayed as if that's a purchase choice they'll have soon... when in reality, it's a technology that will be totally impractical (and way too expensive) for a very long time still. Look at how complicated the availability of ethanol has been. Imagine hydrogen. Also, consider the benefit. What is it? Cost is obviously an issue too. I say it's just an image booster, something to make the automaker appeal better. How about focusing on what they can actually sell today instead?

5-16-2008 **80 F Degrees.** Finally! The warm season has officially begun. I'm so happy!!! The darn cold lasted way too long. It was keeping MPG on the Multi-Display below 50. But the average today climbed up to 49.4 with 365 miles driven on that tank, many in mornings that required a jacket. Tomorrow will be different. Filling up will give a fresh start. That will give the Prius an opportunity to really show off, without even trying. Reading about new owners being drawn to P&G isn't pleasing, though I understand they are still the minority. Most new owners never participate online looking for ways to push efficiency even higher; they just drive it. I certainly will. Carrying a kayak on top to take advantage of the warm drops MPG to close to non-hybrid levels. But I don't care. The other 99 percent of the time, efficiency is fantastic.

5-17-2008 **Electric Announcements.** Nissan, along with a number of small automakers, have recently announced electric vehicles they intend to deliver to consumers within the next few years. That will make things very interesting. Questions that GM is currently struggling with are facing them too. Solutions for electric-only are more straight forward, but challenges like cold temperatures are not any easier to overcome. The fact of most interest is that all of these proposed vehicles are tiny. Coming to a market that was once dominated by the appeal of massive size is a wave of significant reduction. Makes you wonder how much the mindset of consumers will change.

5-18-2008 **Live Green or Die.** That's the cover-story from Business Week published today. In short, reality is crashing down hard for GM. Between soaring oil prices and being globally responsible, they've grossly misjudged the end-of-decade market. Now the struggle is to recover from their mistakes. The quote that sums it all up came from Lutz saying: "*Everything has changed.*" There is now a race to deliver better technology than the competition, at an affordable price, very reliably, in high volumes, the soonest possible. The situation has become a moon shot. They cannot afford to fail. So... they are betting the farm on Volt success. Wagoner's comment expressed the automakers new direction: "*But these days technology means fuel economy.*" That's the message (including emissions) I've been trying to convey from the very beginning (8 years ago) when references were made to vehicle "*performance*". Expectations for Two-Mode have already dropped substantially, sighting the technology cost as the problem. The fact that it wasn't designed for a vehicle as small as Volt was not mentioned, nor what the fact that consumers without plug access won't be included by this effort. It's a gamble like we have never seen, required for survival.

5-19-2008 **46 F Degrees.** That heat didn't last long. In fact, this evening's commute home was down right cold. It's the middle of May. What the heck! Needless to say, 50 MPG is being pretty darn reluctant to finally arrive. Summer seems so far away still. That taste of warmth the other day is just a memory fading away now. Come back!

5-19-2008 **Not Happy.** Some enthusiasts of Volt are not at all happy about Nissan's recent embracement of vehicles using battery-packs. They initially assumed the proposed electric-only model would be accompanied by a plug-in hybrid like the one they endorse. But instead, it will be the type like Prius. One response was: "*That means the engine will be running all the time.*" This particular person has been corrected on this error already. That makes me believe he is intentionally attempting to mislead. I figured it was only a matter of time. This same behavior came from the other competition years ago. I would be naive to think it wouldn't happen from them too. It does make me feel a little bit of anger, but clearly not as much as he will from being sighted for spreading incorrect information again.

5-20-2008 **$2.99 Guarantee.** Apparently, that price is considered a draw now. So, that's what Chrysler has been promoting. They'll pay for 12,000 miles worth of fuel per year for 3 years when you purchase a new vehicle from them. I think back to the not-so-distant past when $3 was feared. Things really have changed. Those days of cheap gas when Prius was mocked as a "*stop gap*" are long gone. Certain automakers were dead wrong. Now, they are paying the price for not having diversified. Isn't that a basic principal of economics? They risked far too much on the expectation of cheap gas. Now they are struggling to find ways to purge undesirable inventory. I wonder what a few years of this will bring. Hmm? The risk simply isn't worth it anymore. Too high of a price is already being paid... literally, not just metaphorically.

5-20-2008 **Reporter Research.** The lack of it is really starting to become disturbing. Assumptions are abundant. The latest example came from some definitions a reporter apparently just made up: "*Mild or one-mode, which assists the engine but does not move the vehicle on battery power alone.*" That is most definitely not correct. It doesn't even make the Two-Mode enthusiasts happy, since Prius is just lumped into the same category as Two-Mode. Consumers are well aware of the ability Prius has to drive using only electricity. So naturally, this second definition made matters worse: "*Full or two-mode, which allows low-speed battery driving and combined engine and battery power at higher speeds.*" In other words, some reporters don't have a clue. Writing about something you aren't familiar with is tough. But not doing enough research to at least be come close to being correct is a very real problem. One we encounter far too often.

5-21-2008 **Ideal MPG.** I hope the effort to promote isn't misconstrued. That former foe of mine (the one who fought against Prius intensely years ago... until he finally figured out what I had been saying all along) went on a driving trip to show what Prius is capable of, under ideal circumstances. Even knowing that you won't be able to get MPG as high under normal conditions, will people actually have a realistic expectation? I believe some will be disappointed, thinking they'll be able to accomplish close to the same. They might not realize just how unlikely that really is. It's the very reason I instead promote the real-world lifetime average. That's far from ideal, very much a realistic expectation for anyone that follows the motto: "*Just Drive It.*"

5-21-2008 **$3.85 Per Gallon.** That's what I saw on the drive home from work this evening. Checking online to see what oil was at, I wasn't surprised at all to see $134.83 per barrel. Prices of oil & gas are spinning out of control. Isn't that an indicator of "*peak oil*" has arrived? When factors beyond just supply have that much of an influence, I don't care what you call it. The turbulence that some hybrid owners predicted (including me) has arrived. Calculations of "lifetime" expense and "payback" period from buying a hybrid were said to be grossly inaccurate, when stated as if the price of gas would remain constant. Clearly, it didn't. Those experts were quite incorrect. We wanted the technology already in place for when the inevitable happened. We hoped it would take longer than it actually did. Oh well. It's not like we didn't say it was coming... someday.

5-22-2008 **98,000 Mile - Oil Change.** Time came again, though I did go an extra 500 miles. The oil was still in way better conditions than I ever see coming out of traditional vehicles. Prius is quite easy on the stuff, remaining thin and translucent from the engine not demanding as much from it. Being so much warmer now, the process was almost just an excuse to play with the car. And of course, there's always the benefit that comes from getting to crawl underneath and inspect everything. All looked fine. Oil change done.

5-22-2008 **Hybrid SUV Sales.** According to a spokesperson for GM, the sale of over 1,000 units (Tahoe & Yukon hybrids combined) for the past two months is something to be pleased about. According to the executive director of industry analysis for Edmunds, the sale of 2,578 units (Highlander-Hybrid) for April means it has failed miserably. So, which is it? Outcome perspectives vary dramatically... obviously. The spinning of results is quite maddening. I thought the measure of success was supposed to be based on sales goals. In that case, reality is the reverse of what those supposed experts have stated. Toyota sales are on-par for the model year. GM sales are significantly behind. Too bad everyone has their own twist on this topic.

5-23-2008 **Volvo ReCharge.** Competition with Volt has emerged. But rather than announcing a concept vehicle a year in advance like GM did, this one is already at the prototype stage. Details released state the electric-only driving range of this small car (this C30 body) will be 60 miles when battery-pack depletion is taken to the 30-percent level. The engine is a 4-cylinder, so efficiency when it's running will be lower than Volt. Handling should be quite different, coming from the fact that each wheel will have its own electric motor rather than just a single big one. No hint of price was provided, nor production intentions. Nonetheless, it certainly does liven up the potential market for plug-in hybrids.

5-23-2008 **Terminology.** Interestingly, deception from over-generalizing is becoming considerably harder. Enough desire clarity now that providing detail is not met with resistance. Things are changing. We have moved well beyond just calling any vehicle with a battery-pack a "*hybrid*". Focus has shifted to include plug-in options. People want to know what the differences in technologies are. I think that is because it is no longer a matter of philosophy. People are now engaged in discussions because they are researching an actual purchase. Deciding what's good for their wallet is taken far more seriously than what's good for the planet. Needless to say, I felt the need to respond to the confusion in a light-hearted way. Hopefully, that's the way this was taken... What's this "*parallel*" technology you speak of? Since IMA and BAS have almost nothing in common with HSD and Ford's hybrid system, calling them the same causes confusion. The proper term is "*series-parallel*" for hybrids like Prius. But most call it a "*full*" hybrid since it offers wider range of operational modes than the other.

5-24-2008 **Quick Death.** Just over the past 2 weeks, that fragile house of cards has fallen. Large vehicle appeal has rapidly turned negative by even those that had praised them. It's over. The once fabled threshold of $3.50 per gallon has indeed proven true. That's the level at which many said the desire for guzzling would sour. And now with the national gas price average approaching the $4 mark, serious production reductions are being announced by automakers. Death has come rather quickly... before Two-Mode could gain any traction. 21 MPG simply isn't appealing, period. Being a hybrid is meaningless. That pain at the pump hurts too much. The favor toward vehicles like Prius has changed dramatically within a surprisingly small amount of time. In fact, that red-herring measure of "payback" has dropped to just 3 years, providing overwhelming proof of what some owners have been saying for years. Expensive fuel is now a reality.

5-25-2008 **Too Much, Too Late.** The reviews for Two-Mode continue to trickle in. All compliment about how well the system is designed. None want to face the reality that the market for massive vehicles is collapsing. Basically, very few consumers are interested in the premium for something that is overkill anyway. They simply have no actual need for such a large 8-cylinder vehicle. A more appropriately sized vehicle with a 6-cylinder engine is a different matter though. The 3,500-pound towing capacity is more than enough and the price is significantly lower. In other words, it sure looks like GM is going to aim all attention toward the upcoming Two-Mode Vue to distract from how low the interest has been in the Tahoe & Yukon hybrids. At $4.00 per gallon, they are coming to terms with offering too much, too late.

5-25-2008 **So High, So Quickly.** Remember a year ago, when my requests for detail about Two-Mode were responded to with hostility? Those enthusiasts didn't want to hear anything at all about Prius, even if it was just to provide clarification about the kind of information I was seeking. My reasoning was to find out how that design would work in vehicles like Malibu & Aura. What was GM planning to offer that would compete directly with Camry-Hybrid? They were furious, unwilling to consider use of that technology on smaller platforms like that. It was very much a "power & size" mentality back then. That engineering would save the slipping sales of massive trucks. Now, they themselves need to consider the very detail I had been asking for. Little did they know gas prices would surge so high, so quickly.

5-25-2008 **Vue-Hybrid Confusion.** It continues. Yet another article about BAS (the "assist" hybrid from GM) using information about Two-Mode (the "full" hybrid from GM) was published. The reporter mixed up the two and didn't know it. I bet he wasn't even aware of the fact that there are two different designs that will be available this year. It's something that should cause great concern. At some point, some innocent consumer will fall victim to such an error. They'll purchase the wrong one and not discover their decision was based upon incorrect information until later. Then what? Suffering from something that should be preventable will be really bad for the hybrid market. I wonder if GM will launch some type of educational effort to reduce future occurrences of this problem. Confusion like this caused by the press can be quite harmful.

5-25-2008 **Reducing Cost.** Thinking about the choice of engine used for ReCharge verses that in Volt, the topic of cost crossed my mind. The Classic model Prius became profitable in part because of the engine. When Echo debuted, it used the same one. Sharing many of the same basic components meant a benefit from high-volume production was possible. With the 3-cylinder engine unique to Volt, that won't be possible. What else could use it? Makes you wonder what approach GM will take after initial rollout, eh?

5-26-2008 **New Document.** There didn't seem to be much need for an analysis of anti-hybrid activity anymore. Many of those techniques the troublemakers used to impair the progress of hybrids simply haven't emerge lately. Some of that is the result of people understanding hybrids more. Some of that is the result of more people simply being interesting in buying hybrids. We are well past the curiosity stage. Misconceptions about efficiency are what many discussions focus on instead. That's a big step forward. Too bad it took so darn long to get here. Needless to say, I replaced the old homepage link with one for this brand-new, plain-english, non-technical document, something more helpful to the situation now we face... Efficiency Misconceptions

5-26-2008 **Clatter, Clatter.** How can the diesel owners stand that? Whatever the case, I understand why luxury buyers in Europe are seeking out the Lexus hybrids. Quiet is a sought after aspect. The clatter of a diesel engine certainly doesn't cater to that. I can hear my neighbor coming around the corner in her Jetta TDI. The sound stands out from all the other cars in the area. I what priority consumers around here will place on that. Hmm?

5-27-2008 **Diesel Price.** On the topic of diesel, the prices here have reached that irritating discrepancy again. I wonder if any of the supporters have a plan for dealing with it this time. That higher per gallon price does not appear to be temporary spike, like before. This time, it basically defines the start of a new reality... for us. After all, paying more (though for different reasons) has been the norm in Europe for quite awhile now. However, their taxing structure allowed diesel to be cheaper than gas. Here, the pricing influences are causing it to cost 90 cents more per gallon. That certainly sours appeal. Higher MPG from hybrids has become more compelling, especially with most of the hybrid misconceptions now just a frustration of the past.

5-28-2008 **Two Electric Motors.** As the interest in reading articles about hybrids grows, the incorrect information does too. I'm not exactly thrilled about this type of exposure. The assumptions reporters are making contribute heavily to the confusion. At some point, consumers may begin to feel overwhelmed. This time, it was the claim that Two-Mode meant the hybrid had two electric motors instead of one... and that was it! Other misinformation of this nature at least attempted to explain how this would effect efficiency. This time, nothing! More just implied "*better*" design, stating this was the next natural step forward in hybrid evolution. That seems pretty convincing too... being so vague... until you discover on your own that the first was that way. Back in 1997, the original Prius offered two. In other words, these writers typically know little about automotive engineering. Don't assume they've researched enough. There's growing proof many haven't.

5-29-2008 **More Green Bars.** I'm seeing them more often than ever before, routinely, in fact. That's unusual for late Spring. The engine running more often in the Winter was the cause before. But now that it's warmer, I'm growing convinced that late-life break-in is the reason. Moving components within the Prius continue to loosen up as the car ages. That appears to contribute to greater energy being captured by the two motors. In other words, instead of 6 blue bars showing on the Multi-Display, I am seeing 7 green bars frequently. Sweet! Remember how "having the blues" was considered normal years ago... back when this Prius was newer.

5-30-2008 **Forum Attacks.** The big Prius forum had two interesting examples this week. The first came from a very upset owner (disappointed from the MPG while driving with a cargo-carrier on top), who was clearly just looking for an opportunity to vent... because everything constructive that was offered resulted in a hostile response. Sometimes the voice of reason falls on deaf ears. He needed to say his piece. The other came from a well known troublemaker, simply looking for a fight. He blatantly provoked, by promoting Two-Mode using false facts and insulting the members participating in the discussion. It certainly wasn't anything that would qualify as a debate. My guess is the high gas prices are beginning to irritate some much more than others.

5-31-2008 **Cold May.** It has been quite irritating. Disappointing weather all month long hurt efficiency and really impaired my plans for outdoor activity. It was a great example of how being under that ideal temperature range the EPA used to measure efficiency (minimum of 68 F degrees) made a considerable difference. The persistent cold dragged down my Lifetime MPG, rather than help restore it from the painfully long Winter this year. I'm definitely looking forward to the big improvement June will bring.

5-31-2008 **Getting Warmer.** The lunch time drive to the gas station resulted in an entire 5-minute segment displaying as 100 MPG. Finally reaching that ideal outside temperature range makes a huge difference. Too bad it took so darn long. The drive after filling the tank was even better, believe it or not. Those 8.5 miles result in an average of 61.4 MPG, which included a short drive on the highway at 70 MPH. The Prius was very happy. That's a true indicator that the cold is finally gone.

5-31-2008 **Where are the SUVs?** Look in the parking lots. They have become scarce. $4 per gallon is clearly the threshold. SUV use for purposes other than it was actually designed has become out-of-fashion almost overnight. Rather than a symbol of prestige, they are now a symbol of stigma... of course, that's here. The rest of the world always looked down upon using a large truck like that for single-occupant, no-cargo commuting. The engine, tires, and suspension were all gross overkill. But with cheap gas and vanity, such excess was overlooked. It isn't anymore though. Trucks will again become trucks, used for the capabilities the offer. None of that terrible waste anymore. The "U" will finally stand for "Utility".

5-31-2008 **Mistakes.** Ignoring purpose continues. That pointless "trophy" mentality is thriving. In other words, the need for efficiency solutions has become urgent and facing reality is difficult. Today's hot discussion topic for the Volt enthusiasts was the ambition for Lutz to avoid "*making the same mistake again*" with hybrids. They interpret that as developing a superior technology. I wholeheartedly disagree. His mistake the first time was having nothing to compete with. Will the second be the same? Even with a miracle break-thru that drops battery prices substantially, you still have to commit to high-volume production. Otherwise, what will consumers buy? When Volt debuts, Toyota expects to be producing 1 million hybrids annually. How long will GM take to do the same? That choice is the mistake that could be made.

6-01-2008 **8-Year Anniversary.** It's in a few days. That's when I put down a $1000 deposit on the purchase of my, well, second Prius. My first was actually only a matchbox-size model, but that does count. 8 years later, quite a bit has changed. We've went from the automotive enthusiast magazines making fun of Prius, saying it was "*an expensive way to save cheap gas*", to now honoring it as the hybrid that started the new age. Little did I know that my own contributions would still thrive after all this time. But the monthly statistics clearly show that the User-Guide is attracting strong interest. (There were 33,718 downloads of the PDF format last month!) So, it certainly looks like I should keep doing what I've been doing and look forward to celebrating more anniversaries. It's been fun being a participant in both Prius history and contributing to the internet itself. Remember, I started documenting my experiences long before the word "blog" had even been coined. It was a very different time. In fact, for those first few years I was accused repeatedly of working for Toyota... because back then, there were few that devoted their personal time in a such a way. Now providing support of this nature is simply considered a hobby. Sweet!

6-02-2008 **BAS Recall.** It looks like those sporadic problems with the GreenLine vehicles are actually widespread. All 9,000 of them are getting their battery-packs replaced. Having such bad news occur at this particular moment is horrible timing. Both gas prices and Two-Mode sales were making for a bad business situation; now this to compound an already difficult struggle. Hopefully, the replacement will solve the problem (when battery-pack failure was detected, the system reverted to constant non-hybrid operation). But it won't fix the reality that sales are awful. Only 282 Malibu-Hybrid were sold in May, 340 of Vue-Hybrid, and 36 of Aura-Hybrid. With numbers that low, it's as if they don't even exist.

6-03-2008 **May Sales.** Prius is back at the monthly expectation of 15,011 units... though I doubt antagonists will interpret the situation that way. They'll claim the previous two month's spike was reflective of demand, not supply. But we've dealt with that nonsense in the past. So, this shouldn't be too much of a problem either. Remember, last year's original goal of 150,000 was easily met (181,221 were sold, which is a 15,000 per month average). Monthly ups & downs are just spin, having little to do with total annual allocations. Inventory fluctuates due to many supply variables. Anywho, Camry-Hybrid didn't do too bad in May either; its 5,999 sold is something to be quite pleased with. 2,644 purchases of Highlander-Hybrid ought to make GM a bit worried. That's way more than Two-Mode sales overall... in just one month! Heck, 2,155 Lexus RX-400h were also sold. Continuing at this pace sounds good from my view. Consumers will gobble up the increased battery supply next year, along with the new model Prius.

6-04-2008 **Oil Overfill.** Here's an interesting insight to that problem, something which hadn't even crossed my mind until a friend clued me in... Prius is made in Japan. The engineers there used measures most convenient to them: metric. For example, the "sweet spot" for highway cruising with the Classic model is 62.1 MPH. That just happens to be the HSD maximum speed for electric-only driving too. It's a rather odd value, until you consider metric. That's because it is precisely 100 km/h. You know what else is a precise quantity? It's the oil level. We (as owners in the US) determined the ideal to be about a quarter-inch below the "full" mark. That's a clumsy amount when dealing with quarts; however, it is not for the metric equivalent: 3.5 liters.

6-04-2008 **Mini-Gathering.** I thought it would be just the two of us at the coffee shop that afternoon. I was quite wrong. Besides seeing our two Prius, I saw several other HSD Prius... and a Classic Prius... and a Camry-Hybrid... and an Escape-Hybrid. All that certainly supported the conversation we were having. Those vehicles are examples of proven hybrid technology. Upgrades are coming in the next year too. The next generations of Prius and Escape-Hybrid are well worth the wait. Refinements to the design will definitely stimulate the market. The long-awaited Fusion-Hybrid certainly will contribute to that as well. Ford & Toyota will move "full" hybrid growth forward. GM is currently subtracting, putting a tarnish on the reputation. I sure hope that changes soon. Needless to say, we had lots to talk about.

6-04-2008 **Volt Announcement.** The GM chairman voted to increase funding for the project. Goals restated were to deliver the first production model by November 2010 and to reach production capacity of 100,000 in 2012. That's fine, but nothing else was mentioned... no other vehicle types planned to use that same technology, not even a hint of BAS efforts continuing, and no suggestion that Two-Mode would grow beyond the pickup and a small SUV. The plans for plug-in Two-Mode were strangely absent too. I got the impression that GM is learning to keep silent about intentions until being much closer to implementation. With so many recent upsets, it simply isn't worth risking anymore bad publicity. Their imagine is serious in need of repair.

6-04-2008 **GM Hybrid Sales.** There's no good way of documenting bad news. So, here it is... Aura-Hybrid had sales of just 36 for May. That's down from the 48 sold in April. Malibu-Hybrid did "better" with 282 for May. Vue-Hybrid made it to 340. Two-Mode saw "improvement" with combined sales of the Tahoe & Yukon hybrids at 589 for the month. In other words, both designs are selling quite a bit fewer than their anticipated annual goals (27,000 for BAS and 12,000 to 15,000 for Two-Mode). What this means for GM remains a mystery, especially with the recent battery recall. Many factors influence production & inventory. But it ultimately comes down to sales. That's how business is sustained.

6-05-2008 **Emotionally Dead.** It is truly bizarre. A few days ago, the announcement came that revealed total sales of Two-Mode had climbed to only 1,100. That is so disappointing, the only responses posted by GM enthusiasts were mellow thoughts about it becoming available in other vehicles... much smaller vehicles. The giant vehicles are dying quickly. GM announced the closure of 4 domestic plants. Trucks are once again becoming trucks, vehicles only used for utility purposes. Using a SUV for commuting to work just plain does not make any sense. Those cruel troublemakers of the past know that all too well now. Their fierce defense of Two-Mode use in Tahoe & Yukon has completely fallen apart. It's over. They now realize my persistence on discovering what benefits could come from by using that same technology in smaller vehicles wasn't an attack, as they claimed. I was looking ahead, well aware of the importance of diversification. As a result, that passion to fight me is gone. They are emotionally dead to the contributions I now post. No more resistance. Change has arrived. Yeah!

6-05-2008 **$3.99 Per Gallon.** That's the national average now, an paradigm-changing milestone. It marks the end of an error (era). What a wonderful coincidence that today just happens to be the 8-year anniversary of me ordering my Classic Prius too. That duration is what realistic accounting for automotive purchases target. Anywho, remember how absurd it was that the purchase of giant SUVs was promoted as "*good for the economy*". Those of us familiar with economics knew quite well that was a recipe for disaster, a short-term fix at best. And sure enough, exactly the outcome we feared is what happened. GM doesn't have much competitive to sell. Both Toyota & Ford will offer "full" hybrid sedans. Ford has the next generation Escape (small SUV hybrid). Toyota has the next generation Prius. A flood of sub-compact economy cars will mark a stage of desperation. It will make the next few years very interesting.

6-05-2008 **Fool Me Thrice.** The mid-morning show on NPR (National Public Radio) featured the future of our automotive market here in the United States. It started with a look back at history of the first time Detroit was taken completely off-guard, embarrassed by the foreign competitors being so much better prepared for changing times. The result was a reckless major adoption of small efficiency vehicles... followed by forgetfulness... allowing the same mistake to repeat. And sure enough, Detroit was taken completely off-guard again. Fooled twice is really, really, really bad. It's a sign that the move toward small efficiency vehicles this time will not lead to re-growth of vehicle size. No one is going to fall for that same trap a third time. We have all learned that lessons of history should not be ignored. Disregarding a error in judgment can easily lead to falling in that same trap, again. The dinosaurs are destined for extinction now.

6-06-2008 **$138.99 Per Barrel.** That's the record high oil price I witnessed this afternoon. We have definitely entered a new realm, one where justifying the purchase of a hybrid takes little effort. People have seen Prius on roads around here for 8 years now. People hear about records being broken, like today's jump up of almost $11. It an existence where stability of the past is far from realistic anymore. Expecting gas prices to be higher later is a good bet. Most of the experts have been proven incorrect. Change is happen far faster than they predicted. The world as we knew it is fading to memory. What do you think the situation will be by the end of this year? A lot can happen in 6 months.

6-06-2008 **Another Chapter, part 1.** Closing this one too would be great. So, I tried today. It was once again the "playing offense" approach. Staunch supporters of Two-Mode hybrids backed off (to the pointing of basically surrender) when sales didn't pick up. Would the same be true for BAS hybrids? The biggest troublemaking voice was deemed as optimistic 3 years ago. But as details emerged over time, the design simply didn't hold up to expectations. Yet, he still touted the system as if it had. Forum members noticed that lack of objectivity over time. I was no longer alone in my battle against his blind promotion. 11 months ago, a number of new bold comments about BAS were made by this same individual. So today, I called him on them... since the outcome was no longer speculation. That time for those events had occurred. It was appropriate to analyze results.

6-06-2008 **Another Chapter, part 2.** The log entry that follows this is what I posted online. How he replies means little. His reputation for twisting the words of others is well known at this point. What I'm most curious about is how newbies will respond to reading all that. My guess is they'll just shrug it off as a stubborn loyalist resistant to change and move on. Closing that same chapter in history shouldn't be that big of a deal for them as for me. They didn't have to deal with trouble stirred from someone unwilling to have constructive discussions. Fortunately, I don't have to anymore either. With gas averaging $4.00 per gallon, the differences between "mild" and "full" hybrids is much better known now than it was 3 years ago. The advantage of electric-only propulsion opportunities has a popular topic on forums lately.

6-06-2008 **Another Chapter, part 3.** Tolerant of the many insults, the false accusations, and patient enough to wait, the time has come to reply... Figures are now available and they are beyond disappointing (missing goals by quite a bit). Vue-Hybrid sales dropped significantly; April last year was 2,683; April this year only 326. Neither Aura-Hybrid nor Malibu-Hybrid ever took off. In fact, the entire GreenLine production has only seen 9,000 purchases since debut in early 2007. True, the recall just issued will basically halt both production & sales now. But shouldn't the sales have increased up to that point? Or could it be that we ("full" hybrid owners) were right about consumer acceptance of this "mild" hybrid approach? Can we finally get a constructive response instead of an emotional defense of GM products? That would be a great change. Goals usually placed upon hybrids are: Significantly better MPG than its traditional counterpart - Significantly better EMISSIONS than its traditional counterpart - Price competitive based on anticipated gas expenses - Price competitive based on other technologies available.

6-07-2008 **Another Chapter, part 4.** Avoidance & Denial were his responses. Facing sales dramatically below anything considered practical for on-going business, it's a harsh reality to face. Of course, those of us looking for more than just a minimal effort have been prepared to deal with this all along. It's not a surprise. With annual production volume from the two automotive giants both at 9,000,000 vehicles each, it was quite obvious that monthly sales of only a few hundred would be a big problem. Economic longevity requires a sizeable chunk of the existing business to be converted over. And with such turmoil in the market now, not taking an aggressive stance makes investors wonder. Consumers need efficiency choices. What will they buy if so few are produced?

6-07-2008 **Another Chapter, part 5.** In the end, being constructive & polite didn't happen. Common undermining techniques, like arguing semantics and making it personal, prevented genuine discussion. My curiosity to learn more about what will happen certainly won't transpire from that venue. Of course, the biggest problem I had with this troublemaker was the misleading about Prius. Then there was the addressing factors of market need (efficiency, emissions, volume, cost) and system design, which was always met with fierce resistance. It was a struggle every step of the way... but not anymore. Others are beginning to ask the same questions. Though now, there is history to compare with.

6-08-2008 **One More Cent.** Reaching the national average of $3.99 per gallon for gas a few days ago was an event many hoped to avoid. It came way sooner than those with guzzlers had anticipated. And of course, those fighting against hybrids had always refused to ever acknowledge the possibility. Now, we have exceeded it. That additional cent puts us at $4. What will a single penny stir when the markets opens tomorrow? That should be interesting. Even fixes like drilling in Alaska never took conditions this bad, this soon into account. So many were in denial about the potential. Heck, that's why some "full" hybrid owners were so against "mild" designs. Why take such a small step when the exposure is so large, especially when better technology is already available? A vehicle put in service today will quite likely still be on the road in 2017. Imagine how much gas could cost by then!

6-08-2008 **Forgetting Emissions.** When considering solutions to our fuel problems, carbon emissions are at least acknowledged now due to climate change issues. Smog isn't often though. That type of emission is still neglected. In fact, anything that makes more oil available will likely make that situation worse. Reducing impact on the air we breathe is a challenge that complicates efficiency technologies. That's why Prius has become the poster-child for green initiatives. Its design places a very high priority on reduction of smog-emissions, even above efficiency improvement it certain driving conditions. Don't forget.

6-08-2008 **SUV Trade-In Value.** That's the hot topic now, both in discussion groups and the popular media. Dealers really don't want them. So people that are trading them in for more efficient vehicles are losing a lot of money. It's great if you are looking for a bargain though. The SUV is rapidly becoming a vehicle for recreation only, not a daily commuter as it once had been promoted. Thankfully, all the false information about them being safer has been dispelled. They are absolutely terrible at accident avoidance. And of course, the people you squash don't care for them either. The message coming from pain at the pump is loud & clear. That type of guzzling just plain is not worth it. A car can be used in most cases instead. Save the SUV for recreation purposes only.

6-09-2008 **$4.09 Per Gallon.** That first occurrence above $4 here sure was obvious. I wondered how long it would take and if there would be a sudden spike as a result. They try to avoid exceeding that threshold as long as possible. And since this area (Minnesota) gets their oil Canada rather than overseas, our prices tend to be lower than the national average anyway. We are far from immune though. Fortunately, we've been pushing ethanol production advancements hard here. Using waste energy for heat (like burning mill sawdust) and progress with non-corn sources helps. The fact that hybrids are so popular here is a big deal too. I'm thrilled by how many Prius and Camry-Hybrid sightings I have every single day here. But it's scary how quickly the pressure can build. Even with multiple solutions being exploited, progress still isn't fast enough. Good intentions only get you so far. $4 gas is here now.

6-09-2008 **Naming Consequences.** The nonsense of not calling Volt a "series" hybrid seems to have backfired already. Avoiding embarrassment from all the "*stop gap*" banter in the past is the reason for this attempt. GM was boasting that fuel-cell vehicles were the solution, not hybrids. So the hypocrisy of now planning to offer exactly that hurts. I don't think they thought out this choice either, as was well stated in this discussion comment: "*GM calls the Volt an electric vehicle. So, naturally, people want to know the range.*" GM didn't realize a naming consequence could come from other automakers announcing plans for offering pure electric vehicles. The assurance of having an engine is suppose to bring pales in comparison to range available in the first place. I guess they figured no one would ever attempt to deliver a vehicle like EV1. Looks like they were wrong again. Someday a turn-around for them will come, but certainly not in the near future.

6-10-2008 **Electro-Shock Therapy.** Reading that article was fascinating. The point which peaked my interest was that even in the best-case scenario, an attempt by GM to deliver a hybrid like Prius would amount to no more than a "*mere me-too*" outcome. A result like that is like being given an participation award, not actually winning anything. To gain green favor, gas would need to be replaced rather than just substantially saved. In other words, the conclusion was that no other choice was available; GM had to develop Volt. But even then, it only establishes the perception of being green. And that reality shocks both automaker and enthusiasts, hence the title. Coming to the realization of just how much is needed right away will either cure or kill. I responded to the online discussion about this by posting... 2% is the optimistic inventory projection for 4 years from now. 98% of their production (all the other vehicles) will be what?

6-11-2008 **Drawing Attention.** Nothing has changed. It was just another article restating the same information we read last year, but written recently. Yet, the Volt spin had this response: "*This is a radical departure from Toyotas previous statements...*" In other words, they've completely run out of new stuff to chat about and needed something to draw attention with... which works great for newbies. Unfortunately, the incorrect facts about Prius continue to be spread as a result. Some is quite intentional. Many just don't have any background. You can tell, because some actually ask questions. For example: "*How long has Toyota had the Synergy drive and how many vehicles is it in? Just the Prius and maybe one other model later this year correct?*" Needless to say, I was frustrated. Not understanding operational detail is to be expected. When no one tries to stop the misconceptions, my attention is raised. But not having any idea what's available or the history is troubling. No wonder mistakes get repeated.

6-11-2008 **Sales History.** My response to the Volt questions was a brief overview mentioning the Japan start back in December 1997 and the hybrid minivan (Estima) evolution we have yet to see any part of here, followed by these statistics for the US... 2007 Prius = 181,221; 2006 Prius = 106,971; 2005 Prius = 107,897; 2004 Prius = 53,991; 2003 Prius = 24,627; 2002 Prius = 20,119; 2001 Prius = 15,556; 2000 Prius = 5,562 (launched July); 2007 Camry-Hybrid = 54,477; 2006 Camry-Hybrid = 31,341 (launched April); 2007 Highlander-Hybrid = 23,621; 2006 Highlander-Hybrid = 31,485; 2005 Highlander-Hybrid = 17,954 (launched June); 2007 RX-400h = 17,291; 2006 RX-400h = 12,779; 2005 RX-400h = 11,774 (launched April); 2007 GS-450h = 1,695; 2006 GS-450h = 1,784 (launched April); 2007 LS-600h = 937 (launched August)

6-11-2008 **GreenLine is Dead.** What that name stirred was maddening. All of GM's hybrids under the Saturn brand were to carry that label. It didn't make any sense. The difference between their "assist" and their "full" hybrids were profound. Yet, that convention for identification did nothing to distinguish. So, reporters were constantly getting the two designs mixed up. To make matters worse, the current BAS offerings were not actually "*green*". To be called that, it implies the smog-related emissions are reduced. But in reality, there was no improvement over the traditional counterpart. The upcoming Two-Mode may in fact be dirtier too, since the current one is. In short, GM has announced they will badge their hybrid vehicles in a new manner. I'm quite curious what that will be. They didn't provide any hints, only stating that "GreenLine" will no longer be used.

6-13-2008 **Reality Crashing Down.** Volt enthusiasts pushing the purist mentality at not happy now. They were the ones who believed the "*no gas*" objective, regardless of cost, was the only development path to pursue. They were also the ones that ignored & dismissed any perspective which addressed the well-being of the automaker. They wanted a trophy vehicle, not a ubiquitous technology spread across millions of vehicles. So, today's look at the big picture really upset them... when the executive engineer at GM mentioned offering a reduced-range option to lower cost. In other words, concern is emerging about not having anything available to compete directly with Prius based on price. It's about time! That original one-size-fits all approach simply didn't make any sense for those with a very short commute. Such a large battery-pack was overkill, an unnecessary expense. And of course, it addresses the capacity & material problem the battery industry is currently facing.

6-14-2008 **Fear of Change.** It manifests itself in very odd ways. This latest example in a published article boggles the mind. That heavily proven false report from CNW was sighted in defense of large vehicles yesterday. Remember how the primary argument was claiming the life-expectancy of Prius was incredibly short? Well, then did it again. But rather than using Hummer as the cherished vehicle, it was Tahoe. Here's that intentional attempt to mislead: "*Would you believe a big Chevy Tahoe SUV has a lower energy cost-per-mile than a small import hybrid? Which is $3.25 cost-per-mile while the Tahoe sports a CPM of $2.94. The math, they say, is simple. The Tahoe has a lifetime expectancy of 268,000 miles while the compact import will last 109,000 miles.*"

6-14-2008 **Flying Chair.** I was in the store for less than 15 minutes... but it sure seemed longer. A lot had changed for such a short amount of time. The sky had darkened. Rain was starting to fall. The soft Summer breeze changed to a force so strong the corral for shopping-carts was jumping up & down. A chair flew across a path through the parking lot. With the store closing soon, I really didn't want to get stuck there. A storm was coming, fast! So, I jumped in the Prius and attempted to reach the most logical shelter in that situation, a 24-hour grocery store. In those few minutes that passed, the weather turned to pouring rain... enough to hint that I was making progress getting away from the madness. So, I kept going. It lightened up considerably. When I got home, the news was reporting winds were 60 to 70 MPH. It could have easily been worse. I got lucky. Phew!

6-16-2008 **For Automotive Use.** I've been reading about the differences between magnet and induction electric motors. It was strangely vague, with the question of purpose not hitting me until I finished. There wasn't any perspective provided. You were never informed of the intended use. Automotive was assumed, but that certainly wasn't stated. Looking back those statements could have applied to anything using electric motors... a car, a train, a stationary industrial machine. There was no way of knowing for sure. Those are big differences, totally overlooked. For example, cooling is a very big problem for a machine operating indoors. But for a vehicle swooshing through the air outside, it is far less of an issue. It was too much of a generalized paper to determine objectivity due to the seemingly out-of-context locale. In fact, I was reminded of fuel-cell arguments, where the same type of "use" intent was missing.

6-17-2008 **More Drilling.** It's hard to believe that's the solution presumed presidential candidate Senator McCain is promoting for our energy problems. How will that help? New sites can take an entire decade before oil can be delivered. And consuming more certainly doesn't reduce emissions. We need the equivalent of a "Manhattan Project" instead... technology advancements, not using up an non-renewable resource even faster. What is it with this old-school thinking? The world is rapidly changing. We must adapt to preserve the things we hold dear. That seems counter-intuitive. But then again, refusing to adapt is what got us in this mess in the first place. $4 gas is already here.

6-17-2008 **Ford Closures.** The plant that produces Expedition & Navigator will sit idle for 9 weeks. Inventory is piling up. Sales are way down. It's getting ugly. Ford sure is having trouble now. Remember when they were in denial, when the announcement was made that the monster-size SUV would be discontinued in favor of producing an extended-length Expedition instead? Now there's distaste for the Expedition too. People simply are not interested anymore. Smaller is in. Guzzling is out.

6-18-2008 **Real-World Data.** If they don't provide it, there's very little reason to believe it's accurate. We've seen it before. Estimates rarely reflect everyday driving conditions and spot-checks are often misleading. It's the on-going average that you really need to draw conclusions with. Getting that isn't common. In fact, you usually have to fight for it. Knowing this, Volkswagen hired a third-party tester to provide some numbers. I'm not sure how representative of genuine real-world data that will reflect. But it's better than nothing. Anywho, the 2008 DSG (automated-manual) Jetta TDI (diesel) produced a 38 MPG city and 44 MPG highway average... which isn't too bad. Of course, that was during ideal temperatures. And compared to the new Prius, it doesn't pose as much for competition. Being quite a bit dirtier and requiring more expensive fuel won't draw many buyers. I wonder how many will be produced to be sold here. Hmm?

6-18-2008 **On The Soapbox.** An attitude adjustment was needed today. Certain enthusiasts still don't get it. So, I let them have it with this... $4 gas is here already, with no hope of going down much. The masses expect mid-20's for the price of a ubiquitous hybrid. Automakers need technology that will generate on-going profit. Why is that so hard for some to see here? Solutions are needed now! How the heck will the development & refinement for Volt be funded if the business is continuously losing money in the meantime. Look at the components of Volt and Prius. Cost & Size of engine, motors, and controllers basically balance out. The battery is significantly bigger in Volt though. So, it will always cost more. There's simply no way Volt could compete with the non-plug configuration of Prius, which is exactly what the current market is begging for. In other words, kudos to GM for their effort to develop a viable product to meet the 2020 efficiency mandate, but what happens until it is available in large quantities at an affordable price?

6-18-2008 **Placing Blame.** President Bush blamed the Democratic-Controlled Congress today for "*the rise of gas prices to record levels*". Hearing that is hard to take seriously, without first being both amused & frustrated. His administration was the one responsible for promoting increased consumption, claiming it was "*good for the economy*". Now there's at least acknowledgement of the true problem... since talk of just how long new drilling sights take to establish. But waiting a decade for those reserves to join in wouldn't have prevented this anyway. Increased consumption got us into this mess. And more oil does nothing to address the emissions problem. For genuine progress to be made, solutions need the attention... not pointing fingers. Don't you love all this political nonsense?

6-19-2008 **No More Truck Updates.** It's official, GM has pulled the plug on next-generation Pickup & SUV development. The newest designs already in the system are the end state. This is a major money-saving decision. And with the market collapsing, does anyone really want a more powerful one anyway? Heck, even improved efficiency is a losing proposition for consumers who desire a more realistic sized work vehicle... and very few enjoy the idea of using them as a commuter vehicle anymore. Focus is being reset to more appropriate venues. It's about dang time! You can only delay the inevitable for so long. Those days of carefree waste are over.

6-19-2008 **No Profit.** The news from GM has been interesting lately. Today we also heard that profit won't be possible from Volt, even if it were sold for $40,000. I don't know how to respond to that. It seemed to be the case all along. Too specialized of a vehicle with such a large battery-pack is a challenge for any automaker. No timeline or volume information was provided. So, the expectations after rollout begins is unknown. There's basic no plans at this point, other than the fact that their intentions do put them on the right path to meeting the federal efficiency mandate for 2020. Of course, profit has to come from somewhere in the meantime. I wonder what they'll sell. Money for development has to come from somewhere.

6-20-2008 **Disheartening Discovery.** The discovery that Volt is long-term project, not a vehicle for direct competition anytime soon, seems to really be disheartening some enthusiasts. Those of us who have supporting hybrids for years tried to point that out from the beginning. But the message conveyed was repeatedly ignored. Establishing a new market is a slow process. Once production begins, you've got first-year jitters, popular media, and competition to deal with. Salespeople & Consumers remain poorly informed until a decent amount of real-world data (minimum of a full annual cycle) is available. And it is simply too much of a business risk to make high-volume commitments until progressing beyond the initial sales boom. Now what? $4 gas is already here.

6-21-2008 **640 Pounds.** When I was at the hardware store, focus of loading the Prius was on volume... not weight. It hadn't crossed my mind just how much heavy those 18 cases of laminate-flooring, the rolls of padding, and box of plastic would actually be. But when I saw the suspension sink on the rear of the Prius, I was excited. That was a rare opportunity to find out just how well the car could handle loaded down with a heavy bias in back. I figure there was about 640 pounds of cargo. That's well over the weight of any aftermarket battery augmentation. I embarked on the drive home. It wasn't really any different... until I got on the driveway. Carrying all that stuff to the side door of the house was not something I wanted to endure. So, I veered to the right and proceeded to drive across the lawn. That was great! The Prius handled it all wonderfully.

6-24-2008 **Dedicated Engine.** It simply didn't make any sense how GM could hope to achieve profitability from Volt with an engine that could not be used in any other vehicle. Remember where Echo came from? Toyota took the Prius engine and detuned it, changing the from the Atkinson-Miller pumping-cycle to Otto and using a few heavier components inside. True, it wasn't as efficient that way. But it could propel the vehicle entirely on it's own, inexpensively... since it shared a lot with Prius. Both vehicles benefitted from increased production volume. Needless to say, GM is now considering that same strategy. Rumors were flying today that there would be a switch from the planned specialized 1.0 liter 3-cylinder engine to a standard 1.4 liter 4-cylinder. That sounds like a sensible plan. If not for the profit incentive, I bet they discovered a power advantage from the mule testing. Of course, how the enthusiasts take the news is an entirely different matter. A change like this wrecks the ideal picture they had painted. Oh, darn.

6-24-2008 **3,800 Dealerships.** That's how many GM has in the United States. How long do you think some people will end up waiting for their Volt? Only 2 or 3 being delivered to each dealer that first year is spreading the inventory awful thin. I can't imagine the backfire all this hype in the meantime will generate. The anxiety that comes from waiting after rollout has begun is far more intense than that during the announcement phase. The saying "*too little, too late*" takes on a whole new meaning from that. Meanwhile, Toyota will have around 2,000,000 Prius on roads worldwide. Talking about a future GM never imagined. I sure how things will somehow change. That kind of struggle is the very thing hybrid supporters were trying to prevent.

6-25-2008 **100,000 Miles.** I sold my first Prius just shy of 60,000 miles. So my wait until seeing 100,000 miles took way longer than expected. But last night, this Prius hit that mark. With my video camera on stand-by, I was ready to film the moment while driving. I even managed to do a celebratory honking at the same time. The result is somewhat cheesy, but that's the point. There's no doubt about it being authentic. Watching the 99,999 vanish to be replaced by an extra digital was great! I wonder what others will think after seeing that. Hmm? The event, especially with a digital speedometer, is something many people actually get to witness. And of course, there's all those naysayers who claimed the battery-pack will need to be replaced shortly thereafter. Being able to document experiences contrary to that is vindicating.

6-26-2008 **Poorly Informed.** Reading incorrect claims about how Prius operates is bad enough. But when the Volt enthusiasts start that with GM's own Two-Mode, there's reason to be concerned. Loyalty is getting in the way of logic. They aren't stopping to ask questions, which is leading to assumptions. Posts of "*superiority*" are abundant, yet none address why there is no plan to compete directly with either Camry-Hybrid or Fusion-Hybrid. The market wants a 4-cylinder "full" hybrid midsize sedan... and it sure looks like that is going to turn into a need soon. Then of course, there isn't a plan for direct competition with the configuration of Prius either. The "*trophy*" nonsense must stop. That starts with education. Those that know information shouldn't remain silent until provoked, which he only way I can squeeze out detail from them sometimes. But we know how that goes. Being poorly informed keeps the discussions lively. So some make an effort to prevent clarification. That intentional undermining is quite frustrating.

6-27-2008 **$140 Oil.** The per barrel price shot all the way up to $142.81 today, closing at $140.21 for the week. That's starting to panic those in support of monster-size vehicles. It is quite obvious at this point that the invasion of tiny vehicles is about to surge. Their appearance on roads is increasing as fast as the disappearance of guzzlers. The statement that makes about consumer attitude now cannot be denied. The message sent from the consumer's wallet speaks louder than anything else. Remember the talk of $100 oil was that of only speculators? Change has come. The days of "*use without consideration of the future*" are over.

6-28-2008 **Ford Plug-In, part 1.** The hot topic of discussion today was about a interview comment a Ford senior manager recently made toward plug-in hybrids. Essentially, it was that they would wait until the market emerged. The response by the Volt enthusiasts was that Ford isn't even going to try, that they'll wait and play catch up later. Refusal to acknowledge the capability of FULL hybrids is making me crazy (so much so, that I'm now always posting the identifier in upper-case letters rather than denoting with quotes marks). Continuing to evolve their electric platform in the meantime makes a whole lot of sense to me. The new generation of Escape-Hybrid coming this Fall, along with the rollout of Fusion-Hybrid, most definitely follows that approach. Figuring out how to make the design profitable and more efficient along the way is great. A reputation is established as they go too. It makes the offering of a plug-in option rather trivial at that point. Thinking of that as a "performance package" choice, much like the way other options are offered now, is something consumers could easily embrace.

6-29-2008 **Ford Plug-In, part 2.** This made me angry: "*Who knows, in 2015 you might have a company making a battery 50% less and holds 50% more charge in 50% less time that the current Volt's battery pack. Toyota won't have that, Honda won't have that!*" It's a great example of the undermining taking place on the Volt enthusiast website. Attempts to mislead about Prius is abundant. They view other hybrids as a threat, rather than an ally. Why vehicles helping to advance battery-pack production is considered a problem defies logic. The actual problem comes from non-hybrids. But they don't get that. So I persist, posting corrections when required. It this case, it was... That's what I mean about the spreading of incorrect information here. Toyota already has that! How can you pretend that the aftermarket plug-in option doesn't exist? Upgrading a FULL hybrid is no big deal. The components you need (large liquid-cooled electric motor, electric steering, electric A/C, etc.) are there at purchase time. So later, taking advantage of improved battery technology is quite realistic.

6-29-2008 **Saving EV1.** The obvious question was finally addressed: "*Why not just bring back EV1?*" The response from Bob Lutz was roundabout. Having to modify the design to meet the more strict safety standards of today would be an extra expense, but developing a SERIES hybrid is quite a bit more anyway. Basically, it was the same old excuse... there wasn't much interest then, so why would there be now. Well, let me tell him! $4 gas is a reality now. Battery technology is much better now. Hybrids like Prius are a common sight now. So much has changed since then, I don't know where to begin. And yes, I am still a little bitter. I would have leased an EV1... given the opportunity. But I wasn't. They never offered it here. That makes the claim that a market didn't exist very frustrating. Needless to say, something better finally be delivered. Getting nothing at all is unacceptable. And those years since were a big step in the wrong direction.

6-30-2008 **Not Enough Miles.** For the most accurate monthly statistics, I try my best to refill the tank as close to the end of the month as possible. But sometimes, guessing what my driving needs will be over the next week is a challenge. And with Summer finally having begun (it was unseasonably cold until recently) and a reflooring project going on at home, that was difficult. The last day of the month arrived and I was only at 195 miles, with 50.4 MPG showing on the Multi-Display. From my experience with low-sulfur gas, where I filled up unconditionally when traveling up north since it wasn't available there back then, topping off the tank never resulted in accurate measure. Smaller quantities are not enough for a system with an evaporative-emission bladder to detect where full is with the usual level of precision. So, I didn't try.

7-01-2008 **Sales Perspective.** The GM enthusiasts are so upset, few even want to respond to sales statistic posts anymore. Whether you look at the numbers from an absolute or a relative perspective, they look really bad. The entire industry so dramatic drops in large vehicle sales. Yes, even Toyota is struggling with that. Fortunately, they have a much more diverse product-line. That helps a lot. GM doesn't. Ford doesn't. Chrysler doesn't. All are in major trouble due to heavy emphasis on guzzler production... news which flooded the airways today. June sales were especially bad, with no hope at all of things getting better. As for the hybrids, here's the numbers for you to draw your own conclusions with: Prius=11765, Camry-Hybrid=3054, Highlander-Hybrid=1511, RX-400h=1330, Tahoe-Hybrid & Yukon-Hybrid=547, Malibu-Hybrid=295, Aura-Hybrid=30, Vue-Hybrid=277.

7-01-2008 **Compact Crossover.** The deception continues. Rather than trying to call the SUV a "*car*" anymore, the term has shifted to "*compact crossover*" now. What a joke. Place it next to a SUV. There are no differences. It's a truck pretending to be something it's not. Changing the label is a blatant attempt to mislead. I'm so tired of the desperation to push what consumers don't actually need. Thankfully, the abrupt climb in gas prices is impairing the automaker effort to sell guzzlers. Strangely, the latest television commercial ended with this: "*Also available in hybrid.*" I wonder what the heck consumers will make of that. Will they understand what that truly entails? And what about when the BAS option is joined by a choice of Two-Mode this Fall? The vague inclusion of hybrid references seem to do nothing but bolster image.

7-02-2008 **Drink Less?** What a odd article. It stated that's what Big SUVs do now, featuring the Tahoe & Yukon hybrids. I added that question mark... since the read was such a strange one. The start was the usual, taking a jab at "small" hybrids, with Prius in particular. Then it got weird. The writer pointed out how the large 8-cylinder engine could operate using just half, which is not an ability unique to hybrids. Neither is the final drive ratio adjustments or adding more gears. In fact, the aerodynamic improvements aren't either. In other words, much of the efficiency gain comes from improvements to traditional design having nothing to do with being a hybrid. It was a clever slam. I didn't realize that at the beginning. But the concluding sentence made it quite clear: "*While I marveled at the engineering and sophistication of this two-mode hybrid, I remain somewhat baffled by the too-heavy, too-costly vehicles in which the technology made its debut.*"

7-03-2008 **"Smart" Car.** The sightings around here continue. Wow! It's hard to believe just how short & narrow of a vehicle they actually are. The interior appears spacious, especially with the roof so high. But the "smart" part eludes me. How can an EPA estimate of 33/41 be a strong draw for anything beyond a city commuter vehicle? Seeing one on the highway in Winter here should be interesting. It certainly enforces a major appeal factor for Prius... with passenger & cargo significantly greater, as well as the MPG. I'm quite curious what sales will be as time goes on.

7-03-2008 **$145.29 Per Barrel.** That's the closing price for the week, leading up to tomorrow's national holiday. Whether the vehicle is a hybrid or not makes no difference anymore. 20 MPG is awful, period. Putting lipstick on a pig doesn't change what it is. For that matter, the "*as much as 30 MPG highway*" advertisements seem to be causing a sour taste now too. Each filling up of the tank hurts. Paying $40 to $50 for gas that often (every 300 miles or so) is a killer for budgets that never planned on such expense. It's a reality shock the industry just plain was not preparing for. Now dealing with it remains a serious concern. I can't imagine what the lack of competition will do for Prius. That next year will be very interesting, a popular topic in future history books.

7-04-2008 **Mini Cars.** Late last night brought more news of change from GM. With the other automakers making plans to bring their mini cars to the United States, it was basically inevitable for them too. In this case, it's the Chevy Beat. Very small vehicles like that, which deliver close to 40 MPG, are what people are seeking now. It's the true "*stop gap*" that GM always feared. Yet, that is exactly what they have to sell at this point. The fact that efficiency is terrible in heavy commute traffic is a reality that all will have to tolerate. The fact that they are a compromise in safety is something few will be willing to address. With battery supplies so limited, ramping up hybrid technology to the level of fleet replacement is totally unrealistic still... so, we get an onslaught of mini cars in the meantime. All the support from FULL hybrid owners in the past is now proving an incredibly valuable contribution. Too bad so many people fought their effort. It is becoming crystal clear what the market should have been focusing on. $4 gas is rapidly changing priorities.

7-05-2008 **BlueTec Details.** Diesel engines are inherently dirty. Between the ignition method and the fact that the fuel itself is less refined. Just matching emission levels to that of a dirty gas engine is a challenge. One approach is to spray urea into the exhaust system. That chemical converts the harmful NOx pollutant to just nitrogen. It means you cannot run out of the chemical though, the EPA demands that urea availability is strictly enforced. For Mercedes-Benz, this is handled by only allowing 20 restarts after the refill warning has begun. After that, the engine is disabled until urea is replenished. 7 gallons of the urea product AdBlue is required. It is recommended that refills take place every time oil is changed, at the 10,000-mile interval. The expense and effort is intended to be minimal. But compared to not having to do anything at all for the gas FULL hybrids and getting significantly cleaner emissions that with diesel BlueTec, that's quite a contrast.

7-05-2008 **Dashboard Screens.** The aftermarket GPS acceptance could be described as "*thriving*". I'm seeing the glow of those screens on vehicle dashboards at night more and more often. Consumers are clearly expressing their preference for new stuff. Back when Prius was still new, there was a level of resistance. That's why Toyota was so modest with the interface. Although those like myself would have preferred more, we understood the importance of simplicity... and now that is paying off. At this point, we can turn our thoughts to wonder about how long it will take before built-in screens become offered more... especially now that automakers are struggling to find ways of making economy cars more appealing. Without MPG strong enough to be the primary draw, it only makes sense that creature-comfort options are expanded. Sweet!

7-07-2008 **100,000 Mile - Service.** The odometer was actually at 100,609 miles. But it really doesn't have to be exact with a system that propels the vehicle with the engine stopped sometimes. Fluids don't age as quickly with a system that runs cooler than a traditional setup, especially because RPM is limited. Anywho, the coolant was drained & & refilled for $104.54. The transaxle (PSD) fluid, which doesn't have any specific distance requirement recommended, was drained & refilled for $105.11. It just seemed like a good time for that. And the tires were rotated along with a brake inspection for $42.59. That made this one of the bigger services, but still pretty darn reasonable. I do my own oil changes and inspect the underneath. So, the next visit to the dealer won't be until snow starts falling again.

7-07-2008 **Solar Panels.** The big news this morning is that an option will be available on the next-generation Prius to power the accessories with solar panels. That's a creature-comfort those in the south would enjoy, since the A/C is electric. Keeping the car cool is a very good use for that. But for those of us in the north, not so much (especially considering potential ice & snow problems). And of course for owners (like me) who carry kayaks or other large cargo on the roof, that option simply isn't appealing. The tiny dents already up there from my rack are good reason to shy away from that particular option. I bet some will love it though. The size, shape, and cost will obviously be the deciding factor. Speculation now isn't that helpful. And of course, there are already misconceptions about this, due to some posting information that leaves out the accessory reference... leading others to believe this will somehow power the propulsion system. Whatever the case, it does draw attention to the fact that the A/C system operates using electricity. That's something in favor of the FULL hybrids that isn't realistic for the ASSIST type.

7-07-2008 **Omission Fallout.** Since that solar panel topic is new for hybrids, I was quite curious if there would be any fallout. And sure enough... Fortunately, they are finally stating the history correct. Rather than claiming that rollout began in 2000, the actual first sales date of 1997 is now being acknowledged. There was an undermining effort originally to pretend that those first 3 years never happened by providing an America-only perspective. That intentional omission really frustrated some of us and caused the drawing of incorrect conclusions for newbies. Now that has changed. No more exclusions of that nature. Unfortunately, some are still omitting other information. In the case of today's publication, it was this concluding sentence: "*Toyota has a goal of selling at least 1 million hybrid cars a year in the early part of the next decade by offering the fuel-saving system on more vehicles.*" Did you notice what's missing? Prius was the only hybrid mentioned throughout the article... and implied there too. The writer was pretending as if the hybrid system isn't already available in other vehicles yet. With around 100,000 Camry-Hybrid and 75,000 Highlander-Hybrids already sold in the United States, I find that writer's statement very misleading. Having to tolerate such vague reporting really is a pain. Without detail, there is always some type of fallout.

7-08-2008 **Addicted To Oil.** We were told by President Bush that America is addicted to oil, two years ago. Now, he is telling us we need to increase supply by drilling for more. Since when is that a proper solution to dealing with an addiction? Rather than reduce, we do exactly the opposite. What kind of nonsense is that? That's a horrible idea to suggest! It's self-destructive, quite negligent of the future. I could understand if the effort was balanced by genuine strides to also improve efficiency & emissions. But it isn't. In fact, those priorities have been almost totally absent during this administration's reign. The situation is grim, a responsibility that the next president will have dumped upon him. What a mess. Increasing supply of the very thing we are addicted to just delays the inevitable. We have to finally take responsibility for our actions, dealing with the consequences rather than ignoring them.

7-09-2008 **More Greenwashing.** How is a Prius owner supposed to react to a new advertising campaign with this slogan: "*Pump Less and Drive More.*" That message in itself is a problem. But the sad reality that it's being used to promote the sales of vehicles that deliver efficiency "*up to 26 MPG*". The hybrid I drive delivers double that!! With such a drastic performance difference, it's sickening to think that all this nonsense could have been avoided by not ending the PNGV program. But the new administration crushed that effort and those prototypes were abandoned. It's a disappointing chapter in our automotive history.

7-10-2008 **Prius Production Here.** We've been waiting a long time for the decision to be made about producing Prius in this country. The sudden drop in truck demand made that easier. Their build reduction will result in consolidation elsewhere. So, the plant currently under construction in Blue Springs, Mississippi was originally intended Highlander SUV for will now be used for Prius instead. Sweet! We'll have to wait until later 2010 and capacity will only be 150,000 per year, but that's still a big step forward nonetheless.

7-10-2008 **Lowering Expectations.** GM made a plea to federal regulators not to include upcoming new vehicles like the Chevy Volt when setting efficiency standards. In other words, just because the technology will be available then, that doesn't mean there are any intentions to achieve mainstream production volume until many years after introduction. In fact, they said the wait would be at least 5 additional years. The first stage of fuel economy increase (25% for 2011 to 2015 models) will not be achieved if the MPG requirement is based on anything but dinosaurs. Simply cutting back on guzzling giants is a cheat. Having to commit to hybrids that deliver high MPG is a risk they are still unwilling to take. Yet, they continue to call Volt a "*game changer*" anyway.

7-11-2008 **Rapid Losses.** The consequences of not having a diverse product-line are playing out at an incredible rate now. It has become a disaster for the history books. Detroit has nothing appealing to offer for high-efficiency choices. They were so heavily investing in vehicles that guzzled, that incredibly risky has become overwhelmingly obvious a bad one. They are in serious trouble... with no widespread solution available for years come. Meanwhile, Toyota is well into expanding hybrid production... and even that is proving not fast enough. The industry was not prepared for losses so rapid. The SUV market was saturated, competitors struggling for sales even when gas was less expensive. But now with gas at $4 per gallon, sales are drying up for everyone. Downsizing of pickup trucks is next. That chapter of carefree waste is over. Penalties of not being prepared for this change are quite apparent.

7-11-2008 **$145.08 Per Barrel.** Gas has been less expensive here (Minnesota) than just about everywhere else in the country. But even so, it is back up to $4 again. Meanwhile, the price of oil shows no hope of dropping. In fact, demand will continue to grow quickly worldwide. American usage is going down a little bit though. SUVs now seem like niche vehicles, rather than showing the dominance they recently enjoyed. It's proving a grim reality for GM's poor choice of Two-Mode placement. I'm so glad Toyota considered the new Highlander-Hybrid as their largest platform for HSD. It's an excellent size for people that actually need a hybrid pickup truck... powerful without being excessive. After all, how much is the need for loads beyond 3,500 pounds? Passing that threshold for non-work use is rare. And of course, the desire for boats so large they too guzzle has dropped dramatically. These high oil prices pushing people to make more practical purchase decisions. Appeal for the extreme is gone.

7-11-2008 **Fascinating Trip.** The temperature was swaying between 91 and 93 F degrees. I needed to drive south, directly at the 40 MPH headwind. With the A/C running, that 70 mile cruise at 65 MPH wasn't exactly ideal. In the past, I have been able to achieve much higher than that resulting in an 44.8 MPG average. Oh well. The return trip a few hours later had me captivated. What would that tailwind deliver, especially since it was now dark and the A/C was no longer necessary? The end result shown on the Multi-Display was 47.9 MPG. That was a pretty good recovery. I still miss routinely seeing averages above 50 though. But with such strange weather this year, I guess there's no reason to dwell on it. That's certainly nothing to complain about.

7-12-2008 **Koppel on Discovery, in China.** Vehicles are a new phenomenon in China. It's a radical new form of freedom for the Chinese people. Change is surprisingly swift. Their infrastructure is still developing. Most families have members learning to drive at very old ages. Oil demand is intense. Pollution controls are sometimes absent entirely. Safety standards are frighteningly low. Roads there are the most deadly in the world. Accidents claims & payments are handled on the spot. 9,000,000 new vehicles are added there per year. Much of their economic future depends upon success of the automotive market, highway development, and the business spawned by it. Vehicles prices are inexpensive, built locally, and purchased with cash. Rapid growth is very important. Expanding sales into America is a strong desire. Wages are cheap. Cost is low. Profit draw is high. Approach is very different. Strategy is to make their automotive business the biggest in the world. Ford & GM sales are actually thriving there. Global is becoming the mindset, seeking opportunity anywhere it can be found. The memory of Detroit's dominance will fade. It's not a future those from the old school envisioned. I suggest you watch this television special.

7-12-2008 **The Problem.** It was summed up well by a member on the big GM forum: "*GM tries to build cars and trucks that people WANT. Toyota tries to build cars and trucks that people NEED.*" I totally agreed, and responded with this... Well said. The vindication of planning ahead is paying off now too. Some are blinded by vengeance against Prius success. Acknowledging the use of that same technology elsewhere is still an act of denial. I was attacked last year when pointing out how important it was for GM to offer direct competition with Camry-Hybrid. Now what?

7-12-2008 **Dropping the Pedal.** There was a white van in the distance, going oddly slow off in the distance. It took little time to catch up to its 25 MPH movement on that 35 MPH road. Being such beautiful afternoon, what could the reason be for driving so much less than the posted limit? I fell back so the driver could clearly see me in their vehicle's mirrors. After a mile of tolerating that, the road turned to 45 MPH. And sure enough, the driver speeded up but still remained 10 MPH slower. Why couldn't that same 35 MPH speed have been driven that 35 MPH road we were just on? It was like the driver simply had no care in the world. A mile into that new stretch, a half dozen vehicles behind me all joined in the frustration. Oblivious to that traffic congestion you cause is dangerous. Ignoring it is rude. What the reason was will never be known. But when the opportunity to pass finally arrived, I dropped the pedal. Flying by that van felt great!

7-13-2008 **Dishonest Reporters.** It's common to read outdated information. Research is sloppy & incomplete at times. Some rush to cover the topic of hybrids with whatever the newest twist is. Today, it was an article about GM's eminent financial disaster. Recovery efforts are too small and too slow to keep up with the rapid pace of the changing market. That's pretty easy to see, no surprise there. But when focus changed from that struggling automaker to the success of another, it got ugly with this: "*Prius remains a niche product even after several years on the market. Its anticipated 2008 sales are a mere 100,000 vehicles.*" That's totally dishonest; in fact, it's an outright lie. Giving the benefit of doubt, where in the world could that supposed mistake have come from? Last year, in the United States alone there were 181,221 sold. There was no mention whatsoever of any of the other Toyota/Lexus hybrids available either. Of course, the reason why become obvious in the following paragraph with this: "*Not only is the Volt's all-electric technology revolutionary – the biggest industry advance since automatic transmission and perhaps even the perfection of the internal-combustion engine...*" I became really angry upon reading that. It was propaganda to paint a pretty picture for GM's future and draw attention away from solutions already in production. Arggh!

7-14-2008 **45 MPG Highway.** That efficiency rating for Prius is endlessly mocked. They claim hybrids should do much better, that the improvement isn't a whole lot more than what a non-hybrid can achieve anyway. If that were true, where are those 45 MPG non-hybrid vehicles? I'm seeing many advertisements and lots of television commercials pushing efficiency "*as high as 30 MPG*". It's a conspiracy to mislead. Their inventory is loaded with guzzling vehicles, so they attempt to set expectations low... hoping to greenwash consumers enough to get them to buy. Reducing the mindset only goes so far. Even slapping a new label on a barely improved product has limits. They cannot publicize their way out of this mess, not this time. The real-world data is painful. They feel it clearly in their wallet. Gas inflation has caused a cost-of-living increase which has become quite noticeable. Excuses to dismiss the significance are fading. 45 MPG on the highway is growing enticing. Too bad so many fought against that for quite a few years.

7-15-2008 **More Reductions.** Truck production is being reduced even more. Today's news was GM wanting 300,000 less by the end of 2009. There's still too much capacity for the smaller inventory automakers want to carry. It's becoming way too expensive to get stuck with unsold guzzlers. So, they are permanently cutting back, not just idling work temporarily. It was inevitable. This is the third year in a row that clearance time meant slashing prices to the point where serious money was being lost. Unfortunately, that's not the only type of reduction taking place. Another cost-cutting measure is to shrink the salaried work force by 20 percent and to suspend common-stock dividends. That's bad news. Struggling to survive like this sure isn't what automakers had in mind just a few years ago. It's amazing how quickly & drastically things can change.

7-16-2008 **Broken Promises.** At this point, even some of the most dedicated Volt enthusiasts are feeling what disenchantment can be like. Too many details, especially price, have changed over the last year and a half. Not knowing what to cheer for anymore is a genuine problem. To make matters worse, some are beginning to undercover the history before Volt was initially revealed. Many promises were made then who's status is far from promising... some even broken. For example, the PNGV included several prototypes for vehicles that strived for a goal of 80 MPG. (In fact, that effort was how Prius came about.) So, what happened? Where did they go? Why aren't they talked about anymore? How come those automakers went from concern about reducing consumption to intense promotion for guzzling SUVs? What caused that drastic shift in priorities and how are we suppose to believe they are sincere now? What's different? Are they really taking MPG seriously now? Who's lobbying for increased oil drilling? And why are the new promises so vague?

7-17-2008 **Green Fatigue.** How much can people take? Recycling. Global Warming. Alternative Fuel. Terms like that have been discussed for ages. Now the field of green is expanding... and far less obvious. The confusion surrounding hybrids is a perfect example. With fundamentally different technologies now available and more on the way, how are consumers who don't know how their current vehicle works going to respond? To make matters worse, upgrades are on the way. Understanding details about new computers is hard enough. Imagine trying to explain differences for a product with many moving parts... which is far more expensive. At what point do people give up? Only so much can be taken. Where should priorities be placed? All are quite important. None can be dismissed. Fatigue is a very real concern.

7-18-2008 **Carbon-Free Electricity.** Former Vice-President Gore proposed we set that as a 10-year goal for our country. Why not? Providing phone & electricity service for everyone in the country was a lofty effort of the past we most certainly benefitted everyone. The same is quite true of the highway system too. It makes sense that serious goals are set to make the world a better place for the children; otherwise, they'll end up having to deal with the mess themselves. Isn't that what every parent wants for their child? The clean, renewable technology for this is available and well proven. Not investing in it is the problem. That's sad. Initial responses to this proposal were mixed. Some people fell overwhelmed by economic troubles already. Change is not welcome for them. Others are screaming that this is long overdue, where further delay only makes a bad situation even worse. I find it quite reasonable. After all, my perspective comes from placing a deposit on a Prius over 8 years ago.

7-18-2008 **Silverado-Hybrid.** The EPA posted official estimates for it today. The rear-wheel drive Two-Mode model came in at 21/22 (city/highway MPG); the 4-wheel drive at 20/20. That efficiency was an upgrade, using software updates not available on this year's Tahoe or Yukon hybrids. How do you think those numbers are going to be accepted? The actual market for pickup trucks that large is quite small. Few consumer have cargo that heavy. A smaller model (what used to be considered large not too long ago) would do the same job just fine without using as much fuel. It's time to ask what you truly need, rather than what you want.

7-19-2008 **Victim Help.** This morning started out with a rude awakening, for some. For me, it was no surprise. The government promised quick relief to those that suffered from hurricane Katrina damage to their homes. 3 years later, things are very much a mess still. The need is obvious. Yet, help is still a problem. It's a harsh reality for efficiency woes too, a rude awakening to say the least. How exactly will assistance be provided for that? People who purchased a guzzler out of want are now struggling with the need to spend less at the pump. Higher MPG guzzlers are not the answer; however, a certain automaker claims that is the solution. Regardless of technology, only getting 20 MPG hurts. Double that is what consumers are now begging for. Disasters, whether natural or politic or economic, are difficult to overcome. Planning better for the future is a necessity. Will we learn that lesson from all this?

7-19-2008 **Flip-Flopping.** 4 years ago, the republican stance was that it should never happen. They were quite insistent upon that. But now when their own presidential candidate did it, somehow that's ok. Arrgh! Anywho, this flip-flop was who should regulate carbon emissions. Last month, he stated his favor for national standards. Yesterday, he changed that to the state setting them instead. Make up your mind! Not doing that means we'll never get to the step that asks what the levels should be. That's typical. Keep the debate alive to avoid actually making a commitment. This topic is far from new. It's been discussed in Congress for years already... which this senator has been part of.

7-19-2008 **Challenge Backfire.** Last week the general manager of a VW dealership in Washington made the claim that their new Jetta TDI would do better in a non-stop highway drive from there in Auburn to San Francisco than a Prius. He had a film crew to document it. He even provided a quote to ensure his assertion was quite clear: "*Volkswagen's new generation of turbo diesels are poised to take over the market that hybrids currently dominate.*" 5 days after the event took place, all we have is a mention of progress midway... nothing else has followed. That's highly suspicious. The Prius owners think it's a sign of regret. Keeping silent about the final results would help to alleviate embarrassment. We believe the Prius won the challenge. Why else wouldn't the outcome have been published?

7-20-2008 **Natural Gas.** That was the new fuel for our vehicles an oil company executive recently proposed. How will that help? True, it does address both types of emission. But switching over to another non-renewable energy source doesn't sound like a good solution to me. Focus should be on electricity. The improvements to wind & solar over the past few years shouldn't be ignored... or in the case of certain politicians, be made aware of. Sadly, limited knowledge is a big part of the problem. There's a number of misconceptions to deal with too. I sure am thankful for owning a Prius all these years. The resulting real-world data extinguishes many arguments about direction. But unfortunately, the aspects of quantity & pace are challenges still. Embracing natural gas is a distraction. In other words... too little, too late.

7-21-2008 **Monitoring LOD.** It was one of those rare situations where not having the ScanGauge would have meant not even realizing what was happening. With my Classic Prius, the emission purge (burning of captured pollutants) event didn't happen often. But if you were attentive during that particular moment, you'd notice the RPM of the engine speeding up without any apparent reason. With the HSD Prius, that speed up doesn't seem to ever happen. Instead, the engine simply stays running during a time you'd normally expect it to be off. You know, stealth requires a hot catalytic-converter. Anywho, I detected that circumstance by observing how the LOD value (engine load) climbed up rather than the usual drop in preparation for stealth. Then it stayed high, which confirmed the purge. Cool!

7-22-2008 **Challenge Details.** We finally got them. Prius won in all of the following categories: CO2 emissions, CO emissions, NOx emissions, NMOG emissions, crude oil consumed, and fuel cost. The only category the Jetta TDI took was MPG. But how is driving almost exclusively on the highway (733 miles) an accurate depiction of real-world expectations? Including city & suburb driving swings the favor heavily to Prius, since efficiency is even better under those conditions. My favorite quotes were: "*The Jetta TDI Clean burning diesel is an environmentally conscious vehicle.*" and "*The Jetta TDI has lots of Horsepower and torque (145HP, 247 lb/ft)... The Prius has roughly 70HP and 80 lb/ft torque.*" Both were obvious attempts to deceive. There's simply no excuse for claiming a vehicle that delivers a Tier-2, Bin-5 emission rating is clean. That's dirtier than the typical gas car and the opposite extreme from the SULEV or PZEV ratings. As for the power comments, he posted only the engine values and rounded them down. How is any of that honest? In a way, it's actually somewhat vindicating to see that genuine competition isn't realistic. The only way to win a challenge... or at least attempt it... is use the old misleading techniques. But the Prius owners knew what was going on right away.

7-23-2008 **50 MPG Tanks.** It's about time. Finally! This particular Summer was off to a very cold start. Early June felt like April at times. So naturally, the MPG resembled that. When the warmer weather did eventually arrive, I was in the mist of a construction project at home. That entailed countless short trips to the hardware store and runs for food. That kept efficiency from climbing to the usual seasonal high. But then last week, everything fell into place. Achieving a tank average above 50 MPG became easy. Yeah! I look forward to that transition every year... and this time it took what seemed forever. Of course, now I'll taking the kayak out to play. Carrying that on top the Prius isn't exactly a subtle change, especially if there is two. Oh well. Life is too short to worry about brief opportunities to get out an enjoy warm temperatures.

7-23-2008 **Apartment Plugs.** Those pushing vehicles that depend heavily on a plug have been dismissing that demographic, just saying apartment owners will provide plugs when needed. Who's going to pay for all that installation? Think about how expensive tearing up ground for wiring will cost. Every other parking stall will need an outlet; otherwise, you'll have people stringing extensions or unplugging other vehicles. It's disheartening when you realize just how long some changes to infrastructure will take. Then there's the issue of how to pay for the electricity being consumed. To make matters worse, there's the issue of receptacle placement on the vehicle itself. Who's liable for an injury or damage caused by someone tripping over a cord? I can't imagine how long it will take for some issues to be dealt with, not to mention a standard being established. Heck, how many plug-in vehicles will have to already be on the road before the topic is even seriously addressed?

7-24-2008 **Lesson Learned.** It has become pretty easy to spot when someone is attempting to mislead. Follow their posts. You'll notice a pattern. Then when you call them on it, they change focus hoping others will forget about their original claims. In my most recent encounter, it was that Highland-Hybrid could not tow a trailer, that the maximum electric-only speed of Prius is 30 MPH, and that Toyota hybrids use a belt for the CVT. Those all are incorrect... and normally easy to prove false. They won't let you though. That resistance is your confirmation that intent is not sincere. But I really don't care much anymore. It's not like the old days where it was a matter of hybrid survival. $4 gas and years of real-world data now available support mainstream acceptance. Motive has shifted to making the competition's design sound better. They simply want the spotlight now. Information overload would be a great problem; instead, some websites focus on blogging. That makes enthusiast propaganda abundant and draws in troublemakers... a wasteland, void of detail. Forums with threads that focus on educational material are what to look for. Those genuinely try to help. Forget the others.

7-24-2008 **Lurker Observations.** I wonder what they think nowadays. Hmm? With 8 years of history under my belt, I could imagine some simply don't question my intent... seeing the support for electrifying vehicles. Some with loyalties to competing automakers obvious aren't as receptive, but to what degree? Staying quiet for how long? And when they do finally respond, how will the post read? I've seen all types over the years. The lesson learned below is a reminder how some long-running grudges emerge from encounters just like that. One thing is for certain, progress takes time. Nothing happens quickly. Even the build up to expensive gas took years, though some refused to acknowledge the upward climb was permanent. There are lots of lurkers, as I have observed from my website usage logs. They are the stealth learners, driven by curiosity for something better. That's a good thing... regardless of whatever propaganda or misleading they may encounter along the way. Too bad they rarely sound off with an opinion, hence the term "lurker".

7-24-2008 **Ford Closures.** It was quite bizarre when Ford announced the plant closing plant here... the one that produces Ranger. Why would a small pickup truck be a financial burden in a market where gas is progressively growing more and more expensive? The choice didn't make much sense. So, hearing the announcement today that it would remain in operation 2 years longer was quite redeeming. That's a step in the right direction. Of course, if you talk to the Two-Mode enthusiasts, they'll still tell you that a towing-capacity of 3,500 pounds simply is not enough. Some never learn that bigger is not always better.

7-24-2008 **$8.67 Billion Lost.** Ford's decision today followed news that second quarter resulted in the loss of 8,670,000,000 dollars. Seeing a number that big for just a 3-month span is just plain scary. It's their biggest quarterly loss ever. The market for guzzlers is falling apart, with no chance of recovery like in prior years. The desire for smaller vehicles is transforming from trend to permanent. The age of dinosaurs is over. It was an age of excess... something to be looked back upon as remarkable. To think that people could have lived that way without concern for the future! Anywho, the "*we told you so*" isn't necessary. Conversion of 3 production plants from truck to small car will begin in December. That long-awaited change will finally happen. In fact, even gasoline TDI (Turbocharged Direct Injection) is on the way. Too bad they weren't better prepared. Oh well. At least there's some hope.

7-25-2008 **Price Increases.** Change has become reality. To alter production in favor of the newly emerging "efficiency" market, all automakers are facing economic considerations. For Ford, that has translated to production halts, plant closures, and employee buyouts. For GM, all that and more. For Toyota, its a shifting of resources and price increases. Prius was not immune. After all, the significant inventory growth plans and the start of United States production has to be paid for somehow. Investing in the next upgrade should be proactive too. And that's just Prius. We want expansion to other vehicle models too. So price increases, with the biggest to Prius, isn't terrible... especially since it will still remain quite competitive. Time will ultimately reveal what's needed. The mindset for dealing with $4 gas is quite new still.

7-26-2008 **4-Cylinder Decision.** It has been made. The design of Volt will include a 4-cylinder 1.4 liter engine. That smaller 3-cylinder 1.0 liter engine didn't cut it. The limited production obviously made it unappealing. There was rumor to be that its power wasn't enough either. Now cost & availability will be better, as well as the ability to supply ample electricity. However, there is now concern among enthusiasts about what that will do to efficiency. The ability to sip less gas than Prius after the battery-pack charge drops to the minimum seems much less likely now. Having to convert mechanical energy to electrical then back can be less efficient than just using the mechanical directly. Under what circumstances a particular design does better in will remain a mystery for awhile. Real-World data from Volt is years away still. That won't speculation though.

7-26-2008 **Hummer Status.** It's turning into a disaster for GM, the iconic "worst vehicle ever" label. What in the world were they thinking? Not too long ago, we saw dealers thriving from sales. Now, many are closed and the automaker is desperately attempting to sell the line. Smug owners were greenwashing with their Prius comparison analysis. Now, roads once dominated by guzzlers are filled with small cars. Media were praising the massive vehicle and helped to promote the "good for the economy" propaganda. Now, they've turned to captions like this: "*It's gone from Hollywood status symbol to the butt of jokes faster than you can say $4 a gallon.*" Status has taken quite a turn. I never expected the bottom to fall out like this. I thought it would be a slow & subtle end, not this abrupt & painful very obvious death.

7-26-2008 **Attention Draw.** The popularity of Prius has kept the growth-rate of the big forum pretty intense. Today's count is now at 41,870 members. That's very interesting when taken into perspective with the big forum for GM vehicles, who's count is now at 37,466 members. Their entire line-up isn't drawing as much attention as Toyota's one hybrid. Will that trend continue? I can't imagine why not. This is the slow time, before talk of the new Prius engages. Just wait, the end of the year should bring tremendous excitement. That's when we finally learn details. Until then, 99.9% of the posts are about the existing models. I love it! New members have a wealth of knowledge they can tap into just by reading messages. And of course, joining in the discussion themselves can be very informative. But the question is, what draws them to the forum in the first place? Is it the reputation of Prius that gets their attention... a curiosity & hope for something better?

7-27-2008 **Mississippi Oil Spill.** 4 days ago a tanker and barge collided on the Mississippi River near New Orleans. 419,000 gallons of oil was spilled. 200 ships were stranded while 800 workers cleaned up the mess. This was the same day Senator McCain was going to fly out to an oil rig for a photo-op that would help promote the message of drilling for more. Timing doesn't get much worse than that. The dangers of oil were getting attention, not supply changes... but then, things suddenly got silent. Even though traffic on the river was still held up, the media seemed to ignore the situation. I suppose the GOP wanting so much to promote the increase in available oil, that kind of news is something they'd very much like to divert from. It's not a solution if using less and polluting less isn't also made a priority. So far though, even the spill wasn't enough for that. In fact, oil is becoming a major topic for the presidential campaign.

7-27-2008 **3-Year Leases.** Not much thought had been given to them until recently... since resale value had been quite predictable. But now, rather than the vehicle retaining about 50 percent of its value after 3 years, certain types have unexpectedly plummeted all the way down to 26 percent. And you guessed it, those biggest losers are the guzzling SUVs. Automakers can't afford that much of a loss, around 8 to 10 thousand dollars each. Needless to say, they don't want to offer leases anymore. That makes the already difficult inventory problem even harder to deal with. The market for those oversized vehicles is falling apart fast... which leaves the industry without a popular high-profit product anymore. Didn't they see that coming? The very same thing happened to the computer industry years ago. Now, financial strength depends upon selling a large volume of low-profit products. It's a paradigm-shift that cannot be fought. Those that cannot adjust won't survive. Change is required.

7-27-2008 **$4 Average.** The national average for the price of gas just dropped to $3.996 per gallon. Oil is down to $123.26 per barrel. Raising the federal tax is now a hot topic of discussion for Congress. Cutting back on funds available meant cutting back on road projects and mass-transit efforts, in other words, a reduction of work. It's obviously bad when viewed from that perspective. But how do you think the average person is going to react to news that gas could cost an additional 10 cents per gallon? Those things have to be paid for somehow. And a dime isn't much when considering how much a gallon of gas costs and how far that takes the typical vehicle. Put another way, our priorities have really been screwed up. So, getting back to them isn't going to be a transparent shift. It doesn't have to be painful. But it will get noticed. It's about time. Proactive was the preferred approach. But it's too late for that. Reacting is the only option available now.

7-27-2008 **ScanGauge Benefit.** Having one for my Prius is nice, but certainly not necessary. It's informative to watch how the correlation of factors such as RPM, LOD, and Coolant Temperature influence hybrid operation for maximum MPG and minimum emissions. I like watching those values. With so much happening at once, that provides interesting insight into the design. Whatever the case, there's another use for the gauge which provides a clear benefit... should you ever need it. And today, I did. The engine-light came on in my mom's car. Rather than bother to check out the vehicle itself, I simply plugged the gauge into her car and check for codes. There was a P0442 displayed. A quick search online revealed that was an emission error, there was a vapor leak detected. Sure enough, the gas cap wasn't tight. Imagine if she had brought the car into a mechanic. How much would they have charged for such an easy check & fix?

7-27-2008 **Tahoe Promotion.** Unexpectedly, during a new episode of MythBusters, there was a commercial for Tahoe-Hybrid. It had a curious approach. How do you sell a monster-size vehicle during a major exodus from them? Well, their approach was to promote the fact that it was a hybrid. As many had feared before it's debut, the technology has become an excuse to continue selling vehicles that very few people (if any) actually need. I can understand a pickup for hauling essential cargo. But a SUV doesn't make sense for that, especially one loaded internally as a people mover. Work or Personal? Who is the intended market? How often is a load heavier than 3,500 pounds for a family anyway? Purpose remains a mystery. The size & power appear unnecessarily large.

7-27-2008 **Limited Production.** Two weeks ago, GM told us "*such vehicles would be built in low numbers through 2015*" when discussing intentions for Volt. Today, they told us that E-Flex platform annual production could grow to 1 million by 2020. So, what the heck does that mean for the rest of their vehicles? That quantity is pretty small, just above 10 percent. For a decade growth, that's an awful slow progress rate during a time where change is required. Too bad that's all that was said. With such scant detail, it's hard to know where priorities will actually be placed. Don't you love the publicity game they are playing. What difference will that make anyway? Not a single vehicle using E-Flex has been sold yet. So, how are consumers supposed to know what this will mean to them? It certainly resembles the nonsense of the past. Remember how they boasted that they'd be the first automaker to sell 1 million fuel-cell vehicles? Whatever happened to that effort?

7-28-2008 **Driving Less.** Those who rely on highway funding from collected taxes are growing concerned. People are driving less to save money. That has become a crystal clear indicator that $4 is the magic threshold. Change has arrived and the first major fallout (not directly related to the automotive industry) is this. Gas purchases was where the money for maintenance & replacement had come from. But when people buy less, that supply shrinks. Next year's estimates are about to face a grim reality of significant shortfall. This abrupt reduction was definitely not planned for. Now what? That once reliable source for funding has become too risky to count on anymore. Makes you wonder what other problems will surface as a result of oil being dramatically more expensive.

7-29-2008 **Hybrid Introductions.** Today was the annual picnic for our department at work. The plan was to leave for home from the park. No such luck though. An extra car was needed to run people back to the office. I volunteered... forgetting that most people still haven't ever been in a hybrid. Well, that was an exhilarating drive. The reaction that comes from a newbie witnessing 54.2 MPG on the Multi-Display and over 102,000 miles on the odometer while cruising along in traffic at 93 F degrees with the engine off and the A/C on was quite potent. The circumstances of their introduction to hybrids were great, and that was before even jumping onto the highway. My 3 passengers were impressed by the experience, to say the least. You could tell by the question asking. Interest was obviously peaked. I certainly enjoyed that unexpected opportunity.

7-29-2008 **Cost Reduction.** Honda announced today that they have cut the cost of IMA system (their ASSIST hybrid design) in half. That's impressive. Both the next upgrade to Civic-Hybrid and the new dedicated smaller hybrid will benefit from that. However, there are still no plans to offer a larger model. Nothing to compete directly with Camry-Hybrid is a strange move. Is there a limitation to IMA or are they ignoring that market. It seems unwise with the traditional Accord being so popular and diesel not making any progress. Oh well. At least they will be offering something hybrid, which is much more than certain other automakers.

7-30-2008 **5 Years Later.** Not knowing what the Classic Prius looks like makes for interesting forum discussions. An owner of the HSD model started one today. She knew of its existence, but had never actually seen it before. Reading that online is a bit odd, since searches are so darn quick & easy. But those that grew up without internet access aren't used to information always being just a few clicks away. It's a reminder of how diverse the market can be. In this case, reputation was all that was known. I suppose now 5 years after the finally inventory was being sold, it does make sense that assumptions of that nature are beginning to be made.

7-31-2008 **Billions of Profit.** For the previous quarter, that's just 3 months, reports today were that Exxon made $11.68 billion and Shell $11.56 billion. During of a time when some consumers are struggling to get by and others are even losing their home, that isn't exactly news well received. Oil prices are still way into the worse-case scenario situation. Long-Term expectations are a complete mystery. GM and Chrysler are planning to sell lots of guzzling (20 MPG) hybrids still, in a market where people are flocking to tiny vehicles for refuge. The outcome of this grand-scale mess should be very interesting chapter in history.

8-01-2008 **Disastrous Quarter.** For an automaker claiming to be on the rebound, it's going to be really difficult to put a positive spin on the loss of $15.5 Billion in a single quarter. That's the ugly situation GM is facing now. What in the world are they going to do? Relying on guzzlers for profit has turned into a disaster. Having almost nothing in the efficiency category to sell is a sign of tough times on the way. More layoffs and inventory dumps are already planned. Will that be enough? How will they compete? It makes the whole "*stop gap*" nonsense something to really regret. Too bad we just can't have a good laugh about that terrible judgment mistake and move on. Paying the consequences of such an unfortunate choice isn't going to be pretty. Hopefully, it won't be too painful. One thing is for certain, the GM which emerges from this mess is going to be very different.

8-01-2008 **It's Time.** I posted this on the big GM forum today, hoping to finally rid those genuinely concerned of past troublemakers... Last year, asking questions of want verses need resulted in fierce responses. The suggestion of a shift away from giant vehicles was intensely mocked. And it was grounds for banning to compare details of hybrid design. Now, reality is setting in. GM's year-to-date hybrid sales here are only at 5,467. Toyota/Lexus are at 165,522. Consumers are flocking to efficiency vehicles. It's time for constructive discussions.

8-01-2008 **July Sales.** Toyota hybrids kept strong, though having more inventory to work with would have made things even better. Oh well. The excitement waiting for delivery has proven worthwhile in the past. The anticipation leads to discoveries online for those that normally wouldn't search for information like that. Anywho, there were 14,785 Prius sold, 2,645 Camry-Hybrid, and 1,371 Highlander-Hybrid. All 3 models of Lexus hybrid came to a total of 1,562 for July. That sure makes GM numbers for the month look bad with just 228 Tahoe-Hybrid, 123 Yukon-Hybrid, 362 Vue-Hybrid, 349 Malibu-Hybrid, and 29 Aura-Hybrid. In a market now placing much higher priority on emissions & efficiency, it really makes me wonder what next year's July report will be.

8-01-2008 **$125 Per Barrel.** That's the point at which prices have been hovering for the last 2 weeks. A result of that was gas here falling to $3.65 per gallon. It's still beyond the threshold for guzzling. The desire for high-efficiency vehicles is rising. The attitude change is quite obvious. I can't imagine what that will mean at the end of the year when the new Prius debuts. Talking about perfect timing. People want to pay less at the pump. It makes the promotion of hybrids that deliver 22 MPG a losing battle. How much demand do they believe there will be? Oil is expensive. Getting stuck with a guzzler is a risk many are no longer willing to take.

8-01-2008 **Marketer Interview.** In this case, it was the chief marketer at GM. This was my favorite quote from that interview: "*We ran some numbers the other day, and the difference between driving a Silverado pickup with a V-8 engine and a Malibu or Camry with a 4-cylinder comes out to about $17 per week in extra fuel.*" What kind of nonsense is that? It's so vague, you are left clueless. It's completely void of any detail as to how that number was derived. And of course, it totally ignores the reality of purchase price differences. I found it a very disappointing response to the topic of people now desiring smaller vehicles. How come the comparison wasn't between a large truck and a small truck? Was he admitting that most people don't actually need one anyway, that a car serves them just fine instead. Even some members on the big GM forum were upset with such shallow answers.

8-02-2008 **Awful Haze.** I'm rather embarrassed by the sight I saw today. A road near my home 20 miles south of Minneapolis provides a normally impressive view of that metropolitan area... but definitely not today. The heat of Summer was concentrating the effects of our pollution. It gave the air an awful looking orange haze. For being one of the cleaner cities in the country, I can't imagine what living in one with much worse emission problems would be like. We need to end this nonsense and embrace change. The need is become quite obvious.

8-02-2008 **New Undermining Efforts.** You may find this familiar: "*If people are willing to pay $28000 for a used Toyota Prius, then they will certainly pay $35000+ for an all electric that uses no gas at all.*" But now the misleading statements is coming from other hybrid supporters (Volt enthusiasts who refuse to admit the it will use a little gas from time to time), rather than the anti-hybrid troublemakers. This was my reply... Prius has been on roads for 10.5 years already and has had several major upgrades over that time. Commitment to the technology is undeniable, with the next generation on the way and several other vehicles sharing similar design. Consumer endorsements have been overwhelmingly positive too. Volt won't have any of that for quite awhile still. Time is required to earn merit. The mindset of overnight success has got to end. Also, don't sight rare examples as if they are the norm. Remember that the need is for millions of high-efficiency vehicles in the very near future.

8-02-2008 **Stalls & Bailouts.** Not acknowledging how immediate our need is has become a big source of frustration. Some simply don't see the urgent nature of the oil situation nor the consequences of continued consumption at this rate. To make matters worse, some expect the government to come to the rescue. How would a bailout work anyway? What would a vehicle like Volt qualify for in the forms of tax credits compared to a plug-in Prius? Think about the quantity involved. That previous "60,000 then phase-out" approach we got was little more than a token gesture. With roughly 14,500,000 new vehicle sales expected here in 2008, it should be easy to see that the grand-scale must be considered for long-term viability... which is where the stalling comes in. Some intentionally attempt to stifle progress of the market so development can advance in the meantime.

8-02-2008 **E85 Misconceptions.** It turns out that most consumers don't have a clue. The "*Live Green, Go Yellow*" marketing campaign has proven a major failure... which surprisingly, GM has admitted. The source & energy issues are vaguely understood, at best. So, new efforts are being made to push a "*better for the environment*" message instead. But the question remains, why are so few vehicles offering the flex ability still? Shouldn't such an inexpensive feature (around $200) just be made standard? How come publicity is more important than actually making a difference?

8-02-2008 **Well Informed.** At the coffee shop today, I leaned out toward the window to see how much of the pollution haze had cleared up since seeing it so awful early that morning. The comment I made was something to the effect of "*not as bad*" ...which unexpectedly caught the attention of a person near by. My response to his inquiry for clarification really got him going. He just happened to be an engineer from San Diego that was quite well informed about emissions that harm the air we breath and technical solutions available to prevent the problem from getting worse. Telling him who I was and pointing out my Prius matched up perfectly with his comments about how much cleaner it was here than where he had just been. Promotion of clean hybrids (SULEV & PZEV rated) is absolutely essential... the faster, the better. People don't realize just how bad things could get. Drilling for more oil is exactly the wrong thing to do. Ask the well informed, not a politician wanting your vote.

8-02-2008 **Demand Drop.** Now that gas prices are starting to drop, someone started a discussion thread wondering if that means the demand for Prius will drop. One response even went as far as saying: "*I fear you are correct*." That was too irresistible to refrain from replying. So, I did... Looks like someone has lost perspective. Sure, the spin will be a drop in demand. But in will only be a perception of bad. In reality, the current 15,000 monthly sales targeted inventory is grossly exceeding the 15,000 monthly production. Returning back to that would still make Prius a popular vehicle anyway. As each year progresses and the miles of owners increase, the reputation grows. In fact, most of the original misconceptions are dead now. And as we've witnessed in the past, sales actually increase when Prius become available without having to wait for delivery. So, next year's significant production volume boost should make things very interesting.

8-02-2008 **Asking Questions.** They still don't understand all the factors at play. But at least the nature of discussions are changing. A few enthusiasts are now taking a step back to look at the big picture, starting by asking questions like this: "*Why is it that Toyota & Honda are able to get hybrids to market so fast and compared to GM, Ford & Chrysler?*" I'm not sure how the response will be taken... Because they didn't want to. In fact, GM even went as far as mocking Toyota & Honda by claiming that hybrids were only a "*stop gap*" measure, that the future was in fuel-cells instead. All that time wasted making fun of Prius. Now they are scrambling to catch up. I suggest you read about that history, what they hope you won't ever be curious about. Volt could suffer the same consequences simply by not being aware of what happened before.

8-02-2008 **2009 Jetta TDI.** The long awaited new diesel is having yet another problem. The planned United States allocation of 12,000 (which itself is a very small quantity) has been reduced to 8,000. Needless to say, those who once jeered Prius claiming this vehicle would crush its reputation have grown totally silent... as if none of the taunting had ever occurred. I can't imagine how disenchanted they must feel. After waiting so many years for this opportunity to spite, then finding out performance isn't as anticipated and that so few will be available. It's one more victory for the hybrid technology that took smog-related emissions into account too.

8-02-2008 **Unrealistic Projections.** When Congress passed the Energy Bill last year, those fuel-economy standards were based upon projected gas prices... which have since been revealed to be quite unrealistic. Believe it or not, the forecast values were $2.42 per gallon of gas for 2016 and only $2.51 for 2030. Needless to say, they were recently dropped in favor of a "maximum feasible" scenario, where $3.14 for 2016 and $3.74 for 2030 would be used instead. Supposedly, that helps justify cost-effective analysis of technologies. I still think that's totally misleading. How & Why would gas be so cheap that many years from now?

8-03-2008 **Economic Opportunities.** Those in the vicinity of the new plant being built in Mississippi, which is now intended for Prius production, are getting excited already. Work there and for near by suppliers equates to opportunities to boost their economy. Isn't that precisely what certain politicians claimed wouldn't happen? Remember how they insisted that hybrids meant job losses? In a way, they were right. Guzzler production is collapsing. But in its place, high-efficiency vehicles will be emerging. It's really just a shift. We still need to produce cars & trucks for people to buy. They'll just be different from what the status quo had been for years.

8-04-2008 **Tire Gauges.** Both political parties are now bringing attention to them. One suggested routinely checking your vehicle's tire pressure to ensure MPG isn't lost from being too soft. The other mocked that message by passing out tire gauges to voters. That's just plain weird. Why in the world would you make fun of such great advice? It's amazing how some twist good intentions for their favor. But in this case, it does get people thinking of their tires. So, there is likely a benefit... regardless of how issue is taken with it.

8-05-2008 **Economy Down, Oil Down.** The demand for oil has subsided. The reason is obvious... people don't have money available like they did in the past. Driving less is a simple fix for quick saving, but is most definitely not a long-term solution. It gives us a moment to think about the inevitable increase. Worldwide demand continues to grow. So a cut-back by Americans only temporarily keeps supply in check. Put an entirely different way, don't expect price drops to be permanent. Planning for gas being at least $4 per gallon is quite realistic.

8-06-2008 **The Problem.** With GM being both the biggest automaker and the one falling into financial disaster the fastest, it's difficult to sound objective no matter what you say about them. But some of us try. Today, it was reflection upon the past... The problem with GM is their mocking of hybrids years ago, proclaiming them a wasteful "stop gap". In other words, they broke a fundamental business rule by not staying diverse. Now they are paying the penalty for putting all their eggs in one basket. If they would have also been developing a high-efficiency technology while selling large quantities of monster-size guzzlers, things could have been different. But instead, they delayed taking any action until it was absolutely necessary. Now, something to competitive to sell is still years away.

8-06-2008 **Saving General Motors, news.** That much-advertised cable special aired tonight. The hour-long show was a lot for me to absorb, because what they said was vague and filled with generalizations. I wonder what the typical viewer thought. The picture painted about the automaker's financial woes gave the impression that time would heal those wounds... without revealing the reality that it will require far more change and take much longer than many are willing to tolerate. Unfortunately, I am well aware of all that. I knew it would take an entire life-cycle for Prius to prove itself. Waiting the years it takes for owners to drive at least 120,000 miles not something this "quarterly results" industry wants to do. In fact, that's the last thing those supporting the SERIES hybrid development want to hear. We need solutions now, not 7 to 8 years after the market starts to fall apart.

8-07-2008 **Saving General Motors, cost.** It was essentially ignored. The perspective portrayed was that those initially high production costs associated with any new product would somehow rapidly diminish... forgetting that the auto industry doesn't update design anywhere near as fast others. Getting the next generation digital camera or MP3 player is usually just a matter of waiting until the following year. But for vehicles, the cycle is typically 6 years and the investment at risk is far greater. So, under normal circumstances that's a big problem. In this case though, automakers like GM & Ford don't have the capital available in the first place. They're stuck with inventory few want and have no clear direction of how to use their remaining resources.

8-07-2008 **Saving General Motors, design.** This got little attention. The special did point out how Toyota hybrid sales were significantly better than GM's, but glossed over the reasons. And from the comments posted online, that's pretty clear why. Even those actively discussing the hybrid choices have only a minimal idea of how they actually work. Those of us that do know are out-numbered by such a degree it's almost impossible to provide operation clarification. Fortunately, the market has basically stopped fighting hybrids. Unfortunately the differences in design are being spun as just promotional deception (greenwashing). Thank goodness Prius has a wealth of real-world data available. Some will discover the hard way why their preferred hybrid isn't as competitive. Oh well. At least some are receptive to our attempts to spread the knowledge.

8-08-2008 **Saving General Motors, urgency.** The time available for required adjustments is gone. It's too late for a smooth transition. This will be painful. The need is already urgent. When an automaker produces over 9 million vehicles per year and a vast majority of profit came from the type that few consumers want anymore, that's a very big problem. To make matters worse, the vehicles most desired now are only available from competitors. Plans must change to deliver something that will actually sustain the business. Expectations for the long-term mean little when market share of the automaker is shrinking at such a fast rate. What will they do in the meantime?

8-08-2008 **Saving General Motors, demand.** It changes like the weather now. People cut back on their driving. That causes a temporary drop in demand for oil, which results in lower gas prices. People stop holding back vehicle use. Demand goes up again, price goes up. In the past, cycles like that took a half year. Lately, we've seen that over the course of a few weeks. Does that mean the market efficiency will gain priority? The upcoming availability of more monster-size hybrid SUV models make you wonder. How much will they be depending upon those sales? Will they be attentive to the growing demand for smaller hybrids too? So far, they've basically ignored the need from those consumers entirely.

8-08-2008 **Oil Down, Gas Up.** Over the past week, the price of a barrel of went from $125 to $115. The reasoning for that seemed to be a drop in demand (consumer wallet pain) combined with less worry about the economy (business speculators). Both are volatile factors. We have a market with too many influencing factors now to rely on trends anymore. Gas prices seemed to be going down ($3.50 here), then they suddenly and without explanation shot back up ($3.69 here). Our economic stimulus checks don't appear to have improved anything. Promotion for "saving gas" fiercely continues, with little attention to how much is actually being used or the emissions caused by consumption. And the political rhetoric is mostly talk, with almost nothing that really makes a difference. What happens over the next six months should be very interesting.

8-08-2008 **Minor Tweaks.** A friend recently went on a trip. He rented a Prius while out there. It was 2 years newer than his at home. Comments about improved performance were just like I made when I got the opportunity to drive one that was more recently produced. We have to wait for major upgrades. But when it comes to minor tweaks, like optimizations in the software which controls interaction of hybrid components, those are rolled out right away. That makes the new owner experience more exciting. We routinely get newbie reports of MPG even higher than they expected. It's pretty sweet!

8-09-2008 **Road Noise.** Mine was considerably reduced with the new tires. Replacing them with the same the Prius had before (Michelin HydroEdge) was a great way to confirm that noise does indeed increase as the tread wears down. I just hadn't realized how much. Hearing the same improvement on my mother's car recently really conveyed that message. Depth of tread makes quite a difference... and it makes sense that design optimization was with new being best. After all, wear depends on several factors which vary upon vehicle, driver, and even maintenance (pressure & rotation).

8-09-2008 **Perspective.** A rather large dose of it was needed today. Seeing gas prices drop just a little is causing people to think the problem is resolved... Remember $1 per gallon? It wasn't that long ago. The attacks for using $2.50 for gas in cost analysis for Prius aren't that hard to find still. Heck, there are fresh memories of speculation that oil could eventually reach $100 per barrel. Some insisted it was crazy to suggest prices could get that high. Now people are finding relief from $3.50 at the pump. Talking about greenwashed! That lack of perspective is scary. No wonder history has repeated itself. Makes you wonder what things will be like 2 years from now, when plug-in vehicles hit the market.

8-09-2008 **Smaller.** This online comment really got me going today: "*...simply making smaller much more fuel efficient vehicles (they don't even need to be hybrids) will go a long way to mediate the demand for oil...*" I interjected with this... That's not even enough to maintain status quo and does nothing to address the problem of smog-related emissions. Don't forget about the needs of the entire world. Half-Baked solutions are what got us into this mess in the first place. In fact, it's the reason there is support for Volt now. Of course, E-Flex won't be a high-volume technology (at least 25% production) for a very, very long time. That's why FULL hybrids are a must. They fill in that large & lengthy gap and make the option to plug easy for both automaker & consumer.

8-11-2008 **Commercial during the Olympics.** It portrayed a scenic vista obscured by the "progress" of man, where the development taking place there included the erection of an iconic gas station patronized by familiar vehicles of the past. As the decades proceeded, it changed. You know, the usual symbolic remembrance of history. But then, it vanished, replaced with that same vista from long ago. With mountains in the background and a Chevy Volt sitting in the foreground among the grassland of the valley, the message was clear... at least to me. We are painting a pretty picture because our reality is quite ugly, we won't have anything substantial to sell you for many years to come still. I'm getting tired of this nonsense. All bark and no bite. You get a good feeling without anything actually changing.

8-12-2008 **Extra Fuel Economy.** It's promoted as "XFE" for special models of GM's newest vehicles. The Sierra pickup will be included. That improves fuel efficiency by 1 MPG on the highway. Put another way, that's half of what Two-Mode provides. What the heck? How are they going to promote their upcoming hybrid now. It was suppose to be so much better, yet the efficiency increase is only 1 additional MPG and there's a towing-capacity penalty. The much higher price will be quite a challenge to convince consumers to buy. Nothing they've delivered lately lives up to the hype. It's tough to remain objective with so much not working out as hoped.

8-13-2008 **It's Getting Ugly, part 1.** They just don't get it. No matter how many hints are dropped, all we get are blog entries from the Volt enthusiasts. Sound familiar? That's the same problem many others have had. Remember the Civic-Hybrid hype? It went no where. Nothing ever emerged to actually help with the market penetration of the vehicle. Forum posts was all that was ever offered. No effort from owners to share anything else. No offerings from the enthusiasts either, despite the raw content being discussed by them routinely. The same fate happened to Escape-Hybrid. All these years later, not even an expansion of online presence. The diesel enthusiasts fit that pattern too. They talk up their preferred technology, but contribute nothing to promote it. Downloadable educational materials are priceless. Yet, only stuff from Prius owners is available. The competition simply isn't interested. They don't understand the opportunity they are missing.

8-13-2008 **It's Getting Ugly, part 2.** Remember Two-Mode last year? That also follows the very same pattern. It's amazing to witness such idealism playing out. Some intentionally misrepresent the competition and shy away from details about the design they promote. Others are completely unaware of events which have already taken place. It's history repeating itself... hence the "ugly" outlook. There's a huge difference between a product for the mainstream and one doomed to be only a niche. Think of it this way. Niche vehicles cater to want. Mainstream vehicles fulfill need. Like those fierce debates from years ago, that difference is not being taken seriously.

8-13-2008 **It's Getting Ugly, part 3.** I'm not alone. There are others trying to convey the same message of needing to actually do something. Just blogging and putting you name on a non-official, no obligation waiting list is not enough. So when this was posted: "*With respect, this is not a waiting list. It's a fan site.*" I chimed in with this... Fortunately, there is time still for enthusiasts to make the transition to supporters. "Volt" is basically still an ideal, with concept models to help better define what's realistic. Unfortunately, it's pretty vague from there. Most of the usual vehicle purchase decision factors remain quite uncertain, especially price. That's a terrible way to appeal to the mainstream. Lots of work needs to be done to properly promote, not just teasers like we see in those PR commercials. The suggestion of where to start is: focus on component interaction. It's overwhelming clear that the differences between SERIES and FULL hybrids are not understood here. Posts with errors are common. So just imagine what the typical consumer will think, especially with GM also pushing their ASSIST design. Many don't even know how many motors there are or how the engine is attached. There's much work to do and few stepping up to do anymore than make comments online. How serious are you about Volt?

8-13-2008 **It's Getting Ugly, part 4.** Attempts to be constructive are met with mixed results. I liked reading this comment: "*Once again GM doesn't have a clue as to what the average American wants.*" But not much came from it. Maybe that's because realize how ugly the situation actually is. Whatever the case, here's what I added... The true problem is not wanting to produce them. It's the flashy vehicles they prefer to invest in the large & powerful trucks, the fast sports cars, and yes, a vehicle like Volt. The Corolla/Camry/Prius category is what the bulk of the worldwide population, including America, would be quite happy with. But since those don't fulfill the traditional excitement factor, they aren't given much attention. It's that old-school thinking which is eroding away the opportunity for recovery. Put an entirely different way, relying on high-profit vehicles isn't a realistic business approach anymore. Large-volume, low-margin is where the market is heading… whether they like it or not.

8-13-2008 **It's Getting Ugly, part 5.** The latest example of Prius owner contributions is the documenting (which includes photos) of one of the first aftermarket augmentations done for a consumer. Hymotion installed their custom controller and a high-capacity battery-pack. That will dramatically increase efficiency in his 2005 Prius. Of course, that MPG does come at a cost. But someday the price paid will drop to mainstream affordability. Until then, we'll have plenty of real-world data to study. Just imagine how things would be if Toyota was already advertising this feature, a good 2 years before it is actually offered. It's exactly what GM is doing with Volt. Nothing available doesn't stop some from trying to gain merit before it is earned. That difference is what makes this so ugly.

8-14-2008 **Game Changer.** The claims of leadership are have grown very annoying, as I sounded off with several others all stating the same point... The enthusiasts keep exclaiming the "*game changer*" label, yet refuse to acknowledge what that actually means. To really make a difference, it must appeal to the masses. That means a car who's destiny is to become everyday common, a technology which isn't special because so many use it. In other words, a good old reliable appliance. We're talking numbers so large they become the business. Then it earns the label. Realistically, that kind of volume is at least 25% of an automaker's annual production. No paradigm-shift is going to happen if quantity is tiny. They must seriously commit resources, accepting a no-look-back approach. Toyota is preparing for that, but even reaching the 10% mark is still a few years away. So this nonsense about GM becoming some type of overnight sensation is quite unrealistic. Study history. It's filled with examples of painfully slow transitions.

8-14-2008 **Price Point.** I doubt this aspect of game changing will stir any constructive response either... Price point is the big reason Toyota is holding back on plug-in augmentation. The battery technology works just fine, but being too expensive is something they recognize as a serious hurdle for mainstream acceptance. GM didn't consider cost a high priority when developing Two-Mode. Now they have a hybrid technology that works as promised, but the price is prohibitive for most. What is good is that? Now Volt seems to be following the same pattern.

8-14-2008 **Environmentalist Label.** Have you noticed how it suddenly disappeared? When gas was still cheap, if you showed any interest in hybrids, you were given that label. Of course, that was the polite term. Some were just plain insulting. But all that is gone now. The appearance of $4 gas caused an abrupt disappearance of anything related to the environment. It's a perceived transformation of purpose, to help you pay less at the pump. That loss of interest in emission reduction is unfortunate; however, this method of mainstream acceptance is still a step forward. Growth in demand is the goal, regardless of what the reasoning for purchase is. Hybrids like Prius reduce emissions even if all you care about is reduced consumption.

8-14-2008 **Insight Comparisons.** Remember them? The same thing is already emerging with the new sub-compact hybrid coming from Honda next year. It's much like it was 8 years ago. Insight & Prius were endlessly compared, even though it made no sense to do so. Because this new hybrid won't have a traditional counterpart either and the production volume will actually be fairly substantial, expect an onslaught of comparisons. People won't care than the size difference is rather obvious or the fact that the hybrid designs will have almost nothing in common. That's what the media craves in this new age of expensive gas and concern for the environment.

8-15-2008 **What Makes An Expert?** The history of hybrids is filled with expert predictions that aren't even remotely close to what actually happened. It makes for great blogging. You point out how absurd their claim is, wait patiently, then point out how erroneous it turned out to be. The best example is how they'd do analysis calculations with a gas price of only $2 per gallon for the entire 8-year lifetime of the vehicle. Were they that naive or intentionally trying to undermine success? Whatever the case, it's much more interesting looking backward now. For example a claim made this morning: "*Honda stopped selling its Honda Accord hybrid because of weak sales. Analysts said the higher price for the hybrid Accord was the main reason.*" That doesn't even make any sense, especially considering how well Camry-Hybrid is selling. The actual problem was the choice of engine size. Honda chose a 6-cylinder instead of a 4. So rather than trying to make the hybrid their most efficient model of Accord available, they focused on power instead. You don't need much background to predict that as a bad choice. Yet, the so-called experts still don't see that even afterwards. Geez!

8-16-2008 **Prius Pursuit.** At this point, you can say Prius has seen it all. An article in the paper today was a report of one speeding. It was doing 78 MPH in a 55. When a state trooper attempted to stop it, the driver took off... since it was stolen. The chase lead to a dead-end, where the driver failed to turn around entirely when it made contact with the police cruiser, then struck an embankment and flipped over. That's quite a story! Thankfully, mine will never see that kind of excitement. It's just the same old impressive MPG year after year.

8-16-2008 **Credibility Attacks.** In the past, troublemakers would use the element of uncertainty in their favor. But as more and more owners hit the 100,000 milestone and the technology advanced, their rhetoric became easier to prove false. So, they turned to attacking a person's credibility. (You know, if they didn't like the message, they'd shot the messenger.) Their desperation was quite obvious to the well informed. But to the newbie, the undermining worked... until recently. The interest from higher gas prices has crushed that. Consumers just discovering hybrids see no reason to doubt their success. Seeing Prius on the road often is all the more endorsement they need. I'm sure glad that nonsense is over. That intentional effort to harm was an unfortunate time in hybrid history.

8-18-2008 **Now Available: Jetta TDI.** Today is the day. The much touted "clean" diesel is now available. In reality, it's pretty dirty. The label comes from being a big improvement over the prior model. But compared to a hybrid like I drive, they're as different as night & day. Jetta TDI is the opposite end of the emission-rating scale, where SULEV/PZEV is at the top for an engine vehicle and Bin-5 the bottom. In other words, being called "50-state" compliant means barely good enough to meet legal requirements. That may sound harsh, but I'm tired of some automakers only doing the minimum... especially when prototypes of much cleaner diesels have been presented in years past.

8-19-2008 **Real-World Yukon-Hybrid.** His most recent six tanks have yielded displayed (not calculated, which is usually lower) values of 18.4, 17.9, 16.9, 16.9, 16.9, 16.9 MPG. That seems pretty darn low for that two-wheel drive hybrid, even taking into account initial break-in of both vehicle & driver. Needless to say, his post was a request to find out if there was something wrong. I curious as heck to find out what kind of responses he gets. That isn't exactly the type of publicity enthusiasts like to hear about. It's the equivalent of a Prius owner reporting displayed averages of 38 MPG for this season, which is extremely rare. Remember, the Two-Mode design was hyped as being far superior to the competition.

8-20-2008 **100th Anniversary.** Not that it matters. Consumers don't care really why there's a discount. They save money regardless. But this reason is rather lame. For the last 3 years in a row, GM has offered employee-pricing in the Summer. So with sales having been very disappointing this year, it only makes sense that steep cuts are again made to unload inventory before clearance time begins. They aren't calling it that though; instead, we are getting advertisement nonsense that those prices are to celebrate the 100th Anniversary of the automaker. Who's actually going to believe it? Was last year to celebrate 99, the year before that 98, and before that 97? It's the same old story of putting too much focus on guzzling vehicles. I'll sure be glad when their product-line no longer requires purging like this.

8-21-2008 **$2.80 Per Gallon.** Things get interesting when you read the fine print. Today, that came looking at the new window-sticker for the Prius on display at the Minnesota State Fair. The "*estimated annual fuel cost*" was calculated with a price of $2.80 per gallon. How is that even close to realistic? The very purpose of the recent EPA update was to portray values that were at least close to real-world for some owners. Now they are already way off, showing numbers that apply to literally no one. Geez! The revision process certainly wasn't well thought out. They should have known how volatile gas prices were and used a relative-index instead. After all, the distance people drive annually varies significantly, making a dollar amount listed misleading anyway.

8-22-2008 **More Propaganda.** This morning's hybrid article featuring Two-Mode was absolutely awful. Like usual, it started seemingly innocent. But then it gave this description: "*At around 35 miles per hour Toyota's system largely becomes a gas powered vehicle, the electric propulsion side offers very little assist.*" It was a clear attempt to make GM's system more appealing. Stealth up to 42 MPH was conveniently forgotten. Fuel-Cut at highway speeds was never mentioned. And the 10 to 20 times the motor contributes power to the wheels every minute hardly justifies the claim of this for the competition: "*electric motors' oomph constantly*", since we know that all it's really doing is keeping the engine in half-cylinder mode. Of course, this was just plain dishonest: "*Unlike other hybrids, 2-Mode gets better fuel economy on the highway than city.*" The writer simply pretends none of the IMA or BAS hybrids exist. He also glorified the supposed Two-Mode advantage of being "*scalable*", but failed to point out it's inability to compete directly with Camry-Hybrid. Instead, we got some green-hallow praise for Volt. I tired of the misleading. It's propaganda to conceal automaker problems.

8-22-2008 **Careless Reporters.** It's pretty easy to see what separates a hype-writer from a true journalist. There's absolutely no excuse for reading this nonsense today: "*Sales of Toyota's Prius, the world's biggest selling hybrid, rocketed 69 percent in the US last year as Hollywood stars including Leonardo Di Caprio and Cameron Diaz became converts.*" They both purchased Classic model Prius, almost 7 years ago! In other words, their decision to buy had nothing to do with last year's HSD increase. What actually happened was Toyota increased production right before gas prices started to climb up dramatically. Talking about not even bothering to research. Just appeal to our sense of vanity.

8-22-2008 **Quadruple Sighting.** That certainly was an odd visual. There were 2 black and 2 white Tahoe SUVs, all with "H Y B R I D" lettering along the base of each. All had Michigan manufacturer plates too. Being at the location of the upcoming RNC (Republican National Convention) a week from now, that was no surprise. It was said that promotion of that nature would take place. But what kind of message will that convey? What need is there for such a huge vehicle with seating room no larger than what Camry offers? How often will that much towing capacity actually be needed? It looks like a symbol of excess to me... especially when you see 4 at the same time!

8-22-2008 **Down & Up, Again.** Oil went down to $115 per barrel. Gas climbed up to $3.69 per gallon. In other words, it's more of the same as before. We are far from the "good" old days. They are just a long ago memory now. The denial about this change becoming permanent has faded. It's here to stay. Hopefully, that means dedicated resources toward progress forward. Simply shrinking the size & weight of vehicles won't cut it. We won't be seeing a repeat of the 80's.

8-22-2008 **Speculation Response, patience.** Some get really worked up about what could be, without any solid reasons to do so yet. Today, it was reaction to the interior of a test vehicle. They had absolutely no clue if any part was intended for the next Prius. They didn't care. I hoped to spread a dose of perspective... Patience. It was a thrill to see ORIGINAL model. That made the wait for my CLASSIC an exciting one. While driving that for 3 years, the patient wait for my HSD progressed. Anticipation was relaxing, rather than overwhelming. That approach was totally worth it! The same for this next model will be too. I've been waiting almost 5 years already. 1 more is no big deal.

8-22-2008 **Speculation Response, chill.** To further convey the benefit of avoiding the danger of making assumptions, I interjected this too... Chill. Enjoy the history you're watching unfold now. You'll later regret trying to rush it, especially after discovering just how much of a challenge the competition has to catch up. These times are the stories you'll tell your grandchildren many years from now, about how the auto industry was transformed.

8-23-2008 **Greenwashed Enthusiasts.** I couldn't figure out how several warnings of being careful to make statements clear, that what they said could easily be taken another way, repeatedly fell on deaf ears. I didn't even get a response from any of the times I pointed out how a comment could be considered an attempt to greenwash. That's because they themselves have been. You'd get the same vague posts as antagonists. But never any rebuttal when called upon. It was too overly simplistic to make any sense. Discussions even got to the point where regular message posters kept contradicting each other but no one cared. That certainly wasn't the situation in the pass from those in favor of previous hybrids from Honda, Ford, or even GM. All encounters with them were met with fierce resistance and a tenacity to defend no matter how fine of detail the posts required. But for Volt, nothing. Such a drastic break from the usual pattern of support really had me puzzled. Could those routine contributors be so idealistic that they hadn't actually thought through the technical and market requirements... or even know what they all are? Well, I finally got my answer.

8-23-2008 **Making That Determination.** The major clue came from a few of the regulars (greenwashed enthusiasts) making comments about being able to "hypermile" their Volt. It begged the question. I yearned to hear an answer. But got nothing. Some of those prominent voices really don't know how their preferred hybrid type or the others actually operate. Here's what I asked... How would that be accomplished? An engine running at a fixed RPM and an electric motor as the only source for thrust provides nothing to interface with. There needs to be a transmission or PSD allowing for the user to adjust for optimization to overcome the default behavior. What do you believe will be available for you to control?

8-23-2008 **Market Awareness.** A big part of the trap those greenwashed enthusiasts fell into was focusing so heavily on the ideal. They can determine what would be most helpful, but fail to recognize what the want the typical consumer will actually buy. For the majority, people are drawn to something realistic for their budget that fits a balance of needs & wants. Getting off the SUV craze where some grossly over-extended and under-estimated has caused a loss of perspective. You'd think it would be obvious. Once upon a time, the roads were dominated by the family sedan & wagon. That fit the price & size requirements well. It was a no-brainer until the farce of SUV safety promoted by the motive of profit obscured the choices. Fortunately now, we are returning back to reality. Only problem is that some enthusiasts and some automakers aren't interested in a "many will drive" vehicle. They yearn for niche, failing to see what is vital to actually make difference.

8-23-2008 **Hypocritical Posts.** Sadly, there are some of them too. The engine in Volt will need to run briefly at times, for housekeeping and warming needs. The die-hard enthusiasts dismiss that as "*only a small amount*" without hesitation. But when it comes to acceleration, they continually mock Prius for running the engine briefly for that. So, which is it? How can roughly the same quantity of fuel be acceptable for use by Volt but not for Prius? Fortunately, that type of campaigning for a particular design doesn't get too far. The "complexity" arguments certainly proved that. Fulfillment of price & size requirements far outweigh semantic spinning. The typical consumer simply isn't interested. After all, most don't have any idea how an automatic transmission works anyway... but they have a clear understanding of how much money it takes to purchase a vehicle and fill the tank.

8-23-2008 **Compact SUV Market.** Abandonment of the SUV entirely is what we are currently seeing. GM is hoping that's just a result of improved choices not being available yet. They hope the upcoming Two-Mode Vue-Hybrid will capture consumers wanting a more efficient option. But will that really? Their hybrid SUV will only be available with a 6-cylinder engine. Based on calculations, that will result in EPA estimates of about 26/35. If fuel efficiency is the push, how will that compete with Escape-Hybrid which has 34/31 estimates? The real-world numbers should favor Ford. Actual MPG will favor not buying a SUV. How much market change will we witness in the next year or so? Efficiency wasn't a priority until recently.

8-23-2008 **First True Sighting.** This time, the Tahoe-Hybrid had a Minnesota license plate and was just two blocks from my home. That counts at the real thing. My first true sighting. My first thought was that I hadn't realized how un-SUV-like the aerodynamic enhancements for the hybrid would look. To an eye accustomed to the rugged appeal, that's more of a difference to the front of the vehicle than they may want to accept. That adds a twist to the already struggling monster-size guzzler market not discussed yet. Things are definitely getting interesting.

8-25-2008 **Saw 2 More.** This time it was two red Tahoe-Hybrids at the RNC, both had manufacturer plates. It makes me wonder if there will be a push for them to get some media exposure or if they are just to influence the attendees. Whatever the case, that is gross overkill for that downtown location. The size of the tires alone make you shake your head in disbelief. Did it really make sense for such a massive vehicle to become hybrid first, especially since it offers to improvement to smog-related emissions? I sure hope GM catches on to the consumer desire for something more practical.

8-25-2008 **Repeating Questions.** There was a small glimmer of hope from the Volt enthusiasts today. A few of them sounded off their frustration about reading posts of the same questions over and over and over and over again. I've been hoping that eventually they'd catch on to why the educational materials for Prius were created. They've been resources to help newbies gain a basic understanding of the concepts and have served as a basis for consistency... which has proved a major benefit for online discussions ...something that's really becoming a problem for Volt. They are just now figuring out the problem that arises when not everyone has the same knowledge of a topic, attempts to be constructive erode to just chit-chat. To make matters worse, they still have some fundamental questions (like engine operation) that remain unanswered. Hopefully, seeing those same questions continuing to repeat will finally get an enthusiast to take the big step toward becoming a true supporter.

8-26-2008 **Efficiency Plateaus.** As Prius owners are quite familiar with already, the system achieves higher MPG in part by trying to keep the engine operating at a near constant speed. Depending on demand, there are several efficiency plateaus the RPM will settle at. Having an electric motor available is how this is accomplished. Without that, the engine RPM would have to change more often and some type of gearing would have to be introduced. In other words, there is no single optimum. Too much happens during the course of driving for a one-size-fits-all approach. Volt enthusiasts thought their SERIES design would be different. Turns out, it isn't. Their hybrid will have efficiency plateaus the engine will operate at too. That should be interesting to observe. I wonder how often it will change. Hmm?

8-27-2008 **Daily Sighting.** Today there were 8 Tahoe-Hybrid, 2 Yukon-Hybrid, and 1 Malibu-Hybrid. Seeing that convergence of Two-Mode and BAS vehicles was a sight to ponder. Clearly they are taking advantage of the promotion opportunity that this convention is bringing. I wonder what the result will be. After all, politicians have been shown the plug-in Prius and plug-in Escape-Hybrid many times now. Too many pressures are still pushing against the effort to endorse FULL hybrids on the scale that's actually needed. And of course, seeing those massive SUVs (hybrid or not) is not exactly politically correct anymore. Our addiction to oil and concerns about climate change are at least enough to teach us that better choices are available.

8-27-2008 **No Moderation.** It has become overwhelmingly obvious that the Volt blogs are simply just a place for enthusiasts to visit daily. The lack of moderator intervention causes each new topic to become undermined within just a few responses. There is no interest in adhering to the intended discussion. So, it's basically impossible to find where something was mentioned or to even attempt a constructive exchange of information. Participants just chime it with whatever they feel like, whenever they want. It's the same old problem hybrid enthusiasts saw years ago on another popular website. Since then, pretty much all of those members moved on to proper forums with threads. I wonder if that history will repeat itself here too. The desire for focus grows stronger over time.

8-27-2008 **Running The Engine.** We finally got a little bit of information about Volt operation in the Winter. Knowing that Li-Ion has challenges to deal with when the temperature drops below freezing, I was curious as heck what the approach would be. This type of battery chemistry requires warmth to operate at full potential. The catalytic-converter does too, especially if the vehicle is to be considered green. And of course, people inside the vehicle want to get warmed up quickly. In other words, Lutz having divulged that the engine will "*run for a few minutes to warm up the battery so that the battery can take over*" was of great surprise & disappointment to some Volt enthusiasts today... even though I've been saying that for over a year. But they don't want to listen to a Prius owner... despite the many times I pointed out how routine it is to let your car sit outside in temperatures much colder than just freezing for the entire day while you work. Everything is horribly cold after 8 hours and you want the heater running as fast as possible. That's the reality of life in the northern states. They now have no choice but to acknowledge that gas will be routinely consumed.

8-28-2008 **16 Two-Mode.** The sighting today very much conveyed mixed messages. All those monster-size hybrid SUVs were parked among a lot filled with other monster-size SUVs that were not hybrids. It was a herd of elephants (pun intended). That symbolized something. I'm just not sure what. No other consumer location has that high of a concentration of vehicles that large anymore. In fact, looking out at the lot here by the coffee shop and grocery store, I see 4 large pickups, about 70 miscellaneous vehicles, 3 Prius, no monster-size SUVs. The market for hybrids the size of Tahoe & Yukon is tiny. Very few consumers will actually benefit from them. We desperately need smaller hybrids. The ability to tow more that 3,500 pounds is gross overkill. Focus on what the majority of the market needs instead. Produce something to compete directly with Prius and Camry-Hybrid already!

8-29-2008 **Photos Leaked.** The production version of Volt is part of the upcoming sequel to Transformers. So to no ones surprise, unauthorized photos of it were taken during the filming... which of course lead to a leak of them on the internet. Needless to say, extremely long hood of the concept model is gone. It simply made no sense. Why would a vehicle with a smaller engine/motor need have a front-end longer than most all of the other vehicles in the same class? That was a clear waste of size, weight, and cost. This, of course, resulted in an outcry by many enthusiasts. The look they fell in love with has vanished. They are not happy. I'm delighted. It looks a lot more like any other compact car... something with a much higher likelihood of being produced & sold in large volume.

8-29-2008 **Total Chaos.** As new information gets revealed about Volt, the next generation of Two-Mode, and Toyota's upcoming plug-in, the GM enthusiasts get torn further and further apart. Their lack of unity toward purpose is really becoming obvious. A quick search through threads reveals a disturbing number of posts debating cosmetic concerns. It's hard to believe just how high of a priority some place on look. Others are focused to the point of obsession with MPG bragging rights. Some believe price doesn't matter. Few acknowledge what high-volume production truly entails. Almost none want to address the topic of winter driving. Self-Deprecating is probably the best way of describing the situation. What a mess.

8-30-2008 **Greenwashing Alert.** Today, I had to point out some of the techniques used to mislead. In this case, it was a reporter who was once against hybrids but now gives you the impression that he isn't anymore. But in reality, it was really just a change of approach. The tactic now is to lead you to believe that there is no way to draw a conclusion yet. They pretend that more data collection is still required. They don't want you to know out how many owners have already proven that there is no reason to doubt anymore. It's quite frightening to think that some people assume they are being given all the facts and it a non-bias manner. Fortunately, it's very easy to jump on the internet yourself to do your own research. There's plenty of reports of high-mileage Prius now available. Hopefully, consumers will find them rather than being greenwashed by reading articles like the one today.

8-31-2008 **Government Bailout.** The talk of a federal "loan" to rescue GM is intensifying. I climbed up on the soapbox to express my feeling on this topic... They fought intensely against hybrids for years, causing a fierce resistance for Prius to struggle with. Rather than helping promote new technology, they focused heavily on monster-size traditional vehicles instead. Now to make matters worse, they are promoting the SERIES hybrid at the expense of the FULL hybrids. How does any of that help the general population? Waiting another 6 years before Volt is able to reach high-volume availability at affordable prices is totally unrealistic. And that’s just the first E-Flex vehicle. What in the world are people going to buy if they require a larger, yet still efficient hybrid? GM has no plans to offer midsize FULL hybrids with 4-cylinder engines. In fact, it doesn’t even appear that Two-Mode can support a configuration that favors efficiency over power. That lack of flexibility in design reveals where this automaker’s priorities have been. What would change if they were provided with loan/bailout money? Clear deliverables must be stated. They must be held accountable for meeting emission & efficiency objectives. Timelines must be strictly adhered to.

9-01-2008 **"Range" Misleading.** Over and over again, the upcoming plug-in Prius is snubbed for offering a "range" of "only" about 10 miles. That's intentional misleading, a clear attempt to undermine. The electricity supply available is a factor of battery-pack capacity, which has absolutely nothing to do with the hybrid technology. Those attempts to convince you otherwise are antagonistic nonsense. Toyota's choice is clearly a matter of containing cost, to keep the price for the consumer at an affordable level. Of course, the topic of "range" for a FULL hybrid is deceptive regardless, since that extra capacity is shared with the engine to improve efficiency, not consumed first like a SERIES hybrid as a substitute. This type of deliberate confusion was to be expected. That's why I've been pushing the education so hard. It was easy to see this type of trouble coming. Remember: MPG BOOST

9-01-2008 **One For Every Need.** I'm getting so sick of hearing that quote! How can GM sincerely promote hybrids with the claim "*one for every need*" when they don't offer one that competes directly with either Prius or Camry-Hybrid? Highlander-Hybrid doesn't have a GM equivalent either. Seeing that television commercial over and over again is making me crazy. BAS efficiency improvement is minor. BAS smog emission improvement is non-existent. Two-Mode is better for efficiency, but the smog emissions are actually worse than its traditional counterpart. It's more greenwashing. When will this madness finally end?

9-02-2008 **School Buses.** This is a new problem that makes the already bad situation even worse. Some school districts simply don't have budgets big enough to transport students. So, this first day of the school year has some parents driving their children to school themselves instead. A whole lot more fuel will be consumed this way. Families will have to spend more (both money & time) than they had planned on. Demand for oil will increase. It's going to contribute to even greater frustration about these times of change. This makes me wonder what other fallout will emerge as time progresses?

9-02-2008 **Below $110.** The media sure made a big deal out of this today. It's as if they have no recollection of the price of oil ever being significantly lower. Remember it being around $60 less than 2 years ago? The chance of seeing that again is long gone. They don't even bother with speculation anymore. The dropped today of $7 came as a complete surprise. Everyone figured the active hurricane would have caused a spike up. But now operations are shut down in advance. The market is tired of the bounces. Settling at a price this high is still way above what the experts predicted. Prius owners saw it coming though. The end-of-decade wake-up call is right on schedule.

9-02-2008 **Education Needed.** The problem continues to grow worse. Today, it was innocent inquisitive looks into the upcoming plug-in Vue-Hybrid. Despite information of how FULL hybrids can support larger battery-packs and what the outcome of that upgrade with a plug brings being available for years now, that group in favor of SERIES hybrids can't seem to find any of it. So there's an unnecessary struggle taking place to understand what it all means to the consumer... and the business, for that matter. How can they endorse something they don't know the differences in compared to the competition? Searching the internet for what's already out there or starting an effort of their own to learn & teach really needs to start soon. Discussions are losing effectiveness when that many stumble over the basics.

9-03-2008 **Looking For A Fight.** The most silly of comparisons became a hot discussion topic this morning. It was a Two-Mode pickup compare to the high-end Lexus hybrid. They have absolutely nothing in common. Those vehicles couldn't be any more different. Yet, they tried to justify that banter anyway. Naturally, it was this slam that got me worked up: "*The fact is Toyota can't make their second-rate HSD work on anything bigger.*" Which lead to... Bigger? For who? How large do you think the market actually is for consumer vehicles that can tow more than 3,500 pounds? Reality is, above that threshold, there are very few. In fact, it's a niche market when you consider how appealing diesel is at that scale. If GM wasn't neglecting the majority, matters would be different. Families want a decent size car that delivers 40-50 MPG. When will those be available?

9-03-2008 **New Honda Hybrid.** It makes its official debut tomorrow. Once again, the debate over the FULL type verses the ASSIST is stirring discussions. I personally don't think they serve the same market. The Honda will work just fine, but abilities are limited and the technology can't really evolve. With only 1 small motor that isn't liquid cooled, what would the next level of ability be? A battery-pack with higher-capacity couldn't be taken advantage of, like with Prius. The platform simply wasn't designed to support more. That being said, Honda still deserves credit for this upgrade that reduces size, weight, and cost. Consumers will definitely like that. But this debut is for a vehicle smaller than Civic. Those looking for a hybrid the size of Accord are still left waiting.

9-03-2008 **Total Agreement.** Well, every now and then, you get flabbergasted with by a response from a normally hostile forum. He was in total agreement with my statement of: "GM MUST OFFER A FULL HYBRID TO COMPETE DIRECTLY WITH PRIUS AND CAMRY-HYBRID". And yes, I posted that way in all capitals, as well as in bold. Making my message absolutely clear was vital, since the reason for it was to counter some spin an antagonist had posted to misrepresent what I claimed was needed. It's frustrating when some attempt to discredit. But in this case, the message itself was ambiguously conveyed. Yeah!

9-03-2008 **Transmission Swap.** You know how they say: "*The Devil is in the details.*" That was definitely the case today. All the Two-Mode talk revealed this neglected bit of information, which makes you wonder why it wasn't mentioned until now. Remember how this hybrid design was touted as a major benefit over HSD because offering it was only a matter of swapping the transmission? Well, it turns out the chassis must first be redesigned to accommodate the larger size. How many vehicles will actually undergo this change without major expense or a penalty to the traditional model? And how long will that take? If Toyota's offerings become hybrid as the default model and non-hybrid a special option, that supposed benefit for GM has will be lost. In fact, isn't the point of hybrids to phase out traditional offerings?

9-03-2008 **August Sales.** They are down for the industry as a whole. Toyota lowered overall annual estimates. Camry sales were up here though. 7.8 percent of them were hybrids (that's 3,456). For Prius, there were 13,463 purchased in August. That brought the year-to-date total up 119,688 for the United States, which is 4,932 less than this time last year. Makes you wonder how many could actually be sold if it wasn't for the limited battery supply, eh? It's a darn good thing production will be boosted next year. In the meantime, we have to make do with waiting lists. Highlander-Hybrid was 1,227 for August. How those sales will be interpreted by GM enthusiasts when compared to the hybrid Tahoe/Yukon monthly total of 797 is anyone's guess. The rest of GM's hybrids were: Malibu=388, Aura=26, Vue=417, and Escalade=1. From the Toyota luxury division, there were 1,383 Lexus hybrids purchased. It's an interesting time we live in. Each month brings results to ponder.

9-03-2008 **Safety Compromise.** Believe it or not, Lutz has requested that safety requirement standards be suspended for the next 3 years... so that more efficient foreign-market models that currently don't meet those requirements can be brought over the United States quickly. Having nothing available for this market is their own fault. Diversification is what schools teach in entry-level business classes. Yet, they disregarded that advice despite being warning. They even went as far as mocking it. Now this! Will consumers really be interested in buying vehicles that score worse than a "poor" rating for safety? Remember, the roads and driving habits are different here than in some of those other markets.

9-04-2008 **New Insight, appearance.** Honda revealed their new hybrid, but gave it the old name. This time, there will be 3 models. One will resemble the original crossed with a CR-X. There will be a bigger hatchback, which looks like their fuel-cell prototype crossed with a Prius (confirming the rumors we had heard). The other will come in sedan style, but will still have a tapered back like Prius. In other words, that "wedge" shape that some antagonists hate is becoming more popular. That's cool! It sure beats the "brick" shape of most SUVs. The most important aspect though is the fact that each body is hybrid-only. There will not be a traditional counterpart, the very thing experts praised Civic-Hybrid for. Fascinating new developments, eh?

9-04-2008 **New Insight, cost.** Reduction of the hybrid system cost was the emphasis of the press release. In fact, neither emissions nor efficiency were even mentioned. It is assumed that an aspect of the engineering refinements lowered weight, but what kind of effect that will have will be very hard to quantify. The first new model will be smaller than Civic and the Insight was an aluminum vehicle. That leaves nothing but waiting for real-world data for a basis of comparison. Regardless, it's a wise move. Honda deserves credit for continuing the hybrid push. Toyota also has cost reduction as a priority for the new Prius, though we have been explicitly told there would be an efficiency improvement too. The new hybrids will make next year very exciting.

9-04-2008 **New Insight, production.** Unlike the original Insight, this one is actually capable of delivering a profit... though small. Setting the production quantity high is how Honda will deal with that. The goal is 200,000 annually worldwide. It's a business-model certain automakers don't like. They prefer to focus on high-profit vehicles instead. But that's not realistic anymore. Change is occurring whether they like it or not. Volume like this coming from another source is a wake-up call for those still resisting serious investment in hybrids as product replacement now. We are finally approaching the time where more than just a token amount of the fleet will be hybrids. Consumers will consider not doing that as... what... irresponsible?

9-04-2008 **New Insight, design.** IMA (Integrated Motor Assist) is Honda's hybrid system, it's an ASSIST design. That means there isn't a second motor or a split-device. The one motor it does have is much smaller than in FULL hybrids and there is no active cooling for it. So there's only so much that it can be made to do. Powering the vehicle exclusively by electricity for more than just a short distance is not realistic. That means the business approach for offering a plug-in upgrade option (like Prius will have) won't be available. What kind of disadvantage that could be won't be known for years. But the way GM is already promoting the ability, it does make you wonder. Perception does have an influence. It should be interesting to witness reaction to all this.

9-05-2008 **Same Words.** Yesterday's acceptance speech by a certain presidential candidate used many of the same words we've heard before. I was hoping to hear something different or at least details telling why this time it will work. The promises to be supportive of hybrids and renewable energy haven't actually resulted in much. In fact, barely enough happened from the outgoing administration to even be considered a token effort, yet they said what we just heard again last night. Where's the substance? What will the change actually entail?

9-06-2008 **2-Year Prizes.** Have you noticed how people aren't awarded vehicle ownership as prizes now? Instead, they only get a 2-year lease. That's an interesting change. It's an undeniable sign that the economy isn't as strong as it once had been... for many, many years. I blame the negligence of this current administration. Priorities were misplaced... and you don't need to look to prizes as an indication of that. Housing, Education, and Medical expenses make it overwhelming obvious. Automotive use has clearly had a shift in attitude as a result. Most likely, people don't want to be stuck with certain vehicles longer than 2 years anymore.

9-07-2008 **Refunded Deposits.** Toyota corporate was not at all pleased that a few dealers started taking deposit money from people for the plug-in Prius... which won't be available to them for 2 years still. They demanded that refunds were provided immediately. Making promises there's no way they can keep was totally inappropriate. I can't imagine what the signed purchase-agreement stated. How could the dealer possibly sell a vehicle who's configuration & price are such big unknowns still?

9-09-2008 **Volt Disappointment, photos.** The official photos made their appearance online yesterday... and disappointment was the overwhelming reaction. That muscle-car (sporty & aggressive) look vanished. It's entirely just a memory now. Totally gone. In other words, there's no edge whatsoever anymore. The vehicle's body has been transformed (pun intended) from a crowd drawing autoshow attraction to something you'd expect to find in a parking lot with a baby's car-seat inside. That photo was a devastating blow to those in denial that concepts never really make it to market. They didn't want to accept the reality that a majority of the population simply wants a family sedan... which is precisely the label you can place on it now. Needless to say, many of the enthusiasts now know firsthand what disenchantment is.

9-09-2008 **Volt Disappointment, feedback.** I waited until the following morning before chiming in, with this: 8 years ago to the day, I drove off the lot in my very own Prius. The expectation back then was hybrids like that would be a standard choice from all automakers by now. After all, peak-oil was predicted for the end of the decade and emissions were already a problem. So, reading a discussion like this was the last thing I ever expected. It appears as though the logically obvious shape of future cars is not that appealing... yet. Letting go of the impractical 20th Century styling is a lot harder than you thought it was going to be, eh? I'm not sure if I can be of any help other than providing words of encouragement. The Classic model Prius use to stick out in a crowd originally too. But as the years progressed, other vehicles began taking on a similar look. Now the same thing is happening with the HSD model. As an owner, you really won't care though. The technology grows on you. That's what your focus will be held by anyway.

9-09-2008 **Volt Disappointment, encouragement.** To my surprise, that feedback actually was encouraging. One of the most outspoken enthusiasts responded with a thank you for the "*been there, done that*" sharing I had provided. Not many people have a perspective like mine. Hybrids were a complete unknown back in 2000. The only "improvement" type vehicles to ever have a production presence was just barely enough for consumers to have heard about. Of course, that's exactly how misconceptions thrive... and that is most definitely what electric vehicles prior to that had done. For Prius to have overcome all that to make it all the way to a position of envy was one heck of a transformation... which I witnessed, from the eyes of participation.

9-09-2008 **Volt Disappointment, next.** That is a great unknown. The reveal of the production model has basically destroyed the blogging community, who's foundation was built firmly upon a very different vehicle... both in look and expectation. So much has changed over the past 21 months that most has been lost. That once heralded wait-list is now in ruin. A majority of sounded off with loss of interest. It basically looks like the effort to entice will have to start all over again. Very little remains. So much has changed that there isn't really much to save anyway. Perhaps it was good that they never did create any educational material until now. Though, it would be fascinating to see a before & after summary.

9-09-2008 **Volt Disappointment, prediction.** My guess is that the survivors (those not disappointed) will have a much more realistic attitude than the group as a whole formerly had. Rather than trying to crush Prius, they'll see it as an ally to help with automotive progress. After all, the new Insight will come out in much greater numbers than Volt and a whole lot sooner & cheaper; it looks a lot like Prius too. I am still beside myself by how much the look actually did change. The difference is amazing... a perfect wake-up call. All that prior publicity with almost no detail to back up the claims was a recipe for disaster. Now a vehicle that stands a genuine chance of large-scale success can be addressed.

9-09-2008 **Volt Disappointment, success.** The measure of it is simple. How many traditional vehicles disappear? Replacement with hybrids is what makes a difference. A vehicle that draws lots of publicity but very few actually produced & sold certainly will not, despite all the "green image" hype to the contrary. Could it be that GM is finally seeing the light? Halleluiah! With such dire requests for significant government assistance, more than empty promises were necessary. Being held to strike objectives will hopefully be required. We don't want any more tax dollars wasted. Measurement by sales quantity certainly seems reasonable. Delivery to consumers is good accountability. I'd call that success. Of course, there's no way to know just how long such a big change of heart will end up taking. There is hope though. This "disappointment" marks a step in the right direction.

9-10-2008 **Volt Disappointment, reach.** My contribution to the discussion a day later, after reading many more unhappy posts, came as a response to this: "*I don't want the competitors bringing the next wave of technology to the masses.*" It was nice seeing that attempt to sway attitudes toward something constructive. Hopefully, this helped with that: To the masses? Even with the far more realistic look now, a vehicle selling for close to $40K with annual production only growing to 200,000 by 2015 certainly will not reach many consumers. Heck, the new hybrid from Honda will sell for half that price and have a volume of 200,000 next year. Making a true difference is rarely what publicity hype leads you to desire. In fact, the actual change mindset is self-defeating. You don't want a vehicle that stands out in a crowd… you want it to become the crowd.

9-11-2008 **Volt Disappointment, disarray.** That seems to be the best way to describe the situation at this point. The lack of purpose unity we saw prior to the photos is more pronounced now. Some have been quite candid about their disappointment, insisting the lost distinctive muscle look has destroyed any chance of success. Meanwhile, yesterday brought a technology demonstration in the UK. This time it was a local Prius plug-in conversion that delivered roughly a 60-percent efficiency improvement over the regular Prius on that particular 15.5 mile test. In other words, there is yet another contender in the market Volt enthusiasts had hoped would be unique to them alone. Clarity of purpose is desperately needed at this point. The laws of physics dictated that the Volt prototype was quite unrealistic, yet all this time later some still refuse to accept that. What do they truly want to achieve?

9-13-2008 **Volt Disappointment, funeral.** It's been a few days now. The loss of virtually everything that concept model represented has hit the hybrid community as a whole in a strange way. It is literally like a death for the enthusiasts, similar to when discontinuation of a favorite vehicle is announced. For the Prius owners, many were glad reality finally sunk in, sighting how arguments of the past can no longer be debated. Answers have been provided. The hype is over. That impractical design is just a memory now. The aspects of balancing for business will now be getting the attention they deserve. There's much more to mainstream penetration than the initial dream portrayed. This marks an end to those naively-optimistic & overly-simplistic expectations.

9-13-2008 **Past CVT Failures.** Remember a number of years ago, when Vue & Ion production of the Cone & Belt type CVT was abruptly halted? There was a very real worry that consumers would assume that was the same as the Planetary type CVT in Prius. Fortunately, that subsided almost as quick as the inventory. Saturn (GM) knew the problem was serious. The recent settlement of a class-action lawsuit from 90,000 owners confirms that. Replacement expense claims will be paid for up to 8 years or 125,000 miles. I wonder how that will ultimately be interpreted. Hmm? Long-Term reliability any vehicle is always a concern, but even more so with the upcoming plug-in hybrids. Financial & Legal messes like this are strong purchase deterrents.

9-13-2008 **Hybrid Type Attention.** An article in the New York Times today published specifically for the purpose of defining hybrid types just dismissed the first category entirely, claiming "mild" hybrids only offer a modest improvement. ASSIST was never even mentioned. Instead, the first category was called "parallel" and sighted Prius as the example. That combined with nothing included about either "series-parallel" or FULL really makes you wonder. Did the writer poorly research the topic or did he have a motive to mislead? Whatever the case, it will certainly confuse readers. The categories which followed were SERIES, then PLUG-IN, then PURE. Use of electricity in place of gas is clearly becoming a favorite of the media.

9-13-2008 **$10,000 Battery.** The president of the Advanced Automotive Batteries association certainly had a few concerns to express about Volt recently. With a direct stake in the success of electric-vehicle propulsion, that shouldn't have been a surprise to anyone. The quotes I found of most interest were: "*Rushing to deliver 60,000 electric vehicles per year poses a phenomenal risk. The business case for a vehicle with a $10,000 battery is problematic. I predict GM will end up building only a few thousand of them.*" There isn't much to add to that. It should be clear that availability at mainstream volume is totally unrealistic for quite a few years still. Ironically, a stop-gap is needed in the meantime!

9-13-2008 **Toyota Venza.** There's a new vehicle on the way, it's essentially a sporty Camry wagon. In other words, the crossover vehicle has been tamed down so much that relation to the SUV is almost totally gone. Remember how the SUV was originally a truck, gross overkill as a family transport? Those unnecessary design aspects are disappearing quickly with the advent of expensive gas. Offering this with a 4-cylinder engine priced in the low 20's seems pretty sensible; those abandoning that senseless guzzler market will likely find it very appealing. And of course, this is a great platform for a hybrid option later.

9-13-2008 **$101.18 Per Barrel.** Oil is still above the $100 mark. That, combined with Hurricane Ike, makes gas here $3.69 and diesel $3.99 per gallon. The upcoming cold season won't provide any relief. The expense of filling your vehicle's tank is an on-going burden which continues to put pressure on the need for change. One presidential candidate is proposing that. The other is putting very heavy emphasis on his slogan: "*Drill Baby Drill!*" Showing no real concern for the smog & carbon emissions that will result from the consumption of that oil is disturbing. Of course, our current president campaigned on the promise of keeping gas prices low... and look where that brought us. We must reduce consumption, period.

9-14-2008 **Omitted Timeline.** The official introduction of the Chevy Volt is about to begin, at the 100th Anniversary celebration for GM. It's amazing how scant the information has been actually presented in the lead up to that event. All we basically get is a statement that it will be an entirely new type of vehicle. You can't be much more vague than that. But the thing that irritates the most is no mention of any timeline. The impression you get is that it will be a mainstream vehicle available to a wide consumer-base within the near future (2 years). In reality, price & quantity won't reach that target for a very long time. It will be much like the original hybrids. The masses will wait until those first models exceed 5 years and 100,000 miles. Reputation building takes that long. There is simply no way to speed up the process. Too many involved don't want to assume risk before that. Will consumers realize just how long of a wait there is still?

9-14-2008 **Monetary Incentives.** Watching history be rewritten is not something I do. The reason for this claim today about tax credits will probably never be known: "*Keep in mind last year Toyota needed incentives to move the Prius.*" But when searching for details to respond with, I found them harder to find than expected. So, including that here for easier reference later was a good idea... No, the tax credit (which you only got if AMT didn't apply) was already being phased out at that point. Of course, it was only $1,575 through March 2007 anyway. Then, from April through September it was just $788. Starting in October, you got nothing. Also, keep in mind that most were sold at MSRP or higher. So the 181,221 purchases in the US last year were not actually influenced much by incentives.

9-15-2008 **Oil Dependency.** Weren't we told that we have an addiction to oil? Why then is the obsession with drilling for more not viewed as a problem? That seemed like an act of the insane to me. Since when do you increase supply of a harmful substance to an addict? It's exactly the wrong thing to do. In fact, that's pretty much the worst suggestion possible. Yet, that's the plan anyway. How can using more of a non-renewable fuel which makes the air we breathe dirty be a good idea? It could be argued for if there was also an aggressive effort to reduce consumption at the same time. But instead, all we get is a mandate that will basically just keep pace with the increasing demand from population growth. Also, keep in mind how long it will take for the technology to reach someone who just purchased a new vehicle. That extra delay of at least 8 years is a very real problem. Effects of the 2020 mandate won't be fully realized until at least 2028. That's 20 years from now! Making our children deal with this mess is a terrible idea.

9-15-2008 **Leader Promotion.** It's starting to get bad. Rather than focusing on making technology available in large quantities with low prices, the bragging has intensified. One article today hyping Volt at the GM 100th Anniversary celebration had the impudence to say that it could serve as a "*wake up call*" for the Japanese competitors. That was a rather blatant attempt to mislead people into thinking that hybrids like Prius had could in no way ever support a plug, as if that idea never crossed the minds of the engineers. You clearly were given the impression that Toyota, Honda, and Nissan were all now struggling to catch up. That complete lack of interest for the typical consumer is quite disconcerting. Whether or not they have the most efficient technology is a red-herring, a distraction from the reality that a majority of their inventory will not meet the cost/efficiency improvements people are now demanding.

9-15-2008 **Financial Disaster.** The economy is a mess. We are now witnessing the struggle of major banks and even a major insurance company fall apart. The automakers here were already in trouble. Their pleas for a monetary rescue from the governments take much lower priority than the institutions which control our financial well being. It is literally the infrastructure itself in jeopardy now. There is little doubt anymore about how poor some of the big decisions made over past few years were. Several major failures all within such a short amount of time is easy to call a disaster.

9-15-2008 **True Intent.** Read the following quote from the magazine Popular Mechanics, then think about it before continuing: "*In the first 18 months, Toyota sold a mere 15,556 of the egg-shaped gas sippers, primarily to environmentalists and the Hollywood elite. In those days of $2 per gallon gas...*" That's so wrong, I don't even know where to begin! The quantity stated was for year 2001, which is only 12 months. To total that 18, including the prior 6 months prior means an additional 5,562. Then there's the shape. It was a sedan in those days. That hatchback model (egg shape) wasn't introduced until later. And that first full year (2004) there were 53,991 purchased in the United States. As for the price of gas, it was only $1.10 per gallon back then. Geez! Of course, if I mention that the article was promoting Volt, does that reveal the true intent? Are you now as frustrated as I was after reading that quote? Arrgh!

9-16-2008 **Official Reveal.** Today was that special day for Volt. Or if nothing else, it certainly was noteworthy. Some said this model looks much better than the one we saw just a few days ago, even though nothing actually changed. Some had extreme cases of Prius envy, expressing obvious resentment in the form of praise for the ironic. Some were in complete denial that, not wanting to face the reality that cost & quantity keep will it out of the mainstream for many years. Some, believe it or not, actually applauded the 100 MPH top speed... even though it's a pointless ability. As for me, I simply wondered when & how unity will finally emerge. So many different wants from so many different voices, few actually focusing on need. The next 6 months will definitely be interesting.

9-17-2008 **Only A Band-Aid.** That's what one of the presidential candidates said more oil would be, back in May. Now, his mantra is "*Drill Baby Drill!*" Frustrated by politics yet? I've been upset by this nonsense for 8 years. Just wait, it will get worse for you too. Sometimes, they just tell you what you want to hear. Let's see some results instead. How about mass penetration of FULL hybrids? Imagine what a highway filled with them would be like. Think about what that would do to our "*Addiction To Oil*".

9-17-2008 **It Has Begun.** The Volt enthusiasts are now quarreling amongst themselves. Disagreements are becoming quite intense too. There are several schools of thought forming... each fundamentally different. I'm intrigued how this will play out. Look, price, and not like Prius are the most obvious. There are some still singing the "no gas ever" song too. Hopefully, the ideals will finally be abandoned so support for an actual product can finally emerge. Getting away from the concept and embracing a practical design is long overdue.

9-17-2008 **Reason For Attention.** It's the same old story, different types of hybrids will be competing with each other... only this time, they'll all come from the same automaker. Consider the Saturn Vue. It will be available with a traditional transmission, as an ASSIST hybrid, a FULL hybrid, and a PLUG-IN. All of them being compared to the SERIES hybrid is pressure already building up against the Volt enthusiasts. And without a unified purpose yet, who could resists documenting the history as it happens. That's a great reason for attention. Do you have any idea what they'll be chanting next year?

9-18-2008 **Trolling Advice.** It's quite different from the past. Normally, comments like this were taken very seriously: "*Stop feeding the trolls.*" If it wasn't, the discussion thread would be overwhelmed by undermining posts. That's changed. Instead, I was able to respond this way... Trolls have little to establish credibility with anymore. The real-world data clearly outweighs any anti-hybrid argument nowadays. It was quite a struggle years ago to convince doubters that the batteries wouldn't all fail at 100,001 miles and that gas would end up costing quite a bit more than $1.59 per gallon. Now, absurd first-posts like that are simply a source of entertainment. Comparing an 12 year old SUV to a brand new Prius wasn't even the slightest bit objective. Yet, it was attempted anyway.

9-18-2008 **Adequate Acceleration.** The final nail was pounded this evening. The coffin for the concept Volt is now sealed. Sporty acceleration was the only original feature remaining that gave this futuristic family car an "outstanding" characteristic. But it too is gone, vanished in an instant from a response to the speed question with a response of "adequate". Needless to say, the enthusiasts were crushed. True, it was an unnecessary design factor. But something in the overkill category is what helps promote vehicles still. Old habits die hard.

9-18-2008 **Bumper Sticker.** Seeing a new one this afternoon that said, "*Drill Here, Drill Now, Pay Less*", was very disturbing. The facts don't support the claim. That's propaganda. The idea doesn't actually deliver. More oil from local sources will take years to materialize and the studies show that those supplies will only help us to retain status quo. Prices won't go down as a result. In fact, the required investment in new infrastructure may actually cause them to rise. And of course, more oil is terribly irresponsible when smog & carbon emissions are not considered. The price we pay as a result of our air becoming dirtier can be very expensive.

9-18-2008 **Climb & Recharge.** After all these years, that is still the most counter-intuitive feature of the FULL hybrid. A stoplight very close to my house is typically green to go up the hill, turning left to remain on the valley's flat is usually red. So, I'll sometimes do the climb. Why go up only to come right back down a minute later, you ask? As the Prius goes up that hill, the engine feeds both the wheels and the battery-pack. You'd normally expect power to be taken from the battery-pack on the way up; instead, quite the opposite happens. So when the Prius gets up to the top, the charge-level raises. Then on the way down, the engine shuts off and the recharging continues. I start my drive the next day with a nicely replenished supply of electricity.

9-18-2008 **Best Friend's House.** From elementary school into college, my best friend lived just three doors down from my parents. Then he moved. That house was then occupied by an unknown couple. They bought a Prius awhile back. So when I stop by to visit with my mom, I'd see it there. Recently, I encountered them on the road a few times. That meant it was finally time to stop and say "Hi". Having spent a lot of time in their house over the years, I wondered how awkward that would be. It was great! Recognizing my Prius (as the one from a few doors down) and seeing my arm extended as a friendly greeting, they instantly welcomed my approach. They certainly were pleased with their decision to purchase a Prius. That was fun getting to swap some stories.

9-18-2008 **Cost To Operate.** This is the latest ploy to mislead. You can't exclude purchase price. But some certainly try to. How much fuel (gas or electricity) it takes to travel a specific distance is not just a factor of what you feed the propulsion system. Only focusing on that is not constructive, yet we continue to see calculations posted which do exactly that. How they can justify that approach is beyond me... especially when prices differ so much. I guess that's like politics, where the omission of facts is a common practice.

9-19-2008 **Hot & Humid.** The conditions outside have been like Fall for the past few weeks now. So, today's final taste of Summer sure was a treat. Driving averaged the low 50's for MPG. Cold & Dry conditions of Winter don't favor efficiency like what the Prius just experienced. Oh well. The mid 40's is certainly nothing to complain about.

9-19-2008 **PR Games.** The public relations game being played by automakers now to earn a "green halo" is getting absurd. Thankfully, some people in the media have a great sense of humor about it. A journalist on NPR had a report featuring "*Tomorrow's technology advertised today*". It was all about how GM is promoting an expensive electric car you won't be able to buy for at least 2 years still. He peered forward years further into the future, announcing more exotic technologies in the form of advertisements. Naturally, the flight ability of their 2050 model sounded quite compelling.

9-19-2008 **$104.55 Per Barrel.** Believe it or not, the price actually dropped below $92 briefly this week. The crazy economic situation we're in has prices of everything fluctuating wildly. That closing price for the week is where I'd expect it to stabilize at. The $3.59 per gallon price for gas and $3.99 for diesel seems realistic too... for the short-term anyway. This time next year, after the new Toyota, Honda, and Ford hybrids are available, certainly should have increased the pressure on the other automakers stressing that resistance is futile. Consumers want solutions to buy right away, not waiting for low-volume rollout sometime in the future.

9-19-2008 **It Was Vaporware!** Turns out, the naysayers were indeed correct! The concept vehicle called "Volt" that was presented to us back in January 2007 no longer exists and will never be produced. It's all gone! Look, Price, Electric-Range, Gas-Range, Acceleration have all changed. In fact, those aspects changed quite a bit. Appearance is totally different. It's going to be at least $10,000 more expensive. The distance you'll be able to travel with gas has been reduced by roughly 300 miles. Running the engine & heater in the Winter will cause the battery to deliver less for travel. And the 0-60 acceleration will take somewhere around 2 seconds longer. I don't think the enthusiasts ever imagined an outcome like this.

9-19-2008 **Another Series Hybrid.** In 4 days, it will be Chrysler attempting to garner green attention. Like GM, nothing is actually expected anytime soon or at an affordable price. But when you literally have nothing to compete with directly, what else can you do? Realistically, a niche market will emerge. So, it's not like they won't be selling just an idea. But the volume of those vehicles will be small for quite a number of years. In the meantime, we'll see a flood of the hybrids targeting consumers that purchase high-volume mid-priced vehicles... the Corolla & Camry crowd. And strangely, hype like this actually encourages them to abandon that terrible attraction some had for the SUV. There is very little appeal for guzzling gas anymore.

9-20-2008 **Oddly.** This statement I posted on the Volt website stirred no reaction... Volt actually did end up being vaporware. None of the concept that we were originally shown remains anymore. Adaptation to transform it (pun intended) to a vehicle with long-term mainstream potential eliminated the very aspects that drew in those original enthusiasts. And now that there is a production version, it's pretty obvious that the process of starting all over again with the promotion is taking place. The irony makes for good history. Makes you wonder what happens next, eh?

9-20-2008 **Plug-In Tax Credit.** The House passed a bill for some credits this week. It was met with quite a bit of resistance though, as you could imagine. Even those in favor of helping out the progress toward greater use of electricity were concerned. The devil is in the details, you know. Anywho, primary focus was on overall battery-pack capacity. Size in relation to the vehicle and actual usage seemed to be forgotten, as well as product volume and credit duration. But with the specific offshore drilling provisions included in the bill, re-examination is pretty much inevitable anyway. Priorities are very much a problem still. Hopefully, the next administration will remedy that.

9-20-2008 **Wireless FOB.** Listening to a guy here at the coffee shop call friends begging for someone to come get him so can be taken home to retrieve spare keys got me thinking. More vehicles coming out now offer a FOB for engine starting, but they still aren't all wireless. Why not? Never having to remove it from your pocket is a major convenience... especially if you want to reduce the risk of locking yourself out. Maybe it's the resistance to change. After all, the FOB that I saw last week from Chrysler required you to turn it like a traditional key. Why? For people with arthritis, that is a horrible requirement. Where's the button instead? That's very handy when you have gloves on, by the way.

9-21-2008 **Superiority Complex?** Hopefully it wasn't a new trend. Perhaps it was just a one-time release of frustration. We'll see. Time will tell. Whatever the case, that instance yesterday morning was disturbing. The Volt enthusiasts posted a flood of insults, degrading all the hybrids currently available in favor of their concept which won't be available for 2 years still and won't be realistic for the mainstream for awhile after that (sometime after 2013). They are fighting the very thing that is helping to fortify the automotive battery market. Why? This isn't like the "smug" of the past, since you could purchase those hybrids immediately. Instead they are telling you to retain the status quo until Volt becomes competitive. That's awful. What if you don't want a compact car? No other SERIES hybrid vehicle size or type is expected until after Volt is produced in high volumes. GM's projection for that is 2015. That's right, 7 years away still. Think of what will happen with our dependence on oil and the price we pay for gas in the meantime.

9-21-2008 **Will Drop Fast.** This morning, the Volt price argument was the highlight of an article published by a Detroit columnist... yes, the same one that fought Prius for years. He quoted $42,000 as the likely price for the first year, but then never actually explained what he meant by "*it will fall fast*" following that initial price. Neither anticipated time nor amount were mentioned. 4 years is fast by automotive standards. As for price, who knows. A 25 percent drop (for the battery-pack) is significant, but that would only drop it to $31,500. That's close to the price of an augmented Prius already. Of course, my favorite part of what he wrote was: "*Don't think of it solely as a car. It's a lifestyle, a political view, a fashion statement and the coolest new gadget you can get.*"

9-22-2008 **From Pink.** I ended the day in the garage, leaving the Prius on for around 45 minutes while I took photos for the newest Bluetooth document illustrating how to connect the cell-phone I just got to the system in the vehicle. The charge-level of the battery-pack was already lower than normal due to stealthing the last part of the drive home. So for the first time ever (8 years), my commute to work started pink (only 2 bars showing on the Multi-Display). That made me curious as heck. How would the uphill merge onto the highway at 70 MPH be? With a short 3 block drive from the house, it didn't take long to find out. To my absolute delight, the engine RPM remained normal and the only difference was LOD on the ScanGauge read a lot higher than usual. The engine was carrying greater load to provide extra electricity... so much so that, believe it or not, the battery color turned blue a moment before entering the lane on the highway. Charge-Level had actually climbed up a bar as a result of that additional effort from the engine. What a fantastic result! The antagonists will hate this. They've claimed that no matter how much gas is consumed, such a response wouldn't be possible. Today, I proved that false.

9-22-2008 **When Prices Drop.** They (many Volt enthusiasts) still aren't seeing the big picture. When battery prices do finally drop a substantial amount, that will basically eliminate the premium for some FULL hybrids... especially if 6-speed automatic transmissions become standard in response to the upcoming efficiency mandate. That will significantly increase demand for the FULL hybrids. Production at very high volume is needed already. Now is when affordable high MPG solutions are wanted. Not having to pay anything extra for that will be a very compelling draw. How will they attract buyers for SERIES hybrids in a market embracing a much less expensive solution instead? Sure, vehicles like Volt will deliver as promised. But paying more is a hard sell. What will supporters do to convince the mainstream to spend the extra money?

9-22-2008 **Biggest Oil Spike Ever.** We saw a record-setting $25 spike today, all the way up to $130 per barrel. The reason was because speculators waited until the very last moment before placing orders for delivery next month. They were gambling that the price would finally fall... which didn't happen and the response to the sudden demand was an abrupt price increase. This level of uncertainly is a bad sign. Remember the good old days?

9-22-2008 **Biodiesel Support.** Did you know that it is only minimal? Just blends of 5-percent are what have been supported by many automakers. So, those running their diesel vehicle on pure vegetable-oil are voiding their warranty. In fact, even a 20-percent mix is too much. Next month, a national standard for B20 takes effect to help promote sales of it from diesel providers. However, VW still isn't prepared to support its use yet. I wonder why. Hmm? Could it be the gel effect cold temperatures cause? I'd expect the standard to address that. But does it work well under all conditions and are refineries in a position to deliver biodiesel complaint meeting those requirements?

9-22-2008 **Escalade-Hybrid Commercial.** Saw my first on television this evening. And of course, it was as demeaning as you'd expect it to be. Size was the theme. Bigger is better, if you couldn't guess. The chosen market approach was to mock the smaller hybrids. It was pitiful... because they were serious! Being stuck with a technology intended for the largest vehicles is a big problem. The destiny is an outcome not supportive of the business model planned. Selling enough to sustain continued production will be one heck of a challenge. Do you think the advertisement I saw made any difference?

9-23-2008 **Hybrids From Chrysler.** Yup, just as expected, it will be the SERIES type. The surprise part is that there will be three. The reveal today included a sports car, a minivan, and a jeep. Descriptions of the latter two resembled Volt, both 40-mile electric and 400-mile overall range. The sports car on the other hand only mentioned up to 200-mile range overall. Details beyond that simply weren't
available. Price? When? Quantity? Whatever the case, that spotlight held by GM alone will now have to be shared.

9-23-2008 **Cost Argument.** Some enthusiasts continue to insist that they'll be able to convince people, despite the higher initial cost, that Volt will be favored over Prius without actually providing any numbers. So, I ran some ballpark calculations (using somewhat optimistic values)... $40,000 vehicle price plus 7 percent tax is $42,800. A 5-year loan at 6 percent interest calculates to a $49,646 total, which is a monthly payment of $827. $22,500 vehicle price plus 7 percent tax is $24,075. A 5-year loan at 6 percent interest calculates to a $27,926 total, which is a monthly payment of $465. The cost of driving 15,000 miles per year with the current 48 MPG real-world average at $4 per gallon comes to $1,205, which is a per-month amount of $104. The $465 plus $104 is $569, which leaves a difference from $827 of $258. So, how are they going to convince the typical consumer to pay an extra $258 per month, plus whatever gas & electricity Volt uses? Heck, even if the owner qualifies for a full tax-credit (no AMT penalty), that would only drop the expense by $125 per month to $133 more than Prius. Of course, the Prius available then will deliver an efficiency improvement, maybe 4 MPG real-world average. That's a monthly improvement of $8, bringing the Volt disadvantage to $141, plus gas & electricity.

9-24-2008 **Diesel Desperation.** It's hard to believe... no inconceivable... that a "*Fuel-Economy Marathon*" winner would be proclaimed without taking into account the amount of fuel that was actually consumed. I was truly amazed that a popular publication would even try something so absurd. A diesel Jetta was placed against a Prius for close to a 500 mile drive. In the city half of the competition, Prius delivered 44.7 MPG and Jetta only 32.0 MPG. That's a pretty drastic difference, totally offsetting the Prius 44.8 verses Jetta 45.4 results of the highway half. Overall, the fuel consumption was Prius 10.63 gallons and Jetta 12.68 gallons. How could they possibly declare the outcome in favor of Jetta?

9-24-2008 **Needed Education.** Think about how much the Volt enthusiasts have been pushed to provide educational materials. It almost got to the point of being antagonized. Yet, nothing happened. Well, now they are wishing they has heeded that advice. Word got out that the SERIES hybrid "sustains" the battery-pack after the electric-only capacity is consumed. Newbies were assuming it "recharges" like FULL hybrids do. As a result of learning that isn't actually the case, there's a big negative backlash. How about that? Those of use pushing education as a need have been vindicated. Of course, not allowing any opportunity for assumptions to occur should be obvious. They did nothing to prevent. Now, there is a mess to deal with.

9-26-2008 **100 MPG Limit.** The criteria used to provide generalized efficiency estimates is very confusing already. In fact, many consumers still misinterpret meaning... despite new information provided as a result of the recent revisions. Attempting to more accurately portray real-world experiences for vehicles with a plug introduces added complexity to the extent that nothing related to an average for "city" or "highway" driving could be depicted properly. So, the EPA is now considering a "100 MPG" category label instead. A new rating process may emerge later. But for now, attempts to measure are misleading at best. The criteria is simply too involved for consideration of FULL and SERIES hybrids with plugs and varying battery configurations to establish a standard quickly. After all, the estimate system for traditional vehicles was in desperate need of updating for years before that finally happened.

9-26-2008 **Accounting Problems.** It hadn't crossed my mind that common practices in accounting were not well known. I assumed and the outcome got ugly. (Of course, it was interesting proof that I got more out of those college classes than realized.) Anywho, when you determine Per-Mile cost, factors such as maintenance are included in those calculations. This is especially important for a vehicle like Volt, where times when the engine is not in use can be withheld if stated explicitly (as the original source did). Then there's the standard amortization for the vehicle as a whole, where other costs like vehicle price, finance charges, insurance, tax, registration, and stuff like tire replacement must all be included too. In other words, you can't just take quoted a Per-Mile vehicle and reverse calculate it to determine MPG. The value is not just fuel quantity only. But a forum member didn't know that and got very angry when twice confronted about it. MPG has always represented distance divided by gallons of fuel consumed. But this was an attempt to express it as an "equivalent" without stating that purpose. So, you got the impression that the MPG represented actual efficiency of the engine itself. This over-simplification to state costs of the many different configurations of hybrids in terms which consumers can easily compare clearly doesn't work... and this particular encounter demonstrated how extreme feelings can be hurt when a misunderstanding occurs.

9-27-2008 **More Arithmetizing.** Reverse calculating public-relation releases to determine MPG only works if the numbers match. But when you dig, you find that those numbers conflict with other GM reports. I figured something else would emerge to reveal the problem with such an approach. Little did I realize that it would be the very next day. Oh well, the emotion stirred will help make that prior event memorable. Having to repeat it certainly wouldn't be good for anyone. Anywho, it really doesn't matter. Real-World data from a consumer owned & driven vehicle is only true measure of efficiency anyway. All else is a sampling, not representative of actual long-term experience.

9-28-2008 **$25 Billion Loan.** Federal money (taxpayer funds) for domestic automakers is defiantly being called anything but a bailout. Arguing semantics is pointless. Quibbling over labels is spin. Reality is that they need help. They have... again ...been caught not taking the efficiency market seriously. History has officially repeated itself. Now aggressive retooling investment is required for them to catch up. How that money is actually used and what criteria must be meet is quite unclear. With the insincere efforts currently taking place, it's hard to imagine them taking the big steps necessary. But with so much money being lost still (GM & Ford lost almost this much the second quarter of the year), something drastic much be done.

9-29-2008 **FOB Battery.** The first one was replaced 6 months ago. It made me wonder when the second FOB would need its original battery finally replaced too. Today, the need became apparent. I got tired of the extremely slow hands-off response and sometimes having to manually push the button for entry. For just $3.59 (plus tax) and a few minutes of effort, that was totally worth it. Replacement brought immediate improvement. Perhaps I should have just done both at the same time. Oh well. Lesson learned.

9-29-2008 **Volt Groups.** It looks like enthusiasts (those hoping to buy) on the Volt blog have decided to embrace the production-intent model, abandoning the unrealistic features once flaunted about the concept model. That's good news. Unfortunately, their step forward has been met with a step backward by antagonists (those wanting to brag) on the big GM forum. Insults toward Prius owners certainly have been easy to find there recently. Their posts are attempts to make the situation personal, hoping to discredit. With a practical design for Volt now, that dream of a dramatically better hybrid has vanished. And thought of the new model Prius drawing a lot of interest adds to their discontent. It appears as though two distinct groups are emerging from the chaos.

10-01-2008 **September Sales, status.** The month is over. Numbers are in. Economic status for just about everyone in all industries is unfortunate. For automakers, that meant much lower sales than the same period the previous year. Basically, consumers are holding off major purchases for now. What they'll buy later when better times return is a mystery. It seems unlikely that they'll choose guzzling SUVs anymore... based on the increased frequency of "24 MPG" television commercials, since promoting such a poor efficiency as a solution is an obvious act of desperation to reduce inventory. The desire for 40 to 50 MPG cars is growing. That's undeniable. How quickly large quantities will be produced & sold is the unknown. The pain from the current economy is really hurting hybrid growth.

10-01-2008 **September Sales, numbers.** The slow start for Two-Mode saw a boost, but not by numbers GM was hoping for. The hybrid Tahoe, Yukon, and Escalade sales were 636, 374, and 91 respectively. That would be on-target if maintained. But this market certainly doesn't support that. And such a small quantity overall won't really make much of a difference with a market begging for relief from the pump. It's not like 6 years ago when gas was still really cheap. Time's up. Solutions are needed now. So when you look at BAS sales, you get the picture. They were 443, 382, and 31 for the Vue, Malibu, and Aura hybrids. Toyota did much better. Though, I'd love to see the growth planned for next year possible now. Stable is a good way of describing the situation. 10,873 for Prius puts things in perspective. It's much better than the competition, but no where near enough to reduce overall demand for oil. 2,785 for Camry-Hybrid helped. 921 for Highlander-Hybrid should give GM concern. And the 820 combined for all 3 Lexus hybrids was nice.

10-01-2008 **Prius State-Of-Mind.** You know it has become a cultural icon when this expression is just casually used in dialog on a prime-time television show: "*Get in touch with your inner Prius.*" Upon hearing that, I shouted with joy. It's a perfect example of being a game-changer. Penetration so deep into our society that it has become a state-of-mind ends all doubt of its significance. I was simply hoping for mass-acceptance of the technology itself. Who knew that the vehicle itself would emerge as symbolic of the times. Sweet!

10-02-2008 **VP Debate.** This evening's debate of the vice-presidential candidates demonstrated extremes when it came to the topic of energy. One spoke words that I'm sure most Prius owners were be delighted to hear... actually doing something now by taking many steps forward. The other, to my shock, sounded exactly like the current administration... drill, drill, drill with no concern at about the resulting pollution. Fortunately, the moderator jumped on that obvious problem and asked about climate change. It's really sad when a "solution" is presented as something helpful for our immediate woes with no future consequences. Regardless of where the oil comes from, its consumption causes smog & carbon emissions. More is bad. We must reduce oil use. Investment in technologies that result in reduction must be supported. One candidate expressed concern. The other didn't even sight it as an issue.

10-04-2008 **New Tax Credit.** The new bill was passed. The most notable element is the fact that money won't be handed out to each automaker evenly. That aspect of the prior credit failed miserably... as some of us had worried. There was no incentive to stimulate the market, no sense of competition. But now with urgent need to repair both the industry & economy quickly, Congress saw the need to push. A market total of 250,000 vehicles will trigger the phase-out (50-percent reduction the following 2 quarters, then 25-percent). That means the automakers will who drag their feet will lose out this time. There is genuine incentive to respond quickly. The credit will have a base of $2,500 with the minimum qualification of 4kWh battery-pack capacity. Each additional kWh above that earn an additional $417. How this will affect vehicle prices is a big unknown. And of course, with AMT still a mess, you may not get the entire amount back on your taxes.

10-04-2008 **MPG Plunge.** I've grown use to seeing it. Driving from the Twin Cities to Northern Minnesota with either bikes on the back or kayaks on top along with lots of cargo inside takes a "huge" hit on efficiency. In perspective though, dropping to 38 MPG is hardly anything to complain about. That's better than most vehicles ever get anyway. Heck, that's almost twice as much as Two-Mode owners have been reporting. It certainly enforces the fact that my Prius isn't babied. The 70 MPH cruise home with a nasty headwind pushing against the bikes certainly made that clear today. It was totally worth it though. The colors of Fall had just peaked and the weather the day before was practically perfect.

10-05-2008 **$93.88 Per Barrel.** Seeing that as this week's closing price for oil certainly was interesting... but not as much as the $3.21 per gallon for gas here (well actually, E10). The kind of effect that will have on the consumer isn't expected to be much though. Too many other economic factors make wallet pain still feel like $4 per gallon anyway. Fuel efficiency has elevated up to the top of the priority list now. Those carefree days of waste are long gone. Having a big & powerful SUV is far from something to envy anymore. In fact, guzzling has turned into a nightmare that has many drivers leaving them garaged, preferring something that sips instead. It's about dang time!

10-05-2008 **Believing What You Read.** Some people do, at "face value" without questioning. That thought is scary. This is nothing new though. People have done that for decades. Only with the internet, it's even easier to come across a source with a mysterious purpose. So, you really do have to take some initiative to at least confirm that others are saying the same thing. For example, an article about the next Prius popped up today from a source claiming to support the move away from petroleum. It seemed sincere. But what was written was loaded with errors. With a writer so poorly informed about that, what other errors might their be elsewhere? Or was that information intentionally wrong? After all, undermining can be more effective than dismissing. Could that actually have been an attempt to mislead? Will people discover that this source was saying something different from others? Hopefully, having the internet available will empower consumers to do some research on their own and not just blindly believe everything they encounter.

10-06-2008 **Quoting Errors.** The very thing I had feared has indeed happened. Remember that recent accounting misunderstanding about Per-Mile computations? Sure enough, someone stumbled across that "information" and quoted it as if the value was a genuine fact. I've seen that occur with other statements, where it gets picked up and shared as if it was data from a credible source... rather than the unverified assumption it really was. I intentionally didn't mention the value itself for that very reason. It was a claim that Volt would only get 30 MPG when operating in depleted-mode (when the engine runs to supply electricity after battery-pack charge-level drains to the normal depletion threshold). If that were the case, it totally contradicts both what GM has been claiming all along and the efficiency of SERIES hybrid technology in general. That would give Plug-in FULL hybrids an undisputable advantage I've never heard anyone ever mention. It's just too far fetched to accept without any data to support it. Even treating that as a particular-condition sample wouldn't be appropriate when there's no detail available. Yet, it happened anyway. That's how greenwashing propagates. An innocent reader picks up on something originating from an assumption and unknowingly spreads it to others.

10-06-2008 **Tipping-Point.** A report on public radio this morning brought up an interesting bit of statistical measure. There's a tipping-point that can be conclusively identified when it comes to topic popularity online. Enthusiasts in dedicated forums embrace new ideas & products during the initial stages of market penetration. That type of activity is isolated, just a niche. The shift to mainstream is when things become important. Manufacturers need to know this so they can reasonably predict upcoming demand. This can be clearly be detected by search-engine data. When ordinary consumers seek out the information, that's when it is time to take that next rollout step. I concur. That's exactly what those of us supporting hybrids have witnessed firsthand.

10-06-2008 **New Logo Debut.** We got our very first taste of the new model Prius today. It was only a small teaser photo of just the assumed new startup-banner for the Multi-Display. But at least it was something. The wait until the Detroit Auto Show kick off early next year would be painful without anything at all. But for those like me that will have to endure countless more months for delivery, it's 2000 all over again! This will be the third time having to wait for a Prius. The outcome is totally worth it. But the time until then seems to drag on forever.

10-06-2008 **Global Economic Meltdown.** A status of "*the sky is falling*" might not be severe enough to properly describe the situation. Response on Wall Street to the bailout plan has been quite negative. It looks like the delay before our market gets that money and the fact that foreign markets are also started to show undeniable signs of suffering makes for a grim outlook. It's bad. Really bad. However, it is necessary. The inappropriate practices needed to finally be dealt with. Unreasonable risk will no longer be taken. That means a better market... eventually. But getting from here to there won't be without some pain. I can't imagine how this will play out in the light of the upcoming election.

10-06-2008 **Hybrid Type: "Combined"** Honda has always went out of their way to avoid using the hybrid identifier of "parallel" knowing that it would only lead to confusion (or worse). So, the system they offer was labeled as ASSIST since the very beginning. In fact, that's how the label of FULL came about. Preventing misunderstanding was a big deal for all supporters back then. But now, those promoting the SERIES type are intentionally taking advantage of that confusion by calling all the other hybrids "parallel". Deceiving people like that is terrible, yet they continue to do it anyway... even when confronted. Needless to say, Honda's newest educational materials try to stay out of that mess. They use "combined" to express FULL, pointing out how it sometimes acts like a "parallel" type and other times like a SERIES. Not calling it FULL makes sense for them, since then people might call their type PARTIAL.

10-07-2008 **Making Sacrifices.** My favorite question from the second presidential debate (which was this evening) was on the topic of making sacrifices. Despite the demand on resources from our military overseas and the economic burdens we face here now from other problems, we haven't followed responses of the past. The first candidate totally disregarded that history, focusing entirely on "*government program cutbacks*" to deal with the situation. I was pretty upset after hearing that. No sense of participation to help out would be asked of us, even though doing our part has always been a fundamental part of the American way. Arrgh! The second candidate didn't disappoint. He stated making "*personal changes*" as a major part of his solution. I was delighted. After all, doing things like reducing our dependence on oil isn't actually a sacrifice anyway. It's just a matter of accepting change for the greater good.

10-09-2008 **Apartment Dwellers.** That fundamental shortcoming of relying on a plug finally got some attention again. The suggestion today was absurd though. It was a proposal to establish charging-stations controlled by credit-card transactions. Why in the world would a landlord spend thousands of dollars for the sake of providing only a few dollars worth of electricity? Tearing up parking lots to install outlets is expense enough. But then when you factor in control & liability overhead, the situation becomes too much to bother. And of course, here in Minnesota, you've got snow & ice removal as a major obstacle as well. In boils down to plugging in being totally unrealistic for a chunk of the population.

10-09-2008 **Core Business.** A troublemaker from the past re-emerged recently on the big Prius forum and started preaching to us about core business. His argument was that a new hybrid brand will be a horrible choice, if made. I begged to differ by pointing out the needed transition away from traditional vehicles with this... Things are different now though. When GM exploded into many brands, the products were basically just copies of models available elsewhere. For a "Prius" line, that wouldn't be the case. The vehicles named "Prius" would be successors, long-term planned replacements intended to phase out non-hybrid vehicles once sales justify the shift, which is what the core business will become.

10-09-2008 **Weakening Market.** It's getting worse. GM fell dramatically today, all the way down to where stock was back in 1950. Ford isn't doing much better. The desire for much improved fuel efficiency combined with economy failure spreading across the world makes the future is quite uncertain. Thankfully, the automotive industry doesn't have to search for solutions. We already know that investing in hybrids is a wise choice. The FULL type has proven to deliver reliable efficiency & emissions improvements at a reasonable price. Not having that doubt to deal with should help a lot. But when other industries are suffering, especially banking, the effort to take the steps necessary will be a challenge. This is a very interesting time in history.

10-09-2008 **Volt Defroster.** Some enthusiasts are already disenchanted from learning that Winter will require the engine to run, wrecking their "*no gas ever*" hope. Li-Ion requires warmth. Frozen from sitting in a parking lot without a plug available while you work for 9 hours means heat is needed quickly from something. Gas will be consumed to provide that. Anywho, the problem gets worse (reinforces the clever design of Prius) when you ask the next question: How will the system provide defrost for the windows in the Winter? If the A/C operates in reverse as a heat-pump to provide warmth, what will dehumidify the air so condensation doesn't build up on the glass? In both traditional vehicles and FULL hybrids, this is accomplished by running both the Heater and A/C at the same time. If Volt only has a single system available, how will it condition the Winter air to deal with both cold & moisture?

10-10-2008 **Defrosting Problem.** The use of a heat-pump isn't a good idea in extreme conditions anyway, since efficiency drops the colder temperatures are outside. So my push to find out if the usual electric-coil (resistance) heater would also be included resulted in an "*it would have to be*" conclusion (from the Prius gurus, the Volt enthusiasts refused to respond). That's not a solid answer, but the ability to defrost pretty much confirmed the need. In other words, each time you take a deeper look into the design of Volt, the less realistic that original "*nicely under $30,000*" price estimate becomes. It sounded too good to be true. How could GM deliver what engineers have dreamed about for decades even though we still haven't had that major battery cost/capacity break-thru yet?

10-11-2008 **Economic Downfall.** Some of us have been complaining for years about how short-sighted the obsession with quarterly returns was. Now the long-term consequences of that poor choice are emerging. It's ugly. The DOW dropped all the way down to a 8,451.19 close for the week. That's a 5-year low. Oil is down to $77.70 per barrel, mostly due to abrupt consumer consumption reduction. As a result, the over-supply of gas has dropped prices all the way to down to $2.84 per gallon here. The price of diesel didn't change though; it's still at $3.96 per gallon. The world is suffering as a whole, with each stock market seeing huge losses. Automakers are now seriously considering even more closures. Heck, even talk of GM and Chrysler merging has emerged. Those are definite signs that change is coming.

10-12-2008 **Required Progress.** I asked this question of an antagonist yesterday: "*What will 50 percent of each automakers product-line consist of a decade from now?*" The response wasn't the slightest bit constructive. It made me wonder why. The need to reduce emissions & consumption was obvious 8 years ago when Prius sales began here. Now it's absolutely blatant. Changing the word "*will*" to "*should*" was my response today, but that was basically to just see if I could get anything thoughtful in return. I doubt it. Progress is required. Look at both Ford & Honda as current examples. Both automakers know they must increase volume of their hybrid production very soon. They can't afford to remain stagnant any longer. GM will be facing the same situation in a year or two with their hybrids. Growth is essential. That means increased quantity of existing models and expansion to others.

10-13-2008 **Plant Closing.** Today's announcement was for GM's plant in Janesville, WI. The result will be 1,200 people out of work the end of this year. Remember how claims were made that hybrids would cause jobs to be lost? That spin gives the impression of being substantiated now. But in reality, it would have happened anyway. The SUVs produced there were already losing appeal and the fact that Two-Mode is now available has done nothing to circumvent that. It's sad that retooling to more practical vehicles instead wasn't possible. The importance of substantially better efficiency (in other words, 40 MPG or higher) is quite obvious now.

10-13-2008 **Saved By Zero.** People are getting worried by that slogan in Toyota's latest advertisements. No interest financing indicates inventory is building up. Last month's sales report certainly showed that could become a problem, especially since the other automakers were already dealing with having too many unsold vehicles. The entire economy is slowing. In fact, that's why gas prices are dropping. They also have unintended supply growth. Demand simply isn't there anymore.

10-14-2008 **Watershed Year.** This was an interesting question posed today: "*How did the year 2010 become such a watershed year?*" I wonder how my response will be considered: That's obvious to those that have been driving hybrids for at least 6 years. Back when we endorsed our favored technology with our wallets, the nonsense about Fuel-Cell vehicles was pretty intense. They were heavily promoted along with hydrogen for availability in 2010. But since those unrealistic goals won't be met and hybrid technology did indeed deliver as promised, it only makes sense that some automakers are now struggling to deliver something worthwhile by that same date. And the fact that most are far from being able to build & sell hybrids in high-volume, they are choosing to deliver a small amount of vehicles that "inspire" instead... since delivering nothing would be not be looked upon kindly, even by the most forgiving.

10-16-2008 **Getting Worse.** I wasn't expecting an announcement of 1,600 layoffs for GM workers (in MI & DE) so soon after the recent plant closing announcement (in WI). But that's what happened today. Silverado (their giant Pickup) and Sierra (their giant SUV) aren't selling well anymore. Other less known large vehicles are struggling even more. A plant in OH will be closing sooner than originally thought too. It's sad that greater diversity wasn't part of the business plan. The rise in gas prices definitely caught this automaker quite unprepared. Being able to ramp up production of more efficient vehicles would have been far better than these drastic halts.

10-16-2008 **Leaked Photos.** It happened. We got to see the next generation Prius even sooner than anyone expected... in the form of a leak. Confirming they were genuine didn't take long. Just a day. But that's an eternity compared to how fast "viral" info gets spread on the internet. Within hours, those photos circulated. You could tell who the honorable publications were too, since they gave proper credit to the originating source. Who & How remains a mystery. What the follow-up reaction will be is now on everyone's mind. Toyota's next obviously won't follow their original plan now. We'll still have to wait for the car itself. But how new details will be shared has peaked the interest of many.

10-16-2008 **106,375 Mile - Oil Change.** That's not a factory suggested change interval. It's quite random. I had a trip up north interfere with the usual timing. But that doesn't really matter. The stuff still looked amazing after 8,366 miles. None of the dark, thick stuff I remember from ages ago with my non-hybrid vehicle from just 3,000 miles of use. It's nice having a car that is so easy on oil. You feel pretty confident the engine isn't getting worked hard when you pull the drain plug out and the oil still looks light and thin enough that you could drive with it some more.

10-17-2008 **$71.85 Per Barrel.** Demand for gas is down. The economy is down. Hope for quick recovery is down. So naturally, the price of oil is down too. It sure makes the outlook for hybrids a popular discussion topic. What will change is what is on many people's minds. They know things will be different. Our irresponsible practices got us into this mess. Now what will we do to fix it and prevent the same thing from happening again. No one ever expected the domestic automaker's terrible repeat of history to be immediately followed by such a harsh downturn in the financial well being of the world. Looking back, it seems as though the struggle to maintain guzzler sales was a warning sign that worse problems were on the way.

10-18-2008 **Opinions Wanted**? It has been a few days since those photos were leaked. Reactions are still difficult to judge. Volt enthusiasts claiming the 2010 Prius is ugly won't explain why. Prius enthusiasts simply don't care about Volt, knowing it won't be widely available until at least 2012 and even then will still be very expensive. And of course, comments coming from the typical automotive blogger offer no basis of perspective... what do they find appealing? So surprisingly quick, it's very easy to say that purchases will be the true measure of appeal. After all, opinions that are rendered via a simple online post pale in comparison to those made by the spending hard earned money.

10-18-2008 **Reminiscing.** In this case, it was in reference to those questioning the value of teaser photos. Is getting to see so little so far in advance really a good thing? I responded to that this way: Spring 2000 was very exciting. There were few photos available back then. But they really made a difference... helping a lot with the loooong delivery wait. Spring 2003 brought that very same exhilaration feeling back all over again... and it was totally worth it that time too. Fall 2008 is turning about to be a repeat of the same experience. Bring'em on! Teaser photos are great.

10-18-2008 **H Y B R I D.** That obnoxious large lettering is what the BAS hybrids are now coming with too, it was quite a sight on that Saturn Vue this morning. I wondered just how desperate GM would be to make their hybrids stand out. With lettering so large sprawled along the entire length of the lower-side paneling, you can't miss them. I love how subtle that makes Camry-Hybrid in comparison. The fact that little attention is paid to that Toyota hybrid is a tribute to how deep the technology will be able to penetrate. It doesn't make a statement like many claim about Prius... even though the actual draw to Prius is the fact that it is a midsize hatchback, a very practical size & shape... without large letters!

10-18-2008 **Comparisons.** I find it very odd how certain people attempt to promote in their own way, completely avoiding questions that the market actually ask. Why? Whatever the case, some of us are trying as politely as possible to change that approach. Here's my latest attempt in response to some clearly unrealistic comparison calculations that were posted... It's interesting how the very numbers that most of the media & non-enthusiast will actually use are never mentioned. Sure, also including best & worst scenarios is fine. But excluding the most realistic just won't fly. It's not constructive. The claims won't be taken seriously without. 8 years of hybrid history here overwhelmingly prove that. Try this: The per-charge capacity of Volt will probably come to around a 35 miles and about 45 MPG following that, both real-world averages in climates with full seasons driven the same way as any other vehicle. Comparisons will obviously be to Prius & Insight, which each will deliver 50 MPG real-world averages.

10-18-2008 **Patience.** It was the advice I conveyed to those already struggling from the 2010 photos, with this short post: That's a very important trait you must learn to embrace when dealing with Prius... both when waiting for delivery and later when actually driving. The struggle to achieve patience is well worth the effort. The 8 years of practicing my "*ohm*" have been very rewarding.

10-18-2008 **Ohm.** Did you like that play on words from the previous entry? I thought it was rather clever. Ohm is a measure of electrical resistance. Prius uses electricity and the resistance relates directly to efficiency. People who meditate to deal with emotional forms of resistance have been known to say a word sounding just like that. Now the "*ohm*" can be thought of on an emotional level for Prius too!

10-18-2008 **Mini-Electric.** The demand for SERIES hybrids is a big mystery with so many electric-only vehicles being announced. Today, it was from Cooper. They revealed a Mini which uses a 572-pound Li-Ion battery to deliver a 150-mile driving range. Expected price is a complete mystery. But other detail isn't... like the 204 horsepower, 162 lb-ft torque, and 0-60 in a little over 8 seconds from the 3,200 pound vehicle. Put another way, the world of homogonous vehicles (engine-only) is gone. The roads will be shared by a variety of different types. My prediction is FULL hybrids will dominate. That type offers the greatest flexibility, hence the widest market reach.

10-19-2008 **Family Resemblance.** Back in 2003, the market was very different. A bold new look for HSD Prius in that time of excess and cheap gas made sense. And of course, it was no surprise that the new Camry & Sienna adopted characteristics of the Classic Prius. So, seeing the reverse happen all these years later wasn't a surprise. In fact, I immediately saw nose (the hood & grille intersection) resemblance. Prius has become part of the family. That sharing of characteristics did come as a surprise to the Volt enthusiasts though. They didn't expect traits from Malibu to carry over to their vehicle. Yet, that's exactly what happen with the transition from concept to production model. Their ideal is changing over to practical. It's the way the automakers should operate... especially now that resources are so strained.

10-19-2008 **Attitudes.** Some of the Volt bloggers are now expressing pessimism or disappointment by the recent changes. My attitude has been one of curiosity. Knowing this was coming from having closely followed the hybrid market since 1999, it was just a matter of patience. There was a lot of history available to compare to... clearly indicating there would be a big departure from the original ideal as production neared. Achieving high-volume success requires a careful balance of need & want. Enthusiasts were only cheering "want, want, want" without explanation of how that could actually be quickly & affordably achieved. Supporters were focusing on "need" instead, which differed significantly... and is now getting the attention it is due, much to the dismay of those tantalized by the original ideal.

10-20-2008 **Charging Problem.** For crying out loud! The local news station apparently had nothing to broadcast today, so they picked on electric-only cars. The story was about how few charging stations were available and the load increased demand places on the grid. Those arguments sounded reasonable, for the most part. But they had nothing but a brief shot of an EV1 available. So they kept showing Prius over and over and over again. For a story on electric-only vehicles, that simply didn't make any sense... especially since they never mentioned the plug-in upgrade available for Prius. To make matters worse, they never mentioned what electric-only vehicles were actually experiencing this supposed problem. You got the impression many were available and in people's garages. But in reality, there are almost none.

10-20-2008 **Complacency.** Do you think it will become a problem? I can easily see some sighing with relief under the impression lower gas prices are here to stay. That fear $4 brought won't be forgotten though. How much of an influence it makes on future vehicle purchases is a big unknown, but at least everyone now knows that it could happen again. The suggestion is realistic now. That's quite unlike the recent past, where some refused to acknowledge it ever being possible. I was growing tired of those ownership cost calculations under-estimating lifetime gas expenses; however, history has already repeated... How much good fortune does it take before something is taken for granted?

10-21-2008 **Urea Requirements.** 2 years ago, they was just proposals. Now, this is reality. Diesel vehicles requiring chemical after-treatment of emissions (to meet legal NOx criteria) will need to comply with strict requirements. For Mercedes-Benz Bluetec, that means having a 7-gallon tank to hold the ammonia solution and a 20-restart counter triggered when "low" is reached. Following those warnings, if that tank still isn't refilled, the vehicle is disabled. AdBlue is the product approved, which costs about $4 per gallon. Tank capacity is expected to last up to 15,000 miles total with refills recommended every 10,000 miles.

10-23-2008 **Owner Summary.** My 5-year anniversary with this Prius is today! There was lots of real-world data available, but getting at it for quick referral & sharing wasn't as convenient as I would like. So, as a departure from my usual approach, I created a document that's specifically about my own experiences. Since boldly go means trying new stuff, that's probably not so bad. Maybe it will convince others to do the same later. After all, the upcoming new model will usher in opportunities to start fresh for everyone. And they can have fun collecting data to share with others using ideas from this example... Owner Summary

10-23-2008 **Two-Mode Vue.** Their ASSIST model (using BAS with a 4-cylinder engine) has an EPA estimate of 25/32 MPG. Unfortunately, GM decided to use a 6-cylinder for their FULL model (which uses Two-Mode). Why? Do they believe consumers will really want to favor power that much more than efficiency? Whatever the case, the pre-production estimates are now available for this particular configuration: 28/31 mpg. With an expected price almost $4,000 more than Escape-Hybrid (which gets has a 34/31 estimate), how are they going to convince consumers to buy this Vue? The market now gives power a much lower priority... in favor of efficiency.

10-23-2008 **Aspen & Durango.** Both were suppose to be the big Chrysler debut into the hybrid market this Fall. Instead, there was an announcement today saying the plant where they were to be produced will close in 10 weeks. With sales of the non-hybrid version far from reaching intended goals, an abrupt halt isn't a surprise. What we don't know is if the non-hybrid production will resume somewhere else and if there will be any hybrids at all. Times are bad for guzzlers... any vehicle delivering only 20 MPG qualifies, even if it's a hybrid.

10-23-2008 **Most Cost Cutting.** Believe it or not, GM is now considering cuts to development programs aimed at improving efficiency. That's includes Cruze! Remember how that was expected to be their premiere high MPG non-hybrid vehicle? But when the goal is to preserve enough cash to avoid bankruptcy, sacrifices like that happen. Of course, it could be a futile effort. What happens once assets have been liquidated? Not having anything desirable to sell is what prevented them from falling deeper into the financial turmoil.

10-24-2008 **Diesel Still Expensive.** That's the clue of what's truly going on. With oil prices dropping to a close for the week at $64.15 per barrel and gas at $2.29 per gallon, you'd get a false impression without also looking at diesel. In other words, the demand for diesel remains fairly steady where gas consumption can much more easily be reduced. Consumers are parking their guzzlers and driving less. Commercial business cannot. The $3.34 for diesel seems to confirm that fairly well. During times of normal economic activity, diesel has been around 25 cents more... not $1.05 more.

10-25-2008 **Hybrid Balance.** Not too expensive. Not too slow. Not too small. Those are the obvious aspects of Prius that were taken into careful consideration during its design. And there's no reason to point out anything else, since the competition doesn't even understand those. Two-Mode from GM has been quite the opposite... way more than what the market actually needs. In fact, with the economy in a state of collapse, few even have it as a want. But the automaker's next attempt to achieve balance doesn't seem to be the right formula either. Two-Mode will soon be available in a more practical-size vehicle; however, speed is faster than necessary and the price (especially with respect to efficient) is just too much. Why don't they hear what consumers are now begging to buy in high quantities?

10-25-2008 **Too Little, Too Late.** Overlooking the obvious need now, GM is working toward a worthwhile *future* platform. It should be realistic within a decade. Neither the battery technology nor the production infrastructure can support that dream yet. Of course, there isn't a vehicle for it either. And with the financial turmoil they are in, major investments like that are simply too great of a risk. How will the effort be funded? It's a question foremost on the minds of Volt enthusiasts now. Something has got to give. With all the emphasis on 50 MPG becoming a realistic expectation from consumers, their current 30 MPG offerings don't cut it. What will they sell to sustain the business in the meantime?

10-25-2008 **20 Miles from Tupelo.** That $1.3 Billion production plant where Prius will be built is proceeding nicely. The expectation is it will bring employment for nearly 3,400 people in northeast Mississippi. That's good news nowadays, especially for the auto industry... in which some are really struggling. With all the discouragement lately, focus on efforts like this resulting directly from hybrid success is welcome. Growth is essential. Death of the high-profit guzzlers was inevitable. It's just too bad certain decision-makers didn't accept that reality sooner. Fortunately, this will serve as a great example of how others should proceed.

10-26-2008 **Snow!** It's coming down pretty hard this morning. Fortunately, the ground is warm enough still to fight off accumulation. But even so, it is a harsh wake up call for those hoping to enjoy Fall a little longer. For me, that means seeing the "snowflake" indicator illuminated and lower MPG. Darn! I wasn't quite ready for the ritual transition ceremony yet (switching to a heavy jacket). Oh well. Winter actually is fun with a Prius and today was an undeniable hint of what's to come.

10-26-2008 **Calendar for 2009.** That date-grid is available now. There are also 5 photo-collages, each featuring a different Prius themes. Combining those free downloads, you can print calendars for next year. Use them for offline enjoyment. After all, hybrids are becoming a hot topic and a computer isn't always handy. You most likely need a calendar anyway. Why not one with Prius photos, lots of them, like in this collection... Calendar "E"

10-27-2008 **They Had No Idea.** After all this time, some of the most prominent Volt enthusiasts (those fighting fiercely against Prius) have begun asking questions about how FULL hybrids work. It took the debut of the GM's Two-Mode Vue-Hybrid for them even address the topic. And to my surprise, they had no idea how that type of hybrid system actually worked. To my shock, one of the troublemakers was actually confused about them even having a second electric motor! In other words, credibility should never be assumed. They were allured by a promise without any background to justify it being realistic. I'm more than happy to shatter their dream. We need to provide high-volume, affordable solutions now. Expensive designs of the future are great, but they won't solve the trouble we have now.

10-28-2008 **That Felt Good.** An enthusiast for Volt got a little sassy today, attempting to paint a picture that GM gets scorned for too much engine power in hybrids but Toyota does not. He focused solely on the 0-60 acceleration time. It was obvious that he hadn't does his homework. He just assumed that speed increase came about by using a larger (6-cylinder) engine. He was wrong. I was upset. So, I responded in a way that would hopefully sting a little with this... That's because the fast 0-60 was accomplished with a smaller engine. Camry-Hybrid uses a 4-cylinder engine, delivering 33/34 MPG and a AT-PZEV emission rating at a competitive price.

10-28-2008 **Website Cards.** Having small "for more info" reference materials has always been quite handy. On the front is a photo, title, and lifetime MPG, along with a link to the website. At first glance, it appears as though I'm providing a business card. But upon closer inspection, the recipient realizes that my claim of it being a passionate hobby is genuine... because on the back is a graph showing monthly statistical data from my own personal experiences. It works great for keeping the conversation short without leaving them (typically a stranger that inquires about the Prius, seeing it in the parking lot) empty handed. It inspires them to take the next step by doing a little bit of research online. Long story short, I created a new one today... website cards 13 website cards 14

10-28-2008 **Diversification.** When someone asks this question, it makes you wonder: "*Why is it that Toyota can make money at 9.67 million vehicles and GM cannot at 9.7 million?*" Do you think my response to that will stir any constructive feedback... GM disregarded a basic business rule by putting all their eggs in one basket. Not only did they take that risk, they actually mocked the competition about it (search for "*stop gap*"). Toyota introduced several models of hybrid, Yaris, and Scion in the meantime. So when the guzzler market fell apart for entire industry, Toyota still had something else appealing to sell. GM has what?

10-29-2008 **Curious about the Green.** When the battery-pack state-of-charge exceeds 6 bars on the Multi-Display, the image color changes from blue to green. That way, there's no need to count. It's very easy to notice. This happens more often during the cold season (from the engine running more). It also seems to be happening quite often due to the car aging... late-life break-in... parts are looser. Whatever the case, with the temperature dropping lately, I'm definitely seeing green more than ever in the past. Oddly, that behavior is precisely what I'd expect from a hybrid taking advantage of every efficiency opportunity available. In fact, a newbie could easily consider it normal. Did Toyota plan that? Discussions are just now picking up on topics like this. There simply haven't been enough 5-year owners to observe & document behavior patterns yet.

10-30-2008 **Dishonest Claims.** With the onslaught of claims anywhere from misleading to just plain not true from the political arena lately, believing the same from automotive forums isn't that much of a stretch. They are so horribly vague and with virtually no follow up, simply saying whatever you want lands a chance of someone taking the statement at face value... no questions asked. That's pretty sad and we've been inundated with that nonsense lately. Thankfully, one of the two presidential candidates is speaking out about how the federal money for the automakers must be used for making fuel-efficient vehicles available, not to fund guzzlers. Guess which; here's a hint... it's not the one screaming "*Drill Baby Drill*".

10-31-2008 **Verifying Results.** Describing my attitude as "angry" would be putting it mildly. The administration about to step down was dead wrong about several hybrid-related topics. The most obvious was the promotion of guzzlers. Next was that hybrids would cause job loss. Then there's the complete disregard for smog & carbon emissions. All that's pretty clear now. We should have heavily invested in competitive efficiency technologies years ago. The market is absolutely desperate for vehicles like Prius and Camry-Hybrid at this point... yet we are left waiting still. There is so much opportunity available. But with leadership (political & business) that had other priorities, harm resulted. People are suffering, despite all the warnings. Attempts to prevent this fell on death ears. What will the new administration do?

11-01-2008 **Some Hope.** Next year will bring the new Prius and increased production-volume from Toyota. The new Insight is coming from Honda, with a debut in large quantity. And finally, believe it or not, Ford will be delivering the very long awaited Fusion-Hybrid. It's suppose to be pretty competitive too (a battery-pack better than Escape-Hybrid and optimized for efficiency more than Camry-Hybrid). The market will be swinging more in favor of "*encouraging*" hybrid configurations. The nonsense from some particular hybrids that still used lots of gas and don't improve emissions is being exposed as "*not actually helpful*". In other words, there is some hope.

11-02-2008 **Remember: Battery Life?** That was the big misconception when hybrids were new here... enough to convince the poorly informed that the technology wasn't worth the cost or effort. You don't hear arguments like that anymore. Proof is overwhelming, showing they were quite incorrect. The real-world data from ordinary consumers ended anti-hybrid fights. In fact, it's even hard to remember who some of those troublemakers were... since they've disappeared. Forums only get an occasional troll post now, no on-going attacks anymore. And the response typically backfires, stirring interesting in hybrids rather than souring it.

11-02-2008 **Remember: Payback?** The abundant cost-analysis write-ups were enough to make anyone crazy. Even the constructive ones weren't objective. They'd misrepresent Prius by never mentioning the features that came standard which were not included with the vehicle it was being compared to. They pretty much never assigned any value to the reduction of emissions or consumption either. It was always about how much money you'd save on gas. And with that, they'd claim gas prices were a constant. Needless to say, the climb to $4 brought all those arguments to a screeching halt.

11-02-2008 **Remember: Crash Safety?** All the nonsense about the SUV being safer ended in a wonderful way. Crushing what you smash into or climbing over the guard-rail wasn't appealing to many people. The fact that impact tests showed poor results didn't help either. But the beauty of all that was when accident-avoidance started getting lots of attention. Then when official ratings were finally published, arguments in favor of SUV safety ended. Turns out, not crashing in the first place is really important. People prefer staying out of accidents. Go figure! Smaller, nimble vehicles make more sense.

11-02-2008 **Remember: Global Warming?** I always found it ironic that "Climate Change" was mislabeled. The effect of warming is weather system instability. Heat is energy. Excess energy leads to more storms and stronger storms. Cold is part of that. So is moisture. That means having really nasty winters too. And sure enough, all that is what we have been witnessing. Of course, for a theory to survive so long before being proven is credit-worthy anyway, even if the original name wasn't well coined. The point is that people needed to consider the carbon-related pollution they were causing. And now, that is finally happening. Denial it isn't smart. After all, reduction results in lots of hybrids and investment in renewable energy sources. What's wrong with that?

11-02-2008 **Remember: Efficiency Estimates?** A major problem which plagued hybrids from the very start was that most people had absolutely no clue what the efficiency of their vehicle actually was. They just assumed based on either a small random sampling or those ideal-condition numbers on the window-sticker. So, negative influences like speed & temperature went without notice for decades. It took years of complaining before requests to revise the official estimate system were finally taken seriously. Then reality sunk in for consumers. The benefit of hybrid technology was much easier to see. Phew!

11-02-2008 **Remember: Emission Ratings?** The result of the MPG awakening has been acknowledgement that smog-related emissions are a problem too. Some of the thanks for that can be given to "*clean diesel*" promotion. People are questioning why the new diesel vehicles aren't as efficient. They discover that the clean claim is just relative to prior diesel vehicles... that adding cleansing equipment to make them compliant with the maximum pollution level allowed causes MPG to decrease... making certain hybrids even more appealing. The attention is long overdue. Our health is obviously affected by what we breathe and population increase along with longer drive times is making more areas dirty. The problem isn't limited to just a few major cities anymore.

11-02-2008 **Remember: Employee Discounts?** This was the first big sign that something was seriously wrong. Automakers saw inventory build up... but only with expensive guzzlers, which was the source of most profit for some. Sitting in lots cost money, making a bad situation worse. Production was slowed. When it became obvious that more drastic steps were needed, prices were significantly reduced. That basically destroyed the market. Waiting for the next major discount opportunity became the norm. Continuing rises in the price paid at the pump made the situation a nightmare. Little profit changed to the loss of large sums of money. No solution readily available spelled tragedy. Then the economy fell apart... essentially killing any hope of depending on inefficient vehicles for income anymore.

11-02-2008 **Remember: Going Yellow?** This episode in automotive history is just plain embarrassing. What in the world were they thinking? The "*Live Green, Go Yellow*" promotion of corn-based E85 was obviously a desperate move to save the struggling guzzler market, since the support for E20 would have resulted in far more ethanol actually replacing gas. But the plan in farming regions (like Minnesota) was to transition the existing infrastructure from corn to bio-waste while improving refining process at the same time. It was a long-term project not ready for expansion to the rest of the country yet. Automakers decided to rush. The result was disastrous.

11-02-2008 **Remember: Saving Gas?** This greenwashing approach was pretty much DOA (dead on arrival). Thank goodness! It came from the Two-Mode hybrids, which heavily promoted the idea. The enthusiasts were especially deceptive. Rather than focusing on the quantity of gas actually consumed, they reversed thinking to make you concentrate on how much was not used instead. They call that "*saving gas*" in a sad attempt to justify hybrids that still guzzle. Since when is 20 MPG appropriate for anything other than work vehicles? Something like that should never be driven on a daily commute, period. Unless you are actually using all that power available, it is a waste... not a savings.

11-03-2008 **October Sales.** The results weren't much of a surprise. Prius was flat with 11,804 sold. That's not bad at all, but as the industry leader more would be nice. 2,792 for Camry-Hybrid. 1,022 for Highlander-Hybrid. 615 for RX400h. Two-Mode status remains a mystery. I poked enthusiasts for what to expect from it in 2009... and none answered. That's quite a change from a year ago, when they took the smug crown and declared victory. Anywho, the Tahoe, Escalade, and Yukon SUVs that use it saw sales of 372, 230, and 193 last month. So what comes next should be very interesting. As for the Vue, Malibu, and Aura BAS hybrids, sales of 354, 325, and 25 make you wonder about their future too. Ford sold 1,997 of their Escape & Mariner hybrids combined. Honda sold 1,621 of the Civic-Hybrid.

11-04-2008 **Congrats!** Obama won the presidential election, by a very large margin. Change is coming. Yeah! The nightmare of the current administration is almost over. Already, the E's have been getting a lot of attention... quite unlike what we've had to put up with. Energy, Economics, and Environment will actually get more than just brief mention from time to time. Something will finally happen now. You can only endure so much "*we're looking into it*" before it becomes clear that there won't be any action. We were told how important those E's were, but almost nothing ever came as a result. They were just saying what we wanted to hear. But now with such heightened awareness from all the campaigning, we have real change to look forward to. Hope is on the way!

11-05-2008 **New Jargon.** You can't help but to be amused from reading stuff like this: "*My L5 dropped to 138.*" I knew exactly what that meant. L5 is how the Prius plug-in upgrade from Hymotion is identified. 138 is what the MPG was using it. And the "*dropped to*" was a sarcastic exclamation of disappointment. It's the kind of thing you see and realize the old world of being clueless & careless about efficiency is being replaced by a new thinking from a new world with displays on the dashboard and aftermarket upgrades.

11-07-2008 **$61.04 Per Barrel.** Watching prices drop has been amazing. It's such an extreme compared to what was happening 6 months ago. Of course, no one expects this to be permanent. Most people are just enjoy the $1.99 per gallon gas. They doubt it will climb to $4 anytime soon, but staying this low is a dumb bet. That's a gamble too risky to take anymore... especially since diesel is still at $3.15 per gallon. Time will tell. It's probably not going to take long either. Financial trouble with the automakers is constantly in the new now. The market for guzzlers has collapsed, ya know.

11-07-2008 **Volt Propaganda.** Now that we have a president-elect who has expressed the desire to support fuel-efficiency improvements, there's a sudden flood of articles & advertisements promoting Volt. They paint a very rosy picture, as if no technical or cost challenges remain anymore and it will soon return GM to profit. The worst was a television commercial featuring the head-engineer who spoke of the vehicle like it was something everyone would be driving soon. Don't they realize the excitement will lead to disenchantment when consumers discover how long the wait will be?

11-07-2008 **History Recap, part 1.** Incorrect event date quoting is what seems to be the biggest problem when people attempt to recall events from the past. Today, it was the belief that Japanese hybrids entered the market in 2004 in response to the money Washington provided American automakers with in the "*early part of this decade*". With year references that incorrect, timelines are obviously quite distorted... making constructive discussion virtually impossible. Needless to say, with mistakes of that magnitude, you have to wonder what else has been assumed... or worse, someone researched and came across a source which provided that erroneous history... which sadly, could be spin to intentionally misrepresent. Whatever the case, it's disturbing. You can help be to feel quite concerned when reading something like that.

11-07-2008 **History Recap, part 2.** An urgent need to provide corrections would have been putting it mildly. Here's my attempt... Clinton/Gore established PNGV back in 1993 to fund Big-3 research to develop 80 MPG cars ($170 million per year for 10 years). Foreign automakers were denied the opportunity to join in. Toyota, worried they would have no way to compete, found their path to success. They surprised the world with the debut of Prius on Oct 1997. But it wasn't a prototype, which the PNGV project wasn't even scheduled to deliver until 2001. It was the actual production model, ready to be sold. Sales began Dec 1997. Honda followed with their first hybrid 2 years later. By 2002, there was no word of any domestic competition and gas was less than $1 per gallon. Bush/Cheney quietly pulled the plug on PNGV in favor of a hydrogen initiative without deliverables for 15 years. It was a move that simply made no sense even back then, and now it is turning out to be a horrible decision with dire consequences. They killed the development funding, but none of those automakers cared. They embraced guzzling trucks instead. Now we're rapidly approaching 2009 with absolutely no idea how GM or Ford can survive. Cash reserves are disappearing fast and they still have nothing competitive to sell. What in the world is going to happen?

11-08-2008 **Denial? Arrogance? Stupidity?** Does it even matter anymore? Regardless of cause, ensuring that rescue money GM, Ford, and Chrysler get from the government is spent wisely is a huge concern. Those past attitudes reigned strong when there was money available and the economy was thriving. But with cash reserves vanishing and no hope of economic turn-around soon, the need to deliver vehicles appropriate to this new market is absolutely essential. A hybrid SUV that only delivers 21 MPG just plain does not make any sense. Heck, even 30 MPG isn't enough. Lots of affordable cars that offer efficiency in the 40 to 50 MPG range is an absolute must. We need millions of them now. When the "*Manhattan Project*" of the 21st Century begins, will the effort be on the production of large quantities of what truly uses less... or will it be greenwashing in the name of "*saving gas*" to allow continued waste & reliance without concern for what comes next... just like what got us into this mess in the first place.

11-08-2008 **The Loss Numbers.** Do you really want to know? It's quite an ugly situation. GM lost $2.5 Billion last quarter and spent $6.9 Billion, taking the cash reserve is down to $16.2 Billion. Do the math. How long do they have left? To make matters worse, when the market loses confidence in an automaker, sales drop... making an already bad situation even worse, the amount of money being lost increases. No one can argue that a repeat of the disaster from the 70's hasn't happened again. The evidence at this point is absolutely overwhelming. In fact, this time it looks worse... since even Toyota must alter some plans. Fortunately, their investment to significantly increase hybrid production is already well under way. Looking back at how intense the fighting was against hybrids like Prius. Seems silly now, eh? In fact, finding those that claimed the technology was a poor choice may be quite a challenge at this point. It was a very wise decision. The end of the age of guzzlers came to a screeching halt, far more abrupt than automakers were prepared for... and some not prepared at all.

11-08-2008 **Two-Mode Future?** When I ask about this topic with GM supporters... "*What should we expect for 2009?*" ...the reaction comes in two forms. One is to consider the post an attack and call me a "*troll*", implying my question isn't the slightest bit constructive and its only intent is to cause trouble. The other is the checkmate silence. They are well aware that nothing good can come from a reply; it will only come back to haunt them later. Both kill discussions. Two-Mode ended up being too expensive and not as efficient as hoped. How the design could be altered to reduce cost and improve MPG is not anything enthusiasts want to address... because that would be admitting the Prius supporters were correct. It's a tough position to be in. A car like Malibu or Aura that uses an adaptation of Two-Mode is desperately needed. How long do you think it will take before that is finally acknowledged by those most stubborn deniers?

11-09-2008 **Financial Recovery, purpose.** The discussions are abundant now. Predictably, the Volt enthusiasts haven't been too receptive about the reality that plug-in technology isn't ready for the mainstream yet. But I tried to stir some constructive feedback from them... What will the money be used for? Quickly providing a high-efficiency vehicle that's both affordable and available in large quantities should be the highest production priority. For GM, that means Cruze. Next would be a non-plug hybrid. Returning to profitability is the purpose of this money, right?

11-09-2008 **Financial Recovery, time.** How do you respond to this: "*To put everything into perspective, remember we as a nation spend $730 billion each year to drive that first 40 miles each day!!!!*" Talking about not facing reality. It's like the recite of a promotion pamphlet. What in the world is going to sustain the business until plug-in vehicles are ready (with heavy emphasis on battery availability) to address that issue? I tried to get the discussion back on track... Time is a perspective forgotten in that statement. The evaporation of the guzzler market has left GM without a source of revenue here, something profitable to sell in the meantime. GM must stop bleeding money before Volt becomes the primary focus. Volt is an investment for the long-term, not an avoid-bankruptcy solution.

11-09-2008 **Financial Recovery, choice.** That didn't help. It looks like focus is turning into defense of the automaker's past, rather than what needs to be done quickly for the majority. It's either one extreme of another. A happy medium doesn't seem to be part of their mindset. And that makes sense, coming from a market which thrives on the advertisement of abilities typical consumers will never use. The post asked: "*Why does everyone say that GM produces Gas Guzzlers?*" And I answered with this: They do… and so do all the other automakers, including Toyota. The difference is that GM doesn't offer anything else. 30 MPG Highway is as good as it gets. Where's the option to purchase a 50 MPG vehicle? That absence of choice is the problem.

11-09-2008 **Financial Recovery, merit.** Consider merit of the efforts being proposed. It's easy to picture. Just relate it to a grading system... Selling enough status-quo vehicles to get by on their own would earn a "D" grade, since that's pretty much the minimum required. "C" would be making a profit with modest sales volume. "B" would be fairly competitive, but with little advancement forward. Traditional vehicles are a dead end. Designs taking advantage of batteries & motors are future. To watch extent is the question. "A" grades come from vehicles that significantly improve both efficiency & emissions at a competitive price in large volumes. Of course, that makes it clear how Volt doesn't provide financial recovery.

11-09-2008 **Bluetooth At Home.** It's pretty sweet! I shut off the Prius. My cell-phone disconnects from the car. My new system at home detects the cell-phone, enabling all the cordless handsets in the house to use that network for calls. There's no traditional service, yet I now have a setup that works like a land-line anyway. The configuration is great for me with just a single phone. For those with a family, you just add another cell for shared home calls. Gotta love it. Now its time for a drive... The home system automatically disconnects and the Prius takes over. Isn't technology great!

11-09-2008 **Plug-In Two-Mode.** When both the plug-in & non-plug versions of Vue using Two-Mode will be available have been questions of much attention lately. Today, a little "clarification" about the plug-in version came from GM. It was always thought that rollout would begin before Volt, since 2010 was so frequently mentioned in articles. Well, not anymore. The official word is "*debut sometime in 2011*" now, since priority is being diverted to Volt instead. That isn't much of a surprise considering how out of favor SUVs have fallen lately. But it does seem to reinforce Toyota's original stance on Li-Ion battery powered vehicles. Of course, I doubt any GM supporters will acknowledge the rollout-speed irony. Complex production can only move so fast.

11-10-2008 **Grille Blocking.** It's hard to believe that less than a week ago the temperature was in the 70's. But that brief reminder of what Summer was like vanished in an instant. I've seen the just 27 F degrees three days in a row now. So, the decision to block the Prius grille again was an easy one. True, it didn't actually do much with respect to MPG compared to all those previous years I hadn't done that. But the heater sure cranks out the warmth well that way. And with only a few minutes of labor and $2 for materials, why not? The upper-grille is now blocked entirely and two of the five slots in the lower-grille. Later when the temperature really drops (here in Minnesota), I'll insert more of than foam pipe-insulation.

11-12-2008 **Hypermiling History.** Now there's an interesting topic. The sighted definition only dates back 4 years. But its origins go back much further. It was a dark time. Long ago, before we knew anything about HSD. Gas was cheap and the SUV was rapidly growing larger. I spent much of my time on hostile automotive forums, where there was a strong anti-hybrid sentiment. My arguments were based on the real-world data I was actively accumulating and about the potential the platform had to offer. It wasn't pretty. Hypermiling originated as a method to undermine the success of hybrids. Traditional vehicles were used to squeeze out MPG higher than the Classic Prius and emissions were totally disregarded. Those online exchanges were frustrating. The host enjoyed all the attention our posts drew, so the combat went on... and on... and on. But after 1.5 years of that, the opening questions was finally declared answered. Hybrids were indeed up to the chore. Want to know more? Read these personal logs. There are hundreds of entries documenting what happened, as it was happening, to give you a picture of those times in a way that looking back with a summary simply cannot do justice.

11-12-2008 **Bailout Desperation.** Not too long ago, Detroit automakers were saying the money needed from the government would be a loan. Now, just a little over 2 months later, the story has changed. It has become overwhelmingly obvious that regaining a sustainable business will be a challenge in itself, so the thought of paying back it is totally unrealistic. It's a self-inflicted disaster, terrible business practices for years led to this inevitable point. Those approving the bailout see that and want to hold automaker management accountable. The original $25 Billion was marked for use of retooling only, to support improved efficiency. That's not enough for this additional $25 Billion. Fear is growing that it will be used inappropriately, to pay those that don't deserve it rather than spending it on efforts to get the business moving again. We'll find out soon.

11-14-2008 **Two-Mode Delay.** It appears to be official. The 260 horsepower, 0 to 60 in 7.3 second, hybrid Vue that uses Two-Mode is delayed. Rather than sales beginning in about 2 weeks, arrival is postponed until the end of first quarter next year. That timing is rather suspicious. Do they actually need more time than that? Is this a PR stunt? With the "Earth Day" celebrations so close, further delay would really be bad press. But a debut at that time would draw good press. Last year, rollout delay blame was placed on the battery-pack. Since Two-Mode isn't new anymore and they should have made a great effort to prevent reoccurrence of battery problems again, what's really going on? Is everything crippled even worse than we had thought due to the financial crisis? Of course, it could just be that powerful SUVs don't sell well even if they are a hybrid.

11-14-2008 **$57.04 Per Barrel.** The weak & uncertain economy is stalling everything, most notably consumption. So, prices keep dropping. Seeing that for a closing price of oil and actually driving a gas station advertising $1.89 per gallon sure makes you think. Of course, diesel is at $2.99 per gallon. Over a dollar difference indicates struggle still. But signs of that are all over the place anyway. It's pretty clear that change is abundant. Where this leads is quite uncertain. Though, you can confidently predict the SUV market will never be the same.

11-15-2008 **Saving Volt, panic.** That mood was obvious. Online posts from the Volt enthusiasts were record-setting yesterday. They see the writing on the wall now. What's needed from GM is the same goal Toyota set a decade ago... to deliver a 50 MPG vehicle priced in the low 20's. A product like Volt addresses the high-end of efficiency and Two-Mode the low-end. Problem is, those are both expensive extremes. There is nothing available in the middle, where a majority of vehicle sales come from. Lack of diversity is one thing, but to neglect the bulk of the population is another. Consumer expectation isn't a drastic reduction of consumption immediately. They want taxpayer provided bailout money to be used for retaining employment. Many jobs are now at risk from not planning delivery soon enough. Volt had an aggressive development schedule set, which meant 4 years even before the first one became available. That was too slow back in 2007 when work began. Now, it is at serious risk of being significantly cut back, since the project does nothing to help with the current financial disaster. Yet, enthusiasts insist that's not the case.

11-15-2008 **Saving Volt, reality.** Options are limited. Traditional vehicles are a dead end. Subsidies can be used to keep that inventory moving. But something else must be delivered soon. The best option I can think of for GM is to quickly adapt Two-Mode for smaller more efficient vehicles. Since they have done a surprisingly good job of development for larger guzzling vehicles, much of the operational aspects are already addressed. Shrinking the existing design is a whole lot more realistic with time so limited than inventing an entirely new platform like Volt. After all, the ability to easily integrate (since all the moving hybrid components contained in the transmission housing) was what they touted early on anyway. There isn't a new market to establish either. Toyota & Ford have already taken care of that, with their FULL hybrids on the road for many years now. Bite the bullet and embrace 4-cylinder engines! The resistance to that change is the underlying problem with GM. They know high MPG from those 4-cylinder hybrids would kill the sales of their vehicles that once brought in large profit. But that's the reality they now face.

11-15-2008 **Saving Volt, purist.** The self-defeating attitude of certain enthusiasts could ultimately be its downfall. They latched on to the "*40-mile*" mindset early and never wanted to acknowledge anything less, despite how much of a price penalty that requires. Why not offer less? And now which such urgency to deliver something competitive, their refusal to compromise in any way is a sign of trouble. Of course, this is the same group of individuals that didn't want to admit Winter driving would make the sought after electric-only range pretty much impossible. In short, this is the same downward spiral we saw last year from Two-Mode enthusiasts with the "*saves more gas*" nonsense... which has proven to be a lost cause.

11-15-2008 **Saving Volt, effort.** Focus should be on quickly repairing the financial woes of the Big-3. These automakers must begin selling practical vehicles to keep the business alive. Investing heavily in Volt simply doesn't make any sense. There's no reason to kill the development program, but placing the immediate survival on it makes no sense. In other words, deal with the excess inventory of the guzzlers and begin the push of sensible-sized vehicles. That way, consumers will be more receptive to Volt when it does finally rollout. Proposing an effort become responsible does not mean abandonment of plug-in technology. Yet, many enthusiasts genuinely fear Volt will somehow be forgotten if the spotlight isn't always on it. Of course, their effort to fight FULL hybrids has always indicated an all-or-none attitude. Someday the SERIES hybrid will join in. But making that happen certainly shouldn't be the priority now.

11-15-2008 **Saving Volt, BAS.** Remember how that mild hybrid design was hoped to quickly fill the needed efficiency void? You know, masquerading as product diversification? Well, that obviously didn't work out. Saying it was "*too little, too late*" would be an understatement. It offers only minor MPG improvement and no smog-related emission reduction at nearly the same system cost as Prius. And with the technology in Prius so well proven now, it makes you wonder what GM will decide (or be forced) to invest in. I'll certainly be glad when clear direction is taken. These personal log entries are making me crazy... noticing how well they reflect the craziness that's been going on lately. What should be saved? When should we expect results? How much progress will actually be made?

11-15-2008 **Saving Volt, hydrogen.** Wasn't that suppose to be the future? None of this saving talk even mentions it. Neither the Volt enthusiasts nor the anyone from GM has made a peep about fuel-cell technology. Heck, we aren't even hearing anything from Congress about it. All that hype in the past has dissolved into nothingness. Supposedly hybrids were only a "*stop gap*" technology, not worth the effort. The tables certainly have turned. Now things look very different... for them, but not Prius supporters... who feel vindicated. We always knew an affordable solution for the masses wasn't that difficult.

11-15-2008 **Saving Volt, variety.** Tired of the endless tangents, I finally interjected with the clearest message I could manage in that particular setting. Who knows if it will make any difference. But at least it puts me on record with the problem & need as I see it and leaving it open for constructive feedback... Being competitive (having an appealing product where large quantities will be sold at a profit to sustain the business) means a diverse offering, not just 30 MPG vehicles and Volt. An affordable vehicle (low 20's) that delivers 50 MPG is missing. When will that market be provided with a choice from GM?

11-16-2008 **Misleading Claims.** What to know why I get worked up, its Volt claims like this: "*As we know, the car will drive for 40 miles on battery without gas (charge-depleting mode), and then 50 mpg thereafter should it need to, up until the point it is recharged (charge-sustaining mode).*" That's propaganda, clearly seen as misleading to anyone that knows how the system actually works. But of course, the typical person reading that would have no idea. There's no disclaimer noting that those numbers are really just ideal-condition representations. In the Winter, the engine will run briefly to warm-up the system when first started. So, no matter how much electricity is available in the battery-pack, some gas will be used anyway. And then of course, the electric heater will run to keep you warm as you drive. Obviously, use of electricity that way takes away from the overall range available. As for the MPG, that value was only provided as an estimate for the original smaller 3-cylinder engine. The new larger 4-cylinder engine isn't expected to be as efficient. Needless to say, the hype is frustrating. It sure would be nice to have real-world data available.

11-16-2008 **Some Progress.** Finally! A teeny, tiny bit of constructive discussion suddenly appeared. The topic of timelines has drawn some attention. That's progress. Those "whether or not a federal bailout is a good idea" threads weren't leading anywhere. Not being well informed about the past was likely the underlying reason. A good example of that is when an engineer figures out how to deal with all the technical challenges but doesn't take any of the market factors into account... like resource availability, consumer awareness, competing technologies, and the resistance to change. They have a huge impact on rollout & expansion timelines and have absolutely nothing to do with anything related to engineering. Heck, even the usual "wait & see" delay is a big problem. Mainstream consumers wait for the early-adopters to see what experiences they share before considering a purchase of their own. Progress is slow, even with the best of intentions. To help progress along, we need to address and minimize those slowing factors. Unfortunately, it doesn't speed up the process as much as you'd hope... especially when as much money as a vehicle is involved.

11-17-2008 **Clearly Tell Us.** It's like talking to the wall. You ask what the automaker's plan is and someone replies with this: "*Stand up and fight for your country!*" No wonder we are in this mess now. The idea of big guzzlers being "*good for the economy*" was actually believed. And now that it has been proven an awful decision for the long-term, they don't know what to actually do about it other than proclaim loyalty. My response, which I doubt will be taken seriously, was this: Some of us have been for 8 years now... watching GM race in the wrong direction as they mocked hybrids, claiming hybrids were a terrible business choice. Now it is obvious that was dead wrong. Investing in the future should have been a high priority all along. The reign of engine-only vehicles is coming to an end, and it's being replaced by a variety of different designs using batteries. The plug-in type will not be dominant for a number of years still. What will be sold in the meantime is a question which should be answered immediately. What will be targeted for the mainstream, those millions of vehicle purchases our economy depends on each year? The bailout/loan money must come with a commitment, something very clear... much better than the vague intentions we've had from the Big-3 so far. Set solid goals of quantity & price. None of the ever-changing nonsense anymore... since it will be taxpayer dollars they'll be spending now. Clearly tell us what to expect and be willing to accept the consequences of failing to meet those stated goals. Defining deliverables for 2009, 2010, and 2011 to measure progress is what the fight is about now.

11-18-2008 **Not Product Lineup.** That was in the claim made today by the CEO of GM to Congress. The automaker wants money and doesn't believe there was a failure to plan appropriately with respect to what they build & sell. Legacy costs are most definitely a problem. But when the questioning came to dealing with higher gas prices, there was a definite evasion taking place by sighting operating expenses in response. There was fierce resistance to addressing the restructuring benefits bankruptcy offers. In other words, it's ugly... really ugly. They obviously have little to sell that's competitive in this newly emerging market. So no matter what effort is expended to remain solvent, reality is that it won't last. Change is required to ensure employment continues. Guzzlers are a dead-end.

11-19-2008 **Disappearing Foes, undermining.** I've written quite a bit over the years detailing my encounters with those fighting progress. It started with anti-hybrid undermining. A certain few made claims that were much, much easier to believe back then than they are now. In fact, looking back those statements now appear absurd. Given a few more years, I could envision people asking: "*How could any believe that?*" But with hybrids so new, gas so cheap, and little concern for dependency or environment, it didn't take much effort to convince people that they were wasting their time & money. Fear of change was the real problem. Some automakers were clinging to the past and supporters were willing to ferociously defend that position.

11-19-2008 **Disappearing Foes, fighting.** Needless to say, those foes are disappearing. Fighting hybrids simply doesn't make any sense anymore. The technology is now well established. Reducing emissions & consumption can indeed be achieved in an appealing & affordable manner. Fighting that in this new economy of ailing automakers is pretty much reputation suicide. As a result, the troublemakers have chosen silence or... believe it or not... given an endorsement for Prius. It's more than just a little odd seeing that white flag being waved. Surrender. Wow!

11-19-2008 **Disappearing Foes, ironic.** I certainly welcome this change. The nonsense they put us through was horrible. And yes, there was still had one whom the need for payback was justifiable. Rather than him fighting hybrids all together, he was always in strong support for Two-Mode. The catch was that technology would only be used on the largest of guzzlers. He was an extremely active participant (and yes, a GM employee) on the big GM forum. Anything quoted with respect to Prius made him furious. So, I could help but to respond to discovery of this: "*I left because this site discusses politics and other mundane crap more than cars.*" He absence made me wonder. The post was from a brief return to check for personal messages. I was elated and could helped but to respond with this... My push for you to discuss implementation of Two-Mode in 4-cylinder cars like Malibu & Aura was how I got added to your ignore list. Ironic how that is precisely what GM now desperately needs to do, eh?

11-19-2008 **Disappearing Foes, rejoicing.** The way some deal with change is fascinating. All of a sudden, the Prius supporters are discovering that much of that resistance we had grown use to combating is gone. The abrupt shift away from guzzlers, due to a "perfect storm" in favor of hybrids was quite unexpected. We're rejoicing and those who had once stirred trouble are disappearing. Who would have thought it would have come to such a dramatic conclusion. The next chapter hybrid history will be quite different that the prior now ending. Just two months from now we will be facing a very different world. It's a harsh wake-up call for some and a long-time dream for others.

11-20-2008 **Let Them Die, planning.** What a strange thing to be hearing & reading. Arguments concerning TARP (Troubled Assets Relief Plan) have been that the Big-3 automakers don't deserve a bailout. It's clear they have suffered from heavy personal expenditures, but that was a known problem for many years and there wasn't much effort put forth to even remain competitive let alone overcome those challenges. Planning for this future was absent. One reporter put it this way this morning: "*However these auto companies aren't victims of a cutthroat, unrelenting economic downturn. The Big Three are eating dirt because they have failed to embrace technology and manufacture desirable and efficient vehicles for the modern world.*" Then he went on to stress the point this way: "*GM just launched its 2009 Cadillac Escalade Hybrid, which I imagine is like a cigarette that prevents lung cancer.*"

11-20-2008 **Let Them Die, denying.** There is a mixture of joy & disappointment coming from this mess. It could have been avoided entirely. Back in 1999 when my interest was caught, Prius was already on the market and PNGV was on the way to delivering 80 MPG prototypes. Heck, there were even electric vehicles on the road. Saying a detour was would be a drastic understatement. These automakers raced as fast as they could in the opposite direction. It seemed pretty clear that was their finally opportunity to indulge. Switching to Prius-like hybrids later was inevitable... for the market. They had no idea the risk of bankruptcy that was being taken. I knew how much was at stake, but for favor to shift so quickly surprised the heck out of me. The impression was they'd reluctantly change kicking & screaming. But that hasn't happened. Still denying what the next step forward (failure to accept fate) isn't a surprise.

11-20-2008 **Let Them Die, begging.** That lack of acceptance from the CEO's of the now crippled automakers is what frustrates. We all expected them to propose plans for next year in their statements made to Congress yesterday. Instead, it was just begging for money to remain solvent with. Paying the bills so production doesn't come to a complete stop was the only concern. It was sad. How long will they survive with an attitude like that? Won't we just see the same problems this time next year? Do they really believe the upcoming concessions in worker expense obligations will be enough? What do they expect consumers to purchase from them?

11-20-2008 **Let Them Die, adapting.** The number of jobs that could be lost as a result of this failure to have products ready for the future is frightening. Not being available in the volume needed is one thing, but to still be deep in the development phase is another. Ford can actually invest bailout money for retooling, to build lots of Fusion (and Milan) hybrids. That could supplement the loss of SUV sales fairly well... in a timely fashion. GM, on the other hand, has nothing competitive and won't for years. Volt is 2 years away from initial rollout, which will obviously need some refinement afterward before it will be realistic for the masses. Adapting Two-Mode to smaller platforms shouldn't take as long, but it requires the desire to actually do it. So far, there has been no interest. Chrysler has nothing. They are already considered insolvent. What they'll do is totally unknown.

11-20-2008 **Let Them Die, seeing.** How clueless the leadership in those failing automakers was had been a big question... until recently. Focus has shifted to outcome. The situation was best described by a British publication with this: "*If the car giants fail, the world will witness Darwinian economics at its most ruthless.*" Who & Why isn't that important anymore. What the heck they're going to build & sell later is getting the attention it is due... finally! The stupidity of telling us "*It's not more than what you need, it's just more than what you are used to.*" must end. How long did they think advertising guzzlers would actually work? After enough time, consumers naturally gravitate to what's new. After all, that's how the SUV market grew. Not seeing that will spell their doom. Will they really mess up that chance?

11-20-2008 **Let Them Die, lending.** A big factor contributing to the more recent automaker problems was credit availability. Banks not lending out money to consumers made an already bad situation even worse... which unfortunately, has turned out to be enough to push them over the edge. Survival comes from selling lots of the well-balanced vehicles. You know, not too big, not too powerful, not to fancy, not to expensive, etc. Those are the vehicles that have a ubiquitous existence. There are many of them and they just work. People drive them in comfort & confidence to get from point A to point B without much thought. It's treated as an appliance, not an object of pride. So, reasonable payments is absolutely vital. Unfortunately, some people can't get a loan of any sort now. What was once considered good credit is now being second-guessed as risky. Money is not being exchanged as much anymore. This change in attitude is really harming the market.

11-20-2008 **Let Them Die, proposing.** There is one other option available, but some Volt enthusiasts fear it. Offering a configuration of that SERIES hybrid with a much smaller battery-pack would reduce the price to a competitive level. Supposedly, the current design in development will deliver 50 MPG once the battery-pack is depleted. The resulting weight reduction would further contribute to that. Resistance to a proposal like that would come from the top. It wrecks some of the original reasoning given as justification for Volt. The change could be considered as giving up, rather than expansion of the product. If too many people find that "lite" version really appealing, work on the more expensive higher-capacity model could be delayed. After all, the market isn't receptive to efforts that risk a lot of money anymore.

11-21-2008 **Fusion-Hybrid Details.** Well, looks like Ford has been paying attention, though reacting reluctantly. The price for this upcoming new hybrid will be $27,270 and will compete directly with the $26,150 Camry-Hybrid. It has been configured to favor efficiency, rather than power. It's 155 horses is quite a bit less than the competition's 187. So, towing may not be realistic. But then again, they do have Escape-Hybrid available. Next will hopefully be some effort to deliver something similar to Prius. The engine in this new hybrid will be 2.5 liters, so squeezing out greater efficiency using a smaller more aerodynamic body with a less displacement shouldn't be that much of a stretch. In fact, it should be pretty darn realistic. The only other thing we really know at this point is they are making a big deal out of the their new stealth threshold of 47 MPH now. That's quite an improvement over the previous 25 MPH limit.

11-21-2008 **Ford Arguments.** Not everyone is thrilled about Ford's step forward, including some supporters. Hearing this on the radio this morning stirred some old feelings of anger: "*They do make fuel-efficient vehicles. Focus can deliver 37 MPG on the highway. Try delivering a refrigerator in a Prius.*" I realize it's just more resistance to change. When Ford does finally deliver a 50 MPG vehicle, it spells market distaste for their non-efficiency vehicles. The obvious disregard for non-highway MPG and emission-rating is a clear indication of not being objection. But what's with the absurd refrigerator argument? How many do you actually buy in a lifetime of a vehicle? And wouldn't you want the store to deliver it, since they'll haul away your old one at the same time?

11-22-2008 **Demanding Proof.** Congress did not accept the automaker pleas for money. The CEO statements were way too vague, not containing any plan for how the loan would be repaid. The burden of returning the taxpayer money afterward was not seen as being taken seriously. In fact, it sounded much like business as usual. The automakers portrayed the situation as only a matter of overcoming legacy expenses. They attributed nothing to the fact that many of their vehicles no longer fit what consumers want to buy. In other words, just like I have been begging for, the politicians want to know what the heck they intend to sell. Remaining viable means making progress on fuel-efficiency models. Price reduction tactics are harmful in the long-term. Automakers must embrace products that will be both competitive & sustaining. Neither of which has been their business practice up to this point. So demanding proof showing how that will change is absolutely vital; otherwise, the federal money will not be provided.

11-22-2008 **More Grille Blocking.** Doing it in stages certainly is more informative. In this case, the partial block of the lower-grille provided interesting data on my commute to work yesterday. At the thirteen mile of my 19-mile commute, the highway narrows and slows to 55 MPH for the decent into the river valley. The engine does very little under those conditions. During the Summer, you can see a steady 186 F degrees on the ScanGauge. But with a Winter temperature of only 18 outside, seeing the coolant drop to 173 was no surprise. In fact, it was pretty clear confirmation that additional blocking would be beneficial. So, I sealed up one more slot today. That leaves the other two, which are quite thin due to the pressure of the nearby form, open still. Now, I'll be watching to see how often the normal operating high temperature of 194 is hit. Most of the time, it just barely taps 192 then quickly drops.

11-22-2008 **Winter Reminder.** If you have an aftermarket device, like ScanGauge, watch for 145 F degrees. When the coolant temperature drops below that, the Prius engine will start back up. Until then, you can take advantage of the "Max Hot" setting with the blower on a low speed. It's nice knowing exactly how much heat is still available when sitting there waiting for a stoplight to change.

11-22-2008 **SNL Opening.** The first sketch on Saturday Night Live this evening was a spoof about the Big-3 CEOs requesting financial help from Congress. It was great! Of course, the subject matter isn't suppose to be funny. Rather than each flying individually in a private jet (which actually happened), they drove their vehicles from Detroit to Washington D.C. It wasn't pretty. They sighted many reliability problems. Then as the politicians were questioning them, one asked why money should be given to companies "*so badly mismanaged*". Sadly, we really do need to know that. Unfortunately, it had to be pointed out that the money was a "*loan*" and "*not a gift or subsidy*" which they must "*intend to pay back*". How that would be accomplished was eluded there too, just like in real life. The need for change is absolutely necessary; yet, they do not seem to be taking the urgent need seriously. Satire can be quite revealing.

11-23-2008 **Flag Waving.** There's been a lot of it coming from Volt enthusiasts lately. They are frantically trying to build up an image of patriotism as the approach GM should take to justify the money they are requesting from Congress. Somehow they think the long-term benefit Volt could provide will be accepted as an explanation of how the load money will be paid back quickly, as if it could support the financial well-being of the entire company in just a few years. That simply makes no sense and is obviously an act of desperation. Yet, they recently have been pushing that idea hard anyway. Thankfully, a few changed their tune today... a mutiny, if you will. Realizing how important GM's immediate financial survival is, those few have begun talk of reconfiguring the technology now. After all, promoting just Volt is as limiting as it would be to bet the farm on Prius alone. Obviously, other vehicle types & sizes are needed... and giving up the "purity" of "Volt" for another model with a smaller Li-Ion battery-pack or to use NiMH instead would be a big step forward... which makes a whole lot more sense to do now than to just sit there waving the flag.

11-23-2008 **Looking Back, bad.** I've been digging up very old hybrid threads on the big GM forum lately. That really upsets the antagonists. Well, too bad. It's the most constructive way of considering what the future brings. They revisit their own comments from years ago, seeing firsthand how errors in judgment were made about what was to come. Unfortunately, they only see looking back as a way of stirring trouble. The denial is amazing. GM is on the verge of collapse, yet some individuals (who sadly, represent a voice of the majority there) still refuse to look at the big picture. Makes you wonder more than ever what their predictions looking forward will be, eh?

11-23-2008 **Looking Back, good.** A long-time online friend found this quote I made 4.5 years ago, when battling a troublemaker who was fighting hard against the (then new) HSD model: "*Prius will become the icon for change... the one that inspired this new age in automotive history*". It appears as though that pretty much hit the nail square on the head. What more can be said? Unfortunately, there is still a lot outstanding. It would be great for that to be unnecessary. The product-line each automakers must include the choice of a high-efficiency vehicle. Good is the fact that the decision should not be difficult anymore. Looking back clearly shows hybrid technology reliable... and wide acceptance when gas prices shoot up.

11-24-2008 **Green Now.** Remember years ago? *I use to sing about the blues, but now it all about being green.* The charge-level on the Multi-Display was almost always at 6 bars, which means they are all displayed in blue. The color only changes to green as an indication that the level went up, to 7 or 8. That rarely ever happened when the Prius was new though. But now, it happens around a dozen time per day now. My guess is this behavior was built into the design and naturally just took us this long to discover it, since so few have driven enough miles yet to notice the pattern. Time will tell. As for why, the impression is that it is simply a factor of late-life break-in. Parts continue to loosen as they age. That reduced drag translates to recapturing more energy, hence more bars being displayed.

11-24-2008 **Shape Category.** I wonder when the general population will step back and recognize Prius as being in a new category of vehicle shape. The profile still seems unique. But with the upcoming new Insight and new Lexus, that line will be blurred. Taking a close look at some offerings available in Europe, it gets blurred even further. Decades ago, the minivan stood alone too. But as other automakers started to offer their own, it went from a specific vehicle to a category. The SUV as a commuter vehicle, rather than its original utility purpose, went through a similar type mindset change. Its shape is the main identifier now, rather than the awful market-spin attempting to call it a car. The fact that the shape of Prius is one of extreme aerodynamics combined with very practical function just happened to be the perfect packaging for high-volume sales of hybrids.

11-25-2008 **What did we learn?** It's hard to believe that question even has be to asked. But the resistance to looking back has been fierce lately. Significant mistakes were made too recently. The pain from them really stings still. Few of those struggling to survive want to admit errors in judgment. They just assumed new technology would emerge in time, being affordable & plentiful. That didn't happen... and won't for awhile. The thrill of guzzling blinded them from investing in the future. Power & Speed obsession made Smooth & Quiet along with Clean & Efficient something to mock. Now they are suffering the consequences. Complex problems of employment obligations should have made long-term planning a main priority. Instead, that was disregarded, not taken seriously. Offering a diverse product-line is something taught in Basic Economics class. For those in charge to make such a fundamental error by investing so much in just large guzzlers shows they didn't actually learn much. Did you?

11-25-2008 **Raising Doubt, profit.** It is beyond frustrating to read this: "*After a decade of relative success with its hybrid Prius, Toyota has sold about a million of the cars and is still widely believed by analysts to be losing money on each one sold.*" Smoking resistance used that same "raising doubt" technique. They'd refer to unknown so-called experts with the hope of making you question something that the well-informed already knew wasn't true. Many naive consumers fell for it too. Others used that as an excuse to not change. Undermining progress is their hope. And in the case of hybrids, it has been quite effective at slowing down acceptance. That's really sad.

11-26-2008 **$54.44 Per Barrel.** It's hard to know what the heck to make of that value for oil with such an unknown economic outlook during the heaviest consumer spending weekend of the year... and I'm getting really tired of all the Detroit nonsense. Putting so much emphasis on high-profit guzzlers got us into this mess. They've claimed it wasn't their fault, even though we were never given the choice of a high-efficiency vehicle. That's why I'm so big on pushing "50 MPG" mindset now. They can't spin that. It's not a relative measure. People know exactly what 50 MPG means. So even with the price of gas currently deflated all the way down to $1.59 per gallon, guzzling is still considered a bad thing now. The current $2.79 per gallon price for diesel helps keep things in check too. We must start offering vehicles that target 50 MPG for an affordable price. Remember the PNGV project? Way back in 1993, that targeted 80 MPG. So this is quite reasonable 15 years later, especially with so many Prius already on the road.

11-26-2008 **Production Ended.** Ford's truck plant in Michigan rolled the final guzzler off its assembly-line today. No more SUVs or Pickups will come from that location anymore. Retooling begins, now. In 2010, small fuel-efficient vehicles will begin being produced there instead. GM may still not see the light, but Ford is finally acknowledging & doing what needs to be done. It's a transformation that's long overdue.

11-26-2008 **Biodiesel Waste.** Remember when I asked a vegi-diesel supporter the glycerin disposal question? Years later, I still wondered what the answer was... until today. When you take that used vegetable oil home from the restaurant and add chemicals to it, the separation process results in two fluids. One is biodiesel that you can use as fuel for your vehicle. The other is a waste byproducts, primarily glycerin... which can be deadly to aquatic life. A man in Missouri learned this the hard way. By dumping his large quantity of waste into a ditch, he ended up contaminating the nearby water... resulting in a sentence of 2 years probation and a $10,000 fine for violating the Clean Water Act.

11-26-2008 **Raising Doubt, size.** I've read countless posts by this particular individual. He has mislead in favor of Volt so many times, the most appropriate label for it now is greenwashing. This was the latest example: "*In addition, the size of the battery must be significant enough to supply the peak horsepower. Bigger batteries not only have more energy storage (kWh) but also more instantaneous power (kW). So a little battery with a 5 or 10 mile range won't cut it. By the way, people on this site have been asking about this since the summer of 2007, and the answer has been the same. It won't work.*" And my reply... Cut what? The engine runs at an optimum for efficiency. A bulk of that resulting electricity gets used immediately for propulsion and the small amount remaining goes to the battery-pack for use later during moments of peak draw. That's no big deal. In fact, Prius has been doing it since 1997. It almost sounds like you are implying that there is a shortcoming with charge-sustaining mode. We've been told that Volt will deliver 50 MPG under those conditions. But that post gives the impression that you can't drive for several hundred miles without plugging in. Please explain. What won't work?

11-27-2008 **Raising Doubt, nothing.** New posts appeared from him, but nothing to acknowledge mine. So, I pushed some more about the "*won't work*" claim... That has already been proven false, a few years ago. Everyone should already know that. We desperately need a FAQ for this type of info! A prototype SERIES hybrid used a smaller battery for a larger vehicle. It was just a NiMH pack which delivered 21 kW of power. There was no plug. Power was supplied exclusively from a fuel-cell stack. In other words, it had a steady-state generator working much like the engine will in Volt. The battery provides the extra power needed during times of heavy demand, like acceleration. It worked just fine. Want to know more? Do a search for Toyota FCHV.

11-27-2008 **Raising Doubt, contradicting.** Late in the evening brought a new thread. By dumb luck, mention of a small battery-pack fit perfect. Seeing the appropriate mention opportunity, I dove in again. And sure enough, that was also disregarded. (Note that this blogging page does not offer an ignore feature. So, I know darn well he saw it.) Anywho, the point is that there is no technical reason Volt must have such a large battery-pack. Marketing is the true reason and some enthusiasts are working hard to conceal that reality. In fact, more information contradicting the claim was posted just an hour earlier... directly from someone who had visited the Volt displayed at the LA Auto Show just the day before. There he was told: "*after the first 40 miles are driven on battery power alone, the engine will fire up and the Volt will get 40 to 60 mpg for several hundred additional miles*". How does that give even the most remote impression that it won't work? The system is clearly designed to operate with only minimal stored electricity available.

11-28-2008 **Raising Doubt, plug.** Loss of the plug for a SERIES hybrid is what they fear. Market acceptance will steal away the spotlight from their dream vehicle. After all, the great majority of attention for Prius is on the model currently available now. Talk of a plug option is quite limited. Consumers are well aware of how prohibitive the price is for battery capacity that large still... beside the fact that current hybrids don't require a plug. Sorry, but starting with a product that large quantities of can be sold immediately makes a whole lot more of a difference that pushing the high-end configuration on the same platform first. Prius can offer a factory-installed plug and greater battery-capacity, but that option has been postponed until the population of hybrids is so deeply entrenched that taking that next step is thought of as natural. You'll know that point has been reached when traditional (engine-only) vehicles struggle to retain consumer attention... when demanding for hybrids isn't necessary anymore... no more doubt.

11-28-2008 **Do The Calculations!** Obviously, he didn't. It was his post about how the CEOs of the Big-3 should next get to Washington DC which I had fun with: "*Wagoner should drive to DC in a Volt and then announce how much gas was used compared to a Prius.*" I was even generous with the estimate for Volt, knowing it probably won't be quite that efficient and the new Prius mostly likely will. That was a good thing too; otherwise, there wouldn't have been any benefit at all. You do the calculations. Watch what happens when you input 54 MPG for the new Prius... remembering that my trip to Chicago in 2007 yielded a 52.4 MPG average. Then read what I posted... 10.76 gallons for 2004 Prius (527 miles at 49 MPG). 10.13 gallons for 2010 Prius (527 miles at 52 MPG). 9.74 gallons for Volt (40 miles electric-only plus 487 miles at 50 MPG). So, is Wagoner going to make a serious production quantity commitment so those 0.39 gallons per trip can be saved?

11-29-2008 **Loan Payback.** It's the misleading. That makes me crazy. Priorities are seriously misplaced. Technologies, like what's intended for Volt, don't actually solve the problem at hand. Later when production of battery-packs is well established, that's a different story. But right now, capacity is still under 5 percent of total annual sales volume for the leader. There's no possible way enough profit can be generated from them to sustain the business, not to mention payback of the government loan too. Sadly, promotion of those plug-in hybrids as the solution is really just a distraction. Yet, certain people are pushing the idea hard anyway. What about the other 95 percent? Will that inventory be just the same old traditional engine-only type for years to come still? How will these automakers remain competitive? There's also the problems of emissions and oil dependency. Immediate survive is important, but other on-going expenses seem to be forgotten entirely. It's the same negligence we've seen for years. How will this be overcome? Will the money just disappear and we'll be facing the same situation again later? No loan should be provided without a clear plan for paying it back.

12-02-2008 **November Sales.** With traditional vehicle sales down quite a bit, seeing these numbers from the Toyota hybrids isn't too bad. 8,660 for Prius. 2,174 for Camry-Hybrid. 907 for Highlander-Hybrid. 624 for RX400h. And 79 combined for the other two Lexus hybrids. The GM numbers are still considerably lower. 404, 190, 173 for the Tahoe, Yukon, and Escalade Two-Mode hybrids. 328, 195, 45 for the Vue, Malibu, and Aura BAS hybrids. That puts the GM total annual count of 11,884 hybrids well under the monthly amount for Toyota. Makes you wonder what they'll claim next month, when the year comes to a close. More importantly though, what will they say about expectations for 2009 production & sales?

12-02-2008 **Bailout, responsibility.** They were provided for all to review today. Combined, the Big-3 are asking for a total of $34 Billion to help them survive these troubled times. In other words, this makes it official. Again, they did indeed get caught unprepared when an abrupt change in the market occurred. So many factors were stacked against them. The odds were bad. But the fact that they did not push hard enough is the true problem. Rather than hoping everything would somehow workout by selling guzzlers in the meantime, they should have made a sincere effort to change. Diversification should have been a best-practice they followed. That didn't happen. Now instead, they have to swing production heavily in favor of responsible vehicles. Government, Environment, Consumers, Employees, and even the market itself are at stake... which no one can deny anymore. The nonsense of quarterly profits and the obsession with size & power are ugly memories of the past. Today, things look very different.

12-03-2008 **Bailout, want.** Their needs vary. GM wants a total of $18 Billion, with $4 Billion of it available by the end of this month. Ford wants $9 Billion set aside, for use if they need it. Both are pursuing market confidence restoration in this now very shaken industry. Chrysler doesn't seem to be getting much attention. I'm not sure why that is. Whatever the case for each, they are all in trouble. Not having competitive products put them in a bad situation anyway. Status quo (more of the same) is not what you want when the economy falls apart... which unfortunately, is precisely the situation they are now in. The lust for size & power blinded them from the now obviously risk they were taking. Expecting strong sales from high-profit guzzlers wasn't a good plan. Whether it was environment, oil dependency, or economy a cause for change didn't matter... since all three were building pressure anyway. All three needed to be addressed. None truly were. Now they want to. Interesting, eh?

12-03-2008 **Bailout, plans from Ford.** Section 2 of the plan they delivered wasn't too bad. They are reducing guzzler production through a "*shift to smaller, more fuel-efficient vehicles*". Expectations of fleet averages were provided. 14 percent improvement next year. 26 in 2012. And 36 in 2015. Of course, we've been disappointed by promises like that already. What's the penalty if it isn't delivered? And what value are they basing the calculation from? It doesn't actually state any MPG goals. For that matter, emissions were missing too. Of course, the hybrid system they offer is rather nice. And it did state they are "*targeting a substantial increase in hybrid volume through a greater than 30 percent reduction in cost*". But then again, no quantity was actually mentioned. Overall, it was weak. Will that be enough?

12-03-2008 **Bailout, plans from GM.** The self-promotion was disturbing. Rather than sticky to facts, words like "*world leader*" were interjected. And if that wasn't enough, other words like "*catastrophic*" probably did the trick. Regardless of the unnecessary adjectives, section 6.4 was dedicated to fuel efficiency improvements. Sadly, the number of models was the basis for their plan rather than actual production quantity. To make matters worse, it specifically said "*volumes expected to be low*". That doesn't exact inspire confidence. Oddly though, fleet average MPG values were provided. Car is expected to go from 31.6 to 37.3 and for Truck it should go from 24.6 to 27.5 in 4 years. It left you wanting more and wondering what the investment in hybrids would actually be. No sense of any shift was conveyed. Will that do?

12-05-2008 **Winter's Arrival.** The sudden arrival of several inches snow brought temperatures well below freezing. The change is here to stay. December is a reality now. Salt & Sand is coating the Prius already. That extra grille blocking I did has demonstrated its ability to retain warmth effectively. The new tires are doing their job well too. It is the sixth Winter for this Prius. I'm looking forward to the seasonal shift. It's quite refreshing when it finally melts away... many, many months from now.

12-06-2008 **Bailout, token.** We got to see Volt in Washington D.C today. It was obviously a public relations stunt, since we all know the CEO drive from Detroit was in a different vehicle. That represented a token effort, much like the production of the vehicle itself could. Taking them seriously means volume. Most automakers can produce a few vehicles to draw attention with. Just look at all the fuel-cell prototypes. High enough quantity to actually make a difference is an entirely different matter, which is what Congress wants from them.

12-06-2008 **Bailout, back.** They came back to plea their case to Congress. And naturally, the returning CEOs each drove a hybrid as opposed to the highly controversial choice of flying in a private jet... like they did last time. Thursday, the Senate heard their tales of woe and asking questions. Friday, it was the House opportunity. Saturday (today), supporters attempt to digest all that said and those in Congress decide what should be done. Watching the C-Span coverage sure was interesting. Repeatedly, a few from all sides attempted to argue that the money set aside for fuel-efficiency retooling should be tapped for this immediate financial survive loan. Certain people couldn't understand how bad of an idea that was, how next year they'll be in a similar situation again without that "step 2" money available. As important as "step 1" is, not having anything competitive to sell is just as much of a problem.

12-06-2008 **Bailout, reality.** The reality of the situation is that the temporary economic low our world is currently experiencing won't last. Thank goodness. Demand will return. Then the unfortunate reality of that is the fact that dirty 30 MPG vehicles just don't cut it. Rapidly growing places like China & India will make it quite obvious that heavy investment in affordable & profitable designs should be made now. Producing large quantities of vehicles like Prius, which deliver at least a SULEV emission rating and 50 MPG, is a reality. A vehicle like Volt will remain a trophy for many years, simply because in cannot meet the required criteria yet. That is a dream still. In the meantime, the fleet of vehicles must deliver some type of substantial improvement. After all, does anyone really believe that tiny non-hybrid cars will be appealing when so much attention is given to the new Prius... and new Insight... and new Fusion-Hybrid?

12-07-2008 **Bailout, discontinue.** Talk of reducing the number of models offered is abundant & frequent. Saturn is getting the most focus. GM's technology debut vehicle, the Vue, would vanish. To go from offering a confusing array of choices to nothing is not what anyone expected. But it could happen. The redundancy among the automaker's brands is becoming too much of a financial burden. Something must be done to remain competitive. Different labels on vehicles that are essentially the same is a big liability. Too bad they were always so proud of model count, rather than focusing on the number actually sold. In other words, they now realize spreading resources that thin is a terrible approach when times are tough. Entire dealerships will likely close as a result of this upcoming restructure effort. Hearing discontinue discussion now sure is different from what we had to endure 2 years ago.

12-07-2008 **Bailout, downsize.** Witnessing the size of vehicles shrinking sure is a change. It was inevitable that downsizing would could some day. After all, when guzzlers grow so large they can no longer fit inside the garage, the problem should be obvious. But to all of a sudden seeing teeny-tiny cars like Smart routinely is bizarre. Prius is enormous in comparison. Remember how some mocked Toyota for expanding out to the Scion brand? Those vehicles had nothing in common with Toyota's regular offering, so the expense of producing a unique low-price platform didn't make sense in a thriving market with cheap gas. The situation sure has changed though. It was clearly a smart move. And now those smaller cars are in a great position for increased sales. With so many already on the road, there is nothing to prove. Consumers like them. They fulfill the need in this new market.

12-07-2008 **Bailout, fear.** It's growing. The die-hard Volt enthusiasts are discovering just how little the rest of the population actually knows about the technology they desire. Since basically nothing was done on their part to promote, it's a rude awaking. Just blogging doesn't accomplish much beyond just educating an inner-circle. To get the word out, at the very minimum they must engage in forum discussions. That way, at least topic-related information can be found. In the chaotic world of blogs, detail is simply lost... buried in the clutter of daily chat... only to be discovered upon chance. And to their surprise, stumbling across enough necessary education to deliver a constructive comment is rare. As a result, misunderstandings are rampant. Needless to say, fear is setting in now that use of the retooling money is being considered. Too bad that hadn't done more to increase exposure. People are likely to dismiss a dream than a prototype vehicle which operational details are well known.

12-08-2008 **$40.81 Per Barrel.** Seeing that is quite a surprise. Of course, that's just an artificial low. Once the economy stabilizes, the price for oil should be somewhat higher. $1.53 for gas isn't what I would have ever predicted. The current $2.73 for diesel is more likely what of a realistic expectation later. But that will probably change in the meantime too. Many industries are struggling now. Fallout could take awhile. Cash reserves haven't run out yet. Once they do, then we're in trouble. Businesses can only tough it out for so long.

12-08-2008 **Bailout, goodbye.** Their was a call for the CEO of GM to step down in the form of a hinted suggestion. Odds are, it was just a tactic to place responsibility for what happens in the next few months solely on his shoulders. Aiming a target like that can be quite inspiring. Changes that wouldn't occur under normal circumstances stand a greater chance of actually happening that way. And if the necessary improvements don't gets addressed properly, there's someone already clearly identified to blame. With so much money and so many jobs at stake, taking this matter seriously is long overdue. Steps to offer competitive & responsible products shouldn't be delayed any longer.

12-08-2008 **Bailout, apology.** That's not what anyone expected. Of course, that doesn't mean it will change the outcome at all. Nonetheless, consumers got a formal apology from GM for having "*disappointed*" and "*betrayed*" them. Who knows how this will be taken. What I got a kick out of was this first post in response to this on the big automotive green blog: "*I don't understand why GM is apologizing to consumers for focusing on gas guzzlers. It was the consumers who were buying them.*" Are some people that oblivious to the importance of having actual choice? Since all of GM's vehicles were guzzlers, what else could consumers buy? Look at how many advertisements we get about all the models they offer that get 30 MPG highway. Where's the 50 MPG choice? For that matter, GM doesn't even offer a 40 MPG choice. Prius has been available since 1997. Waiting 11 years before getting acknowledgement that GM should have also pursued emission & efficiency technology like that is long overdue.

12-09-2008 **Fusion-Hybrid.** The first test drives of the new FULL hybrid sedan from Ford have begun. On the particular drive reported about today, 43.1 MPG was the efficiency reported. There were no details about how this was actually achieved though, so conditions could have been ideal... knowing the event would get lots of attention. The driver was likely well informed about FULL hybrids too... knowing an article would have to be written about that experience. Whatever the case, it's still good news... especially from Detroit. We are all tired of hearing how impressive 30 MPG Highway supposedly is.

12-09-2008 **Bailout, lawsuits.** A desired outcome of the bailout by those formulating the plan is to prevent automakers receiving the money from "*pursuing, funding, or supporting*" any lawsuit which challenges state laws regarding carbon emissions. It's hard to believe that is still even an issue. After all, wasn't money set aside to help pay for the retooling to build more efficient vehicles? Oh! Guess what! The money they are asking for is that! In other words, they could potentially fight with the very money provided so they wouldn't have to. Arrgh! Anywho, it's hard to take them seriously at this point anyway. We'll all find out what happens soon enough.

12-09-2008 **Bailout, 2016.** The Congressional panel heard about profitably of Volt from CEO Rick Wagoner last week. He said it would probably not provide a return on the investment until the second generation is delivered. With the first being available in early 2011, it's reasonable to expect a run of about 5 years before a major upgrade occurs. That means waiting until around 2016. That's 7 years from now! Doesn't that completely miss the point of getting bailed out? The government shouldn't be making long-term outcome decisions like this. The purpose of emergency funding is for keeping the automakers viable, so they can sell competitive vehicles soon. How long are we suppose to wait for payback, especially if so much emphasis is being placed on a design with an uncertain market?

12-09-2008 **Slow Sales.** With a title like this, you can see where the mindset is: "*Low Gas Prices, Troubled Economy Slow Toyota Prius Sales*". The quantity sold per month would have diminished anyway. When you are so close to heavy promotion of a new model, you don't want to get stuck with a large inventory of the older one. That's normal for any vehicle. But with the monster-size Two-Mode hybrids, they depended on high gas prices and a strong economy. For both factors to turn against GM while at the same time legacy costs still being a burden, supporters obviously want to picture a disheartening picture for the entire market. Hearing about fast sales of new Prius next Summer is not what they're looking forward to.

12-09-2008 **Halo Greenwashing.** It's amazing how some still attempt to mislead others into believing that Prius is just niche vehicle not intended as a replacement for traditional vehicles. With so many already on the road, that doesn't make any sense. Yet, the convincing persists with nonsense like this: "*I agree that the Volt is a halo car that won't make money just as the Prius is a halo car for Toyota.*" That would mean GM being held to the same criteria. 15,556 was the quantity sold here that first year... way back when gas was cheap and misconceptions were abundant. GM should at least match that... an entire decade later, after hybrids have already become well established.

12-10-2008 **Predictions.** This comment today required an immediate & blunt reply: "*I find it uncanny how *** is able to predict this stuff so far in advance.*" It was a about how a popular Volt enthusiast predicted this market shift a few months ago. Apparently, many there still have no idea what the rest of the industry has already experienced. From their point-of-view, it's all new. No wonder the idealism persists. The hybrid supporters from years ago actually said the same things. But they don't study any of that online content. Anywho, this was what I posted... Back in 2004 when Lutz proclaimed hybrids were a "*stop gap*", owners were predicting the same thing. Read the old forums & blogs. The writing has been on the wall for years now. By the way, that is the very reason Lutz doesn't want Volt to be called a hybrid.

12-10-2008 **Bailout, stance.** The attitude from GM enthusiasts is strange. On the big forum, the most outspoken anti-hybrid troublemaker is saying nothing in response to the need to have a balance portfolio, dependency on oil, or either type of emissions. All that's be focused on is the "drop" in sales with gas prices so low. In other words, there is absolutely nothing being said about the future. I guess he's overwhelmed by how quickly and how bad GM has fallen. As for the Volt enthusiasts, their stance is a mystery too. None want to address how much their favored hybrid could change over the next few months. Survival is the utmost concern now. Deal with the rest later.

12-10-2008 **Bailout, voting.** The House results are in. With the provision for no lawsuits removed, the bailout was approved. Fortunately, there are catches. Automakers must deliver solid plans by the end of March 2009 stating how they will become viable again to pay back the money. There will also be a "car czar" appointed to oversee the money spending. This really raises the stakes for hybrids. The nature of traditional vehicles is about to be radically reshaped. Priorities are be evaluated. The new Prius & Insight will be in the right place at the right time. Do those asking for the money have any clue what's about to happen? What happens next should be very interesting.

12-10-2008 **Suck It!** You can't help but to be amused by reading that. The very thought made me laugh hysterically. To observe the anger this antagonist was struggling to express was a moment in history to bookmark. Adding to the hilarity, he actually replied to our (Prius owner) comments and attempted to mock us. This was the whole title: "*For All You Greentards That Bought a Prius Three Months Ago – Suck It*". What followed was both profane and insulting, without any attempt to be constructive. Here's how I replied to that... That article was great! I've never seen so many bridges burnt so quickly. Talking about leaving yourself wide open for regret later when the market recovers. It's tempting to compose a counter-article. Makes you wonder if any of his audience would care though. With such blatant disregard for the future, it was an obvious act of final spite. Change is coming. Some resist fiercely to the bitter end, enjoying those last moments of denial.

12-10-2008 **Bailout, motive.** What are they? This current administration would like to do something worthwhile with their final month in power, hopefully significant enough to distract people from the mess they left behind... so many problems caused by making wrong choices. Part of it was comes from not delivering what was promised. We heard many things in those State of the Union speeches, but little came from them. Our "*addiction to oil*" is a great example. Lots of concern resulted in just token efforts. In fact, we are now worse off as a result. Looking at the CEOs now begging for money, you have to question their motive too. What exactly do they want? Managing a large corporation requires the art of compromise. You can't just cater to any particular audience. There must be a balance... which now they are well aware of. But will they actually do anything about it?

12-11-2008 **Bailout, more voting.** The Senate had their turn voting. Results were disappointing for some, a rude wake-up call for others. The bailout plan was not approved. This session of Congress came to a close without providing a bridge loan. How could it have worked anyway? Not enough change was proposed to actually solve the problems at hand. In fact, the question of how bankruptcy is a hot topic again. It had been claimed that consumer confidence would cause a significant sales drop. The lack of a bailout will likely do that anyway. And of course, the future was quite unclear even if that money had been approved. It's a mess. Resistance to change was a big contributor. Now, something must be done... and it's going to be up to the next Congress to see that it happens.

12-12-2008 **Seeing What You Want.** There's been a lot of that lately. So, I did some hunting on the web looking for sources of the "*stop gap*" nonsense still available. Most of it is so old now and so damning, the it has disappeared. So, not stumbling across it was no surprise. What I did find though was. From an interview back in July 2006, Lutz made some rather intriguing comments... "*Hybrids are technologically of doubtful benefit, and expensive, but necessary from a political and public relations point of view.*" and "*So, with all those beliefs out there, you have to do a hybrid for public policy reasons.*" and "*We think running the nation on E85 makes more sense than all the hybrids in the world.*" There was also a comment about the cost of big lithium-ion batteries. Naturally of course, the Volt enthusiasts ignored all but the E85 mention when I posted the article. And even then, they pretended there was no way a hybrid could ever use ethanol for fuel. Acknowledging that Lutz displayed a drastic change in direction, in fact a complete reversal, just 5 months later must be too much to bare. It's that refusal to see the market as a whole that got us into this mess. Will they ever learn? You can't just see what you want.

12-13-2008 **Ending the Nonsense, part 1.** It's getting tiresome. Over and over again, we get posts with misleading information. Heck, some of it even ends up published in articles. Reporters are rushed and do little research, without any follow-up. It's the unfortunate nature of the business. But enthusiasts have no excuse. They have on-going dialog. Information is routinely shared. So, when I see the same misleading so-called facts being posted repeatedly, I insist on being told the original source. It took quite a few attempts over the past 2 months, but I finally got one of the troublemakers to confess. He insisted he was only trying to help. But with so many efficiency factors omitted, the information ended up causing harm. Perhaps that's why he ended up admitting those estimates were just his own, rather than an industry source as the posts had always implied.

12-13-2008 **Ending the Nonsense, part 2.** This is how I attempted to draw the nonsense to a conclusion: Why didn't you include Temperature? Speed? Fuel type? A/C use? Acceleration rate? Those are significant MPG factors that weren't included. The EPA recently had to revise their numbers, since they hadn't either. Those cannot be disregarded calculations. External loads (like a bike)... Driving in heavy commute traffic... Getting stuck by an accident or construction delay... The spreadsheet only serves to mislead with so much missing. 93.5 MPG is the average from the Google plug-in report, which is real-world data from their converted Prius mini-fleet for over a year. And it's quite realistic to expect even greater efficiency from the new model. Yet, your numbers don't reflect any of that either. Look at how neither Price nor Battery-Capacity was taken into account either. That excuse of "so new" only works if those are included too. But they weren't. Stop misrepresenting both Prius and Volt.

12-13-2008 **Ending the Nonsense, part 3.** Next year will bring some dramatic changes. It doesn't seem like too many are aware of that. The attitude appears to be one of incremental improvement. But with production of Prius growing to high-volume levels along with this next generation improvement, that in itself will trigger a mindset favoring hybrids. But the fact that the automakers here will not be getting the survival money they had hoped for means cut that should have happened already finally will. Compensation adjusts to match others in the market won't be delayed until the end of 2011 as planned. It will most likely be required by the end of 2009. Along with that will come closures of production facilities combined with significantly altered inventory. Responsible vehicles will be the center-piece. And since the move to teeny-tiny cars is undesirable for many Americans, embracing hybrid technology is the obvious choice. We absolutely must finally address dependency on oil and both carbon & smog emissions. Rebuilding the auto industry properly cannot omit such fundamental shortcomings of our current inventory. The nonsense must end.

12-15-2008 **Oil Prices.** They've basically flattened. Progress has halted. The world is waiting for OPEC to reduce production. The thought is about 2 million barrels less per day. That's an enormous amount all at once. But with consumers not using anywhere near as much gas as they use to, there simply isn't strong demand for oil like there had been. The days of careless guzzling are obviously over.

12-16-2008 **Bailout, hopeless.** The only thing to report at this point, aside from the reality that no money has materialized, is the sad fact that Volt enthusiasts have lost touch with reality. That group has fallen off the deep end, thinking that sales will be plentiful and profit abundant within 3 years of debut. You ask them how, the response is only electric idealism. It's hopeless. They completely dismiss any coexistence with FULL hybrids. It's that plug-in technology or bust. Scaling back the design of the SERIES hybrid to make it more affordable is an act of mutiny. There's no sense of market awareness. Of course, asking them what they plan to do to promote Volt results in confusion. They think just waiting to buy one is plenty. It's as if they think there will be no competition and consumers won't be interested in learning anything from them. The purchases will just somehow happen without any of their support. Haven't they noticed all the teaching Prius enthusiasts provide? I guess they'll find out the hard way.

12-16-2008 **Winter Extremes.** Last week we got a bunch of snow, at the worst possible time. The commute home was extremely slow as a result. The MPG for me was quite impressive though... because it was still "warm" by Minnesota standards. The Prius handled that well. Yesterday evening, this morning, and on the drive home today, that was an entirely different matter. Efficiency bottomed out. With the temperature several degrees below zero, the engine ran non-stop on the ice-glazed highway. The heavy traffic just crawling along did not make for enjoyable travel. Of course, getting only 36 MPG, so I wasn't all that distressed... especially since that's better than some vehicles ever get.

12-17-2008 **Bailout, surrender.** It's amazing how much can happen in such a short amount of time. OPEC did indeed reduce oil production, by 2.2 million barrels per day. Chrysler announced they'd be halting production of their entire line for 2 weeks. Ford said they'd halt production at 10 plants for a week. GM slammed the brakes on construction of their new plant to produce engines for both Cruze & Volt. The Bush administration admitted that providing money (not approved by the Senate) is turning out to be much more difficult than anticipated. Needless to say, the Volt enthusiasts are starting to surrender. That aggression development plan for the unrealistic configuration just doesn't make any sense in the light of this bailout disaster. Makes you wonder what the heck will happen to Two-Mode.

12-18-2008 **Bailout, bankruptcy.** Now managing an orderly bankruptcy is the idea getting lots of attention. Even with bailout money, it doesn't look like that would do much more than delay the inevitable anyway. The chaos of an abrupt bankruptcy is what they're trying to avoid. It doesn't look good either way. GM is a horrible mess. The downward spiral can now be described as a collapse. Focus on expensive hybrids basically just concealed the disaster already underway from all the other industry pressures. Not having a high-volume, affordable efficiency vehicle already available leaves them without any competitive options to focus on. Development investments should have been made years ago, when times were still good. Instead, hybrids were mocked and called a "*stop gap*". Now what?

12-18-2008 **$36.22 Per Barrel.** Did you ever think seeing a closing price like that would happen again? It certainly wasn't realistic... nor was the recession. The fact that we are starting to see signs of deflation makes a bad situation even worse. Consideration of the future is foremost on consumer minds now. Taking hybrids seriously will hopefully emerge as the new mindset... especially since most of those excuses from the past have since vanished. Of course, there's lots of real-world data supporting the technology now. Concern for emissions is finally becoming a priority. Gas prices could spike to scary levels at any moment. And the Big-3 have are being transformed by forces beyond their control. Remember how fuel-cells were once flaunted as the solution?

12-19-2008 **Bailout, provided.** Through an act of the President, rather than Congress, some bailout money has been provided. That means terms could be subject to change when the next administration takes charge in a month. How the automakers or consumers react in the meantime is anyone's guess. There will be $13.4 Billion paid out to GM and Chrysler next week. Ford will be toughing it out on their own, for now. $4 Billion more could come in February. Details of plans stating how bankruptcy will be avoided are required by the end of March. Deep concessions are expected. Not enough could force dire consequences. The situation is quite serious.

12-20-2008 **$33.87 Per Barrel.** It's hard to even remember when the price of oil was so low. Is the drop complete? How long will this last? What will it climb to when the economy recovers? For that matter, will a gas tax be introduced during this opportunity to help fund our move forward? These are strange times. History will remember these moments. The next few months are going to be very interesting.

12-21-2008 **-9 F Degrees.** Winter arrived in a dramatic way this year. The extreme cold isn't exactly "ideal" for efficiency. Fortunately, the Prius doesn't mind. Start up is no big deal. With such a large motor and battery-pack, power to spin the engine is rather trivial. Despite that, you still really appreciate Spring. The seasonal change is great for variety... especially the opportunity to stealth on the highway. When ice covers the road, traffic slows down considerably. The ride is quite enjoyable. But then again, I'd rather be whisking away to the lake with a kayak on top or up north with bikes inside and on back.

12-21-2008 **Being Green.** After 8 years, you'd think I'd run out of new hybrid content to cover. But participating on blogs & forums unfriendly to Prius, the ideas keep flowing. All you have to do is watch for attempts to mislead. And sadly, they're still plentiful. Anywho, I summarized emission & consumption information related to Prius into this new easy-reading type document... Being Green

12-21-2008 **Mississippi Plant.** The investment Toyota was making to be able to produce Prius in this country has been put on hold... temporarily! Of course, reading some articles you get the impression that the plan is cancelled. One even spun it by saying construction was "*indefinitely*" suspended. In reality, it's just stopped until the economy rebounds. Credibility of the media is that high anymore. They pretty much say whatever they want about hybrids now, without consequence. Errors like this are frustrating: "*Prius sales are down nearly 50 percent for the year.*" In reality, it was just for the month, not year. Who knows why that was printed wrong. But the fact that activity at the Mississippi location has generated so much attention is fascinating.

12-22-2008 **First Loss, in 71 Years.** That's the big news today. Of course, with all the zero-percent financing being promoted, maintaining a profit in a declining economy (especially with a dollar to yen conversion) was quite a challenge anyway. So the announcement of a loss now being expected wasn't a surprise to anyone. It's a sad reality. Too many factors were putting too much pressure on several different industries all at the same time. Fortunately, the future was already planned for. The new Prius is just a few weeks away from official debut. That sure will help with the long-term outlook. It makes short-term losses easier to accept. There's hope once we all get past this struggle.

12-23-2008 **EPA Numbers.** Certification of Fusion-Hybrid is complete. The official numbers for the window-sticker estimates will be 41 City and 36 Highway. That's pretty darn good MPG for a nice sized family sedan. Makes you wonder when the upgrade for Camry-Hybrid is scheduled. Ford will be providing genuine competition for Toyota. It's about dang time they finally got serious about competing. There's still nothing in the works from GM. But at least part of Detroit is getting their act together. Saying advancement forward was a crusade would be a bit of an understatement. Change obviously does not come easy. But in the end, it looks like it could turn out quite nice. Now let's hope availability isn't a problem.

12-23-2008 **Two-Mode Spin.** The misleading about year-end results has already begun. This is what everyone has dreaded. GM will draw a conclusion based on what the sales total come to. Being way off of projection could lead to another "*there's no market for them*" declaration. It's the EV1 nightmare all over again, but this time with hybrids. I sure hope they scale down Two-Mode to a configuration capable of directly competing with both Camry-Hybrid and Fusion-Hybrid. But after all this time, we haven't heard a single mention of the system being capable of integrating with a 4-cylinder engine. Anywho, this was claimed today by one of the outspoken supporters: "*The Tahoe Hybrid is meeting its 10K unit sales forecast even in this horrible market.*" Since that isn't even close to actually being true, I responded to that with... That doesn't look like the case, unless April was one heck of a month. Tahoe & Yukon hybrid combined sales were Jan-Mar = 655, Apr = ?, May = 589, June = 547, July = 351, Aug = 797, Sept = 1010, Oct = 602, Nov = 594.

12-27-2008 **Still At It.** A few Volt enthusiasts just make stuff up, or at least it appears that way. It's probably just assumptions that no one ever bothers to confirm. After all, there are a number of claims they make about Prius that are quite incorrect. Anywho, this claim today got me worked up in a topic intended to stir debate: "*Toyota has repeatedly come out against its series-design, arguing that the parallel configuration used in their hybrids is more efficient.*" So, I posted... Really? Prove it. Show me an efficiency argument. The statements made have been with respect to production. Toyota wants a high-volume affordable hybrid design, something they can replace a large chunk of their traditional fleet with before the end of the next decade. That's millions of vehicles. GM's goal is quite different. They are aiming for a time further into the future with E-REV, which is why they still have to focus on BAS and Two-Mode in the meantime. In other words, Volt won't be a direct competitor with Prius for many, many years still… despite all the hype. There is no FULL vs. SERIES debate yet when it come to price & volume.

12-28-2008 **Hybrid Requirements.** Before the Iconic Prius became available, I listed out the requirements a hybrid should fulfill on a webpage. It was a true measure of progress. Moving forward meant meeting the criteria listed. After 5.5 years, the content was still quite relevant... so much so, in fact, that it was converted into a downloadable document. Each section remained true to the original, but detail was updated to better reflect terminology and examples which emerged since then. That was my proof of intention. Goals were clearly stated and remained unchanged. For so much to stand the test of time, it was quite vindicating. Check it out... Requirements

12-29-2008 **Sneak Peeks.** Today, I published the second here on the website. Being first to unveil two new photos of the 2010 Prius direct from the Toyota Marketing team has been quite a thrill. This one was of the new "Eco Meter" feature. The one last month was of the new Digital Speedometer. Seeing enhancements like that in the new model is very exciting. I can't wait for the opportunity to finally own this upgrade. Getting to see it in person next month will really raise the level of anticipation. Waiting for delivery again will bring back very pleasant memories. It's totally worth it!

12-29-2008 **Anticipated Frustration.** The misrepresentation and old-school thinking still prevails. A review of Fusion-Hybrid included this: "*0-to-60-mph acceleration time of 8.5 seconds isn't stellar*". What the heck are they expecting from a family sedan? Geez! Of course, just like in the past, other hybrids were described incorrectly... as with this: "*The Fusion can be driven up to 47 mph on electric power alone, depending on how leadfooted a driver is. Most hybrids can pull off the electric-only trick only as high as 25 mph or so.*" Most? No. Only the old Ford hybrid design. GM offers 30 for stealth. Toyota has been 42 since the very beginning over a decade ago. Honda still doesn't at all. Makes you wonder what consumers think if this writer is perceived as a topic expert, eh? And naturally, emissions were missing entirely. No mention whatsoever begs the question if they think hybrids are for reducing consumption only. It's frustration I anticipated. Each new hybrid brings it.

12-29-2008 **Battery-Pack Prices.** Replacement is extremely rare. In fact, most owners will never need it. At 110,000 miles, my Prius certainly doesn't show any signs of failure. Aging appears to be perfectly normal. Routinely dealing with dramatic elevation changes or excess heat will likely accelerate the process though. To comfort owners, Toyota officially released the prices. For the Classic model, it's $2,299. For the Iconic mode, it's $2,588. That's if you buy it new at MSRP. Getting a used one from an accident Prius is quite a bit less. Whatever the case, that's totally in line with the price people pay for new transmissions... an expense Prius owners won't have, since there are no gears and nothing ever shifts. Total cost of ownership is proving the naysayers wrong. Gotta love it!

12-30-2008 **Hitting Bottom.** Watching that blog website for Volt self-destruct has been interesting. The prediction of their fate wasn't rocket science. The pattern emerged back the Summer of 2007. It was easy to recognize. The enthusiasts acted like Insight supporters did, many years ago. Unfamiliar with that history and unwilling to study the competition, their progress eventually halted. At that point, traits started to resemble the diesel supporters. You know, arguing about complexity and doing nothing to reach out to the mainstream. This post today summarized the attitude perfectly: "*I'll say this again: plug-in E-REVs are vastly superior to plug-in PHEVs by any measure.*" Despite the endless arguments by many individuals about fundamental problems like price, that overlying theme dominated. It's too bad their desperation got to this point. But with the financial disaster of GM and the plummet of gas prices, the inflexibility of the ironically named E-Flex held back progress. Fortunately, even though the plan hasn't changed yet, the design itself can be adjusted. But those enthusiasts are still unwilling to accept anything like that... for example, switching to a smaller battery-pack to make the debut vehicle more affordable. Oh well. It's not like they weren't told that engineering alone won't sell a product.

12-30-2008 **Classic Sightings.** This is what I posted in response to a very excited chat member seeing a "different" model Prius for the first time, wondering what the heck it was: It's really weird reading a post like that. I saw the ORIGINAL model Prius back in April 2000... after waiting an agonizing long time for the opportunity. The wait for the CLASSIC seemed like forever, mostly because the only real-world info we had came from Japan. The ICONIC wasn't too bad, since I already had a Prius to drive in the meantime. But now... 9 years after having initially discovered Prius... I find myself yet again having to wait... wondering if the both the newbies and veterans have any idea how much will change when this next generation starts appearing on roads. It's going to be intense.

12-31-2008 **Breakeven Nonsense.** I guess they'll publish anything that helps sell a newspaper. Believe it or not, the cost to breakeven is what we are reading about again. Don't you love how they are once again pushing the belief that the price of gas will never rise during the lifetime of the vehicle? That was totally unrealistic back when the first rise to $2 per gallon began. They should know better. The stalled economy will recover. Paying more than $1.66 at the pump is inevitable. Who regrets what? It's the same nonsense from years ago. Geez! I had no idea the repetition of history would be so thorough.

12-31-2008 **Year End.** The one called "2008" sure was odd for hybrids. Build up for new models from Toyota, Ford, and Honda was exciting, but were left waiting until the next year for any substantial detail. GM and Chrysler hybrids were a totally different story... one suffering from low sales, the other from no sales. Gas prices climbed to records levels, feeding a hybrid interest frenzy, then deteriorating. We have no idea what the ultimate short-term outcome will be. There's lots of potential for practical-sized hybrids offering significant efficiency improvement. Vehicles of all types that guzzle are in trouble. They won't sustain the business anymore. Cash reserves are exhausted. Plans for a viable future are essential. The long-term outcome requires that we reduce consumption. No more denial. It's time for serious change. 2009 can't come fast enough.

1-01-2009 **2008 Lookbacks.** They are starting to trickle in. The first I encountered claimed Volt would be available in late 2009 as a 2010 model. That's just plain wrong, so it made me wonder about the praise that was given for Two-Mode. The next article I came across was quite the opposite. It slammed Two-Mode for boasting so much about being superior but selling so poorly. GM didn't come close to sales projections and Chrysler abandoned the technology. What ends up being said about BAS is really making me curious. It's sales were even worse. As for Prius, anything goes. Results are always spun many different ways. Looking back at 2008 sure is good history. I wonder what lessons will be learned from it. Hmm?

1-01-2009 **Remember Fuel-Cells?** Over my many years of hybrid ownership, I've had to endure quite a bit of propaganda... from the naive. It's really unfortunate that consumers are intentionally mislead, then spread it themselves. But sadly, that's the way the market works. Competitors try their hardest to divert attention away from current products with the hope of delaying purchases until they have something to sell. That meant Prius supporters constantly hearing about the promises of fuel-cell vehicles. Remember how 2010 availability was so heavily boasted? Talk of it was so prominent that some simply disregarded hybrids as a fad, not worth the effort. Today, it is 2009. Clearly, that future isn't working out as promised. Instead, the promise has changed. Now, it is a SERIES hybrid... which consumers don't understand. They are given the impression that availability will be abundant & affordable in just 2 years... again, diverting away from FULL hybrids like Prius. It's quite frustrating.

1-02-2009 **Finally!** It boggles the mind. After almost a full 2 years, they finally figured out what the heck I've been complaining about. Phew! What a relief. Patience paid off. Though, my amiable persistence resulted in gross over-reaction. Of course, that in itself was a benefit. They won't forget it! Anywho, over all that time, almost all the Volt enthusiasts referred to Prius as a "*parallel*" hybrid, including the website moderator. For so many to not understand the fundamental differences between Prius and Insight for so long, it was very troubling. Confused arguments were incessantly posted. But today, that changed. The importance of what I had described suddenly made sense. Apparently, it never dawned on them to that very moment how much the design could affect outcome. Now, it does. Yeah!

1-02-2009 **Power-Split.** That was the term which contributed to the favorable swing. The unintentional antagonists still don't understand what that actually entails, but at least they know it is significant. The frustration of having pointed out the power-split-device countless times over those almost 2 full years, it seems to have finally sunk in. How they could have read about the device so many times without questioning what the heck it does is mind-boggling. Never wonder about the competition. Just dismiss to the extent that the difference between a FULL and an ASSIST hybrid isn't taken into consideration. Both generically labeled as "parallel", then carelessly declared unworthy. That changed. Who knows if it will result in any progress. At least awareness was finally raised.

1-02-2009 **Strong & Mild.** Those were among the generic terms used to identify the hybrids that weren't Volt. I guess many assumed the difference was just a matter of motor & battery size. They apparently never paid attention enough to understand that the existence of a second motor wasn't just to add more power. Too bad the term "*strong*" implies that. Of course, if the enthusiasts would have been taking notes over the past 2 years from the daily blogs, they would have assembled quite a technical resource to share with others... rather than claiming that information isn't available. Oh well. It's ultimately their loss. Sharing of that nature is how you attract newbies to expand the market. Their own lack of interest in what makes one hybrid "*mild*" and the other not keeps they from reaching out. Other hybrids will attract the mainstream. Strongest will win (pun intended).

1-03-2009 **SUV Payback.** Ever wonder why payback articles are only published for hybrids? How come traditional SUVs don't get that same attention? In this market, more than ever needed in the past, that should happen. When not used for the purpose they are designed (utility), they are extremely wasteful and clearly don't return any type of "payback" as the hybrids required. Of course, the waste of using it for single-occupant, no-cargo commutes to work is rather blatant. Publishing articles about that would be a bit like beating a dead horse. But then again, what's wrong with finally taking responsibility by bringing attention to the quality of the air we breathe and our dependence on oil?

1-04-2009 **Still Stuck.** Some still haven't figured it out yet. They struggle with hybrid discussion, remaining on the newbie perspective. That is quite non-constructive. In fact, it can sometimes even be damaging to support efforts. So, some type of response was required. Will it help? Who knows. But, at least I tried: Asking about electric-only range for a FULL hybrid is pointless, like the commonly asked question of top-speed for traditional vehicles. When the FULL hybrid engine runs, battery-pack recharging occurs. So the concept of "*range*" is skewed anyway. After 2 years of daily blogs here, expecting constructive questions like battery-pack capacity, consumption-rate, and depth-of-discharge is reasonable. Instead, we're still stuck on just the basics... despite so much time and the urgency for promoting hybrids.

1-04-2009 **Plug-In Attention.** All the commotion on the Volt blogging website had an interesting side-effect. It brought quite a bit of attention to the Prius augmentation now available. I hadn't expected that, especially with so much time still before competition emerges. To hear enthusiasts there discuss merits of it actually is constructive. Of course, they still express no interest in mainstream appeal. The lower price seems to make no difference. Cost just gets brushed aside still. Arrgh! Of course, just raising awareness of other designs & configurations was the point. That actually was accomplished. Getting as far as discussing aftermarket options wasn't actually expected. So, I guess it went pretty well.

1-05-2009 **Frozen Operation, info.** This topic is fascinating. Years ago, those familiar with the challenges of Li-Ion battery adoption started asking "*how*" questions about promises being made. Finally, they are being answered. Turns out that Volt will use heat-elements embedded in the battery case for warming (in addition to the coolant-lines for cooling). When this hybrid is started after sitting for awhile unplugged during the winter (like in the parking lot while you work), the engine will run to provide electricity for the traction-motor, the heat-elements, and the heater for the cabin. Once the battery is properly warmed up enough for normal operation, it will take over and the engine shut off. That's a sensible approach, but it really hurts those purists insisting "*40-miles before using any gas*" will be how the vehicle actually works. Obviously, that's not the case. And it begs the question how emission-rating criteria will be met. Running a cold engine does has pollution consequences. How will that be dealt with?

1-05-2009 **Frozen Operation, reply.** These were the key quotes in the info provided that I was most interested in: "*The engine will start and condition the battery for a few minutes.*" and "*It will propel the car and it will condition the battery. The moment you are running the engine you have the electric heater running in the battery.*" Which resulted in the following reply being posted... That matches reports of the chemistry itself, which clearly state 32 F degrees is the threshold. In other words, the engine will run for warm-up throughout the entire winter in Minnesota when leaving work each day.

1-05-2009 **Totals & December Sales.** The Prius official tally for the year, brought to a conclusion with 7,859 for the month, was 158,884 here in the United States. Spin of that number will be intense. Naysayers will see a fantastic opportunity to claim expectations were not met, even though the industry as a whole is down anyway. I ask how almost 160,000 hybrids of one specific model can be a bad thing? I also ask, where the heck are the GM totals? They concealed the Two-Mode total by combining them with BAS, giving an overall of 14,439. But you can approximate by taking the December values of 981, 442, and 306 for Tahoe, Yukon, and Escalade, the total for the year is 6,874... excluding the mysterious missing April values. Saying 7,000 is realistic... and way off of original projections (half, in fact). Of course, the automaker hybrid total of 14,439 isn't much to tout regardless. I suppose supporters will attempt it anyway. But then again, how will that look in comparison to the hybrid total of 16,858 for Lexus? As for other numbers, Toyota's total (excluding Lexus) was 224,457. December BAS sales were 454, 338, and 34 for Malibu, Vue, and Aura. The total annual count from Ford was 19,522 hybrids and Honda sold 31,297 hybrids here.

1-06-2009 **Gas Prices.** I was quite curious what would happen after the holidays concluded. Turns out, gas prices shot up 20 cents per gallon to $1.89 here. Oil seemed to recover at $48.58 per barrel, which is better than the obviously unsustainable low of under 40. To no surprise, the price of diesel remained at $2.39 per gallon. Hybrid owners doubt that the lifetime estimates published recently (anti-hybrid articles) using $1.66 will be acknowledged. That type of narrow scope greenwashing tends to hype then disappear... probably so consumers can't place blame later when they figure out they had been mislead. The upward climb has begun again.

1-07-2009 **Assumptions.** Jumping to conclusions about an increase in engine size was the hot topic today. It's an interesting one, since some countries actually penalize for larger (emission restrictions). And of course, what's wrong with offering multiple configurations for a hybrid? After all, traditional vehicles have done it for decades. This was my contribution to that, to help stimulate thought and to keep the assumption of MPG penalty from getting out of hand: Engineering is always a balance of design. Bumping the engine size up to appeal to a much wider consumer base could have easily introduced the opportunity to get away with operational aspects that weren't previously available. For example, the larger gas engine could require an increase to the cooling system. That same cooling could be used for the electric motor too... allowing it to output more power than we saw in the past... which seems to coincide with the rumor rather nicely. Hmm? Faster and longer stealth as a result of a larger engine. Very interesting... It could also mean more aggressive battery-pack recharging, another benefit to stealth.

1-08-2009 **Numbering.** It's amazing how some hold on to the past and still refuse to look at the big picture now. We got quite the post today, attempting to defend a "choice" from long ago... generation numbering of Prius. Remember the greenwashing nonsense that took place all those years ago? Anywho, I couldn't resist responding with this: Never been responsible for a first ever upgrade/update, eh? With nothing as a basis of comparison (no competition) and a conservative approach (under promise, over deliver), they naturally chose a minor unit. Then got stuck with it. Taking advantage of the opportunity, the competition later (both Honda & Ford) decided not to use subversion numbers and to not even use criteria as strict to increment. So, it appears to consumers like they already passed the competitor (Toyota). That inconsistency is the problem. Call it what you want. It is still the 4th version.

1-08-2009 **Endless Misleading.** You'd think they would eventually give up. Instead, we continue to get misleading about FULL hybrids. Today it was how fast the Toyota hybrids can travel using only electricity. Random published articles from various non-credible sources were provided. None were correct... obviously. Quick checks from test-drives don't reveal much... but some believe what they read without question. I tried to interject with this, though likely won't make any difference: Look closer at your own links. The variations noted are just based on casual observation, not a measure of electrical draw. When the kW threshold is exceeded, the engine will start up. This happens during acceleration... but not during sustained cruising. In other words, with a Toyota hybrid, accelerate up to 40'ish then ease up on the peddle. The following 2 to 3 miles of up to 42 MPH on flat terrain can all be with the engine stopped. Also, with the EV-button (aftermarket in the US, standard elsewhere) you can accelerate more aggressively up to 35 MPH using only electricity.

1-11-2009 **Cadillac Converj.** I wondered what the competition would do to draw attention to them. With the reveal of Prius imminent, squandering for the spotlight was inevitable. But this? It seems rather desperate. GM announced this vehicle, a luxury version of Volt... which still isn't available yet and won't be for about 2 years still. For crying out loud. It's the fuel-cell nonsense all over again. Whether or not it becomes available is beside the point. You can't buy it still. And when something finally rolls out, it won't resemble that concept anyway. In fact, even the intended market could have changed by then. Strangely, this type of promotion distracts from their current product. Remember advertising? With the market turned upside-down and interest in MPG, there's a definite struggle for attention now.

1-11-2009 **Lexus HS250h.** This new hybrid was revealed today. It's the first ever dedicated luxury hybrid, where there is not a traditional counterpart. Reaction online was mixed. With no basis of comparison, there's really no way to measure interest... especially with a market struggling for sales now. Who knows? It could be another perfect placement situation. After all, people are looking for an alternative to the monstrous guzzlers now. A luxury model that's unique could very well be exactly what they will be looking for. If not, it's still an advancement in design implementation. Committing to production is a big deal, way beyond all the concepts we've been seeing lately.

1-11-2009 **Detroit: meeting them.** Some of us go back many years, online friends and combatants that never expected to actually meet. But there we were, a large group of us (about 50) in the motor city. Yup, a gathering of the most outspoken Prius supporters in Detroit. Toyota invited us to see the unveiling of the new Prius. It was a surreal experience. Together for a unified purpose.

1-11-2009 **Detroit: chatting in-person.** There's a sense of respect that comes from face-to-face encounters. One like this blows your mind. We were the group of supporters that helped make this history unfold. Now a new chapter was beginning, sharing stories in an actual room rather than a forum... a level of interactivity that simply isn't possible online. You get to know why they post what they do. Learning about the person in a new way makes you wonder what comes next.

1-12-2009 **Detroit: what came next.** The discussions changed from past & present to future. Lights dimmed. Silence set. It was time. We watched a screen of a live broadcast from a location just a short distance away. The moment we had long anticipated was now happening. We watched with great anticipation. Then suddenly, there it was. The new Prius appeared. We cheered. You couldn't get much more receptive of an audience. That was our dream. The 2010 introduced improvements and new features to the hybrid we loved. Our efforts to promote contributed to that. Yeah!

1-12-2009 **Detroit: anticipation.** Hanging out in the conference hall... So much to talk about... The evening would bring even more. We saw the new model... Heard of many compelling features... Yearned to see it up close... Hours from then, we would. Much had been done to the design. Those responsible for it would be there to answer our questions. It was a fantastic opportunity about to come soon...

1-12-2009 **Detroit: time to go.** We assembled by the doors waiting for the bus, anxiously waiting for the opportunity to touch. It was a collection of people like no other. This was new, uncharted territory. Internet leaders gathering with full endorsement and encouragement to do even more. They were empowering us. Automaker reacting out to the loudest group of consumers. The product they built & sold was about to get even better and there we were being provided the opportunity to indulge.

1-12-2009 **Detroit: indulging.** It was hysterical. We were over and under and inside everywhere we could be. Getting a hand-on experience like that was absolutely incredible! No auto show would ever allow you to inspect and investigate to that degree. Pieces of the car itself were getting removed. Yes, we actually took a few things apart! We wanted to see the new battery-pack... all the way into the back seat... to follow the wiring. We were quite thorough. How many could fit under the back to check out the new suspension and the front the new engine was quite an amusing question to answer. It was all there for us to explore. We loved every minute of it!

1-12-2009 **Detroit: there it was.** A new model, right there. The 2010 Prius. I had my video recording non-stop in one had while attempting to snap as many photos as I could with the camera in the other. It was quite a thrill. The data I collected in those first 30 minutes is more than what some will be able to get for months perhaps longer. It was an unprecedented opportunity... 3 full hours just for us!

1-12-2009 **Detroit: pioneering.** That fairy-tale dream... getting to be part of the debut didn't end with getting back on to the bus. Instead, it was hearing of a new pioneering opportunity called "*Prius Priority*". I had hoped there would be something special awaiting. We get to purchase one of the first models built! Like back in 3003, we as pioneers get to place orders before the dealers. Our past efforts will be rewarded by getting to lead again. Pioneering continues with this newest model.

1-12-2009 **Detroit: excitement.** Mine was intense. I've got a bunch of photos and video to share. Having so much new website content now at my disposal is mind-boggling. It's a treasure that the curious will gobble up. I wonder what the explosion of 2010 stuff from so many sources will do. The forum & blogging activity will be incredible. In a time of economic hardship, this certain is a bright ray of hope.

1-12-2009 **Detroit: looking back.** 9 years ago my quest for a better vehicle started. I would have never believed it could lead to all this. The friendship forged from online sharing is amazing. We've opened up minds to explore a newly emerging world. Some of my friends are going to upgrade for the first time. I look back at my experience with a new model reliving the feeling of awe. It's extraordinary to see imagination come to life. Some long hoped for improvements actually materialized. It's great!!

1-13-2009 **Detroit: bonding.** The even has caused a stir. Online posts are beginning to label our "group" as insiders. Now that we've all met each other and those directly responsible for Prius in person, you definitely get a feeling of being informed like only someone being paid would... though instead, our incentive is to make a difference. We all share this incredible adventure together. it's very much a bond others won't understand. Heck, I didn't even realize it was possible. We all quite literally went where no one had gone before.

1-13-2009 **Detroit: impressions.** A bigger engine which delivers greater efficiency. That's going to be difficult to explain. The new exhaust heat capture/exchange system could be too. Not having a pump belt anymore should be a no-brainer. Stealth still having the same threshold, yet EV & ECO now being available is obvious discussion, debate, and criticism subject matter. Did I mention the solar panel? How about the really impressive improvements to the user-interface? This year is going to be a wild ride! The 2010 raises ups ante rather significantly.

1-13-2009 **Detroit: cat heating.** That was the new standout feature of the design indulgences. Piping hot coolant down to the catalytic-converter is a significant improvement focusing heavily on emissions reduction, which should really help with the plug-in upgrade later. Heating that device up as quickly as possible is the key to cleansing exhaust... with an obvious side benefit of using less fuel. The engine can shut off sooner and stay off longer with this improvement. Eliminating the need for the thermos should offset the cost. It's a win-win enhancement. I'm curious as heck to observe how it performs in the extreme cold.

1-13-2009 **Detroit: power carriers.** In the current PSD (Power Split Device) that the Toyota hybrids use, there are 4 of the planet (interior) power-carriers. With the new model Prius, that number increases to 5. If you've ever dealt with ball-bearings, you understand how pressure can be reduced by spreading the load. More means less is put on each. Movement should be easier. Efficiency should improve as a result. That's pretty sweet! How to animate and explain the operation could be a challenge though. Calculating position gets really hard with so many rotating & revolving pieces. Thank goodness the engineering isn't something that needs to be discussed in that level of detail. Even most enthusiasts stay away from figuring out how many teeth each of the various sized components have. And to our delight, the overall FULL hybrid design is still less complicated than a 6-speed automatic transmission.

1-13-2009 **Detroit: electric motors.** The big one (MG2) grows more powerful. It will be 60 kW, up from the previous 50 kW rating. The smaller motor (MG1) becomes faster. The RPM will be 13500, up from the previous maximum of 10000. Both improvements will ultimately deliver greater efficiency. The electric side of the system certainly is maturing nicely. As the competition struggles to offer any kind of midsize hybrid, Prius moves on to a generation design supporting very capable motors.

1-13-2009 **Detroit: responses.** Just did a quick scan of the online activity in the big Prius forum. It looks like there's a wide variety of opinion. Basically, no pattern has emerged yet... which would have been surprising. Word spreads quickly, but overnight is a bit absurd. Fortunately, we do have a decent amount of initial information to work with. Interest is huge. I saw a big spike in the web activity logs. What those interested in the new model really want to know about is what I'm curious about. Repeating questions in forum responses are what will form into the new Info-Sheet and User-Guide for the 2010. Misconceptions are the greatest concern... especially with greenwashing such a problem now.

1-13-2009 **Detroit: denial.** Media coverage from Detroit sources barely existed. There was only a brief mention of an unveiling. On the big GM forum, they summed up the 2010 Prius as "*Lipstick on a pig*" ...which makes no sense whatsoever... until you read the posts and realize they focused almost entirely on the look of the vehicle alone. Acknowledging any detail about design would be treason, as the Volt blogging site demonstrated by pretending nothing from Toyota happened in Detroit. It's amazing. The denial is so blatant. If you have nothing to compete with, just ignore the competition. No wonder Detroit was chosen as the location. If that couldn't get attention in home field, the expectation of bailout money actually being used for progress toward better efficiency isn't realistic. Disappointment looms. The next few months sure are going to be interesting.

1-13-2009 **Lipstick on a Pig.** That was the "short take" response by the big GM forum to the reveal of the 2010 Prius. It's a comment that doesn't make any sense. In fact, it is quite absurd. How can a clean & efficient vehicle be considered a pig? Have they lost all touch with reality? Will they ever finally get serious? The denial is truly amazing. I suppose pressure from Ford moving forward with hybrids makes the effort from Toyota hurt even more. Enthusiasts are disenchanted. Stockholders are angry. Consumers are left with nothing appealing to buy. So... they mock the competition. That figures.

1-13-2009 **Insight's Official EPA.** The estimate numbers are now available. MPG is 40 city and 43 highway. That's a far cry from the original model. It's a wide margin, making the difference quite apparent without any need to point out how much larger of a vehicle Prius is. How the two hybrids will compete is an intriguing topic. Price is the most obvious. But the market of post $4 gas is aware of vehicle "electrification" feature. Driving with the engine off while running the A/C wasn't a subject of much discussion in the past. Now, the situation is much changed. That's something which makes the FULL hybrids stand out from the ASSIST. Consumers are becoming better educated about hybrids. This time, not being the same could be much more of an issue. We'll find out in just a few months.

1-14-2009 **New Prius Features.** This is a quick summarized list from the official itemized brochure, not detailed differences enthusiasts will later provide. Nonetheless, it's still a handy reference to what's new in general: Driver Knee Airbags, Tilt/Telescopic Steering Wheel, Driver Seat Vertical Adjustment, 4-Wheel Disc Brakes, Touch Tracer, EV/Eco/Power Modes, Tilt/Slide Moonroof: Solar Ventilation System and Remote Air Conditioning System, LED Headlamps, Headlamp Washers, Intelligent Parking Assist, Dynamic Radar Cruise Control with Pre-Collision System, Lane Keep Assist

1-14-2009 **Everybody Knows.** How many times have I had to deal with such nonsense: "*Everybody and their mom knows that hybrid's basically and mostly improve only city fuel economy. Sometimes I can't believe how stupid people are.*" What a pain. I posted this: There are so many reports of real-world driving proving that false, no one is buying that nonsense anymore. But if that isn't enough, direct your attention to the 2010 Prius... There are no engine belts. Everything is electric. No parasitic loses like in traditional vehicles. The engine uses an Atkinson-Miller pumping cycle, which is more efficient that Otto used in traditional vehicles. Heavy components in the engine are not needed, since the electric motor contributes to power when demand is high, resulting in better efficiency. So, even without mentioning less mechanical loss from the "transmission" system, it's easy to see that MPG can be noticeably higher on the highway.

1-14-2009 ***Pre-Order Submitted!*** I'm looking at a printout of the confirmation I just received. Like with my two previous Prius, the pre-order took place online. The next step in the process is to go to the dealer. That makes the order official. It should occur in 2 to 3 weeks, when an email with instructions arrives in my inbox. Then I'll have roughly 4 months of agonizing delivery wait to endure. Getting to submit a webpage form indicating my purchase preferences is very exciting. It's by far the biggest internet purchase I've ever made. My choice was the "gold" priority package, a silver metallic exterior with a gray leather interior. This is the one that comes with the moonroof & solar options... just in time for Summer... which is difficult to imagine considering how cold it is at the moment. Oh well. The loooong wait begins.

1-15-2009 **Propaganda.** With the 2009 Auto Show circuit about to open to the public, lots of promotion is being broadcast on television. Unfortunately, most of it is hype. They are representing most of the new technology concepts as if they will be available soon... abundant & affordable. That's sad. People are getting mislead, being provided with a portrayal that gives the impression of quick & easy change. The entire bailout situation is absent. There is no sense of urgency. It is almost a "business as usual" mentality... like a complete denial of the financial disaster unfolding. The next few months certainly are going to be of major historical significance. Fasten your seatbelt!

1-16-2009 **Reality Reminder.** Sometimes it's needed. The propaganda automakers feed to consumers is quite misleading. You get the impression more is coming sooner & cheaper than what actually happens. And with the 2010 Prius recently revealed, random posts of disappointment emerge from newbies expecting a plug-in option available immediately. I interjected this dose of perspective on the reality of the situation... Do you have any idea how many "planned" hybrids have come and gone over the past 9 years? Toyota actually delivers something in large volume at a reasonable price, then continues to improve it. The plug option is coming. Li-Ion still has a few quirks that need to be dealt with (like cold weather operation). In the meantime, the platform which will use it is being rolled out.

1-17-2009 **Extreme Cold.** The outside temperature was -20 F degrees. It was my coldest commute ever in a Prius. That spelled opportunity. The digital camera I have now is way better than years past, where difficult lighting conditions simply could not capture action properly. Shots would end up blurry. Not anymore. Rather than be confined to just a capture of the screen, I could actually get some of the surrounding area too. So, I did... photo album 124

1-18-2009 **Reflections.** Today was my first opportunity to playback some of the video I had captured during the Detroit reveal. Many of the nuances are now saved on my computer if I ever forget. But I doubt I will. Fantastic memories have already been permanently stored in my brain. That event was amazing! It was like touching a dream. You hope the technology will continue to improve, especially after 9 years of support. But to actually see that history unfold in a dramatic moment is quite unexpected. It was so much fun. I can't wait for delivery!

1-19-2009 **Painted Into A Corner.** Have you ever considered how long automakers will delay updates to their dashboard? The traditional look contributes heavily to waste. The tiny speedometer numbers and analog interface simply can't be altered... because then people will ask why MPG information isn't provided. Your attitude about consumption changes quite a bit when you are well informed. The data from the Multi-Display in Prius is priceless. You discover just how outdated 20th Century technology really is. Efficiency awareness is not what an automaker selling guzzlers wants you to learn about.

1-19-2009 **Two Models.** The rumors are intensifying. Talk of Toyota offering both the current and new model of Prius at the same time is abundant. Of course, that's not rocket science. It's basic economics. An automaker signs a contract with a supplier. That supplier fulfills the quantity agreement. The automaker must do something with those components. Building the original intended amount of vehicles is the most sensible solution. Waiting until inventory of one model is gone before rolling out the new model, featuring a generation difference, is an unnecessary risk. Most consumers prefer tried & true technology. Supporters jump on the new technology, providing real-world data in the meantime. Everyone wins. Sounds good to me. Of if nothing else, it could be just like back in 2001, when the United States got the Classic model and Japan continued with the Original. Market differences is hardly a new thing.

1-19-2009 **Even Colder Photos.** This batch from the commute the next day is even better. I was able to pull back further, allowing for an even wider view. Not only can you see the Multi-Display, you can also see the Speedometer too... both in action as I drove. Having a quiet back road to drive later in the morning worked out great. I basically had the route to myself... and took full advantage of that opportunity. There's a collection of shots for each of the 4 background colors available. The temperature briefly dropped all the way down to -22 F degrees too. See... photo album 125 photo album 126

1-20-2009 **President Obama.** The nightmare of broken promises is over. Inauguration day was today. Yeah! I got so frustrated by the previous administration saying things like "*we're addicted to oil*" then not doing anything about it beyond just a token gesture. All those years wasted. Tax credit for purchasing a vehicle heavier than 7,500 pounds was insane, especially when such a short-lived credit was available for the hybrids. The denial about climate change and fighting efforts to reduce carbon emissions was horrible. To not even try was sickening. Thank goodness we now have someone from the opposite extreme in charge. Hopefully, the outcome will not only be better for the environment and our security, it will also create jobs... which we really need. Best of luck President Obama. We share your enthusiasm for change.

1-20-2009 **The Big Energy Gamble.** Whenever a major political event takes place, you can depend on the education television channels to deliver. This evening's feature for me was a Nova presentation on PBS. The majority of information was devoted to non-mobile clean energy solutions. The final segment before concluding was all about hybrids. It was a dream come true for those needing a quick, intense dose of support. Prius was the showcase vehicle, with heavy emphasis on plug-in augmentation. It was very exciting to watch. Lots still needs to be done though and the cost of proposed changes is a very real fear for many people.

1-20-2009 **New Prius?** To my total amazement, the Volt enthusiasts are pretending there was never a new Prius revealed. It's been a whole week. And even when provoked, they just ignore the reference entirely! Nothing has been blogged about, despite it being such a hot topic just weeks earlier. What could have changed? Are they perhaps afraid that the upgrade is too impressive to compete with? After all, they had set expectations quite low. Being told your preferred technology will one of many can be a let down. For me, it's quite the opposite. I've been wanting traditional vehicles to be phased out by whatever engineers can dream up as practical & affordable... as long as it does the job of significantly reducing emissions & consumption.

1-20-2009 **Certified Used Hybrids.** Just in time for those of us upgrading from the Iconic model Prius to the 2010, Toyota announced an official certification program for hybrids. The benefit is additional inspection and warranty coverage. Having any type of formal process helps. Official criteria should provide comfort for consumers unfamiliar with what to look for. After all, that's been touted as a helpful with used car sales of traditional vehicles.

1-21-2009 **Ford DCT.** A new dual-clutch six-speed automatic transmission was officially announced today. Ford's target market is the small-car segment, starting with Fiesta in 2010 here. Engineers should be given credit for delivering a big efficiency gain, but the complexity is truly amazing. Talking about a huge step in the wrong direction. We all always knew the step up from 4 to 6 gears would come with that penalty. But when you look at the component diagram I wonder about reliability & cost. Will consumers? That probably depends upon what the concern about oil-dependency & fuel-efficiency is then. Currently, really small cars are still a niche here. Time will tell.

1-21-2009 **Warmer Photos.** After seeing the resulting 39.2 MPG average from a high of -17 F degrees on those unbelievably cold commutes, it was a relief to finally see the temperature rise. It warmed all the way up to 5 F. Can you believe it! Anywho, that evening on the drive home from work, my reading on the odometer hit 111,111 miles. That spelled yet another unique photo opportunity. So, I took a photo of that, capturing the Multi-Display as well as the snowy road in the background all in the same shot. I'm pretty happy that those difficult lighting photos turned out looking pretty darn good too. It's amazing how far digital technology has advanced since first getting a Prius 8 years ago... photo album 127

1-21-2009 **Blatant Errors.** It's pretty bad when the front-page feature of a monthly automotives publication makes such a blatant error: "*The Insight's Integrated Motor Assist (IMA) system isn't a series hybrid like Toyota's Hybrid Synergy Drive (HSD) - it's a parallel system. In simple terms, this means both the engine and the electric motor drive the wheels, as opposed to the series system in which the wheels turn only from power provided to it by the electric motor*." But the situation is even worse when none of the SERIES hybrid supporters care. Supposedly both are authorities on the technology. Spreading of incorrect information like that is bad for everyone. Yet, it still happens.

1-21-2009 **Blatant Smug.** The big GM forum is totally lost, without direction and uncertain what the March bailout deadline will bring. So, the breaking of my silence and finally sounding off about the new model Prius in a smug way shouldn't have been much of a surprise. Random comments don't stir any discussion. Feedback is essential now. The clock is ticking for GM. They must express a clear purpose and gain the support of the enthusiasts. Feeling let down is putting it mildly. Action must be taken. Big change is required. Did the following to-the-point post help? Who knows... 50 MPG from my midsize car, complete with moonroof and solar panel. Anyone else wish GM would also produce a vehicle like the 2010 Prius?

1-22-2009 **Blatant Ignore.** Enthusiasts of Volt were avoiding the topic of the 2010 Prius like the plague. Nothing had been posted, which was significant departure of behavior from before the reveal. Today, that changed... or so it seemed. There was a close-up photo of the solar option. It appeared as though discussions were being stirred with that topic as a starter. After all, the same option had been addressed for Volt ages ago. Unfortunately, quite the opposite occurred. It served as an excuse to dismiss. They had been provided a reason to continue to ignore. And they did. They obviously don't like the improvements, making their reasoning Volt (as the prototype is configured) even more difficult to justify.

1-22-2009 **Winter Memories.** Once upon a time (early December), it was actually quite different outside. Winter like that routinely sure would be interesting. Seeing an average of 51.5 on the Multi-Display doesn't happen that much here in Minnesota. In fact, it almost never does... unless you get a lot of wet, heavy snow during the commute home. In that case, traffic moves along at a very slow pace... as it did that evening. I drove at a steady pace between 30 and 40 MPH most of the way. It made the Prius very happy. So, I whipped out the camera to document what I saw on the Consumption screen... photo album 127

1-22-2009 **Solar Option.** Ever leave your windows open on a hot day? That same cooling is what the solar option will provide… specifically 80 watts to run the air circulation system with when you are gone, keeping the car comfortable without the security compromise. Every little bit adds up. Being able to push air through the car while it's not in use and later while you drive, without needing to draw power from the vehicle itself, will contribute to improved efficiency. You never know what the solar option will lead to later either. This introduction is welcome one. And yes, my pre-order includes it. Delivery in late-May or early-June is just in time to try it out. I can't wait!

1-23-2009 **2010 Prius Reveal.** There I was, a high-definition video camera in one hand and a digital camera in the other. Being ambidextrous sure came in handy that evening. 50 of the most outspoken supporters of Prius had all gotten together for a gathering in Detroit, of all places, to get to see the 2010 model for the first time and learn as much as possible as quickly as possible. Those 3 hours raced by so fast, I sure was glad for the recording devices. Now looking back at what I had captured, it's pretty easy to see how exciting of an experience that was... photo album 128

1-23-2009 **$46.47 Per Barrel.** It was all the way down to $35 recently. Where the heck oil prices will settle at is anyone's guess. That could be up or down. What we do know is that it will take awhile. The upcoming stimulus plan and the second half of the TARP (bailout) money must happen in the meantime. Jobs are still being lost in every market and production plans continue to be cut back. This is a "peak oil" warning sign. Loss of consistency is bad for everyone... which is precisely what we've been witnessing. Permanent change is coming. It's long overdue. Hopefully, the desperate nature of the situation will prevent much resistance.

1-24-2009 **Discovering the 2010 Prius.** The new dashboard, buttons, and screens sure had me jumping for joy. Seeing how the Energy Monitor and the Consumption Screen had been moved from the Multi-Display to a device illuminated like the speedometer was exciting. I wondered how rearranging of the dashboard would enhance the driving experience... and it turns out, you don't even have to drive to find out. Just sitting there with my cameras made it obvious. Hopefully, you can see that too in the photos I took... photo album 129

1-25-2009 **EREV, declared.** After 2 years of uncertainty, a step forward has finally been taken. I want hybrids to replace traditional vehicles. But not just any hybrids. They need to actually deliver benefit in the form of significant emission & consumption reduction. Some don't. Reliance on the ASSIST and FULL labels was how pointing out differences begins. If people aren't even aware that there is more than one type of hybrid, nothing else you say will be heard. That's why I kept pushing SERIES every time Prius was called a "parallel" hybrid. Regardless of intention, doing that undermines progress. Now the Volt enthusiasts have declared the label of EREV to identify their "series" hybrid.

1-25-2009 **EREV, changing.** Remember how "E-Flex" was originally promoted as the technology's name? Then they tried "REEV" for awhile. It was all an attempt to draw attention away from the fact that we were still dealing with a hybrid... which is the very thing a certain in power swore was a terrible business investment. After experiencing enough of that nonsense, you cheer when a decision is finally made. Commitment sure is nice. I'll accept the choice of "EREV", then force them to stick with it. No more changing!

1-25-2009 **EREV, types.** ASSIST = parallel. FULL = series-parallel. EREV = series. That's what all the effort equates to. This identifier represents a compromise and the desire to move on. The catch is, a large quantity of something must finally be built & sold. All we're getting still is lots of talk. That's even beginning to frustrate the enthusiasts themselves. Hopefully, within the next few years, it will translate to so much pressure that their hybrids will rapidly join the mainstream. Unfortunately, right now, it's basically just propaganda.

1-25-2009 **EREV, response.** This is what I posted in response to that official declaration on that Volt blogging website... EREV was the whole point of the push for FULL here. It was quite obvious that this Volt group would eventually notice the same problematic pattern, necessitating a supporter identifier. Prius owners struggled the same way with ASSIST years ago. Study the history and stop fighting those trying to help. There are reasons for certain approaches, which you'll discover as you transition from enthusiast to supporter.

1-25-2009 **EREV, comparison.** My loyalty is very much for FULL hybrids. The current push of EREV is unrealistic for the masses. That particular configuration is way too expensive. Of course, the more you reduce the size of the battery-pack to decrease price, the more appealing the plug-in FULL hybrid becomes... and they know it. So, the spirit if cooperation is remains absent. They fear popularity of hybrids like Prius growing so much and so fast that the EREV is pushed aside as a niche... which means they are fighting the very automaker they endorse, since GM will be producing both types. Needless to say, they try to keep comparisons vague. Detail is thought of as the enemy... even though that is the very thing required to move beyond traditional vehicles.

1-25-2009 **EREV, self-defeating.** The hope is to avoid behavior that prevents progress. Attitude of posts have been that Prius is a problem for Volt. Acceptance that sales of traditional vehicles grossly overwhelm that of hybrids hasn't happened yet. Rather than embrace those on the same team supporting changing, they are fighting them. Claiming that Volt is the one and only solution is self-defeating. Seeing that reality could come soon. The bailout is an unavoidable wake-up call for priorities.

1-25-2009 **EREV, goal.** Sell something clean & efficient already! For crying out loud, we're tired of the "*all talk, no action*" approach. Progress is defined by what happens on the road itself, not what you read online. Actual sales is how merit is earned. Talking about what might be available years from now only serves to endorsement what is currently available. The catch is, something must actually be available. For example, with Prius, having a plug-in option available supports the platform now. The same goes for a better battery-pack later. One leads to the other. What is the goal?

1-25-2009 **Double Renewables.** That's the energy plan President Obama is suggesting as part of the economic recovery plan. It both creates jobs and builds a better future at the same time. Win-Win sounds like a great approach to me. Infrastructure updates (transmission lines, primarily) and growth of solar & wind as power sources is long overdue. The previous administration did basically nothing but introduce more red-tape. I'm so glad we now have a leader that intends to actually deliver. See, the catch is Obama set a 3 year deadline. That's within his watch... quite unlike Bush, who proposed stuff without any deliverable for a decade... long after he could be held accountable. Remember how he heavily promoted hydrogen fuel-cell cars for our children while disregarding our immediate consumption & emission problems.

1-25-2009 **More From Detroit.** Watching through the video I filmed, there were a number of individual frames captured that looked really good as photo snapshots. So, I used some software to grab them from the files. It's really handy having one camera with a small lens and CCD the another a large lens and CMOS. In difficult lighting conditions with minimal time available such as that, one is bound to get a good exposure. What I got adds nicely to the collection, so there's even more to share with everyone curious about the 2010 model... photo album 129

1-25-2009 **Cheap Gas.** That's the real problem. It's what led to the insane promotion of large SUVs as commuter vehicles and the near death of the minivan for families. Encouraging reduced consumption for the sake of national security or the reduction of emission for cleaner air to breathe is a challenge. How do you measure the benefit? But with the pain people feel at the pump, the difference being made is quite obvious. That's a big reason why we saw such a boom in sales back when gas was $4 per gallon. After all, the fear of the technology has faded. Most of the misconceptions are just a bad memory now. Consumers see so many Prius on the road now, it validates the purchase. Cheap gas doesn't. Consumers need motivation.

1-25-2009 **New Prius Stuff.** The new touch-tracer is the most obvious change. I took a number of photos of that. It redefines convenience. Like a computer mouse, there's no reason to ever look down to see what your finger is about to push. You know for certain by image super-imposed over the speedometer cluster. The new Energy Monitor, especially in that new location, really looks nice. But there's lots more to the other screens then I first realized. Controlling two cameras at once was all I could handle. My photos were based on observations of others... which is incomplete. My next encounter with the 2010 Prius will reveal what I missed. Apparently, a few features went unnoticed. Of course, without being able to actually drive, it should have been obvious that something else was there. Anywho, here's what I did capture... photo album 130

1-25-2009 **Highway Improvement.** I'm pleasantly delighted to see plenty mentions of it. A few even dig into the reasoning too, though most simply point out how the larger engine allows the system to less to maintain highway speeds. In reality, there's many factors. The second most obvious is the lower Cd (Coefficient of drag) from the new body style. I personally like the PSD improvement, torque is reduced by as much as 20 percent through the enhancement of the existing arrangment and the introduction of a second (a dual-stage configuration). Then of course, there's the EGR (Exhaust Gas Recirculation) system that gets all the engineer types really excited. It's cooled to reduced pumping losses. The water pump is electric now, which also contributes to the overall improvement on the highway. Needless to say, I can't wait to go for a drive with it.

1-26-2009 **Battery Pretext.** The effort to conceal is really taking an interesting twist. With so much pressure to deliver higher MPG, the thought of compromise on Volt configuration is apparently now seen as an admission of failure. That's the conclusion I draw with misleading so easy to expose: "*The Volt won't work without a fairly large battery.*" I enjoyed responding... Charge-Depleted mode clearly demonstrates that with battery-capacity down to 30%, the Volt design will still deliver impressive efficiency. You still get acceleration & regeneration benefits from the electric-motor. Only the improvement from plugging is held back. In other words, it becomes a viable SERIES hybrid without a plug. Reducing the size of the battery-pack is a topic that is clearly being evaded with the disguise of a false claim. There is nothing that doesn't work.

1-26-2009 **Decision Making.** It's so refreshing to hear that science will now be the basis for decision making, not politics. Those that have not been attentive wouldn't have noticed how much changed over the past 8 years. Prior to then, data from the scientific community was not simply dismissed using the excuse that "*more study*" is still needed. Seeing that it was really just a tactic to delay making a decision. Distractions in life allow it to seem reasonable, so constituents hadn't complained. After all, it's easier to resist change. But now, change is essential. We must. The economic mess does not allow for "*business as usual*" anymore. No more status quo. It's time to decide.

1-26-2009 **Energy Economy.** Many of the economic decisions now being made related to how we provide & use energy. So, it only makes sense that such a label is given. Of course, with the previous administration being sensible wasn't so easy. We were told repeatedly that we were "*addicted to oil*", yet almost nothing was done about it. They only said the words we wanted to hear. But now that the economy it false pretense had supported is now collapsing, the change actually required is pretty easy to see... and much of it is with respect to energy.

1-26-2009 **HybridCars Video.** There's nothing like following a video link someone provides, pressing the play button, then seeing yourself. There I was, at the Detroit reveal next to the 2010 Prius... saying something so fitting to that situation, they used it as the introduction for the video of the event. In full frame close to the camera, I exclaimed "*I Love It!*" then turned away, returning with a "*Where do I sign?*" while imitating that gesture. After a pause and a brief almost maniacal laugh, I said "*I'm serious.*" That was perfect. Leave it to me to provide such a silly segway. Following that was a fade to black noting the purpose of the video documenting: *Fifty of the world's biggest Prius fans were invited by Toyota.*

1-26-2009 **Invitations.** The opportunity to get well-acquainted with the 2010 Prius, like those who went to Detroit experienced that reveal evening, has been extended to other enthusiasts & supporters. In Washington DC, New York City, and Chicago, there will be similar discovery events within the next 2 weeks. I can't wait for the flood of new photos and posts from those who attend. Being able to explore that way is fantastic. You learn so much, so quickly. It's quite fulfilling.

1-27-2009 **Missing April Sales.** Those missing Two-Mode numbers finally surfaced. Until now, I only had 11 months of sales accounted for... which came to a total of 6,874. But now I know. In April, there were 69 Tahoe and 49 Yukon hybrids sold. So, the ultimate count for the year came to 6,992. That's obviously an outcome quite a bit different from what the troublemakers insisted would occur. They sure were a pain. Now, none exist. They've all vanished. Not a single one wanted to provide an expectation of what to expect for 2009. It's really odd when they fight you so hard, then abandon that effort abruptly when things don't go in their favor. I want traditional vehicles to be replaced with clean & efficient hybrids. They just wanted bragging rights. Sadly, we both actually lost though. Two-Mode sales were terrible and I'm still waiting for something worthwhile from GM.

1-28-2009 **Inaction Consequences.** Tired of the nonsense from not doing anything over the past few years, the effort to allow states to choose how to regulate vehicle emissions is now well underway. It had been stalled during the previous administration, claiming that federal criteria was adequate. Arguments are that anything beyond the modest MPG increases required over the next decade will ruin automakers. Not being able to sell high-profit guzzlers is the problem. Margins on more efficient vehicles are slim. Well, too bad. They were warned this would happen some day and the technology has been proven affordable & reliable in the meantime. Dependency on oil and not taking responsibility for the resulting emissions is irresponsible. There are security & environmental consequences. No more excuses. It's time for action.

1-29-2009 **CARB Authorization.** The ruling on whether or not California (and the other 13 states wanting CARB standards) will be allowed to enforce tailpipe emission mandates more stringent than the federal EPA requirement is now getting serious attention. It was dismissed as frivolous by the previous administration. This one is different though, and carbon-emission data has earned merit since those attempts to regulate in the past. It's about time. Not offering 50 MPG or even 40 MPG vehicles is an big problem. Where's the choice? Nothing available is unacceptable... especially when we know that oil dependency and climate-change must finally be dealt with.

1-30-2009 **Prius Fighter.** Remember that stance once taken? This needed to finally be posted... It has interesting how much has changed over the past 2 years. Volt was deemed as a Prius fighter, the game changer. That idea has been all but totally been abandoned since. Vehicle size & price choices made that unrealistic, contributing to the low-volume production plans and discussions of what comes next. The need for a midsize high-efficiency vehicle priced in the 20's still remains. What will GM sell to consumers wanting that in the meantime, while we wait for generation two of Volt technology?

1-30-2009 **Silverado-Hybrid.** The online response to the first-drive report was praise then move on to asking when the technology would be available in a midsize sedan. That didn't go well. It was nothing but a propaganda fest, the same old tired nonsense we've heard countless times already. Excuses to use guzzlers as a commuter vehicles are so disingenuous. There's no justifying required if you actually use a truck for utility. But all that power with no passengers and no cargo is just plain wasteful. Anywho, I liked responding to this particular attempt to greenwash: "*can the prius fit 8 people? nope. you need two priuses to do what one tahoe can do.*" Notice how two Prius will still use less gas than the one hybrid Tahoe: 100 miles @ 22 MPG = 4.5 gallons verses 100 miles @ 50 MPG = 2 gallons.

1-30-2009 **$41.68 Per Barrel.** The economy has stalled, waiting for action from the new President and Congress. News of large recent bonuses distributed to upper-management at companies which received bailout money was the upsetting news this week, adding to the financial disaster. What a mess. Terrible business practices many had been complaining about for years are now revealing their consequences. Needless to say, markets are now taking the "wait & see" attitude... bringing the oil industry to a stop. Investment in new extraction technologies has become much more risky. Gas is "cheap" for the moment. Interest in drilling more has changed dramatically since before the election... just 3 months ago.

1-31-2009 **Accord verses Prius.** Searching for efficiency information on the internet today, I stumbled across a college presentation from a few years ago. It was an analysis comparing the SULEV Accord (non-hybrid) to Prius. To my surprise, the featured photo of Prius was one of my own. That's surreal unexpectedly encountering content originating from yourself. But having the oldest & largest collection available, that's bound to happen more and more. The desire for analysis material will obviously grow as the technology strives for the ubiquitous level. It's becoming prolific already. A few more years of the same, you'll see hybrids everywhere you go.

1-31-2009 **January Thaw.** It's hard to believe we went almost the entire month with temperatures well below freezing. That hasn't happened for 30 years here. So, you can imagine just how annoying Winter had become... until today. We went from sub-zero just two days ago all the way up to 48 F degrees. It was truly amazing! The Prius certainly enjoyed the warmth. It couldn't have been better timed either. On a saturday which you have lots of errands to run is perfect. Of course, that resulting MPG could really screw up the monthly average (depending bladder-effect, of course). The warm, moist air is a drastic improvement. Efficiency is significantly better. That's ok though. I'd gladly accept the abrupt data fluctuation.

1-31-2009 **Are They Nuts?** Even the enthusiasts are getting angry. GM is now furiously promoting Volt, Converj, and Flextreme. Their current problem is offering many brands all featuring similar vehicle models. Are they repeating that same history by spreading themselves too thin again? It has become absurd at this point, promoting several different EREV vehicles even though not a single one of them will be on the road for quite awhile still. To those closely watching the bailout situation, it sure looks like they are trying to paint a pretty picture of a situation doomed to fail. Not addressing the actual need is a big concern. Large quantities of affordable high-efficiency clean vehicles are what people have been demanding. Neither that nor the immediate financial survival changes seem to be getting any serious attention.

1-31-2009 **Info-Display.** While busy assembly a User-Guide for the 2010 Prius, I discovered a rather big naming problem. The device many had been calling the "*Multi-Display*" for 9 years no longer serves the purpose of conveying Energy-Monitor & Consumption-Screen information. It won't be standard anymore either. Instead, it will be an option that provides an interface for the navigation, phone, music, and backup video. That new device also introduces Eco-Meter and Past-Record trip information. Officially, both are called a Multi-Information Displays. That's obviously going to cause confusion. So, I'm coining "*Info-Display*" to keep things. Hopefully that makes sense. After all, all four screens provide driving information.

2-01-2009 **Monthly Reports.** They sure have changed. No longer are they a trigger for trading or dividend frenzy by stockholders. Economic hardship has transformed them back to the long-term forecasting measure they should have been all along. Executive compensation, fed in the past by short-term gain, is quickly shrinking. Millions of dollars exchanged for no progress simply doesn't make any sense... and getting rewarded even though employees are losing jobs is awful. Thankfully, all this is changing now. Getting bailout money from taxpayers imposes new management regulations & limitations. High risk gambles without consequence are business nightmares our government never wants to have to deal with ever again.

2-03-2009 **From Austria.** The past few days have been buzzing with this news. The chanting of "Buy American" from the Volt enthusiasts came to an abrupt end upon learning that the engine won't be built in Michigan. Sharing an engine with Cruze was a great plan for all. But now that retooling of the local plant has halted. Instead, the engines for Volt will be shipped over from Austria. That not only wrecks the domestic appeal, it also tarnishes the green image by having a major component shipped across an ocean. To make matters worse, you have to ask about Cruze. That compact car marked a shift in GM intent, finally offering a competitive small & efficient traditional car. Now what will they do?

2-03-2009 **Economic Stimulus.** The bill voted on by the Senate today had an interesting provision added. People purchasing new vehicles between November 12, 2008 and the end of 2009 will be able to deduct the tax they paid. That won't really equate to much, but it sure is nice. I'll certainly find that a "*stimulating*" incentive. The vote results were 71 to 26 in favor of the $900 Billion. So, I'm quite curious what will happen next.

2-03-2009 **Hitting Bottom.** Sales last month were horrible for every automaker. Detroit claims this point marks the bottom. How they came to that conclusion is a mystery. No one else knows what's to come. Whatever the case, it's not pretty right now. GM only sold 923 hybrids, that's all types & models combined! That makes it really hard to mock Toyota anymore, especially since their combined sales count for the month was 11,876. Whatever the spin, we need intent to be declared. Ford & Honda are gearing up for a hybrid push, hoping that will help build momentum for better times. Toyota is obviously readying for sustained high-volume with the new Prius. What the heck will GM do?

2-03-2009 **January Sales.** The total of hybrids sold for the month by Toyota was 11,876. Compared to GM, that's a drastically larger quantity. But it is unfortunate that the down economy and upcoming new model Prius is so ill timed. Those spinning to mislead you into believing Prius sales are struggling will take advantage of the 8,121 number. Oddly, Lexus hybrid sales are up quite a bit from the same month last year. But then again, stating that count of 1,630 is easy enough to spin. Camry-Hybrid saw 1,141. That's way down. But Highlander-Hybrid isn't as bad with its 984, considering the vehicle size & type. Escape-Hybrid at 753 wasn't too bad either. The 1,556 purchases of RX400h were surprising. You could interpret it all any way you want. It boils down to the reality that sales must go up later. The 299 Tahoe-Hybrid and 168 Yukon-Hybrid make that clear and the 153 Vue-Hybrid, 145 Malibu-Hybrid, and 19 Aura-Hybrid blatant. Looking forward, 1,076 Civic-Hybrid sold makes you wonder what expectations will be set for the new Insight. The next few months will be historic, that for sure. Eyes are definitely on this market for upcoming prosperity.

2-03-2009 **Succeeding**? When a Volt enthusiast asks a constructive question, you have to give pause. Unfortunately, it turned out to be disingenuous. His intent was to discredit automakers not planning to offer a SERIES hybrid by asking: "*How can they succeed if they aren't even trying?*" The fact that GM is not planning to offer a FULL hybrid to compete with Fusion-Hybrid, Camry-Hybrid, or Prius quickly brought that debate to an end. Looking at the big picture works equally as well. Direct vehicle comparisons are an obvious greenwashing technique used to distract from the other vehicles. Having only a compact plug-in won't offset a fleet of guzzlers. But having the FULL hybrid option offered across the entire fleet will... which is exactly what Toyota is striving for. Significant reduction of emissions & consumption from the wide range of vehicle production sold at a profit sure sounds like a formula for success to me.

2-04-2009 **30's Forecasted.** Ahh! Finally a bit of warmth. Being well below freezing for so long really gets to you. This thaw is a welcome change. It's suppose to last a whole week too! Then reality sets in again. But the cold is brief then. No extended spells anymore, just snaps. That's good for efficiency. I want this to be the last I ever see the upper 30's for MPG. Next year should be with the new Prius, which has design refinements to reduce the impact Winter has. In the meantime, I'm looking forward to enjoying the next few days of upper 30's for temperature.

2-05-2009 **Another Name Change.** It's gone well beyond the point of absurd. Shortly after choosing to go with the "EREV" name, they've changed their minds again! Now the plan is to use "Voltec" as the identifier for the technology. You can't help but to wonder if this lack of harmony will lead to anything. 2 years later, not even being able to settle on a name really makes you question constructive support. Fortunately, the rest of the hybrid world doesn't really have to care what marketing nonsense takes place. The type of hybrid is a SERIES. So no matter what they end up calling it, that won't change. Naming it whatever they want is fine. It's still a vehicle with a large electric motor providing propulsion and a battery-pack with an engine-powered generator providing electricity.

2-06-2009 **Power Fade.** That's the term Ford has given the condition when engine-running and battery-chemistry aren't fast enough to charge as needed, leaving the vehicle with limited power. After all those times of pushing to find out why a SERIES hybrid is provided with such a large pack, we finally get a confirmation from an outside source. It really can't use a smaller battery to be competitive. In fact, that's why the size of the engine in Volt was changed from a 1.0 to a 1.4 liter. Efficiency, Power, and Price are all engineering tradeoffs. To deliver a vehicle that works well for its entire life without major expense later, a tremendous amount of configuration research is required. So, those staunch defenders of GM really do deserve the credit for recognizing that effort. But calling the technology a "*game changer*" and dancing around the fact that "*power fade*" is a fundamental shortcoming is inexcusable. Thankfully, they do neither anymore. Now that facts have been exposed, enthusiasts have accepted them. With doubt removed, attitude toward constructive discussion is actually emerging. Makes you wonder how much the bailout situation served as a wake-up call. A harsh dose of reality seemed to have done a lot of good.

2-06-2009 **How Many Times?** The same question keeps getting asked over and over and over again. No effort is made on the website for Volt enthusiasts to clear up the confusion about the different types of hybrids. More and more I get the impression that it's intentional, to keep threads active. After all, we know for a fact a very big automotive blogging website has done that. Discussions are much more interesting to both read and participate in when the topic is well rehearsed. Why move on when you can just repeat the same thing again? After all, Volt has little to discuss anyway. Until the vehicle is actually produced & sold, the discussions are just a way of keeping interest. Anywho, here was that same old question: "*What the hell is a parallel series hybrid?*" I chimed in, again... ASSIST = Insight & Malibu = parallel; FULL = Prius & Escape & Tahoe = series-parallel; EREV = Volt = series; Hybrids like Prius operate with the engine motionless at times (up to 42 MPH), offering abilities of a series type hybrid. The electric A/C, second electric motor, and power-split-device are what make it different from parallel, offering much more than just assist for the engine.

2-06-2009 **Success & Goals.** That discussion on the Volt blogging website was later inundated with the trophy mentality. You know, there was lots of the usual cheerleading with virtually no accounting for economic realities. Whatever. They'll figure it out... quite likely soon too. This was typical of those posts: "*Sounds like Ford doesn't want to admit GM beat them to it.*" The SERIES hybrid is supposedly better than the FULL, but none can explain how the market itself will change. Proclaiming a goal is rare... though a select few are actually trying now. Perhaps it's just to shut me up, but nonetheless that's still progress. Not addressing what "success" truly means has been a problem for way too long. Superiority is not determined on paper. Vehicles produced & sold is the how impact is measured. That's true success. Anywho, my response was: To what? GM is competing with itself. The battle is from within. Think about 99% of the other vehicles? 8,000,000 will be produced by GM each year. If the second year of Volt production is 50,000 then only 0.625% of their annual inventory is using the high-efficiency technology. That's less than 1 percent!

2-07-2009 **2010 Introduction.** The first constructive use of the collection of photos I took at the Detroit reveal has emerged. I wondered what the heck could be delivered with so much information still not available. But the digital images that were captured turned out well and there's enough to provide something similar in nature to a brochure... which isn't anything I've ever provided before. Cool! A brand new idea came out of the desire to offer online content for the 2010. After all, I was one of those desperate for anything Prius related 9 years ago... long before 2000 availability. Being on the other end of that situation now sure is exciting. Anywho, there's now a heavily illustrated document with some brief descriptions highlighting some new features, for your downloading pleasure... 2010 Introduction

2-08-2009 **9 Years Ago.** I've been busy assembling a new User-Guide, one for the 2010 model. Lots of questions remain. Detail about many new features will have to wait until I get the hands-on experience with them. But at least I get start with the portions that closely resemble the Iconic model. The last page has always provided a quick-spec comparison of the generations... to point out how labels can be relative... since we routinely see the competition cherry-picking criteria to fit their own need. Anywho, one bit of data I've never included was combined engine/motor horsepower. That's mostly because the primary goal has always been to emphasize emissions instead. But now, that's worthwhile to add. So, I retrieved my archives. Articles written about the model before Classic were available back in 2000 online and I had saved a number of them. To my surprise though, they all recited the same press-release info... which didn't include that value. Thankfully, the specification webpage on Toyota's own website 9 years ago did! Talking about a credible source to data historical from. I'm sure glad I had that available.

2-08-2009 **Generation Zero.** Since I'm a true tech, fitting the stereotype all too well, referring to the Original model of Prius with a "0" as the generation number is no big deal for me. After all, many of the programming languages I support at work use that value as the first in numeric sequences (arrays) rather than a "1" common for non-tech use. Shouldn't zero be the logical choice, considering how Prius is the most advanced technology you'll encounter on the road during everyday on your daily commute? Anywho, I hadn't actually ever pointed out why "3" is acceptable to me as the official identifier for the 2010 model. Of course, numbers don't work as well as a word anyway. Just look at how well accepted "*Iconic*" already is as a reference for the 2004-2009 design by the media, while also serving as a preventative from antagonist undermining. Regardless, there are 4 distinct versions. So, it really doesn't matter how they are are identified. Each has unique characteristics.

2-09-2009 **Lutz.** He's stepping down. This is no surprise. With executive compensation now being limited for those companies receiving federal bailout money, it was inevitable. When your income is reduced drastically and you could have retired years ago, it doesn't take much to finally make that decision. What that means to his pet-project of Volt has people wondering though. GM will appoint a replacement to keep the effort moving. But some momentum could be lost and the vision altered. After all, the market is redefining itself anyway. Priorities are shifting. Awareness of bad practices of the past is rising. Expect this year to bring long overdue change.

2-10-2009 **February 17.** That upcoming deadline is when automakers are required to provide restructuring details. Long-Term viability plans were part of the loan terms; otherwise, that money really can be considered a bailout. How they will actually pay back the government is a really big deal. It's hard enough stopping so much from being lost. Returning to profitability will be a huge challenge. And so far, it doesn't look like there are taking the situation seriously. Modest change is all we've heard about. That simply isn't enough. The painful decisions must finally be made. Terrible past practices which contributed to this financial disaster must not be allowed to continue. In other words, the product-line must be diversified. Placing so much dependency on guzzlers has proven a poor choice. We'll find out in a week how much has actually changed.

2-10-2009 **Volt Nation.** Remember that? Remember what Lutz said… "*Without the premium, where today if you buy a Toyota Prius you have to live to 150 to get back the premium over a conventional car.*" Things sure have changed since then… what a year ago? Or was it much longer? Because that premium argument sure doesn't work now. Someone new at the helm, finally recognizing that traditional (non-hybrid) vehicles are the actual problem, is what's still needed. Fighting the very hybrid helping to promote change in favor of plug-in vehicles never made any sense. Maybe we stand a chance with a new person taking charge. I certainly wasn't happy about all the resistance he had fought Prius with. It never made any sense promoting 30 MPG vehicles and shunning one that delivers 50 MPG, especially when it can also support a plug. The effort to make Volt look impressive was the obvious goal. But undermining current hybrid technology to make the future look better wasn't constructive. All along, Volt should have been promoted as a greener option, rather than misleading people into believing it would be the only realistic choice available. Like it or not, Prius will be part of the solution.

2-10-2009 **Hybrid Pickups.** I saved the article from many, many years ago. Dodge announced a hybrid which never materialized. Heck, even the prototype only made a handful of appearances and that "through-the-road" design is dead. But now, all this time later, something will actually be delivered from Dodge. A hybrid Ram is intended to take on the hybrid Silverado head on. In fact, the article was nasty enough to make that clear. It made fun of the $12,000 premium and the 5,000 pounds of sacrificed towing-capacity. The Dodge specifications weren't provided, so it does make you wonder. But they stressed the benefit. I ask who the audience is. How many do they actually intend to sell? There are lots of work trucks to choose from already and the competition with diesel will be fierce. Who knows. Two-Mode certainly didn't attract much market.

2-12-2009 **EV Attention.** The automotive publications didn't like Prius or for that matter any vehicle that didn't offer a roaring engine. Look for a rave review of a family car like Camry, Accord, or Malibu. They simply didn't care about the mid-performance vehicles which reliably got you from place to place. The need to demonstrate muscle (speed & power) was the only thing that ever really got attention... until recently. That's abruptly changing. Now a small collection of EV are appearing from small ventures hoping to capitalize on the growing interest in battery-only transportation. In other words, they feel competition for tax credit with the giant automakers is realistic. It's a fantastic way to get established... and the publications are now happy to write about it.

2-13-2009 **$33.98 Per Barrel.** That was the closing price we woke up to this morning. The local reaction was gas prices higher than we've seen in quite awhile. It's back to $2 per gallon. "*Economic Instability*" has become the highest priority to deal with for national security. Dependence on oil means little when large companies around for decades are suddenly announcing thousands of layoffs. Poor business practices destroyed the guzzler market... and housing market... and retail market... and so many other areas of our lives, it's pretty disheartening. Some in power did not plan for the future, leaving nothing to turn to when conditions change. Thank goodness the ridicule of hybrids didn't stop their progress. They are now the very thing expected to help the automotive industry recover. Embracing the technology is a welcome change. Many now see the opportunity the electrification of vehicles presents.

2-13-2009 **5kWh.** It looks like that will be the minimum requirement to be eligible for a tax credit now. Battery-Pack capacity of that size shouldn't be a big deal from a feasibility stand point. But it pushes the level of what some may consider "affordable". The size is compelling, just enough to make people take notice. So, I'm intrigued how the automakers will respond. For FULL hybrids, it's an ample supply of electricity. For SERIES hybrids, that could prove to be a hard sell... based on promotion (propaganda) so far. However, a change in strategy could be a wise choice. Many have been concerned that their self-imposed 16kWh requirement would limit potential buyers. It's an unnecessary expense for those with short commutes, since they don't need anywhere near that much capacity. Having a choice is typically the better approach anyway... and they'd still get a tax credit.

2-14-2009 **Stimulating News.** There's stuff in the stimulus package for hybrids. The tax credit available for plug-in models will be doubled, to an industry total of 500,000. Qualifying conversions will be added, receiving up to a 10 percent credit capped at $4,000. Incentives may start immediately, rather than having to wait until the beginning of a year or quarter. Ultimately, the goal is to get 1 million plug-in hybrids on the road by 2015. That's pretty sweet. This administration is actually pushing for change, rather than just the token gesture we got with the previous. I specifically like how it provokes competition instead of the per-automaker nonsense. With that, those that deliver more benefit the most. Delay means losing out, quite unlike before.

2-14-2009 **1 Month.** It's hard to believe that much time has went by already. The memory of placing my pre-order for the 2010 is still fresh in my mind. Of course, that's probably because there is little else to think about. I certainly don't want to dwell on how much time still remains. At least 3 more months of waiting is required. During the Winter, it's not a big deal. You get use to finding other things to do anyway, due to the extreme cold. But once it gets warm out and stealth season begins, the yearning for more gets intense. You forget how sweet the electric drive is. Spring means not having the heater force the engine to start up anymore. Both you and the Prius enjoy the pleasant return of life to the once frozen land. Excuses for outdoor activities become abundant. Many of which include driving. Wonder of how high MPG will be from the new model will be foremost on my mind. Delivery seems so far away still...

2-15-2009 **Have Mercy.** The criticism is growing, especially with the talk of filing for bankruptcy growing. This caught my attention today: "*The Obama administration must not be so merciless to GM.*" I responded with this, pointing out how these first steps are intended to prevent... It doesn't mean death. It means being able to restructure to the need, not the want. Some of us having begging for this priority change for many years, back when GM actually had the resources available and times were good. They chose not to. Now they are being forced as a matter of survival. The counterproductive attitude & delay was unfortunate, but at least the outcome of emerging as a solvent automaker that builds vehicles appropriate for our well being will finally happen. This change is looooooong overdue.

2-15-2009 **Setting Priorities.** Complaints just for the sake of mercy aren't constructive. Yet, we certainly are seeing a lot of that now. I posted a few responses. Who knows if they are receptive to criticism or they are only using it to feel better at this point. It does make you wonder. We've never seen situations so desperate before... Look at the bailout, some is to be used to overcome those hurdles. But not all. Plans must also include intent to offer something worthwhile & competitive. In other words, pushing guzzlers is a dead end. GM must actually commit to hybrids. What types, how many, and when are the questions. Priorities must be set. The hard decisions finally have to be made. It’s not going to be pretty. But that’s the only way to recover at this point without sacrificing the future.

2-16-2009 **Still Obsessed.** When you read a review for Yukon-Hybrid that starts with this sentence, you know the situation is grim: "*Imagine a Toyota Prius crawling over rocks and slogging through mud.*" How often do you think the Yukon would actually ever get used for that situation? Mostly likely, never. But with the mindset of past still prevailing, it shouldn't be much of a surprise... especially when you read this final sentence in that article: "*Real men drive GMC Yukon Hybrids.*" Obsession with size & power was easy to satisfy, as well as extremely profitable. But now, it's looking more and more like an act of desperation. Surviving from sales of vehicles way over-qualified for the job simply does not make any sense... especially when it still uses more gas than most other vehicles. Remember when trucks were smaller and more practical? They certainly sure don't.

2-16-2009 **Viability Plans.** The speculation about what tomorrow's automaker plans will bring is a hot topic in the news today. Cutting costs and earning profit are major challenges... not to mention somehow paying back the loan money. Remember how they insisted this wasn't a bailout? Will that story change? And what about sales in other markets? Closing factories is a given. Rumor is that GM will go from 47 to 38 over the next 4 years. Sales projections are a speculation, at best. What they'll sell is anyone's guess. That obsession with size & power just plain does not make any sense anymore, to anyone. Becoming competitive may finally be taken seriously.

2-16-2009 **Winter Cruising.** Long trips don't happen that often for me in the Winter. So, yesterday's cruise up north on a straight, flat, windless highway driving 65 MPH with the temp at 19 F degrees resulted in a solid 30-min display of 45 MPG. That was very exciting to see. Watching the RPM, I could easily see how the new Prius will be able to reduce it for even higher efficiency. The cold season next year should be quite an adventure for 2010 owners. We'll be discovering the improvements Toyota made firsthand. They pointed out many revisions for those like me, dealing with situations just like this.

2-16-2009 **No Car Czar.** That idea proposed last year was dropped. Having just one person overseeing the progress of automakers receiving money from the government never did sound like a good choice. Instead, what's being pursued now is having a task force. Supposedly the intervention is still looked upon as a loan, but paying it back sounds so unlikely that it's perceived as a bailout. Paid back in full with interest would be fantastic... especially if it reduces the number of jobs lost in the process. How a task force will monitor & evaluate actions taken by the automakers is a big problem though. Excuses are abundant and measure is subjective. The challenge to make this work is enormous. A task force should at least make it a bit easier.

2-16-2009 **Saturn To Die?** That's the hot discussion topic today. Setting of priorities has always been a serious problem, where GM quarrels among its own divisions for resources. Honda's new Insight is a great example, taking more orders already than total hybrids sales by GM for all of last year. Volt doesn't stand a chance unless a unified message and clear goals are declared. The wishy-washy pricing and availability plan combined with mixed messages about interior features leaves far too many wondering what will really be pursued when the time comes.

2-16-2009 **Negative Effect.** This comment posted today does make you wonder: "*I like to think that anyone who supported the Volt in their own special way helped to sink GM.*" Those of us active in the hybrid market for many years were concerned from the beginning, when Volt was first revealed. All those "*game changer*" cheers were an attention swing in a self-deprecating direction. Instead, it should have been cheering for hybrids in general, with Volt as the "most desired" model. Away from traditional (engine-only) designs as quickly as possible should have been the motto, rather than fighting those that saw this coming. Lots of high-efficiency vehicles sold at competitive prices are needed very soon. Volt clearly won't fulfill that. It is helpful as a long-term solution, certainly not something to revive the financial well-being of GM. Now what? Remember that GM production should be around 8,000,000 per year and the need is immediate. GM already has Two-Mode. Why the $#%&*! can't they rapidly adapt it to compete directly with the Camry & Fusion hybrids? For crying out loud, both Toyota & Ford delivered. Why isn't a FULL hybrid Malibu being planned? Wake up GM! Volt alone is not enough, far from it.

2-17-2009 **The End, Saturn.** It came today. GM's destruction ensued. Saturn's name was on today's death certificate. That brand will cease. Within that path of destruction comes the loss of 47,000 jobs and the closing of 5 more factories. As awful as that sounds, there's more.... $16.6 Billion more. That's how much additional money was requested on top of the $13.4 Billion already provided. It officially marked failure to survive. Without government help, complete collapse would have already happened. With it, who knows.

2-17-2009 **The End, models.** In the official document submitted to the government was the same old propaganda we've heard countless times already. It was amazing to read. You'd think they would have learned by now. But no. On page 20 of 117, the hybrid model count dribble from the past was repeated yet again, underlined for emphasis: "*more than any other manufacturer*". How many actually get sold is disregarded, as if that made no difference. All they care about is offering the greater number of models... which ironically, is the very reason why GM decided to end the Saturn brand.

2-17-2009 **The End, hybrids.** Fortunately, use of the term "*hybrid*" was divided into three categories: BAS, Two-Mode, and EREV. Unfortunately, the only reference was vague and was to tout their "*leadership*" in the area of "*technology and fuel economy*". It boiled down to a chart on page 22 indicated the current phase, the next beginning in 2012, then followed by 2015. A variety of different technologies besides hybrids were listed, but no reference whatsoever to volume. It was all just a generalized plan.

2-17-2009 **The End, fuel-efficient.** You get a sickening feel very quick when looking for detail. The most obvious for me was how they define a fuel-efficient vehicle as one that gets "*30 miles per gallons or more in highway driving*". That's nothing to be proud of and certainly not a solution to our dependency on oil. But yet again, immediately following that previous phrase came, emphasized with underlining was: "*more than any other manufacturer*". The attempt to spin circumstances for the better was obvious. The automaker is in serious trouble and still does not want to face the facts.

2-17-2009 **The End, volume.** The restructuring plan milestones provided on page 87 really highlighted the problem. Brand & Model counts were listed, not volume. Who cares that the number of 30 MPG models were 20 last year and will grow to 33 within the next 5 years. How many they actually plan to produce is the real concern. For hybrids, it will supposedly go from 6 to 26 during that same period. But considering how their entire inventory sold for all of last year was less than Prius in a single month, what's their point? Why are they being so evasive about production volume. How many of those vehicles will actually be available for purchase?

2-17-2009 **The End, vague.** What are the objectives and what penalties are there for not meeting them? How "*sustainable profitability*" really means can actually be a subjective measure. And predicting what the market will become is quite a gamble, one that many have failed miserably with in the past. It's going to take awhile to review all the details. How the press and consumers will react has me quite curious. I'm not optimistic. There's nothing compelling in the report, just lots of reorganization type information. That doesn't provide a clear message for the future. Strategy seems quite vague. The next few week should be interesting. The next deadline is March 31.

2-17-2009 **The End, Two-Mode.** There is mention of "*Gen 2 strong hybrids*", but nothing whatsoever to describe what that actually means. We have to wait until 2012 for it too. Could they proceed any slower? No detail, especially in a document that large, raises serious concern. The more I read, the more I question what will actually change. It sounds like more of the same single-automaker promoting with no regard to what the rest of the industry is doing. The Camry & Fusion hybrids should be competitive targets for Two-Mode. Will that hybrid system finally be adapted for use with a 4-cylinder engine?

2-17-2009 **The End, Shifting.** Looking through the appendix, chart B14 especially caught my interest. The reference to it in the document states: "*GM's oil price forecast predicts an increase to $130 per barrel by 2014.*" and "*Rising oil prices are expected to drive a segment shift away from trucks towards cars and crossovers over the 2009-2014 period.*" It gives you the impression of sincerity... until careful inspection of the actual numbers. The change for "Cars" over the next 5 years will be a 4 percent increase, from 46 to 50. For "Crossovers", 2.8 percent from 20.2 to 23. And for "Trucks", 6.8 percent from 33.8 to 27. In other words, GM only expects modest change despite the influence of oil price and the competition.

2-17-2009 **The End, Reality.** The impression is that GM is still in a deep state of denial. Face reality already! They don't expect change to occur on a scale the rest of the industry is forecasting, nor are they taking the problems of oil dependency or vehicle emissions (both types) seriously. Don't they see the world embracing this unfortunate economic downfall as an opportunity for a new beginning? Prius has proven that new technology opens up the possibility for consumer acceptance on a grand scale. It has improved & expanded. Why hold so tightly to a business model that is failing? Vehicles that depend exclusively on an engine and only deliver 30 MPG simply don't make any sense in 2014. Yet, that is what most of the plan focuses on.

2-19-2009 **Ford Ranger.** It has been produced just down the highway from where I live for decades. Unfortunately, the factory is now preparing to permanently close. Ford claimed there was no demand for small (normal size) pickups anymore. Yet, they just revealed a new model Ranger which will be sold in Europe starting in April and could be available in the United States by 2011. Why the heck aren't they offering it here sooner? That just plain does not make any sense. Waiting 2 years for something that could immediately contribute to a more fuel-efficient fleet, giving consumers a choice where there soon won't be one. You get the distinct impression they are killing the small pickup now only to bring it back later as if it was a totally new idea later. After all, this market has a terrible memory.

2-20-2009 **Being Viable.** That's the name of the game in this new financial reality. Nothing has been presented showing how Volt could achieve that. In fact, it's been stated many times now that money won't be flowing in the correct direction until the second generation. That hybrid depends on something else sustaining the business in the meantime. In other words, bailout money will aid the struggle to deal with legacy costs but GM is still without competitive vehicles. What will they sell to compete with the Camry & Fusion hybrids? What about Prius & Insight? Mention of both Two-Mode and BAS is vague at best. Those of us watching all this unfold from the beginning (many years ago) keep asking, repeatedly, how will they be viable? Oil dependency and emissions are not being addressed by the domestic automakers. This is why money is being allocated via the stimulus instead.

2-20-2009 **Divided Automaker.** By observing recent online posts from GM enthusiasts, it's pretty obvious that a majority are unaware of company strategy as a whole. The number of times I've read questions asking what BAS is truly amazes me. And the lack of interest in Two-Mode gives the impression that the future is being bet on Volt instead, despite the fact it once was the hot topic on that big GM forum. Where & How resources are being spent doesn't seem to be an issue. Each group of people has their own specific interest and just ignores the rest. This problem isn't new. Ford still has that after many years, where hybrid & non-hybrid discussions simply don't mix. A new engine or transmission is all the rage. Meanwhile, the automaker as a whole continues to sink deeper into financial trouble. Enthusiast influence appears to only be alive & well still for Prius. Toyota is positioned well. Honda is striving for the same. Ford has lots of potential. Chrysler is a big unknown. GM is a mess... divided from within... lacking a clear recovery plan. That's why I document my observations so thoroughly. Watching this history unfold is fascinating.

2-21-2009 **There Is Hope.** A handful of enthusiasts (of the non-Prius type) have begrudgingly allowed me to point out mistakes. Those wanting to support Volt have been the most receptive, though taking the suggestion but not acknowledging unintentional misleading caused by prior posts. The best example I can think of is how one had described the flow of electricity but specifically left out the excess generated because it represented less than 1 percent of the overall battery-capacity. I pointed out that regeneration from braking did too, yet he included it anyway. That detail hadn't ever occurred to him. The learning process is slow. It takes awhile to break bad habits, like making assumptions. Some expend the effort. That represents a bit of hope, at least for consumer education, in these very uncertain times.

2-21-2009 **There Isn't Hope.** When it comes to a certain automaker, it sure seems hopeless. If you got the impression that I'm picking on GM, it's not your imagination. Today provided the ultimate opportunity to explain myself too. The Volt group had a discussion on the upcoming plug-in Vue. That allowed me to refer back to a particular personal log entry, the one from 8-19-2004 titled: "*Ever Changing Story*". I was upset then, from GM continuously altering plans some many times 4.5 years ago. We are going to do this. We aren't going to do this. Now, we are going to do this instead. Now, we are back to doing this again. It's that lack of commitment that drives me crazy. There's no reason to believe them anymore. So the fact that the story has changed yet another time, really makes no difference. Vue-Hybrid with a plug option will be delayed now until 2011. That's the year production of Saturn vehicles end. What's the point?

2-21-2009 **Superior Technology, question.** Some simply never learn. You can point out how for years diesel enthusiasts proclaimed simplicity was the key, yet sales never reflected that. The same happened for the hybrids which only offered assist. Consumer demand isn't about engineering fine points. It's about what is actually delivered. What do they get for their money? Some just like to show off a trophy, not interested in actually making a difference for the ordinary person on the street. So, I responded to a Volt superiority claim with this... What makes it superior? FULL hybrid systems replace automatic transmissions. That's a big step in the right direction, eliminating many gears in favor of a power-split device. Eliminating the power-split device really doesn't equate to much. It's basically just a differential.

2-21-2009 **Superior Technology, answer.** Needless to say, I didn't get one. Follow up is rare. For that matter, actual product support would be a miracle. Daily blog entries is pretty much the most anyone wants to contribute. It's like they aren't the slightest bit interested in using any of the methods Prius used for gaining market share. They're just a small static group exists that likes to self-vindicate. I had learned a lot about the "superior" technology in the past from them. That, I'm thankful for. But it's as if I'm the only one who has noticed that progress has stopped. No next steps are being taken, despite the bailout situation. It's just the same old routine... the very thing that kept the other competition from reaching out to more consumers. Explain to us why it is superior.

2-21-2009 **Short On Detail.** That's the response to the restructuring plans submitted to the Canadian government by GM and Chrysler. Voicing clear disappointment was important, to at least try to avoid the same mess the United States is faced with... since those plans leave much to be desired too. A rough timeline with vague references is not what taxpayers provided billions of dollars of support want to see. Production of how many of those new "*high-efficiency*" vehicles is actually planned and intended target market are missing. We aren't actually being told much.

2-21-2009 **50 MPG is 50 MPG.** That was well said, on a Prius thread today complaining about yet another diesel challenge. The competition hates that reality. Average taints their bias comparisons. They've been selectively pushing either city or highway estimates, whichever is to their favor. I'm tired of watching that same misleading on television commercials too. How many people are successfully mislead by that? Fortunately Toyota decided to use only the combined value for the reveal of the 2010 Prius. That's a welcome change... which just to squash efforts to mislead.

2-21-2009 **Former Foe.** Depending on your perspective, he was either a pain or a partner. We sparred daily. MPG was the obsession. He was interested in achieving the highest. I was content with the "*just drive it*" motto. That was ages ago. Since then, he kept pushing and contributed to an official record-setting voyage... in a hybrid, the very thing he had once fought against. Now, the data he had gathered from his travel is being used to mercilessly crush the diesel misleaders. We're both tired of how they insist engine-only technology is the better choice. Clearly, the MPG doesn't support that. But they keep trying anyway. Why? Can't they envision a hybrid ever using a diesel engine? Wouldn't a tiny one be a nice match for some SERIES hybrid uses many years from now? It's bizarre how losing the emissions battle has caused them to keep trying for a win on efficiency, despite the much lower EPA estimates. But what's even stranger is how a former foe is now helping with that fight. Who would have thought?

2-21-2009 **Hybrid Logo.** Someone complained today, wishing Toyota wouldn't have included the hybrid logo on the 2010 Prius. I don't think they ever really gave the situation a thought. Have you? Here's what I posted... Do you realize the consequence of that request? Think about it. This market is obsessed with having some type of label attached to their vehicle. "*Hybrid*" is by far the most benign choice. Do you really want to see the equivalent of "*3.0 L*" or "*V6*" or "*Turbo*" appear on hybrids instead?

2-21-2009 **Gallons/100 Miles.** Long overdue is this need. Our MPG system is so terribly misleading. It allows those wanting to exploit the "*saves gas*" greenwashing to seemingly win "*uses less*" debates. In other places around the world (those that don't guzzle like we do), they rely on a unit/distance quantitative system instead. And that has proven much more effective. But in their case, it has been: liters/100 km. That won't work here. So the EPA finally delivered with this equivalent: Gallons/100 Miles. I'm tired of the past nonsense and delighted to point out this rating system. Go take a look. Here's a link... Find a Car

2-22-2009 **No Control.** The first thing everyone is taught about scientific measure is that you must have a control. Without one, you have nothing to compare to. Yet, that's exactly what the city of Seattle did... and subsequently drew a conclusion from. They have a fleet of 14 plug-in Prius which recently drove a total of 17,636 miles. The complaint is that they only delivered an average of 51 MPG. Supposedly, that's bad. But what were the driving conditions? Having one Prius in that fleet which wasn't a plug-in is required to indicate what the MPG improvement was. Heck, we have no idea how often each vehicle was actually plugged in nor how long they had an opportunity to recharge. The study was disturbing to read about. Sloppy testing with no data sharing is a very real problem, something to be quite concerned about.

2-22-2009 **Plug-In Misleading.** We'll never be able to determine if the omission of detail is intentional or not, but whether or not you have it makes a huge difference. It turns out that the fleet drivers using those converted Prius are not plugging them in and not activating the system. If that secondary battery-pack is depleted or if you never press the button to use it, there's no benefit. In fact, the extra weight causes a MPG decrease. So, it doesn't take much to imagine how skewed results can be from lack of diligence. It's a big reason why some are anxiously awaiting the more integrated plug-in design from Toyota itself rather than an aftermarket add-on. Sadly though, this paints a disappointing picture for those not paying close attention to the market. They'll just assume the particular example is what to expect as the norm for a plug-in model.

2-22-2009 **Continued "Save" Greenwashing.** It misleads, giving you the perception of greater benefit when the number is lower. Greenwashers take advantage of that, claiming how the improvement from 15 to 20 MPG is going to make more of a difference than 45 to 50 MPG. It doesn't. They draw attention over to how much that 5 MPG equates for the guzzler... hoping focus doesn't ever shift on to how much is actually consumed overall. SAVED = The Difference. USED = Consumed Overall. Get it? Most people have the impression that large trucks require hybridization more so than midsize cars, due to marketing. Those wanting to mislead & undermine take advantage of that by continuing to push the "save" mindset. It's very frustrating. Reducing our dependence on oil means using less. Saving is basically just an excuse to drive around quite a bit more size & power than you actually need.

2-22-2009 **6.5 Million.** That's the revised sales projection Toyota announced today. It's quite a bit lower than the 9.2 Million that had been strived for in the not so distant past. Things sure change quickly. Gambling on a strong market resulted in the collapse of the banking & housing industries. The automotive industry is just barely going to miss impact that significant. Being able to adjust accordingly, based a much more realistic conditions, sure will help. But the outcome certainly isn't what analysts anticipated. I'm quite thankful the 2010 Prius improvements were already well under way. They will help with the rebuild toward profitability. Had the economic disaster happened sooner, that wouldn't have been the case. We all really lucked out with this timing. That's cutting it way too close. Unfortunately, the other automakers didn't take the need to plan for the long-term as seriously. Hopefully this second chance (restructuring loans/bailout) will be.

2-24-2009 **Day Of Reckoning.** Listening to President Obama's first large address to the nation, the message of change was overwhelmingly clear. The years of short-term, quick-profit thinking are over. We absolutely must focus on long-term well-being. That means Energy, Health Care, and Education all finally get the attention they deserve, a need long overdue. The feeling conveyed was that we must take responsibility and we shouldn't take on debt we cannot pay ourselves. Our children will later appreciate all these efforts. To think that we've had such a reversal, where the previous administration took a very different stance... which unfortunately, was to not really do anything. We heard about our "*addiction to oil*", but what really became of it? Now, this is the opportunity to make things better. The problems have been stated. He specifically mentioned plug-in hybrids. Watch what happens.

2-25-2009 **Even More Power.** Today, we found out what at least part of the "*Gen 2 strong hybrids*" reference meant... more power. GM set a target of a 50 percent towing-capacity increase. They want to go from the current 6,000 pound maximum to 9,000. The limitation (not delivering as much as a non-hybrid) is due to cooling & torque restrictions, which they believe they can overcome in the next few years. Are they seriously pursuing an even bigger system and not investing anything at all in a scaled-down version... something to compete directly with the Camry & Fusion hybrids? It's truly bizarre that they disregard the family sedan market entirely. No wonder they need a bailout. The obsession with power has truly become a disaster if they really are only making the system deliver more towing-capacity. Will that generation be any more efficient? Or is it only about having even more power? How many of these do they intend to sell anyway?

2-25-2009 **Electric Whir.** I heard it approach from behind. There in the parking lot, pulling into a spot, was a Highlander-Hybrid. It was what had just made that noise. The electric motor makes a whirring type sound when slowing by means of regenerating. Identifying vehicles by their sound was once a practice a witnessed my father do... with awe. The fact that he was capable of such a feat truly impressed me. Now, I have the same ability. Of course, the vehicles I admire sure are different from what he grew up with. Hybrids sound very different... and quite subtle by comparison. There's no loud roar. The sound is faint. But if you know what to listen for, you'll eventually hear it. I did this evening. That was quite exhilarating!

2-26-2009 **VSC to the Rescue.** This is the 6th Winter driving my 2004 Prius. Up until now, VSC has only triggered in circumstances where it was nice benefit. It wasn't necessary though, especially with such good tires. But I was still impressed. Having the car assist with recovery from a slide caused by turning too hard on a slippery road could come it very handy under the right circumstances... which is precisely what happened today. The 4 inches of snow we got in just 1 hour made for very hazardous driving during rush hour. And to my surprise, the road conditions caught me off guard at one particular intersection. Hearing the buzzer sound and feeling loss of control, I allowed the car to handle the recovery entirely. VSC responded exactly the way it was designed. It worked great!

2-26-2009 **Shorter Range.** Resistance to the idea of a Volt configuration offering a smaller battery-pack is intense. It takes away bragging rights. Reaching a wider market that way isn't the slightest bit appealing to the enthusiast. Even though it would lower the price significantly and have no real impact to those that have a short commute anyway, they still don't want any part of it. So today when a study by Carnegie Mellon University was published stating the 40-mile target was "*not cost effective in any scenario*", some were pretty upset. I was pleased. It expressed favor for offering a 7 to 10 miles of range, the very boost capacity Toyota had been using for their initial plug-in testing. But of course, if Prius supports it, they want no part of it.

2-26-2009 **Self-Destructive.** The craziness is unbelievable. Even in the face of bankruptcy, some simply don't care. No interest in reducing emissions & consumption is one thing, but to not care about the well-being of the automaker another. It's a shocking mindset. The sentiment came blaring out with comments about the next generation of Two-Mode. This summed it up well: "*My 'justification' for having all this towing/hauling capacity is that I want it. Period. Put that in your clown car and smoke it.*" In other words, we still have the obsession with power to deal with. Rather than finally shifting focus, it's the same old draw. Each new model must be bigger than the next... despite the reality that very few will ever actually need that. Neglecting the mainstream was the problem before hybrids... and unfortunately ...still is with them. GM simply hasn't learned. Not investing anything into a 4-cylinder option for Two-Mode is the problem. Of course, there was always doubt if that would ever happen, since squashing all that technology into a transmission housing seemed unrealistic. Nothing competitive to sell to the masses is self-destructive. Yet, they continue to push the extremes anyway. The other automakers will gladly accept their choice to ignore such a large market.

2-26-2009 **Asking For Feedback.** It's futile. All you expect to get back is attitude. And sure enough, that was the extent of it this time too. Nothing constructive came from the question. Yet, I continue to ask, hoping feedback will change due to the looming deadline and the recent announcement of making Two-Mode 50-perecent more powerful... How much is GM investing in how small of a market? What about the extremely large consumer base that buy Fusion & Camry family cars? Two-Mode was touted as superior technology to that in Prius, yet it looks like GM has no intention of ever actually delivering it. Is this all that was meant in the restructuring plan, just making the V8 hybrid even more powerful? No 4-cylinder option ever, for any type of vehicle?

2-27-2009 **Sales Pitch.** Rather than embracing hybrids, certain Volt enthusiasts keep fighting them... pushing the inferior mindset to the point of insult. I try to ignore that obvious smug, but every now and then they come up with something new. That was the case today, and it was worth noting... since they typically change the story later, after realizing it was a weak argument. Anywho, the claim was that gallons of gas per year was the most compelling feature. Telling the consumer that was all they'd ever need to know. Disregarding payments of the vehicle itself made me angry. On a 5-year loan, that difference in gas was just 2 months of payments. The other 10 are in the favor of Prius (or a scaled-down version of Volt) instead. But they hope you won't actually do the math. It's that trophy mentality they prey on, hoping a good sales pitch is all they'll ever need.

2-28-2009 **44 MPG.** That was my average for the month. February is always low. Cold starts are efficiency killers, making the affect of Winter well pronounced. Next year will be different though. The design of the 2010 Prius was changed to retain and use heat in an improved manner. These are the types of refinement that result from years of real-world observation. Hybrid system weaknesses are systematically identified and dealt with. I'm really looking forward to witnessing the outcome firsthand. It's stuff like this that reinforces faith in Toyota's commitment to hybrid technology. Continued investment to build it even better makes the debate for astonishingly high-volume production a straight-forward one to win. After all these years, the reality of it becoming standard (like automatic transmissions did) is no longer a discussion topic of just enthusiasts.

3-02-2009 **300 RPM Slower.** That's what I read today about the upcoming improvement to highway efficiency for the 2010 Prius at 120 km/h (74.5 MPH). The cylinders are bigger in this new engine, so squirts of fuel will be too. But with that much of a pumping reduction to deliver the same amount of power, the ease of which it takes to envision a decent MPG increase should silence even the harshest of critics. We'll see. I'm certainly looking forward to it. Getting to be part of the first group of owners is very exciting. Each Prius generation brings new discoveries that we get to experience & report. Sharing information like that is quite rewarding. Supporters yearn for details and we are happy to provide them.

3-03-2009 **Sales.** The spin is focused almost entirely on comparing to peak last year. Remember how the spike gave an impression that annual sales of over 250,000 Prius had become sustainable? Those wanting to undermine hope you won't actually do the math or any research yourself. They only want you to believe the gas price plummet has nothing to do with it. And since the general public has a terrible memory, most probably will be complacent about the true situation. Whatever the case, GM's total sales of 1,087 hybrids for the month requires quite a bit of spin. Lexus alone sold more than that with 1,546 hybrids. For the non-luxury part of Toyota, there were 10,268 hybrids sold. 7,232 were Prius. 2,080 were Camry-Hybrid. 956 were Highlander-Hybrid. From Ford, combined Escape & Mariner hybrid sales came to 1,294. For the Altima-Hybrid from Nissan (using HSD), there were 463 sold here. Civic-Hybrid saw sales of 1,362. The 3 larger Two-Mode hybrids from GM (Tahoe, Yukon, and Escalade) had a combined number of 632. Sierra & Silverado are now available too, selling 47 total for the month. BAS for Vue-Hybrid was 188. For Malibu-Hybrid, it was 197. Aura-Hybrid saw only 23. Lexus details were 1,502 RX400h, 22 GS450h and 22 LS460h. The numbers certainly were interesting for the month of February.

3-04-2009 **Europe Plug-Ins.** They are on the way. That was the big news today coming out of the Geneva Auto Show. 150 are planned for delivery in Europe this year and 350 more the next. This is in addition to the 150 we will be getting this year in the United States. It's the result of Panasonic venture with Toyota finally coming to play. We've been waiting for their manufacturing facility to tool up for Li-Ion battery-pack production for awhile now. That patience will pay off. This is the game-changing event the Volt enthusiasts had always hoped their preferred plug-in vehicle would be responsible for; instead, it will be good old Prius. That's really exciting. I can't imagine how the market will react, especially since the base model of 2010 will provide the EV button.

3-04-2009 **Europe HUD.** The press-release photos from Europe had something our North American set didn't... HUD. That stands for Heads-Up-Display. Yup, they actually get an option that projects information onto the windshield. In the sample provided, it showed the new Eco-Meter being projected into the lower-left corner of the glass. I wonder what that's like, having data literally in your line-of-sight rather than just a little bit below. The benefit obviously won't be as much as not having to down through a steering-wheel. But I'm sure there's something of a practical nature to it. Cost could be prohibitive. Time will tell. Someday it could be available here too.

3-05-2009 **State Sales Tax.** The misleading continues. Certain enthusiasts are showing their desperation to make Volt look more appealing. Price is the greatest weakness, so many push availability of the federal tax credit as much as possible... even though the current quota is only 200,000 total per automaker, which is clearly not enough for the long-term. Regardless of that, the cost of state sales tax is being ignored. You must pay that at the time of purchase. But they avoid that topic entirely. It's based off of the vehicle price, not what you get back on your federal return the following year. At 7 percent, a $37,500 price adds state sales tax of $2,625. So rather than paying $30,000 as they insist by subtracting the federal tax credit immediately, you actually paying $32,625 in the end. If they were forthcoming, that's an extra $525.

3-05-2009 **Substantial Doubt.** Review of GM's restructuring plan resulted in that assessment. The modest changes proposed simply aren't enough to make the automaker viable, according to an audit from GM's own accounting firm. Top White House advisors will be meeting with the domestic automakers in Detroit early next week to address the concerns. Signs of viability are wanted soon. Patience is wearing thin. Nothing compelling is expected. The situation is ugly. No one can afford the losses to continue like this. A return to profit is urgently needed... and appearing to be less and less likely as details sought. The doubt is growing.

3-06-2009 **Resistance To Change.** This latest upgrade to Prius destroys the few remaining arguments about Prius being a niche vehicle. The number of years in production (over 11) and the quantity on the road (over 1,000,000) easily support a status of "common" in the very near future. Fearing that, those desperate to impede this change in attitude are attempting to cast owners as out of the ordinary. It's the only option left, since the vehicle itself is proving resistant to criticism. Acceptance of hybrids into the mainstream ends what was once considered average. Efficiency is gaining popularity as the obsession with speed & power fades. The days of carefree guzzling are over. Priorities are changing. The economic downfall has accelerated the inevitable turn toward accepting responsibility for emissions & consumption. Resistance is futile.

3-06-2009 **Online Poll.** There's a publicity website currently sponsoring a road-rally. The favor for the Jetta TDI is quite obvious. Even though it is supposedly unbiased, you sure get the impression they don't expect the Prius to compete well. It's a cross-country course of almost exclusively highway driving. So, the MPG data should make the diesel appear to be competitive. Only cruising will do that, especially now, before the 2010 Prius becomes available. But the difference is still enough to allow Prius to come out ahead... even when overlooking their exclusion of emission rating. We've seen this all before. Averages are what people care about, not publicity events. Funny part is, the publicity is backfiring. On the website, there's a poll. A few days before the 2-week poll was about to expire, they quietly extended the deadline another week. 257 people had voted for Prius. Only 205 preferred Jetta TDI. Now a few days later, the tally is: 308 Prius, 239 Jetta TDI. They should have left good enough alone. They are causing their own demise. Gotta love it!

3-06-2009 **Rude Awakening.** The self-destruction continues. Now it's: "*I have no intention of ever buying any car that performs as pitifully as the Prius.*" The obsession with speed & power is beyond ridiculous. But I still can resist asking... 9.8 seconds for 0-60 is pitiful? Attitudes like that are a big reason why GM is struggling to survive. While the rest of the industry is scrambling to move on now that the performance ceiling has been exceeded, GM still hasn't figured out what "diminishing returns" means. Those that choose to remain in the past sure are going to experience a rude awakening at some point.

3-07-2009 **Priorities.** The once biggest automaker is now shrinking. How small it will become is the question posed by many, including the federally appointed auto task-force assigned to oversee the spending of tax payer money for GM's recovery. One of the comments made that really stood out was: "*Future technologies are really secondary to the current priority, which is the industry's survival.*" That would make sense if it wasn't for the reality that GM still doesn't have anything to compete with Prius, which is already 11 years old. Or disregarding the "50 MPG car priced in the mid-20's" category, GM doesn't have anything delivering a 40 MPG average planned either. Those are bread & butter vehicles, the high-volume production that sustains the business long-term. Immediate recovery can be achieved with all the tax payer money helping out. But what will GM sell a few years from now that competitive? In other words, in 2013, what will GM be producing for the bulk of their business while waiting for newer technologies to catch on and drop in price? Something must sustain the business in the meantime. That's what the concern is about.

3-07-2009 **March 25.** It's another new embargo that is starting to make the Prius enthusiasts & supporters crazy. We've been told something big related to the 2010 Prius is on the way. That's the date when details will finally be revealed. Until then, we have to endure the continuous hinting that the wait is well worth it. I can't imagine what the build of anticipation will bring. With the restructuring plans from GM & Chrysler drawing to a conclusion during that same time period, focus on the future of the automotive industry will be intense.

3-08-2009 **Cheap Gas.** It's truly amazing how short consumer memories are. The effect $4 gas had on attitude is subsiding. Heck, I read two different articles this weekend about how truck sales are recovering. It's as if someone gave the word to resume business as usual again. Care about oil dependency and emissions seems to have vanished. Investing in the future is once again getting the cold shoulder. To think that the very same "cheap gas" comments made a decade ago are now returning. Have they learned nothing? I can hardly believe such complacency. Years back, the excuse of being naive could be argued. But now, there's simply no reason to go back to carefree guzzling again. The cheap gas is clearly temporary, just side-effect of the down economy. Can't they see that action must be taken... now, proactively... rather than waiting until the evitable price climbing resumes?

3-08-2009 **Missing Data.** I've seen a pattern emerge over my 9 years of hybrid support. Typically, if a person can't explain an observation, they'll eventually get defensive and accuse the person questioning it of something. Since they know their information is correct, they assume the other person isn't being objective. In reality, there's simply another possibility they aren't aware of. To deal with this, I request detail. SHOW ME THE DATA! When nothing is provided, I get suspicious. Since Prius places a very high priority on reducing smog-related emissions, to the point of sacrificing some MPG, those results are easy to confirm. The catalytic-converter needs heat to cleanse exhaust. Acquiring that heat quickly means running the cold engine inefficiently the first several minutes of operation. This is quite obvious on the consumption-screen, since the first 5-minute segment is usually only in the 25 to 35 MPG range. Fortunately, the 2010 addresses this with a new heat exchange system. In this particular example recently, it certainly looks like the claim of under 40 MPG is a matter of reporting mostly just the results of short trips.

3-08-2009 **Solar Confusion.** I've pointed out that the new Prius which I'm (somewhat patiently) waiting for will include a solar panel. Every single person responded by asking how much that will recharge the battery-pack. It's clearly a new misconception in the making. The automatic response is to assume that's what it's for. Use of it for cabin cooling isn't even a secondary thought. They just equate solar with electricity and draw a line to the battery without ever thinking if that is correct. Makes you wonder how long it will take before a majority of consumers figure out that some hybrids offer electric A/C and others don't, eh? The problem stems from them not having any idea how much electricity can actually come from solar or how much just the fan alone consumes... not to mention a compressor. For that matter, they have no idea how much energy the battery-pack can supply either. Needless to say, I'm going to have to explain quite a number of times that the main purpose of the solar is to provide electricity so outside air can be circulated inside to keep the car cool while you are away. It could also run the fan while you drive, but pointing that out may just confuse, rather than help clarify.

3-09-2009 **Insight Hype.** Remember back in 2000? That hype is back. A smaller ASSIST hybrid is being compared relentlessly to a larger FULL hybrid, like before. Only this time, the efficiency is swapped. The larger achieves undisputed higher MPG. This is reinvigorating those hoping to undermine... into a state of panic! While those 2 hybrids battle for attention, it draws the market away from everything else. In an economy where vehicle sales are really a challenge, new hybrids are poised to exceed sales projections. So far, the 2010 Insight certainly has in Japan. 2 weeks from now, the opportunity to buy comes here. That certainly will be interesting. And of course, it will make the wait for delivery of my 2010 Prius even more difficult.

3-10-2009 **Insight Pricing.** We knew Honda would do what it took to keep the base price under $20,000. And sure enough, it has been announced as $200 less than that. Of course, with $670 of destination charges it's technically over. And that model will probably end up being the least sold anyway. But it certainly does wreck GM's previous claim of "*least expensive hybrid*". How consumers in general will perceive it remains the magic question. The AT-PZEV emission rating is a big plus for the green. But the 40/43 (City/Highway MPG) estimate and use only a single 10 kW electric motor could make some scratch their heads. Maybe not. Prius is quite a bit different. Finding out what the typical curious buyer wants to know about hybrids is a brand new discovery. The situation is not at all the same as in the past. It's like starting all over. How much of a influence will price make?

3-10-2009 **Flash Freeze.** The forecast for the commute home was scary. Ice was supposed to hit the roads at the worst possible time. Thankfully, it was so bad I got to leave work early. Unfortunately, that was a little too late. My drive started with a temperature of 36 F degrees. It dropped to 34 as I got close to home. Then suddenly, within only 10 minutes time, it plummeted to just 23. The shockingly fast coating of ice formed on the windshield was a dead giveaway what was to come as I took my first turn off the main road. Sure enough, it was scary. Conditions changing that rapidly caught everyone off guard. The thought of having an accident so close to trade-in time wasn't appealing. Of course, an accident at any time wasn't. Thankfully, I made it just fine. Spring is coming soon, right?

3-11-2009 **Major Milestones.** Almost at the same time, Toyota reached the 1,000,000 hybrids sales mark here and Ford the 100,000. Both are quite noteworthy. Both are the FULL type. And as each number grows, the consumer endorsement becomes increasingly more difficult to deny. With all the miles driven and all the years of experience shared, how can the doubt survive? The technology is sound. That sought after goal of significant emission & consumption reduction has been achieved. Reaching out to an even wider market is the stage we are embarking on now. It's very exciting!

3-11-2009 **SMTD.** They brought it on themselves. The Volt enthusiasts continue to make vague claims and spread misleading comments. It's becoming especially bad now due to GM promoting the upcoming Cruze so heavily. News of plug-in Prius rollout beginning this Fall adds to the mess. They have no idea what to do in the meantime other than undermine the competition. Even their long heralded "*NPNS*" acronym (No Plug, No Sale) is losing impact. I saw this an a great opportunity to take advantage of that, by starting my own. It's what I've been saying for many years: Show Me The Data! But rather than saying that, I just close my messages with a "*SMTD*". The effectiveness was immediately obvious. Now, they are intimidated about using their own acronym. Demanding that actual data is presented wrecks their efforts. They can't actually back their claims. Gotta love that!

3-12-2009 **License Bulb Replacement.** The weather finally got nice. Taking apart the back of the car in the freezing cold for detailed photos was not an appealing thought. With only one of the two bulbs that illuminate the back license plate out, I could delay for awhile. But the recent extreme drop in temperature (Winter's final fling here, hopefully) caused the other bulb to die too. So, I was glad for an early taste of Spring... and took full advantage of it. The camera session went well. It was actually a great excuse to get outside. 7 photos illustrated the process of how to take the back inside panel off the hatch for access to the bulbs. That added to more pages to the ever-growing Prius owner document. Check out this latest addition to it... User-Guide (Iconic)

3-13-2009 **Oil & Gas.** Confidence in the stock market is slowly starting to come back. Part of that is likely due to so much disclosure having taken place. Those affected are starting to see the extent of the mess certain people caused. Knowing what to expect is half the battle. It's obviously not over. But lessons have been learned. It paints an interesting picture for the automotive industry. That disaster is still taking place. What unfolds next is a mystery. The price of oil & gas will have an influence, as will the stock market. What's amazing is how quickly people forget. The harsh reality of $4 gas is not obvious anymore. In fact, there are a number of monster-size guzzlers back on the road. Of course, maybe they just don't care. Whatever the case, it's only temporary. Expecting this low to last is as irresponsible as the risks those trading stock had taken. It's the long-term that really matters.

3-15-2009 **Attitude Still.** Some of the Volt enthusiasts are still posting insults to Prius owners. It's getting really tired. You'd think after awhile, they'd figure out that was only doing harm. Newbies and casual readers encounter the facts and probably wonder: Why the attitude? Whatever the case, I provided more facts with the hope of ending the nonsense. Specifically, it was in response to this, which started with a vulgar reference I'm not willing to include: "*...isn't tax rebates and gas prices what got the Prius off the ground and out of the red for Toyota?*" 107,897 Prius were sold here in 2005, which was before any tax credit was available. 119,855 was the total for the years leading up to 2005. So the answer is a clear: No. Also, let's not forget what else happened in 2005, before the tax credit. 17,954 sales of Highlander-Hybrid here (launched June 2005). 11,774 sales of RX-400h here (launched April 2005). Expansion to a very different platform (AWD SUV) provided a big influence on the technology.

3-15-2009 **Objective Elsewhere.** Unlike when dealing with Volt, there's some objective discussion on the big GM forum. (Part of the problem with the Volt website is the daily blogging format, which contributes to off-topic and easily lost posts.) Today, it was about EPA estimates. The purpose of standardized measure is now understood, rather than assumed as real-world like in the past. Even the count of vehicles actually sold is now finally being addressed, rather than the nonsense of offering more models. Unfortunately, actual owner data can't be dismissed. Some try though. So naturally, I have to respond... Real-World must be addressed. Lifetime measure cancels out anecdotal observations. My own personal data covers 113,887 miles spanning over 5.4 years. That's a sample so large it reflects a wide range of driving situations, pretty much every scenario anyone would routinely encounter along with some extremes mixed in. The revised EPA estimates are much better than the ideal-condition values provided in the recent past. But they are still only estimates and the fine-print clearly indicates a large variation in results can be expected by consumers.

3-15-2009 **Final Oil Change**. That was the first opportunity to do anything in the garage for about 5 months. Spring finally arrived! It was 52 F degrees out!! The comfort was bittersweet though. As the Winter melts away, so does this major chapter in Prius ownership. It was the final oil change (at 114,122 miles). The 2004 could be upgraded to a 2010 in as short of a time as 2 months. I won't need that type of oil anymore. So the fact that I had precisely the right amount left (3.5 quarts) sure was nice... but a bit creepy. What are the odds? For the 2010, the viscosity changes. It will be thinner. Getting stuck with leftover oil wasn't appealing. I lucked out. There will be less waste with the new model too. Rather than traditional filters with metal cases, it will switch to a paper cartridge insert. I wonder if that will be messy? Hmm. Later this year, I'll find out.

3-17-2009 **Remember That Poll?** It closed today. There were 756 votes. 293 were for the "clean" burning diesel Jetta TDI. 463 were for Prius. The 7,800 miles cross-country driving challenge didn't seem to go well. Even though it ended over 2 weeks ago, they never posted any results. That was highly suspicious from the start. Extending the poll made it even more so. You got the impression they were hoping to gather other data to downplay the MPG outcome. The voting only made the situation worse. I'm curious as heck what comes next. They claimed: "*The diesel makes sense economically (when compared to a hybrid like a Prius) if you drive a lot of highway miles.*" Then attempted to prove it. Their silence implies failure to do so. Bias was clearly for the diesel in the videos they posted, many of which came after completion of the drive. Their attempt to squash the hybrid isn't going well. All the updates having nothing to do with efficiency confirms it. Fear of the 2010 Prius being even more efficient on the highway must really hurt.

3-18-2009 **Superior, niche.** That was a semantic argument the Volt enthusiasts were happy to engage in today. It started from a vague comment Jay Leno made, with regard to Volt over Prius. They immediately claimed it as vindication, despite the reason why missing. I welcomed it as an opportunity to point out the non-constructive responses, with this... MAKING A DIFFERENCE boils down to how many are PURCHASED. If Volt sales are few, then it just stays in the niche category. The point is to end the production of new traditional (dirty guzzling) vehicles. A large quantity of FULL hybrids can easily offset the results of a small number of SERIES hybrids.

3-18-2009 **Superior, common.** They simply didn't care, despite multiple references to how many vehicles are purchased here annually. One person was even smug enough to claim that the 16 kWh battery-pack would only cost $2,000 once the tax credit expires. That's absurd! Prices dropping that fast and that much is in the realm of fantasy. And of course, some day in the future when they actually do, wouldn't a full-electric vehicle finally be realistic? The "trophy" mindset is counter-productive to mass penetration. They want something special, not a vehicle you see on every corner. Being common is not exciting to them. That's why they are enthusiasts, people who don't represent the typical consumer.

3-19-2009 **Obama on the Tonight Show.** It was unprecedented. The President of the United States on a late night talk show. But there he was, talking candidly about his first 59 days in office. Watching & Listening to that was remarkable. 8 years of the prior administration never produced anything like that. The change was redeeming... especially in such dire circumstances. The financial industry is a mess. But at least their march forward won't result in digging an even deeper mess. When loans resume and commodities are exchanged, they'll be under much more realistic terms. Unfortunately, the auto industry is different. They'll still be producing dirty guzzlers. Obama's visit to California was an effort to help change that, as he discussed on the show. He visited businesses pushing the electrification of vehicles. Becoming green is among the top priorities. I can't wait until the next time we get to see him confirm the commitment to automotive improvement.

3-20-2009 **Still No MPG Results.** That cross-country driving challenge continues to state a promise to "*detail the mileage statistics*", yet all the new posts on the website are clear efforts to downplay efficiency. Someone from that group even started a thread on the big Prius forum trying to do the same. But we all know that 16 days after completion leaves no excuse anymore. Still nothing in reference to the MPG achieved is a sign of having lost. Prius supporters are overjoyed about their failure. Non-Hybrid diesel vehicles barely achieve the minimum clean requirements. They could deliver a SULEV rating, but it simply makes the vehicle too expensive to compete. And now that efficiency is also proving uncompetitive, silence is welcome. This could spell the end of the debates. They set out to prove traditional diesel was better and ended up discovering it wasn't.

3-21-2009 **Insight Commercial.** Flipped on the television. There it was. A commercial for the 2010 Insight just started. I had heard about it, but not seen it yet. Yes, I know it would only take a moment of searching online to see it. But I wanted to experience the introduction in context, the same way typical consumers will. How they'll interpret what they see will be different... so much so, I'm not sure what to think... got any ideas? By sight, the view from the side obviously looks a lot like Prius at a quick glance. The music didn't have any car related reference. But the words spoken at the end did: "*The hybrid for everyone is here. The Insight, designed & priced for us all, from Honda.*"

3-22-2009 **In Just A Few Days.** The embargo will be over soon. We know that some privileged few have had the opportunity to drive the 2010 Prius. But none are allowed to publish anything about that experience yet. We have to wait just a little bit long. What they'll say should be very interesting. I suspect there will be lots of positive comments about the "launch" speed and the smoooooth EV operation. What they say about the observed MPG should really captivate. We're all yearning to learn details about the improvements Toyota has made. I'm really excited. Are you?

3-23-2009 **Tata Nano.** It finally happened. The $2,000 car actually made it to consumers, in India anyway. How a 0.6 liter 2-cylinder engine vehicle could enter this market would be a story of great intrigue. Heck, even over there the goal of achieving that price was quite a challenge. The base model comes in at $1,985... without heating or A/C, of course. Top speed is 65 MPH. How long it takes to reach that wasn't in the information provided. No surprise about that. Safety appears to be in the form of body reinforcement, crumple zones, and seat belts. For that price, expecting more isn't even remotely realistic. Emissions are within the norm. The quantity built & purchased will be very interesting. It makes me wonder how Smart will end up doing here. Rather than using technology to reduce cost and improve efficiency, the car itself is reduced. That approach may be quite successful in emerging markets. But here in the land of large & powerful vehicles, it only seemed to gain attention when gas was $4 per gallon. Interest rapidly faded when gas got cheap again.

3-24-2009 **Insight Arrival.** It was a non-event. How strange. We expected a media blitz. Perhaps it was the smaller size of Honda that didn't stir initial interest. After all, the wait-and-see attitude is common anyway. I was hoping for at least something though. Now that it is available (as of today) for purchase, it may be up to owners to sound off about this new hybrid. Tomorrow's attention on Prius may have something to do with it too. Time will tell.

3-25-2009 **2010 Embargo Lifted.** As soon as the clock hit midnight, even though they were supposed to wait until 8 o'clock in the morning, a flood of reviews appeared. It was fantastic! Naturally, they slammed the outgoing model of Prius to make the praise for the incoming seem even better. The automotive magazines that don't particularly care for family cars danced a fine line of paying compliment without compromising their usual lust for power by emphasizing the purpose of efficiency. None mentioned emissions, as usual. The real-world MPG results reported were all over the place. Errors in specifications were sparse, thankfully. Overall, it was well worth the wait.

3-25-2009 **Toyota's Worst Nightmare.** A popular automotive magazine published a 2010 Insight verses 2010 Prius comparison today. You know how much they despise family vehicles. Speed & Power are their preference. But since hybrids draw attention, ignoring the opportunity wouldn't do any good. So, they put their spin on the topic. Insight was given the "*nightmare*" label. Honda supposedly has the advantage in the low-cost, small-car category for hybrids... and price was the design feature they found most important. It was previous obvious by this winner verdict too: "*An imperfect car, loud and coarse-riding, and also perhaps the most important hybrid ever built.*" That's a rather odd thing to read. Of course, what they said about Prius also makes you wonder: "*The world's best hybrid has become more solid and refined, yet has somehow upped its fuel economy as well. It's an engineering triumph for the textbooks.*" Nightmare, eh?

3-25-2009 **Toyota's Surprise.** Insight's opportunity to capture the low-cost hybrid market already has a clock ticking. Toyota's chief engineer, Akihiko Otsuka, confirmed the rumors today of a Yaris hybrid being developed. Yup, a small car will offer HSD. We even know that it will be ready for the 2011 model year. That's exciting. A wider selection of FULL hybrids is great. It really wrecks the troublemaker arguments about scalability too. Expanding the market is what we need now that sales of the new Prius are about to begin. Hooray!

3-25-2009 **Diesel Defeat.** It's been 3 full weeks since the drive ended. Still no MPG results posted. Interesting, eh? At this point, it's pretty easy to see that the cross-country driving challenge between the Jetta TDI and the Iconic Prius resulted in disappointment for those diesel supporters. Withholding the outcome for so long builds a strong case that they don't want to admit which ended up being more efficient. And just think, the 2010 Prius would have done even better. After being so smug, this is a fantastic way to be more objective. Engines not pared with electric motors are seeing more than just glimpses now of the demise. Denial has become very difficult now. It's about dang time.

3-25-2009 **Crying Wolf.** Someone finally pointed it out, "*GM has been hyping the Volt for so long that no one is listening anymore.*" That welcome statement resulted in this: Fatigue from all the attention so far in advance certainly is a risk. Some will indeed lose interest during the long wait. Others will build expectations so high, it could easily lead to disappointment. Between now and country-wide availability (Apr 09 to Nov 11) is 20 months. In that time, another 300,000 to 350,000 hybrids will be sold here... hopefully more. Some will even offer a plug-in option. That's going to put a lot of pressure on keeping the Volt hype from getting out of control... especially considering the loan/bailout situation. That will necessitate enthusiasts doing more than blog. Will they?

3-25-2009 **Beat The Chief.** The engineer ultimately responsible for the 2010 Prius, Akihiko Otsuka, attended an event for the press. He drove a 33-mile route (city & suburb) and averaged 62.9 MPG, then challenged the others there to beat him. And they did! Every one of them did, in fact. Some even got MPG into the mid 70's. If that doesn't get you excited to hear about more real-world driving experiences with this new model, I don't know what will. That's great. Most test measures like that, in the past anyway, scored on the low end. Things have changed... much like priorities. Efficiency has improved and people are becoming more interested in that. The guzzler appeal is fading. The term "*performance*" now includes MPG.

3-26-2009 **Insight Sighting.** It didn't take long, just 2 days after rollout began. Of course, my commute is on a highway where railway automotive delivery are trucked. So, seeing a carrier with a 2010 Insight on it wasn't too much of a surprise. It was the distinctive red triangular tail-light that caught my attention. It's the one part of the rear that most definitely does not resemble Prius (which is a tall, silver, rectangle). Anywho, as the truck passed by, I saw that familiar aerodynamic hatchback profile. It was surreal to experience. The mind shouted "*There's a Prius!*" but the eyes easily confirmed it wasn't.

3-26-2009 **Tesla Unveiling.** The world got to see their 4-door, 5-seat sedan today. It's a less expensive electric-only vehicle, the next step beyond their 2-seat electric roadster. With a projected price of $57,400 and a range of 160 miles, the expectation is to build & sell 20,000 annually. Battery upgrade options will even be available, one for 230 miles and the other 300. That certainly upset the Volt enthusiasts. Electric driving without anxiety is what their vehicle is suppose to address. Having a small start-up company push battery technology that hard that quickly is competition they were not anticipating.

3-26-2009 **Restating Purpose.** The credibility attacks are growing. When antagonists don't like the message, they shoot the messenger. That's happening a lot now. No matter what you state favor for, they find a way to spin it so intent appears insincere. It's pretty easy when they are vague and don't bother to be constructive. The point is to obscure what you post by any means possible. Today, it was restating my purpose to support FULL hybrids. If you endorse Prius, it must mean that you are against everything else... or so they claim. No one could anyone be in favor of a specific technology rather than a specific automaker. Does anyone actually believe that nonsense? Wanting all vehicles to be cleaner and more efficient should be a no-brainer. But fear of change compels people to try desperate measures... which they certainly have been doing lately.

3-27-2009 **Mandated MPG.** That was a hot discussion topic today. CAFE standards will be raised next year. 2011 vehicles will need to meet a fleet-wide efficiency average of 27.3 MPG. That's an 8 percent improvement over the current requirement of 25.3 MPG. This is the first mandated increase in over 25 years. It's about dang time. This is long overdue. The estimate is that 887 million gallons of fuel will be saved as a result. That sure sounds better than "*Drill Baby Drill!*" Remember that nonsense last year when people panicked about the $4 gas? It was quite the wake-up call. How much do you think hybrids will play a role in this and the next step of the mandate? The new Prius, new Insight, and hybrid Fusion should serve as excellent examples of realistic solutions. We'll find out soon. Change is coming.

3-27-2009 **Outright Lies.** The upcoming decision from the Obama administration is freaking out some GM enthusiasts. It's only a few days away now and use of government money requires commitment... in other words, change. So predictably, they lash out at those who represent change... like me. Again, I got accused of changing my purpose, making wild claims, and outright lies. But when I confront those accusers, restating a concise goal, they shy away. (From a technical standpoint, it's support for all FULL hybrids. As stated on my website homepage for many years, it's "*To significantly reduce emissions & consumption in a reliable & cost-effective manner.*") When it comes to claims & lies, they refuse to actually point out the specific post or even the subject matter. That same old technique of being vague reveals their attempt to mislead. Oh well. It will be over soon.

3-27-2009 **Transparency.** A shortcoming of Volt enthusiasts is starting to become uncomfortably apparent. GM itself dropped the hint today. Once their allies, now the enthusiasts are interfering with the transparency effort. GM always wanted intentions to be blunt. So, they have made announcements along the way. Today, it was about when pricing would be determined. Six months in advance is unusual. But that keeps intent very clear. Enthusiasts generally weren't unhappy about that. They still refuse to provide detail. They figure the competition will exploit it, especially with lots of time available to rebut. GM doesn't agree. How will this emerging conflict play out? Remember, part of the loan/bailout agreement is to be as forthcoming as possible.

3-27-2009 **iPod Mentions.** When you read a review and the lack of a proprietary connector is the only thing that they complain about, you know the car did well. I was quite amused. iPod was mentioned 8 times! It's interesting how they felt their readers would share the same sentiment. Creature comforts are becoming more and more of a priority. The appeal of the monster-size guzzler is definitely fading. This is long overdue. I wonder how long it will take before comparing electric-only aspects of driving will become common. That's when you know the market has truly taken a big step forward.

3-27-2009 **CAFE Requirements, definitions.** The document detailing 2011 model-year efficiency minimums is 857 pages long. Talking about being thorough (lots of charts & calculations). I like that. The long awaited increase in MPG is finally starting to materialize. Nonsense of the past, like "utility" vehicles over a certain weight being exempt, no longer exist. That loophole which was so terribly exploited has been eliminated. Taking responsibility for what is produced has finally become a priority. Anywho, the following entries (a reference I'll depend on later, I'm sure) are the definitions that document provides for the various hybrids available now and in the near future.

3-27-2009 **CAFE Requirements, MHEV.** There isn't a whole lot to this particular design. In fact, many often argument that this really isn't a hybrid since no propulsion power is ever contributed by the electric motor. It is defined as this: "*Micro-Hybrid (MHEV) systems are the most basic of hybrid systems and offer mainly idle-stop capability. Their low cost and easy adaptability to existing powertrains and platforms can make them attractive for some applications.*"

3-27-2009 **CAFE Requirements, ISG.** This is what is commonly referred to as an ASSIST hybrid. It's technically the "parallel" type, but those responsible for the document are well aware of how that term is used to intentionally mislead. So, that opportunity has been prevented. The proper term is now: Integrated Starter Generator (ISG). Their definition is divided into two distinct categories as follows: "*There are 2 types of integrated starter generator hybrids that are considered: the belt mounted type and the crank mounted type.*"

3-27-2009 **CAFE Requirements, BISG.** The first of the two categories is: "*A Belt Mounted Integrated Starter Generator (BISG) system is similar to a micro-hybrid system, except that here it is defined as a system with a 110 to 144V battery pack which thus can perform some regenerative braking, whereas the 12V micro-hybrid system cannot. The larger electric machine and battery enables additional hybrid functions of regenerative braking and a very limited degree of operating the engine independently of vehicle load. While having a larger electric machine and more battery capacity than a MHEV, this system has a smaller electric machine than stronger hybrid systems because of the limited torque capacity of the belt driven design.*"

3-27-2009 **CAFE Requirements, CISG.** The first of the two categories is: "*A Crank Mounted Integrated Starter Generator (CISG) hybrid system, also called an Integrated Motor Assist (IMA) system, utilizes a thin axial electric motor (100-144V) bolted to the engine's crankshaft. The electric machine acts as both a motor for helping to launch the vehicle and a generator for recovering energy while slowing down. It also acts as the starter for the engine and is a higher efficiency generator. An example of this type of a system is found in the Honda Civic Hybrid. For purposes of the final rule, NHTSA assumed the electric machine is rigidly fixed to the engine crankshaft, thus making electric-only drive not practical.*"

3-27-2009 **CAFE Requirements, PSHEV.** Those of us driving Prius for many years have been calling this a FULL hybrid. They defined it as this: "*The Power Split hybrid (PSHEV) is described as a full or a strong hybrid since it has the ability to move the vehicle on electric power only. It replaces the vehicle's transmission with a single planetary gear and a motor/generator. A second, more powerful motor/generator is directly connected to the vehicle's final drive. The planetary gear splits the engine's torque between the first motor/generator and the final drive. The first motor/generator uses power from the engine to either charge the battery or supply power to the wheels. The speed of the first motor/generator determines the relative speed of the engine to the wheels. In this way, the planetary gear allows the engine to operate independently of vehicle speed, much like a CVT. The Toyota Prius and the Ford Hybrid Escape are two examples of power split hybrid vehicles.*"

3-27-2009 **CAFE Requirements, 2MHEV.** Rather than just lump Two-Mode into the same category as the other FULL hybrids, it was separately defined: "*The 2-mode hybrid (2MHEV) is another strong hybrid system that has all-electric drive capability. The 2MHEV uses an adaptation of a conventional stepped-ratio automatic transmission by replacing some of the transmission clutches with two electric motors, which makes the transmission act like a CVT. Like the Power Split hybrid, these motors control the ratio of engine speed to vehicle speed. But unlike the Power Split system, clutches allow the motors to be bypassed, which improves both the transmission's torque capacity and efficiency for improved fuel economy at highway speeds. This type of system is used in the Chevy Tahoe Hybrid.*"

3-27-2009 **CAFE Requirements, PHEV.** This is the category of great interest, since the government has been rather quiet on this particular topic. The previous administration hyped it, but nothing actually materialized. This one intends to push delivery. They were defined as: "*Plug-In Hybrid Electric Vehicles (PHEV) are very similar to other strong hybrid electric vehicles, but with significant functional differences. The key distinguishing feature is the ability to charge the battery pack from an outside source of electricity (usually the electric grid). A PHEV would have a larger battery pack with greater energy capacity, and an ability to be discharged further (referred to as "depth of discharge"). No major manufacturer currently has a PHEV in production, although both GM and Toyota have publicly announced that they will launch plug-in hybrids in limited volumes by 2010.*"

3-28-2009 **2010 Discussions.** I told them what was in store. Have they noticed yet? At first, discussions about the 2010 model were rare... even on the big Prius forum. What happened years ago was a good sign of what to expect again. Sure enough, posts are increasing quite a bit... to the point of where you can easily see them dominating once rollout begins. Those with the Iconic model will wonder if their peers will drop off. Sadly, many will. When you have a car that long which runs that well, everything eventually gets discussed. Once in awhile, a veteran will chime in to say "*all is well still*" or something to that effect, but their post often gets overwhelmed by all the chatting about the new model. Participating will shift to the 2010. It will dominate. That's what really reinforces mainstream acceptance... witnessing the next generation take over.

3-28-2009 **Diesel Refute.** The person responsible for that challenge hasn't been cooperative. In fact, he's been ignoring comments about emissions entirely. And still, we haven't been presented any MPG data. Needless to say, some of us are now speaking our minds about the obvious bias. Here's my refute... Panic. That pushed them to do something, quickly before the 2010 became available. TDI supporters know their in trouble. The T2B5 emission rating is embarrassing, especially knowing that VW has shown off prototypes of diesel vehicles delivering PZEV. So, they divert attention to highway efficiency instead... much like the rest of the non-hybrid industry. The fact that the 2010 Prius also improves that must be quite humbling. Didn't they know we'd respond this way? Prius count is over 700,000. EPA restrictions kept TDI sales low, to around 15,000 annually. Doing the math really quick, it's easy to see how outnumbered they are already. MPG data makes the situation even worse. So, they decided to conceal the results. Non-Hybrid diesel is not the future. Get over it!

3-28-2009 **80 Percent.** That's the number we've been beaten to death with over the past 2 years. 80 percent of the population drives 40 miles or less per day. So, it's been the key argument point for Volt all along. They used that to justify the purchase of an expensive plug-in vehicle, dismissing comments by those who have a daily commute of only a few miles. They say it's worth it, then present an array of reasons in support of that... except one. What percentage can actually afford that expensive plug-in vehicle? Turns out, very few. Whether or not the purchase is worth it is completely beside the point. They simply cannot afford it. 2 years ago, risk taking was all the rage. Now that the economy has collapsed from that, there's a very real problem with their argument. It's not worth the risk.

3-28-2009 **Public Outcry.** After typing the previous entry, it occurred to me that information really needed to be posted for discussion feedback. Conveniently, there just happened to be a post relating to spending. I interjected with this, making sure to again point out the need for Volt enthusiasts to finally do more than just blog... Excessive risk taking contributed heavily to this financial disaster. The economy is collapsing now. How much people can afford really hurts the high-priced vehicle market. Argue all you want about whether or not Volt is worth it. The sticker-price once the short-term tax credit expires will be a very big deal. GM is attempting to remain transparent by stating intent to price the vehicle well in advance. The lack of transparency from the Volt enthusiasts is becoming a problem though. They continue to be vague and very little easy-to-find detail is available for newbies as a result.

3-28-2009 **EV Threshold.** Reading through the wonderful collection of 2010 Prius reviews recently published, it has become clear that the change of EV maximum from 35 to 25 MPH is a welcome one. Stealth is still at 42 MPH, so there's no loss or compromise with that electric-only drive feature. It's how EV has been changed to for the typical consumer to benefit from. Now you can press surprisingly hard on the accelerator-pedal without triggering the engine to start up. No skill required. You just push the EV button and enjoy the heavy commute traffic you just got stuck in... or the drive-thru... or the on-ramp... or to pay for parking. The more generous kick from the motor isn't just software changes either, it also comes from the battery-pack now delivering 27kW of electricity rather than 25kW as before.

3-29-2009 **Sustaining Business, part 1.** Getting caught up with details often causes people to forget about the big picture. The federal task force was established to do exactly that, and the time for their decision to be made is rapidly approaching. That's freaking out some. I was more than happy to provoke big picture discussion, with this... Emission & Efficiency improvement approaches differ tremendously. Toyota set a price goal and worked carefully within those bounds. GM set a technical goal and said a high price could be justified. Both, of course, expect high-volume production to reduce price in the end. But the benefit from that is quite different. For Toyota, it makes a product that already reaches the mainstream even more appealing. For GM, it just makes the product acceptable for the mainstream. When you consider the need to sustain business in a highly competitive market, one approach has a distinct advantage over the other.

3-29-2009 **Sustaining Business, part 2.** What I'm hoping they'll figure out is that Honda & Ford also took the same approach as Toyota. The goal chosen by GM is higher risk. To make that work, they must be flexible. Unwillingness to alter plans at all as things develop could become a weakness that impairs success. Engineering is a balance of compromises anyway. Reasons for decisions need to be re-evaluated over time. Looking back afterward often reveals problems. Insight from what you've learned along the way helps make that next step the right one. Not even acknowledging the need to consider the big picture is a real problem.

3-29-2009 **Sustaining Business, part 3.** If it seems like I'm picking on Volt specifically, it's easy to prove I'm not. Read personal log entries from before the prototype was revealed. There's complaints about price not being taken into consideration. The plug-in augmentations for Prius were just Li-Ion battery-pack upgrades that mimicked the properties of the current one but with much greater energy density. In other words, that was a configuration that sacrificed price for guaranteed compatibility. It was too expensive though. 50% more isn't affordable. How would they sell enough to sustain (profitable) business at that price? So with Volt at 100%, it begs the question of how many consumers could make a purchase like that. 15% to 25% is the threshold I've stated as a design target for years... and continue to still.

3-29-2009 **Lean, Meaner, and More Competitive.** Those were the talking points from President Obama, in his radio address to the country today. His auto task force will be announcing their decisions about Chrysler & GM tomorrow. Change is coming. Results are expected. That pointless propaganda of the past is not acceptable, neither is status quo. The obsession with size & power while at the same time disregarding responsibility for emissions & consumption will not be tolerated. Broken promises will have dire consequences. To receive loan/bailout money, they must actually deliver. Thank goodness this is finally happening. Complaints over the years to prevent this it on deaf ears. But now that the industry is facing the harsh reality they had been so complacent about, there is a glimmer of hope. Hybrids were not the cause as some had insisted; instead, they will be part of the solution. Yeah!

3-29-2009 **Change Has Come.** GM enthusiasts have been in a state of panic lately, attacking anything representing significant change with knowledge the auto task force announcement tomorrow would bring an end to the automaker they once knew. Looks like the dominos have already begun to fall. Ahead of the inevitable fallout tomorrow will bring, Rick Wagoner CEO of GM said he'll be stepping down. After 8 years of being in charge, facing what's to come probably wasn't worth it. Why not let someone else make a name for him or herself and just enjoy retirement instead? Consider how many millions were made in that executive position. That automotive industry where the SUV was king is dead. Those dinosaurs are facing extinction. Clean & Efficient cars are now taking over. Their time come. Hooray!

3-30-2009 **Memorable Quotes.** Knowing that change will be coming soon, it should prove rewarding to make note of quotes like this: "*The Volt is among the crown jewels of our recovery and is not in jeopardy.*" Saying something like that can be a quote that comes back to haunt later. Financial trouble eventually breaks even the most solid of plans. Money for funding development projects must come from somewhere. Anywho, here's what I contributed after reading that... What does "Volt" actually mean? Remember how much it has already changed since the reveal 2 years ago. Expect some more. The vehicle must become mainstream competitive quickly, especially if taxpayer money is planned to be paid back with profit from it. Setting of a higher priority on price reduction is realistic.

3-30-2009 **Falling Apart.** That's the feeling for some. Others feel it is action long overdue. The restructuring plans submitted 6 weeks ago, revisions to those from 4 months ago, still didn't convince the administration that taxpayer money would be used well. The actions stated weren't enough. More & Faster change is required. Making GM viable can't be as subtle as they've proposed. Very deep cuts must be made now. It started at the top. That action was hopefully enough to serve as wake-up call to take the extended deadline seriously. Aid will be provided for operational expenses during the next 60 days. In the meantime, if aggressive restructuring doesn't take place, bankruptcy will be enforced. Perception simply isn't enough. Very real results are required... quickly.

3-30-2009 **New Beginning.** A merge of Chrysler with Fiat seems inevitable now. That's an interesting mix. Fiat is a well established name in Europe and Chrysler is staged for big change. It could be a great opportunity, opening doors here in America with so may dealers ready for something new. The name could help. But it still comes down to their being something competitive to buy. More status-quo vehicles won't help the struggling automaker advance. We won't have to wait long to see an outcome. Even though the government focus is primarily on GM, this other financial mess must be dealt with too. Fortunately, the economic footprint of Chrysler is smaller. So, impact from major restructuring won't be as traumatic. It's still a problem though. Too much emphasis had been placed on the large guzzlers, which is exactly what consumers have been shifting away from here. Fiat has experience with smaller vehicles, experience which could prove quite valuable.

3-30-2009 **Emission Attention.** As the less known automakers strive to make a name for themselves, one area of attention just begging for opportunity is emissions. For developing nations, this is especially important... since they typically deal with much worse air quality. And sure enough, we are starting to see that. The old school of thought isn't appealing. They know the consequences of those technologies, like non-hybrid diesel. Exploiting coal for electricity is problematic too. Trying new approaches is easier elsewhere. The status quo is harder to change in the more established nations, like here.

3-31-2009 **Rain & Snow Mix.** Here in Minnesota, we rarely see those weather conditions. Heavy rain while also getting large snowflakes just doesn't happen often this far north. It's too cold for that. But being so close to a Prius upgrade, experiencing unusual circumstances like that is great. So, I enjoyed this morning's commute. I welcome final memories like that. Classic Prius remembrances still bring a smile to my face. Of course, some of those places where I ventured out to take photos don't exist anymore. But that's likely to happen over time with the Iconic model too.

3-31-2009 **Buyer Confidence.** Don't you love how that aspect is totally disregarded when competitors introduce new products. They act as if the other automaker hasn't established any loyalty through real-world data. Reality is, consumers include that in their evaluation of reputation. Times like these are not when assumptions are taken lightly. Nothing can be taken for granted anymore. Earned endorsements go a long way. Power from sharing online is becoming increasingly more effective. We aren't at the mercy of mindless advertising like before. Those senseless commercials showing the car sliding sideways or the truck climbing a pile of rocks don't appeal to consumers the way they use to. Buyer confidence is based upon changing priorities. A big one is how committed the automaker is to delivering improved efficiency. Will the technology really deliver as promised and will it be reliable?

4-01-2009 **Official US Pricing Info.** When you see that title for the thread and it was posted by the Prius product manager, you tend to get rather excited. I remembered what day it was though. And sure enough, the text of the post exclaimed: "*April Fools.*" It's great knowing that they have a good sense of humor. But at our expense? Fortunately, he did say we won't have to wait too much longer. Already knowing the price in Japan is close to the new Insight there makes us all really wonder what the new Prius will be here. I'll admit, the wait is getting to me. The wait for Spring is bad enough. Compounding it with this too... Ahh!

4-01-2009 **March Sales.** Detail doesn't appear to be available anymore. All I can find online is totals. The economic woes seem to be hitting all automakers hard. Wouldn't it be wild if we started getting only quarterly values instead? Focus on what happens each month is what contributed to problems in the first place. Results in the short-term have proven detrimental. Anywho, the number of Prius sold in March was available: 8,924. That's not bad considering how close the new model is, no government incentives are available either.. GM hybrids still qualify for up to $2,200 in federal tax credits. Only 1,612 total were sold though. That sure puts the Toyota total of 12,515 in perspective, especially when you discover the additional 1,232 sales that came from Lexus 1,232.

4-01-2009 **Stating the Obvious.** Someone needed to finally say it: "*It's the cars, stupid!*" All the financial disaster news is making some forget the basics. You get hung up in detail and forget to also step back to consider the big picture. Prius is well positioned. So my comments to the Volt enthusiasts often fall on deaf ears. But, it's worth trying... Product diversity is an important business rule that management disregarded and is now paying the consequences for. Focusing heavily on massive Pickups & SUVS while letting market share slip from compact, midsize, and efficiency vehicles was an obvious mistake. "Get the job done" must include a more balanced approach. (Volt is an extreme, by the way. The current configuration most definitely does not target the mainstream consumer.)

4-01-2009 **The End Of May.** That's the official word from Toyota for 2010 Prius arrival at dealers. Mine should be slightly ahead of that. Needless to say, I'm getting quite anxious. The thought of getting to experience a Prius upgrade *again* is very exciting. At the same time, finally taking delivery so I can start collecting real-world data seems like a distant dream. It's a necessity with so much craziness from automaker financial troubles and all the mixed messages about fuel efficiency. That's making me nuts. The wait seems like forever. Yet, the time will actually fly by... especially with Earth Day and the distractions of Spring in the meantime.

4-01-2009 **Ethanol Mandate.** The research had been going well here, for over 2 decades. Then the greenwashing desperation of certain automakers screwed that up. Instead of keeping mandated use of ethanol in state, where it actually is viable, it was spread across the rest of the country. Ethanol wasn't really ready for that yet. Improvements to the growing & refining process were still in progress. Figuring out how to use materials like switch-grass and bio-waste (stuff like orange peels) on a commercial scale wasn't complete yet. That upset some powerful groups. So, now they are fighting everything... including the state-only mandate here in Minnesota increasing the level in gas from 10 to 20 percent. That's the very thing which the research depended upon. I understand resistance in most of the other states. But why here too? Everything is local. The effort to make ethanol better is realistic. Keeping it within these confines should make sense. But instead, rage is causing demand to end it all.

4-01-2009 **Generation Vindication.** It's amazing how some things are able to self-correct. The deception of the past which intentionally undermined Prius for the benefit of the competition has now impaired the competition from taking advantage of that anymore. In fact, it is actually holding them back now. In other words, the new Insight is labeled as the second generation. Even though we know the technology has been advanced enough to call it one more, just like Prius had, they aren't able to say that. What goes around comes around, eh?

4-02-2009 **Viability Assessment.** This official comment from the 5-page summary the task force submitted sure stirred up some emotion today: "*GM is at least one generation behind Toyota on advanced, "green" powertrain development. In an attempt to leapfrog Toyota, GM has devoted significant resources to the Chevy Volt. While the Volt holds promise, it is currently projected to be much more expensive than its gasoline-fueled peers and will likely need substantial reductions in manufacturing cost in order to become commercially viable.*" I agree. The original plan of keeping the price under $30,000 was carelessly abandoned. It was an important objective which shouldn't be dismissed. How are they going to sell the vehicle in large enough quantity for it to generate enough profit to sustain business with?

4-02-2009 **Extreme Nonsense.** If you're looking for an example of the absurd, look no further than Rush. His ranting is amazing. It's hard to believe some people actually believe his extreme nonsense. But apparently, that's the case. This is the latest from him about hybrids: "*Nobody's buying 'em. Nobody wants them! The manufacturers are making them in droves to satisfy Obama! Sorry for yelling. Nobody wants them!*" Fear of change manifests itself is a variety of ways. Pretending that those on the road were somehow forced sales and that building more is just a waste seems to be a form of denial. What does he think a hybrid is?

4-02-2009 **Beyond Suspicion, part 1.** Sometimes, things just work out. After over 4 weeks of pointing out that the MPG detail from the diesel challenge was never provided, we actually got some... but not much. In fact, all we finally got was this: "*For those of you solely fixated on stats, the MPG part of this was that the CBTDI Jetta achieved an average of 37.4 MPG against the Prius 34.96 MPG.*" That single sentence said it all. Efficiency that low from a Prius is not even close to representative of normal. Something was wrong.

4-02-2009 **Beyond Suspicion, part 2.** Most post on the big Prius forum to inform everyone that the numbers were now available on the challenge website was late in the afternoon. That timing worked out nice. Many had a chance to see it and respond right away. My contribution was commenting that if their claim was normal driving and everything we ever do isn't, how come results are dramatically higher MPG using cruise-control? How could that be considered hypermiling? Needless to say, our comments pushed an unexpected response. The website abrupt changed late in the evening. It now stated: "*For those of you solely fixated on stats, the MPG part of this was that the CBTDI Jetta achieved an average of 41.4 MPG against the Prius 40.96 MPG (corrected).*"

4-02-2009 **Beyond Suspicion, part 3.** We were delighted. It took a whole month to finally provide a single sentence about MPG and both values were supposedly messed up? How could such profound errors happen? The odds go way beyond suspicion. Lack of detail is always a concern. We had always hoped the delay was somehow just due to someone struggling to make a nice spreadsheet, complete with graphs. But waiting 4 weeks for just one sentence with two totals is absurd. The values themselves were great though. The diesel increased exactly 4 MPG and the Prius exactly 6 MPG. There's nothing to explain such an odd "correction". Both new numbers are reasonable outcomes too.

4-02-2009 **Beyond Suspicion, part 4.** Credibility had been lost weeks ago anyway. So that unexplainable altering of numbers meant little in the end. After all, rushing to use the older model Prius rather than waiting for the new... which would undeniably be more efficient ...revealed a bias from the start. Those videos & comments that followed confirmed it. There was no control vehicle for comparison. There was just a cross-country drive which heavily favored the diesel vehicle and no detail documenting the experiences. The outcome was tarnishing the already bad reputation for "clean" diesel.

4-02-2009 **Beyond Suspicion, part 5.** By the way, the diesel was a manual transmission. Knowing that alone is all you actually need to see that they weren't trying to be constructive. Consumers don't want to have to shift. Having an automatic transmission is what's considered normal. But we all know that the convenience comes with an efficiency penalty. Resulting MPG will be lower than the 0.44 difference observed between the non-hybrid diesel and the Prius on that drive. Of course, the fact that diesel costs 25 cents more per gallon messes up their argument too.

4-03-2009 **Fusion-Hybrid Commercial.** Saw my first tonight. Wasn't expecting it. So, I missed most of what was said and shown. Most of the time, I just tune out Ford commercials. But naturally, the word "*hybrid*" caught my attention. It makes one wonder what the demand will be. Getting the word out that there is now a hybrid sedan available from Ford is important. Of course, with the intent to only produce 25,000 the first year, you really don't want to attract just anyone. Well informed consumers work best as new-product purchasers. They'll find out about it without much budget being spent for advertising. But then again, Ford still needs to do some of this for image too... just in case federal money is required to keep operations running smoothly.

4-04-2009 **Getting Along.** Complaints are growing. One enthusiast in particular is presenting data only to his favor. Omissions are obvious. The devil is in the details, and we all know it. Yet, he persists anyway. If you haven't guessed, it's comparing Volt to Prius with an equal size battery-pack. That's what is always missing. Same capacity forces the technology itself to be looked at. But his belief is that anything less than the 40-mile size will harm the market, even though the identical thing has been said about price countless times. So, all we continue to get is a matrix portraying ideal-condition values comparing extremes without disclaimers stating the assumptions or conditions. Realistically, it doesn't matter. The clock is ticking. June 1st is coming quick. Reality is about to come crashing down. The superiority nonsense will end. Getting along will become a necessity. The time for loan justification will be over.

4-04-2009 **CEO Advice.** People were sounding off to the new head of GM today. This was my contribution... Make the first version of Volt affordable for the masses. Price should be an important priority. The original goal of "*nicely under $30,000*" has been lost in the chaos. Achieving high-volume quickly is important for the new GM that emerges. A niche configuration may be more exciting, but that’s not what will sustain business. Selling lots at a modest profit is the key.

4-04-2009 **It Lives!** Giving the benefit of doubt, this comment was responded to: "*Hybrids offer 90% of their benefit when driving in stop and go traffic. They offer little, if any, benefit on the highway...*" Of course, the person who posted it could have intentionally trying to undermine. I'll find out based on his posts that follow. This was my attempt to find out: It's hard to believe that misconception still lives. There's so much real-world data to the contrary now available, you don't even have to point out technical differences anymore. Being naive isn't much of an excuse after all these years.

4-04-2009 **Yup, Misconception Still.** He really didn't have know how hybrids achieve efficiency gains. The assumption was all of it came from the battery-pack and electric motors. Engine alterations were never considered. Being able to sacrifice power for the benefit of more MPG is simple, if you are aware of the combustion pumping cycles available and that different sizes & weights of components available. But then again, he also assumed the electric-motor wasn't ever used while cruising either. It makes you wonder how many others don't have any idea what happens under their vehicle's hood. More than a single configuration of the engine itself is possible. Thankfully, technical description isn't usually needed. Just provide real-world data.

4-05-2009 **Electric Mode**. What in the world does Ford think that means? This recent quote from a spokesperson really makes you wonder: "*This car actually can go up to 47 miles an hour in pure electric mode, which is more than double any other hybrid on the road.*" It sure appears as though they are lying. Prius has been able to drive at up to 42 MPH using only electricity (known as "Stealth" mode) since the very beginning back in 1997. The introduction of "EV" mode in 2003 provided a greater acceleration threshold from a speed tradeoff, but even that was up to 35 MPH. So, what the heck does the "*double*" comment refer to? Are they really spreading blatantly incorrect information?

4-05-2009 **Acknowledgement.** The new CEO of GM was on "Meet The Press" this morning. He clearly conveyed that the "*Not far enough. Not fast enough.*" assessment from the task force was understood. Unfortunately, the enthusiasts still won't accept it. Their holding of the "40-mile" ideal at the penalty of high cost is impairing progress. If 50 MPG is what Volt will deliver after the battery-pack is depleted, why in the world can't the capacity be reduced to lower cost? The point is to transition away from traditional design as quickly as possible while building & selling the newer technology as much as possible. An extreme won't reach the masses. The majority want a mid-priced vehicle that delivers significant improvement... which is what that proposed configuration of Volt would do. Delay is unacceptable. Waiting years still before positive cash flow is achieved will not be tolerated. Viability much be achieved in the short-term and paying back of the tax payer money following that.

4-05-2009 **New Proposal.** An approach to separate Volt technology from the recovery effort of GM is to request a different loan entirely... which is precisely what GM has done. They are hoping to be provided with $2.6 Billion specifically for that. Enthusiasts would then have to acknowledge the re-categorization of Volt, no longer comparing it to Prius, since it will be targeted for an entirely different base of consumers and much later than hoped. The expectation of delivering profit could then be dropped too. Co-Existing with whatever the plug-in option and next generation of Prius brings wasn't appealing in the past. All other technology was considered inferior. But with this change, they'll have to live with that reality. Excluding Volt from GM's financial trouble makes the final proposal to the task force more likely to be accepted.

4-05-2009 **Some Already.** Not all the enthusiasts are resistant to the proposed change in plan. In fact, some embrace it. That ideal becomes less of a problem when the approach is instead deliver a long-term solution. But in the meantime, something else must be delivered. Sticking with traditional vehicles which only deliver 30 MPG Highway is totally unrealistic. The competition will be offering hybrids, making those non-hybrids increasingly more difficult to sell. Some enthusiasts acknowledge that reality, while a few continue to pretend that the next 5 to 6 years won't matter. I'm looking forward to observing the upcoming battle from within. Embracing hybrids like Prius, which are pushing battery production well into the mainstream, is a benefit for all in the long-term. Some already see that and accept that.

4-05-2009 **Lowering Expectations.** A discussion about the rollout of a new SUV which delivers 30 MPG Highway was where I confronted the Volt enthusiasts, wondering if that's what they think is the solution for GM recovery. It was the perfect example of lowering expectations so SUVs could live on as a commute vehicle. Anywho, this is what I posted there... It's interesting to see how quickly Volt is being re-categorized as a long-term solution. What was once just beyond the horizon is now getting pushed out further for the sake of becoming a competitive platform and no longer part of the recovery effort. 2015 seems to be when expectations are being set for achieving mainstream status. Question is, what will be sold at high-volume to typical consumers in the meantime?

4-06-2009 **Soapbox Time.** The shallow attempts to discredit irritate. I know I'm not alone. So, making it clear who was responsible and what the problem was (but without actually pointing a finger) could be beneficial. Though, it's hard to know how many actually bother to read it. Anywho, my soapbox time resulted in this... Rather than Prius being an ally moving toward electrification in the fight against traditional vehicles, certain Volt enthusiasts have negatively labeled the smaller battery capacity offerings. It started with calling the plug option a "*hassle*", even though that provided a substantial MPG boost. Then the switch was made to calling that "*anemic*", without providing any detail to support the claim. There's no attempt to be transparent. Certain people absolutely refuse to compare a Prius and a Volt with the same size battery-pack. That lack of objectivity says a lot. The insults make it worse. Some of us are really getting tired that. Unless discussions become constructive, much will be lost.

4-06-2009 **Commute Vehicles.** The insanity of using a SUV which can tow thousands of pounds of cargo for a commute vehicle, empty and without any passengers, was acknowledged by the very automaker responsible for pushing the idea to the extreme it became. But their solution is many years away still. And even then, it still isn't expected to be totally competitive. Thankfully, they don't have the resources anymore to sustain such nonsense. The time to get serious, though long overdue, has finally arrived. Just doing the minimum and at a snail's pace isn't acceptable. The engineering we know we're capable of must be used. No more excuses. No more passing of responsibility. Just do it! Some day soon, we will hopefully be able to look be with amazement that anyone would even try to use a utility vehicle as a passenger car.

4-06-2009 **$2.05 Per Gallon.** I wondered how long it would take to finally break that $2 barrier. Consumers don't like seeing that 1 change to a 2. So, it stays below even when oil prices rise. And lately, they have been... delaying as long as possible before prices rise. Today, that inevitable change happened. The arrival of warm weather was likely the influence. It's hard to tell now. With the price of a barrel of oil at only $52, predicting what that means to the consumption market is like throwing darts. You just don't know. Higher in the Summer is a realistic expectation though. And with some of us already driving a 2010 Prius by then, things are going to be exciting. The timing is great. Not seeing $4 again for a long time would be great. But too low, the forgetful nature of consumers hurts. A little bit of a rise is a good reminder.

4-06-2009 **End of Life.** Point this out. Everyone does. But it's always from the design perspective. The wait for real-world data is clearly not being taken seriously. Learning from Prius seems to be elusive in discussions about vehicles with a battery-pack. It's like they don't want to admit the reality that consumers will wait, not wanting to buy until the entire life-cycle is actually demonstrated by consumers. That's why this particular time in history is so important. As reports of the 2010 model trickle in with their first complete year of ownership, some Classic owners will be celebrating 10 years of ownership. That's a sales endorsement like no other. It makes those end of life concerns fade away. Newer technologies will still be waiting for that.

4-06-2009 **Two-Mode Sighting.** My first official sighting happened today. All those in the past were, I believe, owned by businesses. This one had an ordinary license-plate on it. Just sitting there in front of a parking-meter, I couldn't resist getting close for a look inside. That hybrid Yukon looked just like I expected. Seating was like Camry. The girth of the vehicle was for rugged operation, not interior space. The larger vehicle size didn't equate to more leg room. It's as if the full-size conversion van never existed. Passengers don't take precedence to obsessive power. That vehicle is utter nonsense. Sold for utility but used to move people only is gross overkill. Fortunately, the excessive design suffers from an excessive price. A more realistic configuration of the technology may have captured the market, but GM wasn't interested in balance. In fact, the next generation will deliver even more power.

4-07-2009 **Pressure Building, deadline.** The ultimate deadline for GM is approaching quickly. 60 days to revise the plan that wasn't accepted recently will be a challenge. Bankruptcy is looking inevitable. What the new company emerging from that becomes will be intriguing. At the heart of it is Volt. Should a vehicle which won't deliver profit for 5 or 6 years be allowed to drain resources in the meantime? Comments are coming from every angle, none are words of encouragement. So, you can imagine how the enthusiasts are feeling. They are desperately seeking out a voice to lead them. Objectivity is a fight from within. Some argue assumptions about the design. Others want to stick to the facts available. All feel the pressure building.

4-07-2009 **Pressure Building, competition.** Rather than just ignoring Prius for now and focusing on goals, there's quite a bit of emotion stirring. This was my favorite: "*I think Toyota and their Prius hybrid suck!*" How can you not be amused by that? All dignity about the situation is lost. Burning bridges isn't a concern. What things are like for GM simply doesn't matter. Frustration must to be vented. So, they attack want is realistically their closest ally... the vehicles currently doing the most to pave a way for plug-in acceptance. I couldn't help to do a little venting myself, in the form of presenting a dose of reality: 1,500,000 more will be put on the road between now and when the second generation (positive cash flow) version of Volt becomes available.

4-07-2009 **Pressure Building, PR.** The emphasis on PR (Public Relations) for GM has always been heavy. That's how they developed the reputation for "*Over Promise, Under Deliver*". In other words, as much as they present good things to come with good intent, the often fail to meet those expectation they built up. Excitement followed by disappointment is a tough cycle to break. But they keep trying. Unfortunately, the Volt enthusiasts seem to get sucked in entirely without acknowledging the past. In the light of the upcoming deadline, I was happy to provide a reminder of the situation... Before Voltec, it was Two-Mode. Before that, BAS. Before that, fuel-cells. GM is great at PR. Getting beyond that hype has always been a problem. The lack of detail here certainly isn't breaking the trend. June 1 is rapidly approaching.

4-07-2009 **Saturn Hybrids.** Vue was supposed to be the premiere Two-Mode vehicle. It was planned as the first of the FULL hybrids to offer front-wheel drive and the first with a 6-cylinder engine. So, many were pretty excited. It was a step in the right direction... long overdue. Last Fall came and went. The debut never happened though. It was delayed until Spring. And now that it's Spring, people have been wondering what happened. Where is it? Turns out, the model was dropped. With the impending death of Saturn, investment in any of those vehicles didn't make any sense. But rather than just shifting over to the same platform on an equal level brand, like Chevy, it is instead going to be sold as a Cadillac. The SRX will be that long awaited hybrid... but not until sometime next year, and at what price?

4-07-2009 **Past & Present.** Comparing the business of Volt to that of Prius doesn't make sense. They certainly try though. I jumped up on the soapbox tonight, with this... Remember what else they said? Countless claims were that Prius didn't sell well. But in reality, Toyota limited quantity until production could be retooled to the point of profit. Sound familiar? Well, it's not. Those were in the days when gas was cheap, the SUV was king, and climate change wasn't anything more than a treehugger fear. Prius was simply dismissed as a fad. The situation is very different now. GM is betting the farm on Volt. Not because they want to, like Toyota did. They have to. They're being forced to deliver something new and abandon the old. Taxpayer loans must be paid back. Also, the idea of "eco-PR" is just spin now. All automakers are expected to provide cleaner and more efficient vehicles. It's not an option. Consumers see right through the "30 MPG Highway" advertising. A monster-size hybrid used for one-person, no-cargo commuting is considered wasteful too.

4-07-2009 **A Bird In Hand.** When that's all you have to say, you know the end is near. It was in response to Ford offering the hybrid Fusion and GM focusing on towing-capacity instead. The attempt to paint a pretty picture but not actually improve is getting pretty obvious. Denial only makes the situation worse. So now, they aren't making unsupported claims anymore. Talking about a change for the better. Real-World MPG data wasn't even necessary. Sales alone is sending a clear message. Far more could be done. The song & dance up to now simply isn't enough. Makes you wonder how different things could have been if GM had focused on hybrid cars instead of Hummer... or for that matter, kept upgrading EV1 rather than shifting emphasis over to Hummer. Time to deliver.

4-08-2009 **Two-Mode Utility.** This statement summarized how much things have changed: "*I'm amazed that people still think you can just slap this system into a Malibu and get 40+ mpg, that's not the application for this technology.*" With that, I had to chime in... Remember how it was promoted as the successor to Prius and a platform for BMW sedans? Being a technology only for utility use was not how the original promotional material read. The story has changed. Real-World implementation has proven the on-paper estimates incorrect. It's more expensive and less efficient than hoped. That may be ok for big trucks. But it's not competitive for midsize cars. The decision to create BAS+ was the first clue that things weren't going as planned. Volt pretty much confirmed it. Still thinking you could doesn't matter anymore.

4-09-2009 **Missing 40 & 50.** It makes you wonder how long automakers will be able to delay the inevitable, especially the once giant automaker called GM. As time progresses, consumer demand for 40 & 50 MPG vehicles will transform from the "would like to have" to a much more insistent statement. We've seen how high gas prices rapidly change attitude. Unfortunately, we've also seen how people quickly forget when they come back down. Fortunately, the task force would like to know how GM will be competitive (as well as pay back the loans) without vehicles like that. No more reactive approach. Proactive is required. Waiting to see what demand reveals means its too late. We know high gas prices will returning. We know efficiency vehicles for that are still missing.

4-10-2009 **Correcting Market.** The banking industry is revealing how change is sometimes quite forceful. In this case, those banks with poor practices are now suffering from the risks they shouldn't have taken. Many will cease to exist in one form or another. The market will correct itself out of necessity. There isn't much choice available. Consequences of bad decisions have been harsh, people are suffering as a result. That's a fantastic excuse to change. For the auto industry, that means market share will shift and the products they produce will be different. In other words, the worries some had about how business was being conducted (too much focus on short-term gain) have been confirmed.

4-10-2009 **Relative Reference.** The greenwashers don't even bother with that. They just endlessly claim "*Prius sales are down*" with the hope that you'll never actually look up the numbers to verify that horribly vague & misleading claim. Their goal is to undermine, impeding progress any way they can. Being specific really frustrates them. I insist upon detail... then watch them attempt to spin a response to conceal their original intent. Today, I posted totals for 2008 top-ten sales of Toyota vehicles here. Notice how Prius is the third best-seller: 436,617 Camry; 351,007 Corolla/Matrix; 158,884 Prius; 144,655 Tacoma; 137,249 Tundra; 137,020 Rav4; 115,944 Sienna; 104,661 Highlander; 102,328 Yaris; 84,181 Lexus RX.

4-11-2009 **Calling It Edsel.** Reading this quote in print sure ruffled some feathers: "*The Volt is a huge money loser just like the Edsel.*" Overcoming that label is going to be quite a challenge. 4 years of exposure during development and 4 years of production before profit is achieved sure makes calling it a "money loser" difficult to deny. Edsel was only built from 1958 to 1960. Success from sales of this will take much longer. It's in a far more complicated market. Hybrids and plug-in options will definitely present choices new to mainstream consumers... to the point of them seeing the end of traditional vehicles approaching. At the same time, pressure from other economies will affect resources. Time will tell. Much will happen in the next few years. What role will Volt play?

4-12-2009 **More Than 40 MPG.** Remember how the 2011 Chevy Cruze was introduced last Summer, right at the height of the gas prices? Those reports stated over 40 MPG on the highway (leaving out a city estimate, of course, since that was obviously much lower). There was a lot of hype. It was a non-hybrid vehicle to challenge the hybrids. Well, sales of the European model begin in the UK in July of this year. Early testing reveals that the overall expectation is 42 MPG... which is only 35 MPG here, in US gallons rather than Imperial. That makes a person wonder what the source was of the original reports. And for the highway value to be really high, the city would have to be really low. Is that the case? Whatever the situation is, a combined rating of 35 MPG isn't going to shake the industry as previously hoped. That's actually nice for traditional vehicle. But when real-world conditions and future gas prices are considered, having that as their only high-mileage vehicle available does make you wonder how the federal loans will be paid back.

4-14-2009 **Direct-Inject Engines.** That's the next step in engine efficiency improvement for all types of vehicles. It should help to reduce emissions from cold startups too. Both measures are rather vague though. In fact, it's rather strange that the new MPG is promoted with no comparison to the old at all. Whatever the case, there is improvement. We know this well, since it was one of the benefits only diesel could claim. Now, gas also can. Anywho, GM is really hyping that technology advance now. Only problem is, all of the vehicles listed as initially getting it are guzzlers. The highest efficiency expected out of the bunch is 30 MPG. That obsessive focus on only those vehicles is making many of us crazy! Why in the world aren't any vehicles that currently get 30 MPG included? The new Cruze will end up having it. But that won't be until a year later. It seems bizarre. Adding direct-inject to Malibu would immediately boost the MPG of their BAS model. No plans have been announced though. In fact, this now make its 29 MPG combined (26 city/34 highway) Malibu-Hybrid look really bad. Why bother with that when you can just buy a 30 MPG highway Terrain SUV instead?

4-15-2009 **Orders in Japan.** They've exceeded 20,000 already. Still a month away from availability of the 2010 Prius and the demand is building nicely, there. Here, no such information is available. Heck, we don't even know what the price will be. Though, I predicted we'd find out on Earth Day... which is only a week away now. Official orders will begin following that. Status of mine should be known then too. This is an exciting time. Discounts on remaining current inventory may entice those still delaying to finally jump on the opportunity to get a tried & true model. For the rest of us, which is likely to be a very large group, will be taking that next step in automotive history. I can't wait!

4-16-2009 **Prius Sales.** You can now find Prius available on dealers lots. The one near me has about 20. Supposedly, that's a horrible thing... even though they've got far more of other vehicle models on the lot too. Seeing more than just a few doesn't mean this "*the fact that current Prius sales have fallen off a cliff*" as an antagonist insisted. I took that in a light-hearted way. They were not amused. I certainly enjoyed posting this though: I always look forward to spin like that. No one wants to get stuck with older inventory. 8,924 sold last month is actually pretty good so close to the next generation being available. In fact, that's more than total Two-Mode sales for the entire year in 2008. It's the market obsession with monthly stats (and lack of patience) that contributes heavily to the distorted demand. 99,999 are the anticipated sales for the 2010 model here in the US during the portion of 2009 which it is available. Mine can already be chalked up in the sold column. Just waiting for delivery. Should be mid-May.

4-16-2009 **Bankruptcy Opportunity.** The enthusiasts of Volt have been unusually quiet lately, just blogging about political & economic stuff rather than aspects of the technology. I haven't had much to say as a result. However, this particular comment did catch my attention: "*The problem is that GM can't just shut down its brands. They have franchise agreements with their dealers.*" That got me to chime in with this... Yes, they can. That's what bankruptcy is for. Reorganization not possible under normal circumstances suddenly becomes realistic upon filing. That's why failed efforts to do it without have made way for taking that step. It's pretty much the only option now available.

4-16-2009 **Necessary Action.** That term sure is making an impression on the automotive industry. The long-overdue organizational & priority changes are crashing down as a harsh reality. This is the wake-up call that should never have been necessary, but was always feared as unavoidable if the complacency continues. And sure enough, it did. Now they have to take action in ways only described in worse-case scenarios. Remember how some joked that the history of the 70's would never repeat. Well, it actually won't. Turns out, this situation is even worse! The denial was much more intense and the consequences dire. So we better change the saying... Those who don't learn from the past are doomed to either repeat or die. The automotive industry from a few years ago is dead. They resisted change and destroyed their own future.

4-16-2009 **Wonderful Shift Lever.** Remember how the one in the Classic model got so much negative attention, simply because it pulled forward instead of down like traditional designs. It was amazing how much was devoted to such a trivial component. You only shift once throughout the entire drive. Yet, the difference was heavily discussed. With the Iconic model, the revision just got little mention... despite actually being a profound change. The media is strange. They really like the 2010, calling it "*wonderful*", despite it working exactly the same way. The only difference is cosmetic and a new position. Apparently, that's all it took to satisfy them.

4-17-2009 **Pointless Debates.** Unless they are considered an effective way of passing time, the hybrid debates have become completely pointless. What good does arguing an estimate do when so many of the past have been proven inaccurate? Just waiting another month or two is all it will take before the initial real-world data starts to come in. And as limited as that is, it's still way more revealing than on-paper assumptions. Too many factors of driving influence the assumptions often made. So, I've taken to just impatiently waiting. As tempting as it is to chime in with my real-world data for my Iconic Prius, what will come from the new model will speak much louder with respect to MPG. The design was enhanced to such a degree that new owners are bound to be pleasantly vindicated in a variety of circumstances. I learned quite bit with regard to that during my time in Detroit. In a few weeks, I'll get to experience it firsthand in my own 2010. Though, I wish it was even sooner. Oh well. I know. The wait is totally worth it.

4-17-2009 **Harmful to Humans.** That was the ruling declared today by the EPA. The six greenhouse gases, including carbon dioxide, are now considered pollutants which can be regulated under the Clean Air Act. Impacts listed were: increased drought, heavier rain, more frequent & intense heat, greater ocean/sea rise, more violent storms, as well as harm to water resources, agriculture, wildlife, and ecosystems. Automakers have always been at odds with issues like this, since would end up creating new fuel-economy requirements. On the national level, outcome depends on how tight the restrictions are set. Fighting that could be more difficult than the choices made by individual states. Selling guzzlers is a challenge when high priority is placed on emissions. Attention to the topic like this draws lot of favor to hybrids like Prius, since they actually use less gas rather than hype how much is "saved".

4-17-2009 **Reasons to Steer Clear.** At this point, it's hard to imagine who they think they're fooling. But some keep on trying. The article started by pointing out tax credits are no longer available for Prius, saying it will take much more time to "break even" without it. Both have been dead topics for awhile now. Stirring up those old ghosts caught my attention. What will the twist be nowadays? And rather than leading up to it, the next reason was simply stated to buy a Volt instead, implying the "*due in 2010*" means available soon at a competitive price. Then it only got worse. Comparison was made to a basic model Yaris, the same old "nothing in common cost savings is all that matters" vague argument we've heard for years. That isn't the slightest bit constructive. So when they referred to that long-ago debunked study about battery production, it was obvious that they were writing in absolute desperation to impede the progress of Prius. That adds to the excitement for the 2010 model. Fear like that is a good endorsement. This new Prius will reach even further into the mainstream. No reasoning can dissuade from that.

4-17-2009 **More Sales Data.** It's truly amazing how much some resist change. Some deny the economic crisis or the end of a generation has any influence on sales. The argument on the big GM forum has become absurd. The spin isn't even the slightest bit objective anymore. Random statistics are used as "proof" that demand is decreasing. They flat out refuse to judge Prius based on sales totals for an entire year. 2008 top-ten sales data was treated as if all was well in the automotive world, not uncommon from what we've seen prior to that. The logical response to that was to post the 2007 data too. So, I did. That immediately got dismissed. Whatever. Posting the data so others could draw their own conclusions was the point. Here it is for you: 473,108 Camry; 371,390 Corolla/Matrix; 196,555 Tundra; 181,221 Prius; 173,238 Tacoma; 172,752 Rav4; 138,162 Sienna; 127,878 Highlander; 103,340 Lexus RX; 87,718 4Runner.

4-18-2009 **Battery Quantity.** The reality that battery-pack supply is limited to a specific quantity is something those fighting hybrids absolutely refuse to acknowledge. At most, it just gets quickly dismissed as utter nonsense. They quote sales statistics as if hybrids could be built the same way as traditional vehicles, having a plentiful supply of parts readily available. This deception allows them to convey the impression that there is no maximum... that demand is directly reflected by purchases. It will happen some day. But that's many years away. The market is simply too small still. Quantity must grow well beyond the 3 percent (or so) hybrids hold now. Growth is very much dependent on what third-party suppliers commit to in advance, not what consumers want the moment gas prices go up.

4-18-2009 **Measuring Progress.** A big deal was made today about all the enthusiasts Volt has. It's quite a following. Few actually lead though. Daily posts are how interest has been gauged. Naturally, I don't find that an effective measure. They don't really accomplish anything. That information sharted quickly lost & forgotten shortly afterward. Progress is basically non-existent. There's nothing to show for that online activity. Threads just fade away into archives with titles often unrelated to much of the content within. People just interject whatever they want into the active topic of the day. Needless to say, I wanted to point that out in a place relevant to that. So, I did with thise... It will be interesting when "enthusiasts" finally become "supporters". The difference is one does more than just blog, actively reaching out and engaging those outside of their online community to help promote.

4-19-2009 **Resisting What?** Seeing that question today was quite unexpected. It was in response to a comment I made about how some are still resisting change. I explained it with this... That's simple, just accepting Prius as a mainstream vehicle now and stop trying to twist interpretation by selectively comparing it to obscure instances in the past. In other words, acknowledging plain old annual sales statistics. The denial is truly amazing. Some are still desperately struggling to keep the hybrids thought of as something only for special circumstances. They are frightened by the thought of them being accepted as ordinary family cars.

4-19-2009 **Two-Mode vs Single Mode, part 1.** You have to read it to believe it: "*Don't see how two-mode vs single mode is even relevant. GM's two-mode is a system designed to make large vehicles more efficient. It doesn't scale down well just like HSD doesn't scale up well. Apple to oranges.*" Those few who remember the past, recall how GM hyped the technology quite differently. But once the technology finally reached production, the story began to change. Now some would like you to believe it was never intended to compete directly with smaller hybrids. They'll even go as far as wonder how such a misunderstanding could ever occur. The blogs & posts of the time reveal what really happened, documenting what was said back then. Spin long afterward can't hide that. We know how the design didn't deliver as much as was originally promoted.

4-19-2009 **Two-Mode vs Single Mode, part 2.** Here's what I ended up posting in response to that comment on the big GM forum: Back then, it was for all types of vehicles. The "large vehicle" only stance wasn't always the case. Promotion stated that they were just first, with direct competition for small vehicles to follow... hence my posts here. Many, many, many claims were made about how much more scalable Two-Mode was than HSD or Ford's design. Now it turns out, that's not actually the case... which I always suspected. Reality is that the market needs a clean & efficient technology to serve those driving everything from sub-compacts to those towing up to 3,500 pounds. That's the bulk of consumers. The need for larger vehicles is tiny in comparison. In other words, Two-Mode is a specialty technology and the other FULL hybrids are for the mainstream.

4-19-2009 **Halo Marketing.** That's the term I used in the new section added to the document most appropriate to the upcoming holiday: Earth Day. In it is a variety of topics related directly to hybrids, pointing out the greenwashing approaches to watch out for. Awareness is key. The world of emission & efficiency technology is becoming much more complicated. You can't just assume each option is equally green. They are *not* the same. Anywho, this addition addresses "Actual Sales". When they are low, an automaker could still benefit from the halo effect... making them appear greener than they actually are. Minimal consumer acceptance means minimal outcome. More of a difference can be made by selling greater quantities of other technologies, not necessarily the one which is marketed as superior. Here's a link to the document... Being Green

4-19-2009 **Sienna & Previa.** Seeing those two to Toyota minivans driving side-by-side sure was a sight... one from long ago and the other still available new at dealers. They were the same color. Size difference wasn't as much as I would have thought. It made me wonder how much of a draw Estima would be here. In general, this market shuns that once popular vehicle type. Of course, that was once true of the hatchback too. Things change over time though. Prius drew major attention back though to hatchbacks. That hybrid minivan could too. But would Estima be most effective? Or should it be Sienna instead? Remember how once upon a time Previa was popular? Maybe what goes around really does come back around.

4-19-2009 **Euro 5.** Just a reminder that the next level of emission standard in Europe will be taking effect in September of this year. They are raising the bar, requiring cleaner tailpipe emissions. It's similar to what happened with the Tier-2 standard in the United States. Progressively improving vehicles is a slow process. But this system of doing that is quite effective. Dirty technologies once taken for granted finally have to be upgraded. Only meeting the minimum is no longer acceptable once the requirement increment takes place. New vehicles sales are allowed for just those that actually make an effort. It flushes those out that aren't able to compete.

4-20-2009 **Production Has Begun.** It's official. 2010 is the "current" model of Prius now. Let the markdowns of the older model begin. We don't know how many there are left of them, but there's always a crowd who prefers the "tried & true" rather than the "first year" version. Discounts entice them to finally take the plunge. It's a great situation for everyone. Heck, even those looking for a good deal on a used one will get the opportunity once those of us looking forward to the upgrade trade ours in. This is definitely an exciting time. I can't wait to start looking for them on the road with me. Just a little bit more patience. They'll start loading them on the ship about a week from now. Hooray!

4-20-2009 **51 MPG.** Driving up north with the bikes on back is really hard on the efficiency in the first place. Combine that with countless extremely short trips and you've got the low 40's starring at you on the Multi-Display. That made returning back to the routine of the daily commute strangely welcome. Driving more than just a few blocks without all that extra drag sure makes a difference. Of course, even at the worst for Prius is still way better than most traditional vehicles. But even so, I much rather prefer seeing that 51 MPG today for the average. Though... it does make me wonder what the situation will be the end of next month... with my 2010 Prius. Exciting, eh?

4-21-2009 **Cheap Gas.** It just jumped up 18 cents, to $2.09 per gallon. Perhaps the Summer climb has begun. Whatever the case, remaining low is the preference for the immediate future. Being able to collect some real-world data before prices start to draw attention back to hybrids would be nice. In other words, the market would really benefit from the 3 new hybrids if reality doesn't come crashing down right away. Seeing $4 gas again is quite unlikely. But with all the oil being stockpiled now just in case (the most since since 1990), cutting back by OPEC will become a problem at some point. And of course, we know how naive consumers can be. It will definitely be interesting once the economy turns around. Things won't ever be the same again. The insanity of Hummer has pushed interest in another direction now. Creature comforts, which includes an appeal in new technology, is drawing attention and becoming more of a priority.

4-21-2009 **2010 Prius Pricing.** Hooray! Today, we found out what the numbers will be. My prediction of when that would happen turned out to be correct. Of course, choosing the evening before Earth Day isn't exactly "rocket surgery". That's fairly sensible considering all the attention hybrids get then anyway. It's that wait which is making many nuts. Anxiety really builds up. So, finding out anything new at any time is helpful. This just made it even more so. Pricing is pretty much as expected too. Low 20's has always been the base target. This Fall, it will be $21,000 to ultimate sway those considering Insight based on price. Upon release, it will $22,000 with a variety of goodies standard. Extremely well loaded (we're talking features only found in luxury vehicles), will be just under $32,000. The particular configuration I ordered will be just under $30,000 (which includes the moonroof & solar panel.) Seeing all the options available sure will stir discussions. There's a wide array available and the price sure spans quite a range.

4-22-2009 **Earth Day!** It was very exciting. I provided presentations at the School of Environmental Studies. That's a high school for the local district which is part of the big zoo in Minnesota. The students there are quite reception to hybrids. They had lots of questions. Many asked about pricing and features. The reliability of the technology to improve emissions & consumption was a non-issue for them. Their age & background is quite supportive of that. Focus was more on how that is achieved. So, I ended up pointing out the battery-pack and describing motor/engine interaction far more than I expected. It was too bad I hadn't thought of making a video of the PSD which could be played back on DVD. That could have been very effective of an educational exchange for that particular audience. Most rarely ever are interested in digging for detail that deep, but they were surprisingly receptive to that. Of course, it could just be that third time is the charm. This newest generation of Prius is a big endorsement toward the permanent availability of the technology. It's obviously not a niche anymore... especially from the perspective of those students who are just now getting their driver's licenses.

4-22-2009 **Insight Advertising.** There were 3 totally different Insight commercials on television this evening, on Earth Day. It was definitely an opportunity Honda was taking full advantage of. They know the 2010 Prius is coming to this market soon. Quantity will be larger. After all, the automaker producing it is and so is the existing consumer-base. So, establishing a sizeable presence right away makes sense. It's a good strategy. The advertising is great. Drawing attention away from guzzlers is a wonderful turn of events.

4-23-2009 **Anniversary Dates.** My first commute with my first Prius was supposed to be memorable because it was a hybrid; instead, I got trapped driving through the spilled remains of a spectacular accident. So when the first anniversary came around, I really had reason to celebrate the event. No such luck though. That day was September 11, 2001. The world definitely had other things to be concerned about. Unfortunately, the one year anniversary of second Prius was profound in a bad way too. A tragic life-changing event in my family just happened to be on the very day. So... with the 2010 Prius, hopefully it will be off to a better start. The first commute opportunity for new owners will come on May 18. The day before that marks an anniversary date for me... **8** years, **8** months, and **8** days into Prius ownership. That's not the only special date with memorable numbers this year either. My **9**th anniversary is on the **9**th day of the **9**th month of the **9**th year of the millenium. Makes you wonder what the date will be when I get this third Prius, eh?

4-23-2009 **Halting Production.** Hearing about GM's plan to halt production in 13 plants for up to 10 weeks was quite a surprise. We've heard that the inventory build up of unsold vehicles was becoming excessive, but to that degree is shocking. The economic downturn is revealing itself to be much worse than predicted. The changes once thought of as harsh are now looking to be rather sensible. Saturn, Hummer, Saab, and Pontiac brands will be cut entirely. The remaining will need to be scaled back significantly. Once a giant automaker which gloated about the number of models and record-quantity production, soon to be dramatically smaller, that's not an outcome anyone expected... especially so quickly. Isn't it amazing how the long-resisted change finally happened?

4-23-2009 **Publishing Corrections.** A popular automotive magazine recently wrote a comparison article featuring the 2010 Insight and 2010 Prius... published online, before the pricing of Prius here was available. They just guessed. And of all things, the conclusion drawn was that Insight was a better buy due to the $3,000 lower sticker-price. Well, it turns out the difference will actually only be $1,200. What will they do about the paper version of the article about to be mailed out to subscribers? Odds are that edition is already printed. Do they just follow up next month with a correction? We know how terrible of a solution that has been in the past. Countless troublemakers wanting to undermine only make reference to the inaccurate article, pretending there's nothing wrong with it. Maybe the online version will be revised, making the correction clear enough to help avoid that. You think?

4-23-2009 **Dealer Notification.** The first was finally sent. Yeah! A friend in North Carolina got a call from his dealer with details about his 2010 priority order. That's exciting... for him. I'm still impatiently waiting for mine. Fortunately, the manager at my dealer was kind enough to show me his computer system so I could see how the notification will come to him for mine. I appreciated getting to see that. Here in Minnesota, shipments come from the other coast. So, I wouldn't expect my timeline to match anyway. The wait is difficult. It's history repeating itself all over again. Of course, third time is a charm... right? I know, patience.

4-23-2009 **Intentional Misleading.** You really have to pay close attention. Today's example was a rather clever attempt to mislead. When quoting the efficiency of the upcoming Audi A4 diesel, they compared the European estimate to that of the EPA estimate of the 2010 Prius here. The Audi is 51.13 US MPG. The Prius is 51.3 US MPG. It gives you the impression that the diesel will get virtually identical results as the hybrid. Assuming that based on the numbers provided makes it quite easy. Unfortunately, that's totally dishonest. The testing used in Europe is very different from that here. Both measurements must be quoted using the same criteria. But when you do that, the hybrid is revealed to be dramatically more efficient. When you look up the European estimate for 2010 Prius, you see that it is 71.2 US MPG. Clearly, that is not what the greenwashers wanted you to know. Take the time to verify numbers. Tricks like that are far too common.

4-24-2009 **Lots of 2010 Prius!** Toyota's original plan was to provide 334,000 worldwide for the first year of production. But today a Japanese article stated a revision, an increase in volume to 495,000. Yeah! That's just plain sweet. Committing to numbers like that from the start means a serious push of the technology, penetrating even deeper into the market than the competition expected. It sure makes Ford's plan for 25,000 the hybrid Fusion quite small in comparison. That's really puts pressure on GM promises too. And you know Honda will respond with aggressive promotion of Insight. Hybrids will emerge as an economic recovery strategy, building up what was once thought of an a niche market into the new standard sooner than many expected.

4-24-2009 **$2,000,000,000 More.** On the eve of Chrysler's bankruptcy/takeover deadline (less than a week away), the government has provided GM with the money promised to allow them to sustain business until their deadline. Seeing billions of taxpayer dollars being exchanged with such uncertainty isn't comfortable for anyone. Some enthusiasts are exhibiting new levels of hostility, since survival is now at stake rather than just prestige as in the past. Regardless of the outcome, what they once knew is dead. Permanent change is now taking place. Wondering what it will encompass be is situation now. Hearing about the resulting requirements for both automakers should come within the next few months. The denial nightmare is over.

4-25-2009 **Engine Load.** I don't think that exact value has ever been documented... anywhere. And now that the 2010 Insight owners are fiercely arguing the amount of drag by the engine when no fuel is being used is trivial, I expect them to actually quantify it. Claims of being equal, despite a fundamentally different hybrid design, won't be accepted without actual data to support it. For my 2004 Prius, when driving faster than the Stealth limit (42 MPH), the LOD value according to my ScanGaugeII is 20. After dropping below that speed, the engine will physically stop when the LOD value falls to 12. Makes you wonder what I'll see with the new Prius, eh?

4-26-2009 **Ignoring the 2010.** Reading articles written for Earth Day which pretend the 2010 Prius doesn't exist sure is frustrating. They ignore the new model entirely, pretending it doesn't exist. All information about Prius is for the 2009 model. That allows them to understand efficiency and overstate the base price. In other words, they lie by omission. There's no way to ever know the extent of damage caused by that type of misleading, but we certainly are aware of the effects. You hear it in discussions on a regular basis. Undermining progress takes many forms. This was just one particular example.

4-29-2009 **Thunk. Thunk.** Despite the damp road, the silence of stealth allowed me to hear it. There was a faint distinct thunking sound as I drove. The water threw me off though. I couldn't quite pinpoint the tires as the source. I finally stopped. Sure enough, there was a 3/4 inch rock wedged in the tread. The small part was just large enough to hold on, with a majority exposed. It would have made for a dramatic noise (a destruction to a close-following vehicle) if I had entered the highway with it still attached. The momentum would have flung it pretty hard. Fortunately, I caught it. Being able to stop without wasting any gas or having to deal with exhaust fumes as you inspect sure is nice, a hybrid benefit rarely mentioned.

4-30-2009 **Final Month.** It's entirely possible that today will mark my final month of real-world data gathering for my Iconic Prius. A tip up north with the Prius heavily loaded inside & out combined with colder than temperatures doesn't exactly make the average one to stand out. It will be just another one in the mid-40's. Next month should be considerably better; however, I'm really hoping the data is incomplete. Upgrading to a 2010 model as conditions reach the ideal will make for exciting discovery... even with the kayaks on top from time to time. Witnessing MPG highs is very rewarding.

4-30-2009 **Humidity.** The arrival of Spring is commonly marked with very humid mornings. Today was no exception. The fog was pretty thick. The Prius loved it. My entire commute got a MPG boost. Seeing that efficiency bump on the highway at 70 MPH sure was exhilarating. I can't imagine what it will be like when that becomes a permanent sight... just a month or so from now. Waiting is agony... but it sure is worth it.

4-30-2009 **Chrysler.** It's going to happen. No last minute deal was struck. Using taxpayer money to maintain business required serious recovery efforts by today. They didn't materialize. Whether or not that would have resulted in sustainability doesn't matter anymore. Bankruptcy is required now. Hopefully, the first phase of dramatic court-enforced restructuring will do the trick. If not, the second phase of asset liquidation will occur. When & What are big questions now. I suspect the changes for Chrysler will be quick & painful to avoid the impeding deadline for GM next month. Do you think this will result in a much more sensible product-line? Achieving that this way is a terrible means... but it sure is better than the automaker disappearing entirely.

4-30-2009 **Lack of Objectivity.** I've been a pain in the backside for years, pushing those posting vague & misleading content to finally clean up their act. Some do, not realizing they were contributing to greenwashing efforts. Others don't, since they are indeed attempting to deceive. Motive is revealed when they are confronted by many. Today was the day for one particular troublemaker. He's a hard-core enthusiast of Volt, doing everything he can to preserve the "40-mile" range acceptance. From that, his posts frequently undermine lower battery-capacity designs. In a discussion about a "10-mile" capacity for the plug-in Vue-Hybrid, that intent came shining through... and about a dozen popular posters finally retaliated. The reality crashing down on Chrysler must have been the rally call they needed. It was devastating. Talking about vindication! They pointed out how his "facts" were incomplete and made far too many undisclosed assumptions. The group freely expressed their disappointment with his approach, making his lack of objectivity obvious for even the most casual of readers to notice. I was absolutely delighted.

4-30-2009 ***Pre-Order Confirmed !!!*** It felt so good to see the email finally arrive. Knowing that production of the 2010 Prius was well underway, but still not hearing anything about my pre-order beside just the price, was making me crazy. More information won't speed up arrival any. I just need something to keep me from going nuts in the meantime. The fantastic Spring weather is about to roll in. The long slumber of Winter is broken by escaping for a trip to take photos and bike or rollerblade. Excitement from the discovery process which comes with a generational upgrade is very fulfilling. I'm like a child looking forward to the school year ending. My delivery will take place pretty darn close to the same time. Anywho, I followed the instructions and confirmed my pre-order. Submitting that online request form will change it to an order, the dealer will be notified, and the car itself will be assigned for delivery. Yeah!

5-01-2009 **Green Credit, history.** Some still genuinely believe an automaker will be sell lots of guzzlers if they also see an impressive hybrid. This quote about profit is what set me off: "*The Volt will help GM leapfrog Toyota's green credit. It doesn't matter if the car loses for a few years, its not about sales, its about indirect sales.*" Green credit? Someone needs to study history. Gas was still cheap. Climate change was still considered a "crock of @#%!". The automotive market was thriving. Prius had *already* become profitable and selling at high-volume by the time "green" was thought of as something of praise. Of course, if you honestly believe green credit will allow an automaker to continue selling lots of guzzlers, you're in for quite a surprise. The world is rapidly becoming a very different place. Delay of 4 to 5 more years before a competitive efficiency vehicle is available simply is not acceptable.

5-01-2009 **Green Credit, condemn.** That followed with this gem of a quote: "*Just wanted to say I have never, ever seen an environmentalist condemn Toyota for making the Sequoia, Land Cruiser, Tundra, etc before*". Personal encounters can't be proven anyway. The motive was to undermine. But the crude attempt to divert the discussion didn't work. Those aware of the history and with any business sense know how important product diversity is. When sales of one begin to drop, you better have another already available which you can shift volume to. The other automakers, especially GM, clearly didn't prepare for what's happening now. Interest in midsize & midprice vehicles which offer great efficiency is a product they didn't both to invest in. Anywho, here's how I responded: That wouldn't make any sense. Toyota used that profit to fund the retooling of their hybrid design to make it profitable. Other automakers used their profit quite differently. And now that the opportunity to do that has expired, some try to avoid facing the reality of that poor choice to not invest more in the future.

5-01-2009 **Green Credit, excuses.** The denial is remarkable. Rather than just admit errors of the past and move on, they continue to push the idea that every automaker acted the same way in the past hoping discussion readers won't ever bother to check the facts. This explains how one bankruptcy is taking place and another is about to. Change is difficult. This is some proof: "*Seems like your making excuses, and not very good ones at that.*" Accusing someone of doing the very thing you are guilty of is a play right out of the book of tricks. Sometimes it actually works too, but only if attention can be diverted elsewhere... since digging into the detail reveals the true story. This was my reply to that quote: What excuse? Production of those guzzlers has decreased quite a bit, which is what many of us wanted by the time the 3rd generation hybrid system became available. Guzzler quantity shrinks while hybrid quantity expands. It's happening. No spin will conceal that. Heck, all the exposure Volt is getting is clear evidence that market wants are changing.

5-01-2009 **Orders & Expectations.** A discussion about that on the big Prius forum caught my attention. I chimed in with this: At my dealer yesterday (informing them my priority had just been confirmed), I asked the salespeople there what they would point out first about the 2010 model. All responded with the LKA (Lane Keep Assist). Do they really think that's what will compel a typical consumer to buy? Throughout the years, it has been the significant improvement to emissions & consumption combined with a couple of soon-to-be-common goodies to enhance the driving experience. Finding screens in vehicles is indeed becoming common, validating that choice as a mainstream feature. Package V will be fantastic for demonstrating potential, but I can't imagine it becoming common. The consumer view will likely be similar to that of Avalon. Package IV (the one I ordered) is what I expect as the most likely to be purchased by those seeking a "fully loaded" model. The benefits of the moonroof and the solar-panel will be obvious and enjoyed frequently... which is what I'm sure I'll be pointing out first to consumers.

5-01-2009 **April Sales.** We have no idea what the availability was for Insight. So, the 2,096 sold is difficult to interpret. All the television commercials lately (4 different ones), would seem to imply that supply is ample. Whatever the case, Honda is clearly pushing hybrids again. 3,361 Civic-Hybrid were sold in April. That outweighs Ford's overall hybrid total of 2,299. But then again, we don't know about quantity for their newest hybrid either. Ford & GM also has a distorting factor from their "*confidence*" programs too. They both offer customer assurance for new purchases, covering payments for 6 to 9 months if they lose their job within the next year. Of course, GM only sold 1,534 hybrids. So, what difference would any of it make? Toyota doesn't have that. 12,223 hybrids were purchased here from their Toyota division and 707 from their Lexus division. 8,385 of those were Prius. Next month should be very interesting. The end of the Iconic model supply may be reached and the first of the 2010 will finally arrive.

5-01-2009 **Prius Sales.** The publications based in Detroit absolutely love to point out when Prius sales are low. They spin the reason why, giving you the impression of an overall decline. But in this case, they did nothing but compare it to sales in April of the previous year. Remember what happened then? Toyota put production of other hybrids on hold so they could deliver an extremely large quantity of Prius then, to take advantage of all the Earth Day attention it would get. And of course, that paid off big time due to the rapid increase in gas prices then. Of course, the following month inventory was drained to the point of shortages. And now this April, sales are way down due to the soon-to-be-available new model. They didn't mention any of that though. Numbers were provided in a vague way hoping you'd make an incorrect assumption about demand.

5-01-2009 **What if it doesn't?** I'm still in dismay from that question. When at the dealer last week, it's what the salesperson asked. He was being sincere too. I didn't know how to reply. After learning about so many optimizations to the design during my visit in Detroit and already knowing about a few being carried over from Camry-Hybrid, I couldn't see how anyone could even wonder about that. The system will without a doubt yield higher MPG, despite the power increase. To what degree is the more appropriate question. I'm most curious about cold-weather performance. Highway will obviously be higher.

5-01-2009 **Detroit Spin.** When a newspaper based in Detroit publishes an article with this as the title, "*Prius hybrid sales decline*", you can't help but to get excited. You know you are about to read some greenwashing. They can spin great stories. The article was extremely short. This was at the heart of it: "*April sales of the once-popular Toyota Prius hybrid declined 61.5%, compared to the same month a year ago when gas prices were at least $1 higher.*" No mention was made to point out how Toyota explicitly targeted April last year for an sales blitz, sacrificing future inventory supply for immediate availability. No mention was made about the new model being available very soon either, pretending April was just another month. Heck, last month's difference wasn't mentioned either. Of course, pointing out any of that changes the story. They wanted you to believe the demand is waning, that the want for hybrids was just a fade. They don't want you to see the big picture. And sadly, some newspaper readers do indeed take facts presented at face value without any other consideration.

5-02-2009 **Generator Fallout.** All we ever hear about Volt is stuff related to the battery operation... and people are beginning to notice. In fact, it's getting bad. No detail whatsoever with respect to the engine operating the generator raises skepticism. Why haven't we been told anything? Why did the most devoted of supporters only get to drive with electricity supplied from a plug? Why isn't the "ER" part of "EREV" (that's Extended Range Electric Vehicle) not talked about anymore? That promise to share information throughout the development process has been broken. Those with technical backgrounds believe the efficiency of mechanical to electrical back to mechanical transfer of energy isn't meeting the goal originally set (50 MPG). That tradeoff of engine optimization at the penalty of too much conversion loss is a risk no one else has taken beyond prototype testing. It's why I believe FULL hybrids offer greater opportunity. They take advantage of the mechanical while also allowing for boost from a plug. Energy management is a delicate balance of many factors. Committing to one specific configuration 4 years before implementation could prove unwise. This generator fallout may be the first clue that something isn't going well.

5-02-2009 **Negative Comments.** Lack of data being available is turning my hope that a more affordable configuration of Volt simply isn't going to happen. Readers will see my comments as negative overall, not just for the "40-mile" range with a promise of "50 MPG" afterward. Engineering realities are complex to explain. Combining that with Business realities makes for a situation often overrun with emotion. Constructive discussions are a challenge... especially with so much at stake. I suppose once I get my 2010 Prius, the negativity would have emerged anyway. Averaging 50 MPG from a vehicle priced at $21,000 this Fall is what mainstream consumers will hear most about... because it's at a price they can justify and won't have to wait years still before availability. No data means no sale. Estimates alone aren't enough.

5-02-2009 **No Data, No Sale.** Inspiration for that came from the previous log entry. The Volt enthusiasts have been pushing "No Plug, No Sale" for ages. It's an absolute I strongly disagree with. So, the idea of changing their P to a D in the acronym as a terse method of demanding constructive discussions sounded really good. Here's what I posted online for them to mull over... N**D**NS. Real-World data is what grows demand for efficiency vehicles. The impressive MPG numbers being reported for Fusion-Hybrid will likely become a big success story for Ford. The low pricing of Insight doesn't amount to much without MPG data to support it. Estimates have proven insufficient. N**D**NS. That's true for Volt too. The plug doesn't equate to much without actual MPG data. Real-World operation revealing true quantity of gas use will go a long way. Without that, it's still just hype. N**D**NS. "No Data, No Sale" isn't rocket science. You cannot convince a consumer to spend that much on nothing but an estimate. Hybrids have already proven that. N**D**NS.

5-03-2009 **Aura-Hybrid Sighting.** The one I spotted this morning was my first out in the wild. That's as many as the one Malibu-Hybrid I've seen. Both are quite rare. Neither is much of a hybrid. A large alternator contributes to propulsion at times while driving. The engine shuts off when the vehicle is stopped and no cooling (engine or cabin) is needed. That's it. You really can't get any less. ASSIST hybrids, like Insight, are a step up. FULL hybrids, like Prius, are obviously the next beyond that. I don't suspect the kind like Aura will be sold for long. The price is way too high for getting so little in return for MPG improvement and pretty much nothing for smog-related emission reduction.

5-05-2009 **The Wait.** It's not too bad. I've got lots to distract me in the meantime. Heck, there's 2 sets of Winter Prius photos I still need to publish. What makes the wait difficult is reading about all the others suffering too, especially since they have to endure hearing about how long the priority orders will take. Combine that will the reality that greenwashing efforts are growing in intensity, you have a recipe for impatience. Thankfully, I know the wait is worth it. This is the third time I get to be a pioneer. Back in 2000, things were very different. Most people had absolutely no clue what a hybrid was. Then in 2003, many had dismissed them based on misconceptions and the technology still being so "new". But now in 2009, none of that exists anymore. The spin is to make Prius appear outdated... rather than now being a mature technology ready for high-volume mainstream purchases.

5-05-2009 **Done.** What else is there to say? Constructive discussion has dropped to almost nothing everywhere. New Prius is just speculation. Old Prius is just repetition. Fusion & Insight are hybrids too new still. Two-Mode and BAS are poor sellers with no funding. Volt was never practical. In other words, this particular chapter in hybrid history is done. Nothing productive in nature is available anymore. We must wait for the next chapter to begin. Thankfully, that's only a few weeks away. Phew! Not being able to progress isn't a good place to be. Knowing it won't be much longer is very encouraging.

5-08-2009 **$2.19 Per Gallon.** For quite awhile, the price of oil has been hovering around $50 per barrel. That kept the price of gas below $2. Closing this week pushed it up to near $60 though (specifically $58.63) and gas jumped up accordingly. I have no idea what provoked the change in such a long pattern of stability. Perhaps the seasonal effect of warm-weather travel has begun already. It's a bit early; but then again, the economy is still a mess. This is most definitely uncharted territory now. Focus is on vehicle efficiency far more than it ever has been. Hybrid technology is well proven. How much each automaker will embrace it is the question, not if they will anymore. We'll someday see scary prices again. Hopefully, the next few months won't bring them. I would rather like a chance to gather real-world data for the 2010 Prius beforehand. Being prepared ahead of time is great. Whether or not that will be possible is anyone's guess. The so-called experts have lost their credibility. Predicting when is next to impossible. Predicting if is pretty darn easy. Those lows we had been enjoying wouldn't last. In fact, they may become just a memory soon. Time will time.

5-08-2009 **Wallet Voting.** The reputation protection is getting way out of hand. Enthusiasts are focusing on efficiency estimates more than ever now, totally disregarding cost & availability. They don't care whether or not a difference is actually made. They just want bragging rights. It's pretty sad that it has come to this, but they'll inevitably run out of theoretical arguments anyway. Real-World results ultimately overcome all that other nonsense. And it's the count of actual purchases that stand out above all. Sales are what really make the difference. That vote each consumer makes is what ultimately matters. Believing strongly in a technology you choose not to drive doesn't make any sense. If you don't end up buying it, what's the point?

5-08-2009 **Quarter Losses.** As you could imagine, some GM enthusiasts have been wishing for Toyota to suffer. So, they are taking full advantage of their announcement of 7.7 Billion in losses this most recent quarter... because that number is bigger than GM's loss of 6 Billion. Of course, it doesn't take into account the loan money GM used in the quarter which will need to be paid back later. They also didn't acknowledge the reality that Toyota covered its losses with their cash reserve. This is how I responded to the news on the big GM forum: Where did the losses come from? Was it throwing out the baby with the bathwater like GM, doing everything necessary for the sake of survival? Or was it proactively accepting the contraction of the guzzler market and investing even more into efficiency vehicles? The retooling of production for the 2010 Prius, which about 90 percent of the technology for it is new, took place during the first quarter. Think about how the year-end results will look. Meeting the goal of selling 100,000 Prius here between mid-May and the end of December will make that investment a sound business decision.

5-09-2009 **Number Misleading.** From time to time, I still check in on that old diesel enthusiast forum. It's intriguing to see the Volt enthusiast blogging website following that same history... and denying it. The evidence is right there. Yet, they feel their situation is different... even though they too haven't grown. Not reaching out to a wider market is a big problem. Expansion is vital. Anywho, one of the frequent posters there declared this in an argument: "*The rejection of the Prius is a prime example.*" I couldn't help but to be amused. I knew it was an absurd thing to claim, realizing that being vague was key. When you look at the actual numbers, you see the picture is entirely different. Rather than the perception of Prius sales slipping lately, you see that what was said is totally misleading. The actual numbers for Prius was 8,385. The total Toyota/Lexus hybrid sales count for April was 12,930. You get the impression that's small... until you notice that the entire product-line, gas & diesel combined, for Volkswagen was only 16,289 vehicles. That's it! They sure are in for a rude awakening when the 2010 Prius becomes available.

5-09-2009 **Garage Is Ready.** The 26-year-old spring in my garage door struggled throughout this last Winter and ended up breaking during the coldest days. Pushing the small piece still remaining, I managed to make it to warmer days. That strained the original opener to its bitter end. Relying on the homelink connection in the 2004 Prius, since the only non-replaceable remote broke, pretty much meant replacement was inevitable anyway. So, I finally replaced both... which involved major clean-up of the seasonal clutter than had built up too. The new setup is generations better than that crude opener from all those years ago. This one comes complete with a laser position indicator. No need for a board on the floor anymore. A dot of red light appears on the dashboard of the Prius telling me when I've pulled in far enough. All is ready in the garage for the 2010 Prius now.

5-10-2009 **Fuel-Cell Fallout.** The Obama Administration is cutting back on expenses that don't yield reasonable results. Money has already been put forth toward efforts that do, like battery research and plug-in credits. So, it's not like a complete cut or just a token gesture as we saw with the previous administration. Fuel-Cell technology wasn't ever really a solution, it just took away from plug-in hybrids and electric-only vehicles by using electricity in a different way. Converting electricity to make hydrogen then back to electricity was never an efficient choice. Keeping it electricity makes more sense. Some people are upset by this... but not with the reality that the original fuel-cell promises for 2010 are way off-schedule. Sacrificing so much now for the hope of a technology that could benefit greatly from hybrids anyway was greenwashing, and many see that now. Fuel-Cell vehicles need motors, batteries, and electric devices just like hybrids... which is why the administration and consumers are focusing on hybrids now. It may seem like fallout, but there is really a mutual benefit. There's no reason to wait for fuel-cells. Investing in hybrids will help advance both. Of course, I still have issues with fuel-cell exhaust in the Winter. That's a lot of water coming out of the tailpipe... which will lead to lots of ice on the road.

5-10-2009 **New Two-Mode Configuration.** Thankfully, those stubborn attitudes of former GM management are being overcome by the need to survive. Speculation coming from the recent SAE conference was that Two-Mode is being adapted for "smaller" vehicles. No, there still won't be anything to compete with a car the size of a Yaris, which HSD can accommodate. But GM will be able to use a 4-cylinder engine in a vehicle the size of Camry & Fusion. That blatant product absence may finally be addressed. Having no plans to compete was suicide. They finally acknowledged that. The size constraint of needing to squeeze an entire hybrid assembly into a traditional transmission housing does pose significant challenges that naysayers insist upon details for. I share that concern. The point was to be able to deliver hybrids rapidly, simply by using swapping the transmission. That never seemed practical. There still needs to be a place for the electronic controllers under the hood, like an inverter & booster. And the complexity of the design itself still makes justifying the price difficult. Many are curious about this recent change of heart. The once neglected hybrid "family sedan" market is actually getting some attention by GM now. Isn't it amazing what the threat of bankruptcy can bring?

5-10-2009 **2010 Commercial.** Though I have only seen it online, it's an official sighting. 2010 Prius advertising has begun. The television commercial has a "harmony" title. The new Prius drives along scenic roadways made of people dressed up as things like flowers & butterflies. It like a 21st Century throwback to the colorful presentations of a decade long ago. I liked it. The commercial is quite a switch from the ridiculous stuff we had to tolerate in the past. Remember? How many times have you seen a car sliding sideways or a truck pulling an absurdly large load or a SUV climbing over a rocky surface? None of those commercials of the past made any sense. They were totally impractical scenarios. Yet, we got inundated with them. For consumers desiring change from all that, this will definitely draw their attention.

5-11-2009 **Perception of Purpose.** It's hard to believe anyone would actually frame Volt's purpose in this way: "*This isn't about sales. This isn't about saving the most gasoline. This is all about public perception.*" But believe it or not, he was dead serious. The so-called "halo" effect misleading over the years must have convinced him that's what production was all about. I responded with: Thanks! I've been hoping for a quote so inane it couldn't be spun later. It does a great job of summarizing why the GM of 2008 was doomed to fail. And if the GM of the future holds the same belief, they too will fail. Without actual sales, how could an automaker survive? True, perception will shift with Volt, but that will be in favor of abandoning traditional vehicles... not other hybrids... especially those capable of a plug-in upgrade.

5-11-2009 **Changing of Purpose.** I read an article today which claimed Toyota had intended for Prius to become a high-end hybrid, offering only premium options, but the emergence of Insight made them abruptly change their mind. The fact that the base model 2010 matches that of the base 2009 was totally overlooked. It just painted a picture which lead you to believe Honda's success messed up Toyota's plans. Was the writer sensationalizing the rollout to draw attention or was he clueless to the actual situation? Getting your story published often doesn't require verification of facts and something like purpose looks different afterward anyway. I see errors and encounter spin all the time. It's easy with so much happening in the automotive industry now.

5-13-2009 **First 2010 Arriving!** Some photos got shared online today. They were of the first new Prius arrivals. The 2010 looked great. We had no idea where they actually were though. We weren't told who they were intended for either. But they were indeed some genuine production models in the United States. Yeah! It's about time. I'm only 2 weeks away from getting really anxious... when at any moment, the phone could ring informing me of delivery. Mine is finally getting close. How often do you think I'll be driving by the dealer to check for it? With my 2004, I noticed it on in the lot right away. Living so close to a dealer sure comes in handy in situations like this. I can't wait! This is getting very exciting!!

5-13-2009 **FULL Definition.** Now it is getting fun! When one of the really unscrupulous troublemakers attempts to mislead by changing the very definition you helped to establish, how would you feel? He explained to me what a FULL hybrid was. I guess he didn't realize I was there at the very beginning of US rollout, actively answering questions for those wanting to learn and fighting off those trying to undermine. The difference from an ASSIST hybrid should be obvious. The electric motor only assists the combustion engine. That's all, because it is directly integrated. Being forced to rotate directly with the engine limits abilities. Most notably, an ASSIST hybrid cannot drive "electric only". The engine cannot remain motionless while you drive, at any speed. He ignored that engine reference, implying the same level of "electric only" was delivered, just like a FULL hybrid... which just plain is not true with so much smaller of a motor, without active cooling, or an ample supply of electricity. Remember, the FULL hybrid has a second electric motor which runs frequently, to top off the battery-pack and provide electricity on-the-fly. He pretended that part of the definition didn't exist. In fact, he avoided detail entirely. It was just a vague reference trying to conceal differences. They are not the same... 6.5 years ago when the definition first came to be, or now.

5-13-2009 **Perceived Difference.** A discussion about the difference between MPG and a Unit/Distance measure recently popped up on the big Prius forum. When you calculate values, there is nothing to be concerned about. Both ultimately provide the same measure. But the approaches are complete opposites. One focuses on how much fuel you "*save*" and the other on how much you "*use*". Many Prius supporters already know this. I chimed in when someone asked what the big deal was when the math results in matching outcome: However, there is a perceived difference... which can be taken advantage of... and greenwashers do. Remember, there are lots of people that don't bother to actually do the math. They just see bigger & smaller numbers and make assumptions.

5-13-2009 **Assumptions.** As the previous entry eluded to, assumptions are a problem we have to deal with routinely. Taking the time to write down fill up data at the gas station and crunch numbers later simply doesn't happen. Few ever do that. It's the very reason why MPG data has been so readily available in Prius. Since MPG is the format most used and there's a big difference between real-world and estimate values, it only made sense to make the information easy to access. Too bad all vehicles don't offer that. Greenwashers exploit that shortcoming. Hybrid owners go out of their way to state how misleading estimates can be... since they are armed with data to prove it. Don't assume. Check for yourself.

5-14-2009 **789 Closings.** The bankruptcy of Chrysler is proceeding. 789 dealers are getting there notices now. That's about a 25 percent closure for the United States. Being trapped with too many sales locations and no way to break the contract was a terrible situation for them. Of course, GM has even more. Bankruptcy allows them to accelerate the breach process. Though it will still take time, heavy penalties will still have to be paid, and they'll still have an inventory problem, at least it better positions the automaker for being competitive later. So many jobs being lost is bad for an already struggling economy. But getting it over with now allows for new opportunities to emerge sooner. After all, devastating events like this are often what triggers the entrepreneur spirit. Embracing change helps.

5-14-2009 **32 MPG Highway.** It's hard to believe a few still try to push the highway efficiency estimate. That's only an estimate and the city value is significantly lower. Optimizing for just the one is a sad reality we must face. But to put up with the propaganda that comes with it is intolerable. It continues though. This is the conclusion draw today from a troublemaker on the big Prius forum: "...*so Chevy will lead yet another segment when it comes to gas mileage*." He insisted GM was superior by focusing solely on traditional vehicles offered. Acknowledging the huge lead Toyota & Ford offer with their FULL hybrids is something he resists intensely. Well, too bad. I responded with this: Bragging rights don't equate to anything. Sales are what keeps the business afloat. Feel free to indulge when that merit is earned.

5-15-2009 **1,100 Closings.** The pain continues. Today, it was the announcement of 18 percent of GM dealers to be closed. That's a lot. But the end of year goal is 3,605 locations. That number represents 42 percent of the current total. It seems so overwhelming. With such a drop in production & sales though, what else can you do? GM spread itself far too thin. For many years, thereâ€™s been fighting within. Rather than competing with the other automakers, they were competing with themselvesâ€¦ wasting lots of resources. All those dealers made it impossible to remedy the situation. This is a golden opportunity to finally correct that. It sets up the automaker for introducing significant change. You can't imagine surviving dealers complaining about the new product-line when considering how many of competing dealers vanished from existence. This reduction is necessary and long overdue. Too bad so many jobs are being lost as a result.

5-16-2009 **Dreams & Death.** Those that set their expectations too high are feeling reality crushing down on them. In other words, those "*40-mile*" range only "*nicely under $30,000*" means nothing purists are beyond the state of panic now. The failure to restructure enough and virtually inevitable bankruptcy combined with such a massive market contraction and a change in consumer priorities is bringing about a requirement of compromise they are unwilling to address. The new GM likely won't deliver their dream anywhere near the date originally hoped. Volt can't achieve volume on a scale large enough to justify it. Achieving profit is too many years away still. Negative cash flow for so long is unacceptable. Death is coming. A new birth will produce something appealing to a much wider consumer base, capable of competing in high volume sooner will replace it. Purists won't be happy. But most everyone else will be.

5-16-2009 **Craving Photos.** Just like the prior two new model rollouts, people are craving photos. As soon as this Monday (2 days from now), we could get our very first purchase reports. Actual 2010 Prius owners will begin emerging! That's very exciting, but at the same time frustrating... since they are on the coast and those of us deep inland require additional waiting. Fortunately, everyone is well aware of how consoling it is to see photos online. I made that discovery way back in 2000. There was lots of encouragement to share, so others could live vicariously through you. For me, I'm happy to contribute. Lots of photo opportunities await.

5-17-2009 **Promises & Choices.** The big discussion of the day is emerging to be comments about what the new CEO of GM recently made. The promise was to deliver vehicles that "*will blow you away*". That immediately raises concern for me. Both the Volt concept and the Two-Mode were promoted that way. The body of Volt turned out to be an aerodynamic disaster. The design of Two-Mode ended up less efficient and more expense. So, I asked how this would be any different, pointing out how price was never stated as a priority. Why won't a choice of battery-pack size for Volt be offered? After all, some people don't have a 40-mile commute. Paying for unneeded capacity makes no sense. Only a single configuration limits market potential significantly. One size does not fit all. Lack of diversity is what contributed to the mess GM is in. How can allowing that mindset to continue be a good idea? Consumers want choices, not promises to impress without regard to price.

5-17-2009 **Snobbery.** Certain reporters just rub you the wrong way. One in particular, who clearly doesn't like Prius, did that today. He mislead about the new Insight, giving it much praise by comparing to the older model Prius. Knowing how close delivery of the new model is, it was to be expected that one final insult would be attempted. But to chose the label of "*snob*" for Prius owners was a bit of a stretch. Who actually acts that way? His claim of Prius owners looking down on Honda's design with "*this is a real hybrid*" comparisons simply isn't true. We have always called it an ASSIST type... which shouldn't be a big deal, since that is what the "A" stands for in Honda's own name for their technology.

5-18-2009 ***Deliveries Have Begun !!!*** Without surprise, those on the coast are seeing the 2010 Prius first. Not having to be loaded onto a train then a truck, like mine, makes for faster delivery. That's ok. All most of us care about is progress being made. Hearing reports allow us witness the new ownership experience anyway. Unfortunately, as with the past, many don't deliver much for photos and don't stick with the forum posting for long. Sadly, many of those with the now older model will drop off due to the discussions changing so much. That's what happens. We've seen it before. History is repeating itself. The handoff to the next generation is taking place. The bar has been raised. I can't wait to start reporting about my own observations. Soon. I know. Patience.

5-18-2009 **Accelerated Progress.** Change is upon us. It's finally happening. This new wave of hybrids made the argument against higher MPG standards a difficult one. Tomorrow, that condition will be even more so. It appears as though the anticipated announcement from the Obama administration will be to accelerate the efficiency mandate by 4 years. Instead of 2020, the requirements will need to be met by 2016. Who's going to argue with that? Both Toyota & Ford are seeing encouraging numbers immediately upon new hybrid rollout. Both Chrysler & GM are deeply in debt with the government. None of the other automakers are big enough to mount a resistance. In fact, just going with the flow at this point is the best strategy. It's a fantastic way to introduce change without getting blamed for doing it. We needed to part from the guzzler market... which really only existed in the United States anyway. The rest of the world already embraces the idea of using less fuel... as well as reducing carbon emissions. These are exciting times!

5-18-2009 **80,000 Orders.** That's the estimate in Japan upon the start of 2010 Prius sales. What the number is here is anyone's guess. Heck, we don't even have an effective way of contacting all the owners. The sale claimed to be first in North America has already been contested. The typical consumer just snaps up their Prius and doesn't say much, if anything. Promises to share lots of good photos are hit & miss too. But at least it's something. After all, the posts on the big Prius forum are dominated by the 2010 now. It won't be long before those interested in the Iconic model will be stuck with reading old threads. Interest in the new model is intense.

5-18-2009 **Snowy Remembrance.** On the verge of getting a 2010 Prius, I'm still trying to pick out the best of my unpublished 2004 Prius photos to share... The first weekend of April this year certainly gave me an exciting opportunity to add to the collection. One the drive home Saturday evening, it was snowing really hard. Everything was coated with a fresh heavy layer of the white stuff, including the Prius itself. The way the light hit the large flakes meant I was about to get wet & cold. Sure enough, I drove by a fantastic location to break out the digital camera. Trying to figure out where to place the car to avoid unnecessary tire tracks or footprints, then jump out while attempting to protect the lens from getting wet in the windy snow, sure made things interesting. But it was totally worth it. In fact, I ended up driving to two more locations to take advantage of those rare conditions. See... photo album 131 photo album 132

5-19-2009 **Expected Sales.** The efficiency mandate is upsetting to some. Others simply see it as something easily offset by "100 MPG" vehicles like Volt. But do either actually crunch the numbers? Actual sales make a huge difference. If an offset strategy is taken rather than actually improving 30 MPG vehicles, how many should we expect to be sold? The mandate indicates a 35 MPG average is required. 100 vehicles driving that for 100,000 miles each would result in 285,700 gallons being consumed. To meet that equivalent, it would take 21 vehicles like Volt to offset the 79, giving a total of 284,307 gallons. Using a 50 MPG hybrid instead, it would take 36 to offset the 64, giving a total of 285,312 gallons. So... For every 100 vehicles, is it realistic to expect 21 of them to be a plug-in vehicle like Volt? With a price somewhere around $35,000 by 2016, that seems like quite a stretch. For every 100 vehicles, expecting 36 of them to be a 50 MPG hybrid selling for $20,000 by 2016 is though. How many can be sold is the biggest factor. There won't have much of an offset effect if the quantity is limited. Of course... that's not taking into account vehicles that get MPG lower than 30. If you do, even more of the higher efficiency vehicles are required. The importance of them being affordable should be obvious. Lots will not be purchased if they are priced too high.

5-19-2009 **Cheaper Design.** I discovered a cost-saving measure Honda took for the new Insight. They eliminated one of the two internal clutches in the hybrid system. Unfortunately, that reduces the efficiency of the regenerative braking. I honestly don't know how the motor will behave differently. But I do wonder where the heck the electricity will come from. Will forced recharging happen more often? Does re-capture from slowing provide enough to compensate? ASSIST hybrids don't use anywhere near as much as FULL hybrids anyway. But having less available raises the question of overall efficiency. Actual implementation doesn't always look as good as the on-paper calculations. How effective was the change? Was the cheaper design worth the tradeoff?

5-19-2009 **$2.39 Per Gallon.** The price of oil climbed to $60 per barrel. That was the first time since last November. Gas prices quickly shot up as a result. The travel season we call "Summer" has officially begun. The holiday coming this weekend will make the situation quite clear. Paying more to feed your vehicle is inevitable. Why in the world fight the push for high-efficiency when it's already expensive to keep that guzzler going? Offering vehicles with much better MPG should be a no-brainer. Yet, some still resist the change. Don't they care about the consequences of emissions or consumption not improving? Can't they see the opportunity this makes for the struggling automakers to introduce more competitive vehicles?

5-19-2009 **No Accountability.** It's hard to believe how extreme the Prius misleading from some Volt enthusiasts has become. The recent climb in gas & oil prices combined with the availability of the 2010 must be making them crazy. The first Volt sales, which are only to a limited area, are still a year and half away. Having nothing to work with in the meantime is causing desperate efforts to make the competition look less appealing. My favorite examples were the claim that the plug-in Prius only delivers 55 MPG and the claim that the battery-pack upgrade will cost $10,000 for just a 5-mile range. Who do they think they are fooling? Greenwashing that easy to prove wrong doesn't make sense. Aren't they aware how just a few searches online reveal a totally different story? Don't they have any concern about being held accountable for spreading false information? Oh well. Soon I'll have a 2010 Prius, so I can contribute to the real-world data for those wanting to research benefits of different hybrid technologies for themselves.

5-19-2009 **Plug-In Market Limitations.** Certain Volt enthusiasts love to distort & obscure whenever Toyota makes a comment about the plug-in market. Again, I had to point out how PRICE was a major factor. The market will be limited if the battery-pack isn't affordable. Why do they insist on dismissing that? Their claims of superiority totally disregard overall production. What good is a small number of extremely efficient vehicles when the rest of the fleet isn't? Focus on selling FULL hybrids by the millions should be seen as a sensible approach. Instead, that thought is treated as an attempt to undermine EREV technology. Geez!

5-20-2009 **Mumbled Comment.** The instructor at a class I took today lost credibility quick when she mumbled a negative comment today when someone mentioned I owned a Prius. It was hard to believe she would express such an attitude... especially in that setting. What surprised me was how poorly informed her comment sounded. When, if ever, did she actually verify that information? It was just like those reviews we'd read where you'd question if the person ever drove a Prius. How could errors so blatant be printed? But seeing that happen many times makes it easy to understand how some consumers don't really have a clue. Thank goodness Prius are a common sight on the road now. Eventually, those like her will figure out they made a mistake... misunderstood... assumed... drew an incorrect conclusion. In the meantime, I still have to tolerate stuff like that.

5-20-2009 **At The Dealer.** There was a 2010 Prius. It was not the model I ordered, nor the color. But it was the real thing, at the dealer. That's a very good sign. Another dealer in the cities here had a delivery too. The time for mine is quickly approaching. It could be tomorrow. It could be the day after. If neither, it won't be until sometime next week after the holiday... or even longer. I can't stand the suspense. So close. This opportunity to upgrade is very exciting. The wait is totally worth it... though quite a test of character. Fortunately, the dealer is well aware of my anticipation. That should mean a call shortly after it comes of the truck. In fact, they even suggested I might have the chance to remove the transport material myself. We'll see... soon, I hope.

5-20-2009 **Dust Inside.** It was 95 F degrees outside. I wanted to simulate what the new solar panel will do for interior cooling. There was no concern of rain or theft. So I assumed (bad idea) all would be fine leaving each of the windows open about an inch. It never occurred to me how much dust could settle inside during those few hours. Everything was coated with a nasty fine film. What a nasty surprise! No wonder I grew up with always leaving them up and having to tolerate a baked car afterward. I must have learned that lesson decades ago and forgotten. Sure glad the 2010 is coming soon.

5-21-2009 **Photo Count.** I was curious how many personal Prius photos I was able share to before taking delivery of my third model. The day I finished choosing & touching up the last batch was 8-8-8 for me. That's 8 years, 8 months, and 8 days of Prius ownership. With a significant event like that so coincidently timed, you wouldn't expect another amazing numeric coincidence... would you? Well, guess what. I checked. There was indeed another. The count of photos was exactly 1701. How about that! It sure will make remembering how many easy before accepting delivery of the 2010 easy.

5-21-2009 **Roof-Rack Measurement.** I played with the roof-rack on my 2004 today. It appears as though the 2010, despite all the glass on the roof, won't be an problem at all. I was somewhat concerned about the rubber feet. But it turns out the lip doesn't reach into the gutter deep enough. And my extra long crossbars make placement (over an exercise mat, just in case) over to the other side of the car easier than expected. The weight will sit on the metal edging over the door and attaching it won't be that big of a deal. Of course, I'm still not sure if the length of the clips will be dead on. But it looks darn close. I should be able to try it on a 2010... soon. Stay tuned.

5-22-2009 ***Delivery Status.*** I finally got the call about delivery status. Of course, at that point, I had already reached out to my contacts asking them how close my 2010 Prius was. Knowing there were others already on the road locally meant mine had to be mighty close. I really want to get a jump on the photos & documenting. It sure sounds like we are about to be flooded with newbies. Helping out with the overwhelming numbers of repeat & vague online questions will benefit everyone. But to do that, I need a new model of my own. They told me within a week it should happen. I can't wait! What a surreal experience. This will be the third time being a pioneer. Delivery is now just a few days away. Hooray!

5-22-2009 **Coffee Shop.** I had my annual get-together today with a friend from California. He drives his Prius here to Minnesota every year. It's a great way to kick off Summer. I always look forward to our meeting. But this particular time, it's much more exciting. Both of us have 2010 Prius on order. Mine should be delivered before he leaves too. That's means we'll meet again. I'm really looking forward to contributing to his delivery excitement. Anywho, we met at the usual place. It's a strip a few minutes from the capital where the population of hybrids heavily concentrated. The number of Prius we saw while chatting was truly amazing. They were everywhere. Lots of other hybrids drove by and stopped at the coffee shop too. Heck, we even saw 2 different original model Insights. But even so, our 2010 sighting next week will top that all.

5-23-2009 **Cash For Clunkers.** This idea, which has been implemented in other countries, is getting lots of attention here now. For those wanting to part with their old guzzler in place of a much more efficient vehicle with a cash incentive may get an opportunity to. The government is working out details to pay for those exchanges, providing a large sum of money for an old vehicle not actually worth much and very expensive to operate. Making the purchase of a much more efficient (and cleaner) vehicle easier is the objective. It is intended to help consumers while at the same time revive the automakers and stimulate the economy. We'll see. You know how it is often said that "no good dead goes unpunished".

5-23-2009 **Forgetful Consumers.** The problem is becoming increasingly obvious, even the inattentive are finally noticing. When gas prices are low, people buy guzzlers. When the rise, people panic. You'd hope they are simply forgetting just how bad things get when in costs a lot to fill the tank. But then again, you'd think they'd be smart enough to see that it will happen again. The previous administration pushed the mindset that the problem with supply could be fixed permanently, so you'd have no reason to worry afterward. That's not realistic. Worldwide consumption is growing as the supply of oil that inexpensive to extract & refine is shrinking. There's also emissions problems to be concerned about. Yet, some still don't take any of it seriously. Well, in case truly are just forgetful, let this serve as a reminder.

5-23-2009 **Rebate Propaganda.** It has spread from enthusiasts to the media. Lutz recently appeared on the Letterman Show, stating the price of Volt would be "*right around $40,000*". That's a far cry from his original price target of "*nicely under $30,000*". But to quickly prevent Volt's image from too much tarnishing, he mentioned the $7,500 tax credit available. There was no mention of how many purchases would actually qualify it or the fact that you'd still have to finance the full amount and what until you file your return the following year. It was instead presented as a rebate. Those that crunch the numbers know the impression given does not match reality. But the media simply doesn't care. They were happy to spread the propaganda. Several articles were quickly published all stating a $32,500 price with the "rebate" as the only disclaimer. Lack of detail is frustrating. People will later be disappointed or angry when they finally find out what those details are.

5-23-2009 **Late Next Year.** The near future is becoming a strange topic of discussion. We are now frequently getting "*late next year*" reports on electric-only vehicles and plug-in hybrids. They are presented as if they are coming soon enough that you can just simply wait to purchase one. The extremely limited quantity is never mentioned. The price is often brushed aside. Both are bad. Strangely, there is a good from this. These vehicles are presented without any misconceptions attached anymore. Fears of reliability or performance shortcomings are gone. The idea of the automotive industry changing dramatic is somewhat acceptable now... overlooking the propaganda, of course. Fortunately, Toyota is preparing to reach annual production of 1 million hybrids. That combined with whatever Ford & Honda decide to produce should provide those wanting change with something to actually buy.

5-23-2009 **Diesel Commercials.** The new Prius is obviously thought of as quite a threat now. In the latest diesel commercial, a Jetta TDI commercial mocks the old Prius while sighting a very misleading 58 MPG record. Negative publicity has backfired a number of times in the past. You'd think that advertisers would realize drawing attention to Prius promotes curiosity about it. People wonder why it's considered so much of a threat to the competition. Prius owners like me love it! I'm glad to provide lots of real-world data showing how realistic of a choice it is and especially happy to point out the new model. Why bother with so-called "clean" diesel when you can buy a very appealing hybrid instead?

5-24-2009 **Greater Use Of Electricity.** That comment of mine was immediately responded to, but in an extremely vague way. Giving the benefit of the doubt, I responded with the following. (Unfortunately, it turns out the person was indeed attempting to greenwash by claiming even the price of the base Prius would go up dramatically in the next 5 years.) BELTLESS operation is an example. It means not having to start the engine to operate a secondary system. The A/C system, steering control, and coolant pump are each traditionally powered by belts connected to the engine. Switching them to motor eliminates that, which increases efficiency by greater use of electricity. MOTOR size increase is another example. There's a huge difference between Insight & Prius for this. One uses a 10kW motor, the other 60kW. Much more propulsion & regenerating power is available for the larger, which is a greater use of electricity.

5-24-2009 **Insight Size.** You know how you approach a vehicle from the sidewalk, where you are a half foot higher since it's down on the street? That's the impression I got today as I neared a 2010 Insight. Being so much lower than Prius hadn't occurred to me. I just thought length & width we're a lot less. Since I was at the Honda dealer, it was only a block from Toyota. So, I went there for comparison. The 2010 Prius is noticeably taller, to the point where interior height will definitely be a concern. I wonder how much headroom there actually is. Hmm?

5-24-2009 **Checking Out The 2010.** The same guy that was over at Honda followed me to the Toyota dealer. I figured he was just curious about the new Prius. Turns out, that's his other vehicle. After 4 years and 85,000 miles, he was yearning for the upgrade opportunity. His excitement about the 2010 there (still) for us to drool over was surprising. He wasn't thrilled about the delivery wait his was about to begin. I was somewhat uncertain how to break the news to him that I'd be getting one in the next few days. Fortunately, he took it well. We circled that Prius like vultures the next few minutes, pointing out details along the way. Luckily, dealers aren't open for business on Sundays. It would have been an amusing sight for any observer watching us do that.

5-24-2009 **MPG Improvement.** Many newbies will likely find my homepage and see the lifetime averages for my first two Prius. Those values are over-simplifications of what they can expect, but those are still nonetheless long-term real-world examples from one particular owner. For my circumstances, the resulting difference from the generational upgrade was a 2.3 MPG improvement. Taking that same leap with the new Prius, the value calculates to precisely a 50 MPG average. That's an intriguing number. Too bad it will take an entire year to find out what it actually is.

5-24-2009 **New Driving Buttons.** There are sparse reports trickling in from 2010 owners now. Complaints about EV being too sensitive and ECO being too restrictive are common. But who are the people posting those opinions? It reminds me a lot of new owners going way out of their way to prevent the engine from starting. The thought of allowing it to run briefly is counter-intuitive. I suspect the same is true for the new driving buttons too. We'll find out soon enough, when this 8.5 year Prius gives them a try. My guess is that I'll be recommending "*Just Drive It*" even more so than in the past. Easy to understand examples of when they work best will probably to awhile to discover. Remember, all energy use is a tradeoff.

5-24-2009 **Speedometer Photo.** I figured it would be the last opportunity to capture the odometer reading. Within days I could be behind the wheel of a 2010 Prius, saying goodbye to the 2004 which I spent so many good times with. To think about all though experiences in the extreme cold or the careful hot days driving the kayaks to the lake. All that is about to come to an end. The 118,091 miles recorded in the photo will mark a history filled with good memories. Pushing the button on the camera made it official. I was ready to take that next step. Here's what I saw at that moment... photo album 132

5-25-2009 **All But Certain.** That's the talk now about GM filing for bankruptcy. They are really striving to make the process easier, so the new automaker which emerges will be better positioned sooner. Worker compensation and benefit/retirement obligations will get agreed upon. But the fundamental flaw of not having competitive products remains. How in the world is all that debt going to be repaid? Our market is rapidly transitioning away from large guzzlers. The rest of the world already never really had that problem. GM was the largest automaker for 77 years of its 100 year existence. Now, it will be smaller than a few of its rivals. Strange how things are working out, eh?

5-26-2009 ***GOT MY 2010 !!!*** I was at work, just finished saying "*at any moment the dealer will call me*", when that's exactly what happened moments later. What followed was the usual craziness... rushing around... gathering important items... final prep of the 2004 for trade... racing over there... signing lots of papers... then, driving home in a new Prius. Sweet! The moment was surreal. It was late, but I was far from wanting to sleep. My sister left an excuse for travel at my mom's. She forgot her computer power-supply and I was more than happy to run that errand. So, I did. It was only 61 F degrees out. That made getting rid of the silly 17 MPG the 5 miles of delivery transport had caused a test of patience to watch disappear. But by the time I made it back home, it was indeed gone. The average climbed to 55.4 MPG after a total of 72 miles. Eventually, warm weather and vehicle break-in will bring even better MPG. Oh no! More waiting!!

5-26-2009 **First Photo.** I had to take something unique, something that would stand out as uniquely mine. After all, this third pioneer purchase most definitely qualifies as "*boldly going*". By the time I got my license plates mounted on the 2010, it was quite dark out. So, I figured what the heck. Setting the camera to flash, I pushed the button with absolutely no idea how much of that new Prius would actually be illuminated. To my astonishment, the back end of the hybrid with the "1701-A" was captured in a unique way. Success! What a great way to remember the moment. Here's what I saw... photo album 132

5-27-2009 **From The Other Side.** I saw that television commercial for the 2010 Prius this morning. From the perspective of an owner, I didn't realize how much my impression would change. Rather than being that new model I had been dreaming about for months, it was now the hybrid parked in my garage. Those awe inspiring features were just a few feet away waiting for me to use them. That's the side many yearn for, but few actually get so soon. Yet, I did. Hooray! I'll do my best to take & share photos along with documenting my experiences in writing. It's the least I can do... and something I wanted really bad. I was so sick & tired of all the nonsense the old guzzler industry is struggling with still. Let go of that self-defeating obsession with size & power already! This is the 21st Century; vehicles that are clean & efficient should be the norm now. Instead, we are still having to deal with greenwashing. But now I have a source of real-world data stronger than ever. MPG even higher than with my previous Prius should make an impression on those fighting change. Resistance is futile. Times are changing. Enjoy the commercial.

5-27-2009 **MID Photos.** My first drive and my first commute are documented with digital photos. Memories like that are too precious to not share. After all, those many anxious people waiting for delivery of their own 2010 need something to keep them preoccupied in the meantime. It's so exciting to see MPG numbers that high while at the same time learning what the new data has to teach. You'll like the new MID (Multi-Information Display). The location is great. The layout is refined. The results are addicting. It sure contributes a lot to the hybrid experience. Take a look... photo album 133

5-27-2009 **Cold & Gloomy.** What a terrible first day with the 2010. The temperature outside was only 54 F degrees and the sky was heavy overcast. I still had fun though. During the day, I took a break from work and met that friend waiting for his own 2010 again. We explored my new Prius. It was another one of those memories you know you'll never forget. That sure was exciting, despite the disappointing weather. It even rained a little while we were driving around. So much for a demonstration of the solar-panel. Oh well. At least the efficiency didn't fall too much. After a total of 149 miles, the consumption average only dropped to 54.5 MPG.

5-28-2009 **Warm & Sunny.** Believe it or not, it was much warmer & brighter. The temperature was 79 F degrees and there wasn't a cloud in the sky. What a change for the better! The commute drive home was wonderful. I watched the consumption average climb to 55.9 MPG after a total of 194 miles. Also, the idea occurred to me shortly after leaving work to use the second trip meter (a feature which wasn't available on my 2004) to measure just the commute itself. Unfortunately, I was already a few miles into it. Better late than never, eh? 16.6 miles were tracked. The result of that was an amazing 68.1 MPG average. Wow!

5-28-2009 **Change Immunity.** The attitude & belief on the blogging site for Volt enthusiasts continues to be one of immunity. This was the quote published by the webmaster today: "*The Chevy Volt program will not be affected in any way by this process.*" How can they honestly believe nothing will change? The price of the battery-pack can easily be made affordable by reducing capacity. Why don't they think that will happen as an approach to increase sales and decrease risk. You know, offer a smaller one for a base model and a larger as an option. They should see Volt as quite vulnerable. In fact, it should look pretty darn realistic at this point that adjustments will be made to the current implementation plan. Volt won't die. But the justification for such a high price simply isn't there. Expect reconfiguring to make it profitable much sooner? Of course. Bankruptcy requires change. That doesn't necessarily mean an end, but it does insist on a sound way of sustaining business.

5-28-2009 **Candid Comments.** My neighbor saw the new Prius and struck up a conversation. I eventually asked him about Volt. He blurted out a laugh. He said the 40-mile range was a huge shortcoming. Why bother when EV choices with greater range would also be available? The idea of an engine running afterward simply didn't appeal to him. Having to wait overnight for a recharge didn't either. Volt supporters definitely face a huge mindset challenge. Even without addressing price or competition, the vehicle itself doesn't attract the way enthusiasts claim. That makes sense. An entire generation grew up hearing mixed stories about the EV. Why rush out to get one when they've been waiting decades already? It's a dream abandoned long ago. With the future generation watching them emerge into market, that's entirely different matter. They'll actually will have something to look forward to. Where that puts an EV with a short range and an engine is a bit of a mystery though. One thing is for certain, the mainstream will be dominated by hybrids replacing traditional vehicles. How long that next step (offering a plug) takes is the real question. With vehicle life around 10 years, it's going to take awhile.

5-28-2009 **Fit-Hybrid.** Honda is reportedly accelerating their plans for Fit becoming a hybrid. Rather than the original Spring 2012, it now looks like Fall 2010. The price target has been set at $15,800. The IMA system is expecting to boost the 33 MPG estimate to 38 MPG. What the market will be like then is anyone's guess. With all the attention currently falling on FULL verses SERIES hybrid debates, how the ASSIST will be perceived is a head-scratcher. What will consumer expectations be by then? At that point, the true reception to this newest version of Prius will be fully realized. We would have been through an entire seasonal-cycle and lots of real-world data will be available. Lots of sightings on the road will be the norm too. Going from mainstream to future-standard may become the focus. Traditional technology must be replaced by something. What will the price of gas by 1.5 years from now? Honda's gamble is an intriguing one.

5-29-2009 **Expected To File.** The hype around Volt is growing. GM enthusiasts are using it as a distraction from all the disastrous financial news. The media and online are obsessed with the topic. It's big... way bigger than what happened decades ago. Rather than struggling to deal with an abrupt market change, they actually died. Bankruptcy is a failure to meet obligations. Now the focus is on taking the resources that still remain and using them effective to create a new automaker. Judicial decisions by a court will determine outcome, not the choices of assets holders. It's the worst fears of some unfolding. For others, it's change long overdue in a rather painful way. Too bad the warnings weren't taken seriously. Not diversifying and planning for the long-term has consequences. We are now witnessing them firsthand. Remember all the large Pickup & SUV promotion and the mocking of hybrids?

5-29-2009 **100,000 Orders.** The acceptance of the 2010 Prius in Japan has been explosive. Toyota has already decided to increase annual production from 400,000 to 500,000 as a result. I wonder what the reports here will be. Hmm? If the market there (which is smaller in comparison) already has 100,000 orders, I can easily imagine seeing at least that many here. That means I should take lots of photos to help with the delivery-wait impatience commonly attributed to Prius orders. Of course, that only makes the situation worse for those who started as just curious surfers. They join in too, adding to the list of those waiting. It's a nice problem to have... and well worth it. I should know. This was my third time through that cycle. Each time was more rewarding. Gotta love it!

5-29-2009 ***First Impressions.*** My average so far has risen to 57 MPG. The daily driving today ended with a tally at 61 MPG. What am I going to do? My spreadsheet graphs don't go that high? Nice problem, eh? This new Prius is truly amazing. When people ask how Toyota could have possibly improved the hybrid system, I have no idea where to begin. Most don't understand how it worked in the first place. So, realizing the significance of a revision is quite unlikely. Fortunately, creature comforts related to sound & feel are easy enough to demonstrate. The new "Eco Meter" is great. It compliments the current MPG indicator (which is now next to the speed indicator) quite well. I suspect it will inform new owners that striving for a maximum MPG is not the best approach... that it's ok to use the engine too. As for motor use, all I can say is: Wow! Driving in stealth (electric-only without using EV mode) has become surprisingly easy. Not much else to say yet. It's only been 3 days and I've been busy at work. More to come.

5-29-2009 **Reality.** They needed a good size dose of it today. What a pain. How would you respond to this: "*The idea behind the design is great and much better that the hybrids now being built.*" The hype for Volt is not supported by any data. Heck, even the consumer want of making it affordable isn't being addressed. Arrrgh! Anywho, this is how I responded... The reality behind the design is making it competitive. Disregard for price makes for a terrible business case, something unwise on the verge of bankruptcy. 45.3 miles of driving for me today in the 2010 Prius. The resulting average was 61.3 MPG. That technology is available already. It is priced for high-volume sales. Battery cost drops later will benefit hybrids like Prius too. GM is investing in Two-Mode for midsize vehicles too. Don't act as if that isn't happening. Volt technology will not be alone. Evaluation of "great" and "better" doesn't mean the same thing for everyone.

5-30-2009 **Still Hard To Believe.** Watching the intentional move away from midsize sedans was amazing. How could GM just abandon that market? They did, in favor of trucks. Those excuses that Two-Mode would "save" much more gas are now regarded as careless & irresponsible. We kept hearing the trucks would "first" get the technology, then smaller vehicles would follow. Now when the market becomes desperate for those smaller vehicles being hybrids, we find out the technology was never intended to support them. Ok. We were mislead. Many suspected that. How could so much focus on power be used in much less powerful vehicles anyway? But now we are being told a smaller system is planned. Huh? The story keeps changing. How are they going to deliver such a design shift, from an expensive system with massive towing capacity to a competitive-priced 4-cylinder system? That's drastic and still hard to believe. It sounds more like pandering, especially with all the Volt promoting at the same time. How much development money is going to be spent where? How much of the product-line will use each of the technologies? How affordable will it be? When will we get it?

5-30-2009 **BAS Fate.** The 3 new hybrids this year sure are bringing attention to the type differences. Heck, even attention for Volt is helping. With BAS on the extreme low end (minor assist ability and no smog-emission reduction), you have to wonder what will happen to it after the bankruptcy. The "*too little, too slowly*" concern is very much aimed at technologies like that. It's time for big steps. Change is at hand anyway. Oil & Gas prices are on the rise again. Doing the minimum doesn't make sense. We want more than just recovery from this economic mess. Being able to thrive again by investing in the future is very good plan. That's why I've always supported platforms which can sell in extremely high-volume while also being able to offer a plug later. Heck, that's why I'd like Volt to start with a smaller battery-pack. Prius is extremely well positioned already. Seeing the benefit of mainstream penetration through an affordable base price should be obvious. After all, that was the point of BAS. Unfortunately, the gains from BAS are too small to compete effectively. What will become of it?

5-30-2009 **Parked In.** I parked the 2010 Prius at the far end of the spaces available. Naturally, the drive-thru by it just happened to be backed way up. I had never seen that much traffic there before... ever! And I just happened to have a new car then. Figures. It took 3 times of back & forth to maneuver out of the spot with only half of the street width available. That left the rear of the Prius facing outward. Then it took about 100 feet of driving backward to finally reach a place where I could turn around. What a pain. It certainly was one heck of a good excuse to take advantage of the backup camera though. That part, I did enjoy. Having an extra source of input to confirm it was safe to proceed sure was nice.

5-30-2009 **Average Speed.** On the MID, the new multi-information display on the 2010, there's a MPH value. I'm quite curious how this new data feature comes into play. The value is quite low, so it was immediately apparent that it was keeping track of all the time the vehicle is on... including the time you are not moving. For someone like me who rides a bike long distances, overall progress is very important to know. Stops cannot just be disregarded. That time counts too. You need to what happened the entire time you were traveling. With respect to Prius MPG, I suspect we'll discover an efficiency pattern directly correlating to the speed displayed.

5-30-2009 **57.3 MPG at 372 Miles.** That speaks for itself. Of course, so does the recent jump in oil prices. Gas is now at $2.59 per gallon. The warm season climb has begun. It sure positions the 2010 Prius rollout well. Talking about great timing. I can't wait to start seeing them on the road routinely. I suspect it will be rare for awhile. But by the time the cold season arrives, the quantity would have grown enough... as well as the reputation. I can't wait to report my measurements throughout the Summer. The electric A/C remote feature combined with the solar ventilation system sure will make it exciting. I'm not sure what to expect. But Prius certainly hasn't disappointed in the past. In fact, it's been quite the opposite. What surprises are in store? MPG discoveries sure are fun.

5-30-2009 ***Power Mode.*** For countless years, Prius owners have had to endure the claims of "*fun to drive*" from the diesel owners. We always knew it was rather hypocritical to imply you could drive aggressively and still get MPG high enough to still compete with the hybrids. It's really a tradeoff. But you do still get the choice. We'll now there's no argument about that same choice being available on a hybrid too; however, there really isn't as much of a tradeoff. I live in a valley. About two-thirds of the way up, you turn off the residential street into a 50 MPH suburb thru-way. That climb is steep. You can't just passively enter the road. The engine had to contribute quite a bit more than normal for it. But not anymore! I pushed the new "Power Mode" button introduced with the 2010. Wow! This model has a larger electric-motor and can draw more electricity from the battery-pack... and it's pretty obvious that's being taken advantage of when you drop the pedal. The climb up the hill shot me past the vehicles in the other lane. I certainly wasn't expecting that! Sweet!!

5-30-2009 **Iconic Look.** I owned my 2004 Prius for 5.5 years. During that time, I took hundreds upon hundreds of photos... heavily documented my experiences... participated in online discussions & debates... created educational materials... and of course, drove over 118,000 miles with it. Needless to say, that's likely more than double what most people do with their vehicle... perhaps more. So the thought of trading it for the 2010 was pretty easy. I was ready for new experiences and most definitely got a full set from that older model. Discovery of features in the upgrade along with all the information I can provide about it is compelling draw. How could I resist, especially with the new look? After all, rigid lines in contrast to the rounded edges is quite a change. That shape of the Iconic is now just that, something I'll cherish as great memories. I'll look back at it with a smile. That's what I owned during the "nonsense" years, when arguments against hybrids were intense... when we were still naive about just how much of a risk we were taking by not embracing hybrids much sooner.

5-30-2009 **Tail Lights.** Wow! What a surprise. It hadn't occurred to me that Toyota may have change the tail light configuration. Rather than traditional bulbs for marker lights and LED for the brakes, both were clustered together using the same LED array. The look is truly impressive. The soft glow while you drive is quite a complement to the stark contrast from when braking. I adore discoveries like that. It's nice touch to bring even more worth to the already compelling vehicle. That's sure is a pleasing benefit to a technology which is primarily used for energy conservation. High brilliance from low power. Gotta love it!

5-31-2009 **Final Moments.** Looking back, it's fascinating already. I took a photo of the final odometer reading on the speedometer cluster. 118,185 was the mileage at which I handed over the fobs to the dealer. It was an awkward moment, to put it mildly. Pulling up to my old 2004 from behind the wheel of my new 2010 was surreal. I knew it was a memory in the making, that nothing would ever resemble that particular experience. The photos that I took really reinforce that feeling... especially when you realize how dark it actually was. The lights reveal that it was quite late in the evening. Needless to say, I would be far to exciting to go home an sleep. Those moments are what I had been dreaming about. See what I saw, right before an entirely new chapter in Prius ownership began... photo album 132

5-31-2009 **First 2010 Encounter.** Of all times to spot a 2010. There I was, on my way to a much desired location to shot photos of the new Prius. With a digital camera at the ready, seeing another along the way was total shock. For it to be parked in a scenic location all alone was pretty much a miracle. What are the odds? Needless to say, I stopped without hesitation... parking right next to it and snapping off a bunch of photos. Too bad there wasn't an owner anywhere near by. With the park right there and the library across the street, I never know if my actions were noticed. Perhaps someday the moment will be recognized by someone looking through the album. Take a look at what I saw on that particularly amazing first encounter... photo album 134

5-31-2009 ***Solar Panel.*** Right now, I'm hanging out at the coffee shop to catch up on log entries. The thought suddenly hit me that it was 79 F degrees, Sunny, and I'd be away from the Prius for awhile. So, I dashed out to the 2010 Prius to push the button to activate the solar cooling system for the first time. It's not all that hot out. But this opportunity certainly will demonstrate the abilities this new feature has to offer. I'm very excited. The surfaces exposed to the sun will obviously still be warm. The air temperature inside should be close to that outside. It should be like leaving the windows open, but without any of the penalties. I can't wait to experience that.

5-31-2009 **Small Car Production.** Today's news, on the eve of bankruptcy, came with mixed opinions. GM agreed to build 160,000 small cars locally, instead of over in Asia. Their practice of outsourcing the smallest vehicles and building mostly giants one here is coming to an end. Of course, there was an immediate backlash to that announcement. Those driving wasteful vehicles fear having to switch to a teeny, tiny subcompact. Why they don't ever acknowledge the existence of midsize vehicles boggles the mind. Whatever. GM will finally become diversified, focusing most heavily on the middle rather than the extremes. This first move was actually the hardest... which is why they got it over with right away... before tomorrow's disaster.

6-01-2009 **Waiting For It.** This morning's upcoming filing of bankruptcy by GM is making everyone crazy. The big GM forum had a discussion thread started to offer everyone an opportunity to chime it with their thoughts on the situation. Here's what I contributed to that: June 5, 2000 was when I put down a deposit on my first Prius. It was the only FULL hybrid available back then. There was hope that all the other automakers would offer their own years later though. The push began to get GM and Ford to deliver something... anything! Ford made & broke promises, but after taking much longer than expected they finally did. GM decided to mocked hybrids, devoting resources to the extreme opposite instead. That lack of diversity and planning ahead is coming back to haunt them. It's very strange that end of decade predictions actually did come true. We were correct. Now what?

6-01-2009 **Bankrupt!** It actually happened. GM did indeed file for bankruptcy. Of course, most everyone figured that would be the result anyway. The money from the government and the requirement for thorough restructuring plans was an effort to reduce impact of what was pretty much inevitable. That loss of consumer confidence which would supposedly be caused by filing could be prevented by taking these measures. So, that's what they did. It's amazing how we had to endure the "*more models*" argument for years only to come to an end where that was a terrible thing to have argued for. GM must down quickly purge that excess. The redundancy was killing them. Focus should have been on a limited number of choices all along... exactly what those of us in support of Prius were arguing for. Such vindication! Now will this new GM finally address needs seriously?

6-01-2009 **Online Prius Discussions.** They were virtually all about the 2010 model today. I suspect the official collapse of GM contributed to the abrupt attention loss for the Iconic model. Seeing the shift over take place so quickly was unexpected. It was inevitable, but I thought it would take longer. All it takes is a wave of new owners joining into online discussions. It's what we saw when the previous generation of Prius emerged. Overwhelming veteran owners doesn't take much. There's not a whole lot to say about such a reliability vehicle anyway. Discoveries with new features and much improved efficiency will naturally draw attention.

6-01-2009 **Solar Surprise.** I forgot the system was activated. So when I ran into the store today for a quick errand, jumping back into the Prius afterward sure gave me a surprise. The fan was running! I had totally forgotten about it. Hearing it busy at work trying to keep the car cool while I'm gone sure is a fascinating situation. You don't expect your vehicle to have a mind of it's own like that. I bet the owners with adaptive cruise-control will feel the same way. Conveniences like that certainly aren't necessary, but they are nice. After all, isn't having stuff like that why I worked so hard? And after enough satisfied consumers like me, the option could become standard. Just look at what the dashboard of Prius offers. Even the base model comes with a MID. That happening to solar anytime soon is unlikely. But you never know. The point is we get the choice to try it.

6-01-2009 ***Stealth Discovery.*** I got an opportunity to contribute a discovery of my own today. When I plugged in my ScanGaugeII (an aftermarket display) into the 2010, it revealed something I we've all been really hoping for. It seemed odd that the MPG indicator next to the speedometer stayed at 100 even when driving at the fastest Stealth speed. Sure enough. The old threshold of 42 MPH did indeed change. I was going 45 MPH, yet the RPM still displayed as 0. The engine remains stopped at a faster speed now. 46 MPH is the threshold for the new Prius. That will definitely contribute to higher suburb MPG. Sweet!

6-01-2009 **Empty Promises.** How should one react to a comment like this: "*The Chevy Volt program shall remain intact and not derailed in any way.*" Making a promise like that is irresponsible. There's no possible way to guarantee such an outcome. But then again, it's extremely vague. After all, we don't really know what "Volt" truly is anyway. The vehicle is something that will offer a plug and go 40 miles using electricity under ideal conditions. The "program" is just an effort to make the technology available for consumer rollout. Neither of the two most important questions are part of a promise. I posted this to ask for that detail... PRICE: Are we still talking a $40,000 vehicle to produce with hopes of getting price down to the low 30's within the next 5 years? VOLUME: How many should we expect to be produced within the next 5 years, will it become mainstream at over 100,000 annually?

6-02-2009 **Delivery Truck.** My commute route takes me along the same highway where deliveries to the Toyota dealer occur. So when I see a carrier approaching in the distance, I prepare to watch closely as it passes. Today was the most satisfying experience doing that ever! Seeing that it had 1 new Prius on top and 3 on the bottom was quite exhilarating! What a thrill to see so many 2010 models together all at once. New owners in my area are just days away. Hooray! As much as I love driving such a unique & special vehicle, I would prefer it become vanilla common quickly. That's the technology which the mainstream will benefit greatly from. In fact, it is essential. More Prius! Yeah!

6-02-2009 **That PWR Button.** I found a great use for it... when waiting to turn left in heavy traffic. You know, when the light is green but the flow of vehicles is really dense. You sit there patiently waiting for the opportunity to drop the pedal. At the moment that opening finally arrives, being able to launch with a huge burst of power would really be nice. And now, that's what we have. In the past, Prius was easily competitive. Now, it's positioned to impress. We still don't need a faster "0 to 60" with respect to MPH, merging into the flow of traffic was fine already. That need was already satisfied. But the "0 to 60" speed in terms of feet, where all you need to do is pierce through an opening is a valid application for faster. It has always been inherently dangerous crossing traffic with any vehicle. Some streets can be really nasty. If the use is just to move an extremely short distance in a clearing, why not? True, the ability could easily be perverted. But that's true with most technologies anyway... and of course, the desire to see the MPG remain high compels you to switch PWR off immediately after using it.

6-02-2009 **We Knew All Along.** When the new CEO of GM in an interview today was confronted about the initial $40,000 price for Volt, he responded with a "*we knew all along*" reply. Was that an admission of the previous promotion being just greenwashing? Remember how much we heard the "*nicely under $30,000*" price target? It's hard to know how to respond to such repeated deception. We said that even after 5 years of production, such a price still wouldn't be realistic. Yet, enthusiasts insisted it wouldn't be anything to be concerned about. But now with the urgency to deliver high-volume soon, they don't want to acknowledge that past. In fact, there's still heavy dependency on tax credit even though the quantity now required for a business-sustaining and competitive product will cause it to expire in the very first year of production. Cost of the battery can't possibly drop that much that quick. Some of us knew *that* all along.

6-02-2009 **May Sales.** It's hard to know how to comment anymore. GM hybrids didn't sell well. Only 1,739 total in May. But with the reality of bankruptcy looming, consumers were likely more hesitant than usual. Prius sales are up, a nice climb go 10,091 for the month. Consumers are obviously making decisions about whether to snatch up a last minute deal on an Iconic model or to endure a wait for a 2010. I wonder how those still wanting to undermine will spin that. Heck, the 2,941 sales of Camry-Hybrid were a good sign too. Even the 2,780 for Insight show where the market is going. If that's not a wake-up call for GM and supporters, just direct them to the 1,870 count for the new Fusion-Hybrid. The hybrid SUVs also sold at respectable numbers: Escape with 1,702 and Highlander with 1,351. Civic was the only other hybrid with substantial numbers at 2,077. These are tough times. Recovery of the automakers depends more than ever on changes. Hybrids will play contribute to that in a big way. Growth is the key. There's lots of potential.

6-02-2009 ***One Week Later.*** Driving my 2010 Prius has been quite an adventure. The surprise process is incredible. We hope to make discoveries, but have no idea what to really set expectations at. I've been averaging 59 MPG on this new tank. That's amazing. In fact, that alone makes for a compelling technology argument. Seeing the price of oil climb to $68 per barrel and the price of gas to $2.65 per gallon, along with the bankruptcy of the biggest source of resistance, sets the stages for unimpeded growth. Owners endorsements will flood in at an incredible rate. We are clearly on the verge of major change in the automotive industry... with heavy emphasis on producing lots of vehicles like Prius. Gotta love it! Just one week into ownership and I can already share many stories of upgrade satisfaction. The commute to work has become an amazing experience. Flirting with 60 MPG is efficiency that ends the nonsense of the past. The decision to abandon traditional vehicles for hybrids has become a no-brainer.

6-03-2009 **Deceptive Comparisons.** Writers are capitalizing on the timing opportunity. This morning there was yet another example of the Iconic Prius being compared to a new vehicle, in this case Insight. The hope is that readers don't realize the numbers quoted aren't for the new Prius. Being vague allows for assumptions to take place. You end up with the impression that the 2010 was what the MPG came from, but that's not actually the case. Take this quote: "*I get around 50 mpg in my Prius and the Insight is rated lower â€" 40 mpg on city streets and 43 on the highway.*" That intermixing of real-world and estimates really adds to the deception. I'm tired of dealing with this nonsense. That goodness I'll have real-world data to rebut with soon. I'm only 130 miles into the second tank, but the MID is showing a study 59 MPG. Want to compare that?

6-03-2009 **Eating Inside.** It didn't take long before I finally decided to eat inside the new car. There was a "free rootbeer float" promotion. It was late, after a stressful day at work. And I could really go for a hamburger. So, I swung by my to pick up my sister (who was also craving the indulgence) to catch up with here and show her the 2010 Prius. The plan was perfect... if neither of us spilled anything... which, we didn't. Interesting thing is, the new car smell was almost gone already anyway. The air-filtration system does a great job of addressing all breathing-related aspects of cleansing.

6-03-2009 **Solar Powered Ventilation.** I feared a misconception of battery charging would emerge from the existence of a solar option being offered. Fortunately, Toyota's promotion of the feature always include the word "*ventilation*". That makes it nearly impossible to understand the purpose incorrectly. That strategy seems to be paying off already too. Even before the television commercial which highlights it specifically, some complained that it lacked the ability to charge. Making intent clear is very important. Certain competitor still haven't learned that lesson. That ambiguity can lead to disappointment.

6-03-2009 **Best Online Advertisement... Ever!** What a surprise that was! I went to look up a word online. To my shock, the small entry field on the usual neutral background had been transformed to a large scenic vista along with a Prius. I had never seen an webpage feature that elaborate of an advertisement. And of all things, it was for the 2010. It was strange though. Why hadn't anyone else pointed that out? That answer came shortly afterward. I was the first to stumble across it and report the discovery. The creative approach ended up being reported by the media. What I thought was the most clever was Toyota's placement of extra promotion on the webpage that provided the definition of "*solar*". It came complete with an advertisement specifically for that new Prius feature along with Prius related words.

6-04-2009 **The Goal, frustrated.** The propaganda has become horrible. With GM desperate to redefine itself, the Volt enthusiasts are pushing the "*superior*" mindset... with no regard for actual need. Many of them only want to crush Prius, to earn the crown of "*best*" technology. The following comment is what really got me frustrated: "*The goal is to sell millions of cars per year to Joe public.*" A supporter was truly trying to get them to be constructive, but most simply ignored the statement. Price is the biggest problem... which they just carelessly dismiss with a "rebate" reference. High-Volume production soon is not a concern. They figure people will just tolerate guzzlers for at least 6 more years. It's amazing how they see the situation through blinders, never attempting to look at the market as a whole. In the United States alone, the expectation is 8 to 9 million new vehicles annually. A plug-in technology only available on a compact car is clearly not enough. How many do they think will be produced? How long do they think we can wait? How much do they think we can afford?

6-04-2009 **The Goal, soapbox.** Here's how I responded to the "*sell millions*" comment: There are many here who strongly disagree with that... though, they refuse to admit it. Instead, focus is on the ideal engineering, not business reality. Remember, that's the very same approach taken with Two-Mode. Rather than designing a technology for the masses, it was configured for a niche. Mainstreams concern, such as cost, were disregarded. Volt is falling into a similar category. Look at it this way... based on driving 15,000 miles per year, Prius (55 MPG) uses 273 gallons and Volt will use around 50 gallons. For Prius to match the consumption reduction of Volt, it would need to sell at a ratio of 5.5 to 1. Prius annual production is now being raised to 500,000. For Volt, that sets an expectation of 90,900 just to match. And that's not even taking into account any of the other FULL hybrids also being produced by Toyota. For Volt to actually be a "leap frog" technology, well over 100,000 would need to hit the street the very first year of production. 4 years later, plug-in options for FULL hybrids will be common and will decrease the ratio needed... requiring even more Volt to be available. Production increases for FULL hybrids will require still more. GM expects 150,000 Volt annually by 2015. That's well short of leaping and certainly doesn't reach many consumers. Too little, too slowly is what the task-force reported. Those numbers confirm it.

6-04-2009 **The Goal, determined.** I won't let their lack of constructiveness get the best of me. In fact, it's pretty easy to rebuttal to a power message. All I have to do is drive the Prius and document my experiences. Real-World data & photos trumps a pre-production vehicle by a large magnitude. People can see for themselves how realistic the technology in Prius is. Spreading it to a variety of vehicles types & sizes available in large quantity is a very easy thing to accept. What else is their to prove? Seeing so many on the road is a heck of an endorsement. The goal to provide millions a practical choice is what we are striving for, not an ideal. That will come later. Vehicles need replacement years later, just like computers. The next will be even better... but you'll still enjoy every minute of the one you buy now. I'm determined to help make that happen.

6-05-2009 ***10-Day Impression.*** It's been an amazing experience so far. The first full week of my 2010 Prius ownership started with GM filing for bankruptcy and ended on the 9th anniversary of having placed the order for my first Prius. Commuting to & from work is a true delight. Rather than incredible MPG, as with my Iconic model, this new one is truly unbelievable. I am quite curious how the media will react once reports from owners begin to stir attention. Heck, consistently seeing 59.3 MPG even shocks me. Many understand how the larger engine allows for lower RPM, which contributes to improved efficiency. But the fact that RPM is even lower during warp-stealth (when the engine is spinning, but without fuel) leaves you wondering how they did that and what other surprises are in store. Having the engine shut off sooner sure is nice. I was hoping that refinement was realistic. What will next week bring. The unusually cold weather so far is likely holding back this Prius from really shining. I can't wait for Summer to finally arrive! After all, that solar panel is yearning for an opportunity to impress.

6-06-2009 **Offering Choice.** Telling us what we want & need has been a fundamental problem. Which unfortunately, still has not been overcome. Yet again, I had to point that out for the Volt bloggers: Why won't we being offered a CHOICE of battery size? Old GM failed in part by not offering choices. New GM shouldn't follow that same mentality… one size fits all… lack of diversity. Provide the larger battery size as an option, just like countless other upgrade features have been marketed for decades. That way, consumers can choose what to buy. A less expensive Volt would still achieve significant consumption reduction while also being able to reach a much larger number of consumers. Not getting the CHOICE also makes Volt less competitive… which is not wise in this much more competitive market. Remember, the business model now is low-margin vehicles sold in high-volume.

6-06-2009 **EV Limits.** I finally encountered the strange "9 MPH" limitation newbies had pointed out about the 2010 Prius. Knowing that the emission system must first be completely warmed up, I hadn't tried to prematurely engage it. They did. I'm also aware of when there's a benefit to using EV mode, rather than just letting Stealth engage automatically. In short, it's when you'll be driving 25 MPH or slower for an extended amount of time without any rapid acceleration. In other words, waiting in line at the drive-thru or on-ramp or when waiting to pay for parking. I thought those uses were obvious. Apparently, they're not.

6-06-2009 **Leaner, Greener, Faster, Smarter.** All the television commercials promoting the "*Reinvention of GM*" is making me somewhat crazy. They are promoting an idea without any substance. What are the plans beyond reducing the number of brands & models available? When we look back are 2009 how will things be different? How would the vehicles themselves be improved to make the GM competitive? In other words, what will be changing? Without the commercials, it just looks like less of the same.

6-06-2009 ***Engine Shudder.*** It's totally gone in this new model. With the older Prius, an attentive owner aware of the criteria required could notice when the engine stopped or started. But with the 2010, nothing at all. That's why connecting that aftermarket gauge was such a big deal. Even when you knew what to expect, it didn't seem to happen. Heat management is likely a big contributor to this. No more dancing with a cold engine on the verge of stopping shortly before warm-up is complete while the vehicle isn't in motion. Shut off comes much sooner and last much longer. It's quite impressive. But now with the shudder gone, informing newbies of what actually takes place under the hood is even more difficult. There's no feel or sound to clue them in anymore.

6-06-2009 **Dealership Games.** Reading an article written by a reporter who interviewed someone at a dealership as their research is always amusing. In this case, it was Ford. The hybrid version of Fusion was spotlighted as a symbol of change, even though only one had been sold during the previous month. It was also praised as the fuel-efficiency leader, since it is supposedly much bigger than the "*small*" Prius. And believe it or not, this is how they promote it: "*The hybrid technology is twofold: It's better fuel economy, and it's lower greenhouse gas emissions.*" That's stating the same benefit twice, since better MPG relates directly to carbon-dioxide reduction. The push for cleaner turned to E85, pushing the carbon theme heavily, but still never mentioning the other type of emission: smog. It was yet another article that completely disregarded emission rating... which is too bad, since Ford scores well in that category. Unfortunately, the dealer wasn't smart enough to point that out. Like many, they focus entirely on "*greenhouse*" appeal.

6-06-2009 **2010 Meeting.** A friend from Chicago dropped me a note, saying he'd be in town with his 2010 Prius. I raced to make that meeting happen. It wasn't an opportunity I'd want to miss. Unfortunately, the temperature was only 48 F degrees. What a pain. True, it was the result of the much needed rain we've been hoping for. But hiding inside the 2 new hybrids pointing out features causes condensation on the windows. To make matters even more silly, my wheels were turned. So, he turned his to counter. It looked absurd... those Prius alone late at night in a wet parking lot next to each other all steamed up. In a way, it was somewhat fortunate I had forgotten my camera in the hast to get there. That certainly was fun. I have the solar package. He has the one with adaptive cruise-control and lane-keep assist. So, it was our chance to do up close comparisons. We had a blast.

6-06-2009 ***Rain Treated Windows.*** That rain yesterday was my first opportunity to witness how the new special glass reacts to water. Both front-side windows repelled the rain wonderfully. It was odd seeing them so clear compared to the windows behind them. That sure was nice. I can't wait to find out how they respond in the Winter. (Hopefully, it will seem like forever. I don't want to rush Summer.) The aftermarket chemical treatment never worked well for me on our salt-coated roads here. The factory option looks promising. I wonder how many other people will discover the feature after they take ownership. That wasn't one that jump out at me, only a line in the long list of options the package offered. It's a pleasing addition.

6-07-2009 **Watching MPG.** The recent cold weather "killed" the efficiency average in my 2010 Prius. When filling the tank today, I discovered the result was "only" a calculated value of 56 MPG. Isn't that disappointing? I don't even know how to be smug with this new model. The attitude comes off as sarcastic instead. I think that has to do with the technology being so well established now. Back when that label was first applied, things were much different. The market hadn't seen extremely high gas prices yet and climate-change was only a treehugger concern. Now seeing Prius is no big deal. They're all over now. Watching MPG has become an aspect of appeal. The days of careless guzzling are over. The pain in the wallet is enough to draw attention and end the shun. The problem oil dependency causes is finally a concern... though not taken as seriously as it should, nor are smog-related emission... but it's a step in the right direction.

6-07-2009 **Changing Image, article.** There was an extensive article published today which addressed the image aspect of the vehicles an automaker offers. The focus was exclusively on GM's plan to offer Volt & Camaro, how that would change their image in the future. Needless to say, the symbolism of Prius and mistakes of the past were written about in depth. Price was brought up, but high-volume production was not. That topic is essentially just pushed aside waiting for "*technological advances and economies of scale cut the cost of batteries*". It's the chicken or egg syndrome. They expect cost to drop as the result of lots of people buying, but that won't happen until cost drops. The solution to this was to request more money from the government to subsidize the first few years of production. In other words, GM now wants money they won't have to pay back. My question is why do they continue to insist that only a "*40-mile*" range is the only configuration that should be offered.

6-07-2009 **Changing Image, for Prius.** For the supporters on the big Prius forum, I posted this response to that article: If both vehicles are just for show and very few are actually sold, it truly is just about image. If Camaro becomes a dominant vehicle, they've basically learned nothing and simply shifted from one type of guzzler to another. If Volt (the $40,000 configuration) becomes a dominant vehicle, I will be beside myself. Even some enthusiasts are now begging for a choice of one that's affordable. Prius nailed the price/efficiency balance. For GM to also achieve a high-volume product like that, they need to rethink Volt configuration. Even the task-force is saying too little, too slowly. The negative cash flow it will require for a number of years still simply doesn't make sense. The goal should be to reach millions with the new technology.

6-07-2009 **Changing Image, for Volt.** For the enthusiasts on the blogging website for Volt, I posted this response to that article: The attention to "image" is a huge concern. Selling lots of mid-size, mid-price, mid-appeal vehicles is what the competitors do a great job at... and consequently sustain their business well with. The "awe" inspired by vehicles like Volt & Camaro stirs much excitement but high-volume sales simply are not realistic. A plug-in vehicle priced well above average and a guzzler in the time resource & environmental concerns don't make sense. In fact, that's the very mindset which the old GM struggled with. Will the new GM repeat those very same mistakes? If the goal of Volt is to truly make a difference, that means it must be able to reach a large consumer base. So far, no high-volume commitment has been made. The abandonment of the original intent of being priced "*nicely under $30,000*" confirms a lack-of-reach priority. In fact, making the technology in Volt ubiquitous seems to be something GM is attempting to avoid. Rather than attempting to replace a large chunk of their fleet with it, they do all they can to draw attention to its uniqueness. How will GM compete? Do they really think image will help sell what they currently offer?

6-07-2009 **Changing Image, discussions.** If you think progress isn't being made, think again. That fact that price is getting so much attention now is a big improvement. Rather than promoting the ideal, as in the past, there is now a practical aspect emerging. GM filing for bankruptcy is something the most stubborn of arguers never considered a reality. But now that it actually happened, asking what makes the current configuration competitive is no longer considered an effort to undermine. It's more of a matter of survival. After all, just 6 months from now Toyota will be offering a small number of Prius using Li-Ion batteries... which is another thing some never considered a reality. Change is happening... real change, not just image.

6-08-2009 **More Deliveries.** I saw 4 more 2010 Prius on a delivery truck today, heading toward my dealer. It sure is nice commuting on the same route the trucks drive from the railroad yard. Getting to have sightings like that is inspiring. New owners often don't post online. They just disappear into the unknown. But knowing there's a steady flow of new Prius going somewhere is all I need to know. People somewhere are buying them. Every delivery adds to the total. Each Prius helps make a difference.

6-09-2009 **Diminishing Returns.** You expect to read glowing review statements like this: "*The pep and power of the smooth, refined, and quiet Volt motor can't even be compared to...*" But do you take them seriously? Here's how I responded: "Diminishing Returns" is a term that is often dismissed here, despite the fact that the typical consumer is quite satisfied with the driving refinements already available. If they aren't seeking anything better, why do you think they will want pay extra for it? It's as much of a selling point as the difference between a 0-60 time reduction from 10 seconds to 9. Most consumers won't ever benefit from it. The same applies to towing capacity. Automakers can promote the upgrade, but the usage doesn't change. The difference is moot. Efficiency, on the other hand, really will draw sales. However, we don't have any data on that. So, there's nothing to discuss yet.

6-09-2009 **Contradicting Propaganda.** You read the information about Two-Mode. The material claims it is superior to other hybrids due to its ability to offer a direct mechanical energy path, avoiding any conversion to electricity. You read the information about Volt. The material claims it is superior to other hybrids due to its ability to operate using only electricity, never having a direct mechanical energy path. So... which is it? GM's own propaganda contradicts itself. How can both be superior? Mixed messages like that is why there is fighting from within. Competing for its own resources, the automaker is divided. There is such a thing as a happy middle. Will those running the new GM ever figure this out? The enthusiasts still haven't.

6-09-2009 **Prius Profit.** We were treated to a Bloomberg article about the profit Prius makes for Toyota. How many of those still trying to undermine hybrid progress will pretend no such thing was ever published? Even just acknowledging anything on that topic was printed could be looked upon as being responsible for greenwashing. When the amount itself is available... 100,000 yen ($1,042) to 200,000 yen... it's really difficult to deny.

6-09-2009 **Above $70.** It finally happened. We all knew the price of oil would climb back up again. Summer's start was the most likely time. The driving season has brought about rude reminders of our dependency several years in a row now. This is probably disheartening for some. I could imagine a few clenching the hope of somehow not having to deal with the reality of change becoming a necessity. Automaker struggling just to survive should be a clue that things are only temporary. We can't just continue doing only the minimum. After all, consumption isn't our only problem. Emissions (both types) is a very big deal too.

6-09-2009 **Nearly 800 Dealers.** Hearing the stories about Chrysler dealerships permanently closing their doors, after decades of dedicated sales & service, is truly shocking. What in the world are they going to do? How will this affect small communities? The impact of poor automaker decisions is now really harming those who weren't directly responsible but were still very much part of the business. That's an extremely difficult position to be in. No one has any idea what comes next. All we know is that the magnitude is huge.

6-10-2009 **Fiat.** It's official. Though the process wasn't exactly smooth, the bankruptcy sale of Chrysler to Fiat did end up happening. Product offerings will take 2 to 3 years before the new automaker identity truly starts to emerge. But in the meantime, the plans they set forth will be enlightening. A shift toward cars, away from trucks, is absolutely inevitable. The age of overkill is over. Appeal for the sport aspect of driving, as opposed to just sheer size & power, is what most expect. Witnessing that over again will be very interesting. Remember, the same thing happened back in the late-70's thru mid-80's. The purchase that occurred today is an interesting step away from the absurd obsession we had to deal with in the 00's. Good luck Fiat!

6-10-2009 **Happy With Iconic.** There's a crowd who isn't interested in trading their current Prius for the new model. That's ok. The market is focused primarily on newbies anyway. But since I did take the plunge, something must be said to those I left with the Iconic. So, here's what I posted: I enjoy witnessing the rollout process all over again. It's beginning to resemble the computer industry. Each hardware/software upgrade is consists of a pleasing set of improvements. Nonetheless, they aren't for everyone. Some aren't ready yet and will wait until the next round. Some (like me) pounce at the opportunity. Others will be on the fence, torn about what to do. This is new for the automotive industry. New vehicles purchases didn't involve compelling features we find in Prius. They will though. The bankruptcies are forcing the change which was resisted fiercely in the past. Drawing consumers simply by pushing size & power doesn't work anymore. Yeah! Enjoy your Prius, whichever model you drive. You're doing your part to help that change along. Thanks!

6-10-2009 **Death of BAS.** Sales have been almost non-existent. Production has been halted, with no intent to ever resume. Inventory is really backed up. The only substantial deliveries have been to the government, as part of the bailout effort. In other words, what some of us have been saying for years has finally been proven true. That mild ASSIST hybrid simply couldn't compete. To make matters worse, pointing that out has been with reference to the success of Ford's new FULL hybrid. So those who defend GM by attempting to discredit the information claiming it's just Toyota spin are trapped. They've run out of excuses and far too many references in the past reveal they were wrong. Priorities were misplaced. The announcement today about the end of what was once deemed a large part of GM future sure makes for interesting blogging! Change is now. That awful plan of doing the absolute minimum is now part of history... too little, too slowly.

6-11-2009 **Repeating History.** It boggles the mind how some don't learn from mistakes of the past. Remember all the hype behind Two-Mode? The same is happening with the technology in Volt too. They are so focused on pushing technology to the extreme that they neglect the very consumers they are supposedly developing the vehicles for. In other words, bragging rights are given much higher priority than price. In fact, price is so low on the list of concerns that it is often brushed aside. Two-Mode does indeed deliver lots of towing capacity, as promised, but the price is well beyond what most people are even willing to consider. So, sales are poor. How will Volt (as currently configured) be any different. You'll get the very impressive MPG, but you have to pay dearly for it. How many people are willing to do that?

6-11-2009 **Understating MPG.** This idea often surprises Prius supporters. My guess is they don't engage in online combat as I do. After all, participating on the hostile forums isn't for everyone. But I'm determined to help keep the greenwashing from getting out of hand. But rather than promoting the potential the 2010 has to offer, I just state 55 MPG as a typical experience. That's it. The value is under what I am seeing now, but still well above the EPA estimate. The number is pleasing without overstating. After all, that's what the competition did... with little success. I'd rather understate. Remember, my motto has always been "*Just Drive It!*" You can squeeze out higher MPG, if you desire. But that's not good for real-world comparisons with traditional vehicles. There's no need for more. 55 MPG easily sells the vehicle anyway.

6-11-2009 **It's So Small.** That was the exclamation today from someone at the coffee shop asking about my new Prius. I turned to look out into the parking lot in amazement. The 2010 Prius was the largest vehicle out there. And of things, it was parked next to a Geo Prizm... dwarfing it in size! The guy had obviously never looked closely at the Prius. He defense was that as a student seeking a degree in Automotive Engineering, it was easy to just dismiss hybrids in favor of diesel. Acknowledging the fact that a hybrid vehicle could use a diesel engine was apparently a sin. So, I avoided that topic in favor of pointing out the upcoming strict emission standard in Europe this Fall would cause diesel MPG to drop and price to rise. It was clear the discussion had ended. He didn't want to face that reality. Things change. Blatantly incorrect assertions, such as size, don't work anymore. I wonder if he realized just how easy it is now to debunk claims which worked so well in the past. Hmm?

6-11-2009 **Wheat Straw.** Advances in the production of ethanol are proceeding well. Today, news came in the form of an announcement about a station in Ottawa planning to offer a production of 40,000 liters (10,500 gallons) of ethanol per month from wheat straw. The move away from food sources is a welcome one. Strangely, all the propaganda for corn-based ethanol brought attention to the non-food opportunities. Remember the "*Live Green, Go Yellow*" advertisement campaign? It's hard to believe that certain automakers thought they could avoid having to reduce consumption by simply switching to a renewable source alone. Thank goodness we've already overcome that deception. Phew!

6-11-2009 **Not About Sales.** It's hard to believe all the "image" nonsense. The denial is truly amazing. A few exerted great effort to conceal the success of Prius. They portrayed it as just a status symbol, insisting it has no effect on the product-line... just a excuse to allow automakers to continue producing guzzlers. Well, now that the truth is being revealed, their strategy is changing to make the technology seem outdated... as summarized in this quote: "*The hybrid game isn't about sales, it's all about image and making the other guy's technology obsolete.*" They want the label to act as a stigma. I just find it amusing, knowing how many non-hybrids are still being produced. Isn't that engine-only technology extinct by now? Anywho, I replied with this: That quote goes in the blogs! It's hard to believe such misguided thoughts still persist, even after bankruptcy. You'd think attitude would change and they'd noticed the world is now different. But no! Even when Toyota is increasing volume with the hope of Prius eventually rising to the number-two bestseller in their product-line, the competition is still in denial claiming it's just a "halo" vehicle. The image nonsense is getting absurd. Profit is being made. Hybrids are now mainstream. Accept it already!

6-12-2009 **Not The Same.** Rather than hybrid type, it is now intention. GM is getting attacked from every angle for doing too little, too slowly. The response has been to give the impression they are doing exactly what Toyota did back when Prius was new. This was the quote that finally provoked a response from me: "*The Prius didn't' come out making a profit when it first hit the market, why are you criticizing GM for doing the same thing?*" It's very easy for me to see that's not the case, because I witnessed that history firsthand. Those just tuning into the hybrid market now don't have that insight. So, convincing them of a different history isn't much of an effort. I'll do what I can to point out how the situation now is not the same, with posts like this... Unlike Toyota, we are not getting an AFFORDABLE configuration first. In fact, we aren't even getting a CHOICE. They are totally disregarding the midprice market. For GM to be doing the same, they'd have to start by offering a small battery-pack. Those with short commutes would be quite content with that and pleased with the much lower price. Those with longer commutes would still benefit from the efficiency the generator offers after the battery-pack is depleted. Later, GM would then follow up with a OPTIONAL larger battery-pack. But that's not what they are doing, so it is not the same.

6-13-2009 **Acceptable Delay.** A new theme is rapidly emerging. In the past, there were occasional references to how long it took Toyota to achieve profit from Prius. None in defense of GM ever acknowledge the barriers back then. It's a complete disregard for the attitude toward guzzling back then, when gas was cheap and the SUV was a status symbol. Anyone concerned about either type of emission back then was mocked. Misconceptions were absurd & abundant. Heck, even data about hybrids themselves was hard to find. Now, the situation is dramatically different. GM is already producing vehicles which use battery-packs and electric motors. So with all that, why should it be acceptable for 6 years after rollout begins before we can expect high-volume production of Volt? Even under normal circumstances, why should we endure such a long delay? Let's not forget how taxpayer money is expected to be paid back. How long must we wait?

6-13-2009 **Excuses & Commitment.** We are getting a lot of one and none of the other. Fear of change is obviously pushing these extremes to the forefront. Promising to deliver what's needed is basically an admission of guilt. So clearly, that's not going to happen. It's frustrating. The exploitation of the SUV was a delay of the inevitable. Sure enough, the day of reckoning has arrived. The typical consumer needs a midsize car at a midsize price. That means hybrids like Camry, Fusion, and Prius should be given extremely high priority. That's what we need. It's not what some want... or so they think. Those resisting make far too many assumptions about what the technology has to offer while at the same time dismissing the our dependence on oil and our problem with emissions. No more excuses! It's like when a child refuses to do what must be done. They know they'll be better off afterward, yet they resist anyway.

6-13-2009 ***2.5 Weeks Later.*** It's finally starting to resemble Summer here. That means time to play with the still-very-new Prius. Yesterday, it was a drive in stealth like no other. Up hill and several blocks before the engine started. That was truly delightful, some might say electrifying. Today, it was driving from the bank to the far end of the strip-mall across the street using EV mode. Never having the engine run was great. When stopped, I went to stop while the solar-panel did it's thing. The car was comfortable when I returned. Having the fan blowing fresh air through the car while I'm gone is difficult to describe. It's quite unique of an experience. Opening the roof for the drive back topped the errand outing for the day... or so I thought. To my surprise, I discovered all the windows in this model Prius are automatic. No more button holding anymore. Cool! Needless to say, I'm really enjoying the 2010... even without mentioning the 55.5 MPG average for this tank.

6-13-2009 **Niche Mindset.** There's a strange sense of panic that only a small market exists for Volt and Prius will gobble it up. People fear they need to show superiority or die. In reality, there's lots of traditional vehicles which must be replaced with something. The instinct to fight competitors will ultimately kill GM from within. Just look at how many internal groups are contradicting each other with the many hybrid types being offered. Meanwhile, Ford is getting along just fine with Toyota. It's a fascinating to watch what inspires competition. Honda just quietly does their own thing. GM loves to hype what they still don't offer. Meanwhile, the price of oil continues to climb. It's now at $72 per barrel and we've become accustom to paying at least $2.50 for a gallon of gas. Just imagine what things will be like a few years from now. The last thing hybrids will be thought of is a niche. They'll be so common some will wonder how there ever could have been any question about them becoming the norm.

6-14-2009 **MID AVE MPH.** It took almost three tanks before I figured out the value of this new data. Too bad I didn't document it from the very beginning. Oh well, that's only two entry points missed. The number itself is what threw me. Overall average speed is what's recorded, including the time you are stopped. That seems odd until you start comparing your data to other owners. If the value is only 29 MPH, you probably stayed off highways most of the time. If the value is in the mid-30's to 40 MPH, it's probably a good mix of city, suburb, and highway driving. Higher than that, mostly highway. This will be interesting to watch for a pattern develop from my data, especially since speeds tend to slow in the Winter due to bad driving conditions. I like how we now have an readily available reference basis for driving type. Stay tuned. I'm quite curious.

6-14-2009 **Pointless Posts, pattern.** It was getting agonizing for even me. I can't imagine the impression you as a reader of these entries get from all my back & forth posts about the GM vehicle plans. The posts may have seemed pointless, but they weren't. Going between the discussions on the big Prius forum, those on the big GM forum, and those on the Volt blogging website, I noticed a pattern. The casual reader most likely would not. So, I figured I had an advantage. And sure enough, I got what I was looking for.

6-14-2009 **Pointless Posts, volume.** A very frustrated member on the big GM forum finally just blurted out: "*They do not want it to be a large volume vehicle.*" That's what I've been saying all along. He even went as far as preceding the statement with this: "*The fact of the matter is that the Volt is being manufactured for CAFE and PR.*" I responded with these statements... I was attempting to get someone to admit that large volume was not an objective for Volt. Point made. Volt's purpose is different. Point made.

6-14-2009 **Pointless Posts, competing.** How many times have you heard that Two-Mode is more scalable than HSD, that it is superior to the FULL hybrid technology the competition offers? Then shortly following that, someone will post how the technology in Volt will render all else obsolete? They are arguing with each other, but assume it's me just stirring trouble. Here's what I had been patiently waiting to get: "*GM has strong hybrid technology this will be coming to the market and it will compete with the Prius.*" And my reply to it... So many posters absolutely insist the technology in Volt is the new standard, rendering the FULL hybrid (like Prius & Fusion) obsolete. Yet, you just confirmed that's not actually the case. You confirmed GM will deliver FULL hybrids to compete with. Point made.

6-14-2009 **Pointless Posts, objectives.** The internal fighting GM experienced before bankruptcy was a major contributor to their problems. Two-Mode, BAS+, and Volt were all claiming to be the new technology standard, all competing for resource from the demands of the traditional product-line. They were spreading themselves too thin with technologies the same way they did with the number of brands & models. That was old GM. The new GM claims to be "reinventing" itself. Purging those obstructions of the past is great! But it sure looks like they are beginning to recreate them over again. If they'd declare clear objectives, all that can be avoided. Do they want a low-volume plug-in technology that will offset guzzlers, so they can still meet CAFE requirements? Do they want to replace their traditional product-line with hybrids? Or do they want to replace and also offer a plug-in? Knowing the answer to those questions has a profound influence in how resources are spent and how the automaker competes, as well as the time expectations. What are the objectives?

6-14-2009 **Reaching 35 MPG.** There was an article published today about the challenges automakers face to meet the 2016 fleet-efficiency requirement. The situation was summed up with this statement: "*The fact that even most hybrids don't make the grade raises some interesting questions.*" That set the tone. I was angry. The older model Prius was listed rather than the 2010 and the hybrid Fusion was missing entirely. Talking about misrepresenting the situation! Some of us call that "lying by omission". Needless to say, it was an anti-hybrid report disguised as a constructive analysis of economy standards. And naturally, there was no mention of emission benefits whatsoever. Deception like that is a harsh reminder of the resistance to change we still face.

6-14-2009 **EREV Estimates.** Efficiency estimates are crude, at best. But credible sources are attempting to establish criteria for what owners are likely to observe in real-world conditions. Today, we got information from the researchers at Argonne National Lab. They're known for their objectivity with past reports on Prius. This one, of course, makes reference to the Iconic model, rather than the 2010. So, it is already outdated. But the methodology for measure should hold... especially with Volt, which is still just in the concept phase. What I found most interesting from this study was that they specified 20-percent as the generator usage. Expectations are far less from enthusiasts, who crave the ideal rather than being realistic. As for the MPG when the generator was in use, they approximated 50 city and 45 highway for Volt.

6-14-2009 **Solar Guilt.** Now, it's getting weird. I love it though! Today marked my first bike trip of the year... which is a sad commentary on how busy things have been, considering it is already the middle of June. That meant it was hot outside. Driving to the location, I used the A/C in the 2010 for the first time... which performed remarkably... efficiency in the 2010 is truly amazing. Anywho, by dumb luck when parking, the very best spot just happened to be available. It's extra large and in a corner shaded by a tree. I snapped it up... then realized my Prius was the only vehicle (obviously) with a solar roof. Hiding from the sun is that very last thing you'd expect with technology like that. But I did anyway... then felt a little bit of guilt seeing all the open spots in the bright sun. Who would have thought?

6-14-2009 **Freaky Transition.** The very long awaited transition from analog television to digital finally happened 2 days ago. When helping a relative with the setup today, I swapped back over to the analog tuner to see if anything was still there. All that was available was "*if you can see this video, on continuous playback*". That was freaky. For the channels you grew up with to now be reduced to just providing information on how to complete the setup for digital really makes you think. Imagine, someday hybrids will be the standard. Engine-Only configurations will be reduced to special-need vehicles. It's inevitable. Heck, do you even remember when you last used chemical-based film? Embracing new technology can be surprisingly easy sometimes.

6-15-2009 **Uncertainty.** The situation at GM is rapidly degrading. 2 weeks after declaring bankruptcy, it's really a mess. The hope to send a message of change has turned into just more of the chaos which led the automaker to that point. In other words, the haphazard approach to survive continues. Seeing this is easy when you try to figure out what the objectives are for GM with hybrids. Within just a few searches, you can come up with a half-dozen very different outcome impressions. This is what I posted to illustrate the type of clarity we should expect: The problem all along for GM has been not setting clear goals. Then consumers don't even have to care about what the particular technology is. For example, Toyota set the following with Prius... Price: *low 20's* Efficiency: *50 MPG* Emissions: *PZEV*

6-15-2009 **Questions.** You know that the end is near when a number of GM supporters start pointing out GM's own deceptive practices. There's simply no way to start fresh without first acknowledging the problems that required the restart. Now with several examples of failed hybrids, overcoming mistakes of the past should be easier. But you never know. I find it odd how relevant my skepticism from the original Two-Mode announcement still is. In short, it seemed disingenuous. Sadly, the "*over promise, under deliver*" reputation was accurate. Anywho, I posted this... 4.5 years ago when Two-Mode was announced, it was hyped as superior to the competition with this statement: "*The hybrid technology that currently exists is already outdated and will likely be gone in a couple of years*". Not only was that inaccurate, it was also an empty promise. GM is telling us what to drive by not offering a choice. They never delivered. We are still waiting for that hybrid competition. Is BAS+ also cancelled or just BAS? Will there ever be a 4-cylinder Two-Mode car? What is the production volume intention for Volt technology? Fundamental questions continue to go unanswered. Speculation is wild. GM supporters quarrel amongst themselves. It's a mess.

6-15-2009 **Greenwashing Proof.** It feels absolutely wonderful when someone attacks you about Prius information, claiming you have no idea what you are talking about, and you've got an arsenal of photos available clearly providing proof that they are attempting to greenwash. I was delighted to refer to my album for that. The effort to document my experiences paid off a large dividend this evening. Though, it took me aback to see the sight of the old Multi-Display again. Reliving such a vivid memory, in this case the day temperatures dropped all they way down to -22 F degrees, emphasized how those times are now over. Rather than making history, I'm now driving the new standard. This model Prius will be the ubiquitous one. We'll see it everywhere, in very large quantity. The Classic & Iconic models are already quickly becoming part of an intriguing past.

6-16-2009 **Attitude Adjustment.** How much do you think has actually changed? The reality of the bankruptcies impact has yet to be seen. The outcome is likely to be on an enormous scale. But unfortunately, a shift on that magnitude can go overlooked. It's like the change over to cell-phones and notebook computers. The reason for the subtly is due to the amount of time it takes. Much of that comes from the resistance to it. Someone needs an attitude adjustment to prevent the delay; otherwise, those unwilling to adapt die in the process. We've lost countless manufacturers of other popular products of the past. What truly makes the automakers any different? These consumer goods are a bigger risk due to the purchase price. It is reasonable to expect the death to be quite painful. So, why must it comes to this? Shouldn't the success of Prius speak for itself? How can there be any doubt still? Our dependence on oil and the quality of our air should be reasons enough. Not being competitive anymore and attempting to nurse the automakers back to health should be a clue that major change is required. Yet, the revitalization plans we hear about still leave much to be desired. What lessens have been learned?

6-17-2009 **Quick Reference Guide.** I didn't realize or remember there was a DVD that came with my 2010 purchase. Wow! It's mostly for first-time hybrid owners. So you can imagine how I would have so easily set it aside when given the large bundle of stuff that can with during the time of purchase. After all, I prefer the hands-on introductions when learning anyway. Then afterward, I follow up with the formal education. You tend to pick up much more that way. The intriguing part is, by watching it, you quickly become well informed... much more so then a person would about a traditional vehicle. Toyota definitely wants to empower owners. What an exciting & unexpected find! Just imagine what Prius could have been like if something like this had been available years ago. It's almost like a video version of the User-Guide. Of course, I suppose it could also intimidate... giving an impression Prius is somehow different in the way you drive it. That's not the case. The video just makes it finding features very easy and tells you about what happens when you move, touch, or switch something. Close-ups with motion & sound do an excellent job of pointing things out that no printed manual could ever accomplish so easily. Needless to say, I was quite impressed.

6-18-2009 **What's Different?** It sounds like GM is planning to repeat the same mistakes of the past. Rather than spreading themselves too thin with brands, it is becoming a wide selection of propulsion systems. Internally, the automaker's divisions competed for resources among each other. Drain like that from within makes competing with actual competitors (other automakers) much more difficult. We've seen that same struggle countless times before. How will this be any different? The plan is to offer 14 hybrid vehicles by 2012, including BAS+, Two-Mode, Plug-In Two-Mode, Voltec, and traditional automatic & manual transmissions. Why are they attempting to deliver so many different designs?

6-19-2009 **Total Silence.** It was obvious even at the time of all the diesel attention that supporters were in a state of panic, attempting everything they could possibly do before the 2010 Prius deliveries began. I checked last week to see if that one particularly bias diesel website had posted any updates since their final post with the abrupt "correction" to their MPG results. Nothing. The outcome they feared is being confirmed by their total silence now. Not hearing even a peep from groups once so vocal says it all. This is the double entendre meaning behind the "stealth" term given to Prius... since there have been times in its history where it silently progressed even deeper into the consumer market.

6-19-2009 **180,000 Orders.** The count is up to an amazing quantity now. With automotive market, as well as the economy as a whole, such a mess, this is really good news. All those orders are in Japan, where there are government incentives to help stimulate sales. Something like that may happen here later too. Right now, there's lots of uncertainty still. My guess is we'll see strong sales without a clear indication of how many are still waiting for delivery. Having Prius become the top-seller here as in Japan is unlikely. Camry has held that position for many, many years now. Enough orders to make the struggling automakers reconsider plans is all we need anyway. Investing heavily in technology that doesn't address the consumption & pollution problems well is the concern. Token gestures cause even more harm now. Significant volume is the key. The news of all these orders is a very good sign.

6-19-2009 **Clunkers.** A billion dollars was approved by the Senate to enable consumers to trade in their guzzler for a more efficient vehicle. The guzzler must be less than 25 years old and be rated for no higher than 18 MPG. The amount of money received is greater for a greater increase in efficiency. That makes for a very convenient excuse to abandon a terrible mistake of the past. Those still feeling the pain of $4 gas may find this great incentive to exceed the status quo. Why bother with a run-of-the-mill 30 MPG vehicle when you've always driven a stand-out vehicle anyway? This program puts hybrids like Fusion and Prius in a great position. It's easy to embrace the high MPG when there's an incentive like this available.

6-19-2009 ***Passing Power.*** I got the opportunity to use that new PWR button for passing today. When you have farm machinery driving slowly on a curvy country road, patience for the opportunity needs to be followed by the willingness to drop the pedal. For me, that was the chance I had been hoping for. When the moment arrived, the outcome was delightful. The Prius charged around the obstacle with the greatest of ease. Surges of thrust like that are exactly what electric motors deliver extremely well. Those hoping to undermine using the not "*fun to drive*" excuse are in trouble when they discover what that PWR button is capable of.

6-19-2009 **The End Is Near.** You can easily tell now. The antagonists have run out of material now. They've got nothing on the 2010 Prius and the Iconic model arguments are years quite outdated, debunked long ago. Hearing about the stellar MPG new owners are getting is making their desperation difficult to conceal. The best they can do is attempt to spin there own spin, a confusion tactic. I've had it. I'm biding my time waiting for real-world data collection. It's a slow process. Each tank takes awhile to use up. Anywho, this was my response to the craziness caused by the refusal to acknowledge the recent increase in production volume as a result of all the new orders: Yes, anything you can do to distract from the total quantity. Percents & Rankings work well for that. Comparisons do too. Point is, the penetration of hybrids into the market is growing deeper quickly. And once a consumer takes that step away from a traditional vehicle, their misconceptions vanish. That influence easily spreads, to their family members & friends... and neighbors... and coworkers. Then you've got people like me sharing real-world data online. It's that acceptance you fear. Avoiding the total quantity confirms it. 180,000 sales is 180,000 more on the road, regardless of how they got there or how those sales were perceived.

6-19-2009 **Ugly Hybrid.** It boggles the mind that debates about Prius still quickly degrade to appearance. Funny thing is, even those who don't care for the new look are questioning whether or not others are even aware of the changes with the 2010. On several occasions now, a collection of photos have been posted by them to make sure. Of course, those who already spewed recent ugly comments obviously won't recant them upon discovering they made that error. Being poorly informed is commonly anyway. During the transition to a new generation, that is especially widespread. All the news about the order lists growing to a massive scale is truly frightening to some. The death of the dinosaurs cannot be denied anymore. Being replaced by cars shaped like Prius makes the situation even worse for them. Careless guzzling is ugly. Sleek aerodynamics encasing an extremely practical shape is beautiful.

6-21-2009 **Lots of MID Photos.** It took quite awhile to learn what was important to take photos of on the new MID (Multi-Information Display) and to figure out how. This one is different from the two other Prius. Information is directed toward efficiency well beyond what we had available before. 4 weeks and 4 tanks into ownership, I'm getting a feel for what will ultimately be needed in the downloadable documents that end up being created, which will include some of these photos. The Eco-Meter and 1-Minute Consumption screens are the most informative. The Energy Monitor, which I didn't use much in the past, gets used even less now. Past Record hasn't come into play yet, but later I could imagine it revealing some trends. Proximity to the Speedometer is fantastic. Move that data source higher was a wise decision. The type of display makes the green & white colors remarkably easy to see under all lighting conditions. The red color tends to fade away in the bright, but its use is sparse anyway. Anywho, here are... photo album 134

6-22-2009 **Now It's Hot.** It suddenly became Summer here. The morning commute temperature was 84 F degrees. Living in Minnesota, people are quick to complain about the afternoon temperatures climbing into the mid 90's. But I'm even quicker to remind them of how long Winter is here. Flashbacks of January cause them to suddenly reconsider their complaint. Then I point out that the Prius is absolutely loving it. Seeing the average MPG maintained at 58 is truly remarkable. Getting the opportunity to try out the solar ventilation and give that electric A/C a workout is fantastic! I so look forward to enjoying moments like this.

6-22-2009 **Keep Your Clunker.** The argument against Prius backfired wonderfully today. It was hard to believe they'd actually back themselves into a corner like that. Several posts from various forum members were attempts to convince that you were better off keeping an old vehicle from 15 years ago than to get a Prius. It was based on economics alone. Other factors like safety and reliability were totally absent. Single point arguing was the best they had to offer. I was quite amused. On a forum supporting GM, the automaker's fate had been totally forgotten. Keep you clunker was the message they decided to convey. Consumers eventually have to buy something and GM must produce something. But they absolutely refused to acknowledge the reality of the situation. I responded with this... That's it? With a group so devoted yet so divided about what the next step for GM should be, you'd think the arguments would go deeper than just reciting the same old over-generalized replies. Holding on to extremely old vehicles is the ultimate example avoiding the issue. GM PRODUCES NEW VEHICLES! Telling people not to buy anything is an absolutely horrible solution.

6-22-2009 **Made In Mexico.** The new technology message being chanted on the big GM forum has been "*Buy American*". Even though foreign-owned automakers build some hybrids here (with the hope of significant increases later) and employ workers here, that's not good enough. I thought jobs for our men & women was the point. Apparently, not... because the most hypocritical news just hit the web causing an enormous stir. The premiere hybrid from GM was hoped to be the Sierra. It's their big pickup truck and has been a symbol of pride. But of all things, it's not going to be built here. Instead, that will take place in Mexico along with the non-hybrid model already produced there. The enthusiasts should have studied more before promoting a message they now regret.

6-23-2009 **Coming To An End.** That's quite obvious when posts are filled with literally nothing, detail missing entirely. They've become horribly vague. Arguments pretending to be constructive don't actually say anything anymore. You get comparison references to Prius that use only words like "*better*" which are completely void of quantitative measure. You have no idea how much or even if it actually makes any difference in real-world driving. For that matter, the use of the word "*Prius*" is so generic you are setup with the hope of incorrectly assuming the new model. These are all undermining techniques we've seen countless times in the past. There is nothing in them to sway consumers with, other than fear. But those driving hybrids know it's really the fear of change. That's why all the nonsense is increasing. The era of guzzlers is rapidly coming to an end.

6-23-2009 **The Other End.** The one is guzzler appeal fading appeal. The other "end" is the enthusiasts post for Volt. They want to capitalize on the change, taking advantage of the opportunity to push their extreme. The difference between "*superiority*" and "*mainstream*" still isn't understood. The concept of "*being competitive*" is simply dismissed. Tired of their nonsense, I posted this... Reading through the posts above, I see that the usual incorrect information about Prius is now mixed with facts that are outdated. The persistence of comparing vehicles with such drastic price differences is bad enough. But not understanding how the new model operates and what features have changed says a lot. We are about to begin the second half of 2009. Between the bankruptcy outcome for GM and the sales count for Prius, it should become obvious how much the market is changing. The shift to low-profit affordable vehicles that don't guzzle is already underway. That puts traditional vehicles in a difficult spot. Some will really struggle to remain competitive. How does that position Volt, in a market so different from which it was originally conceived?

6-24-2009 **Still Evading.** The most devoted of GM supporters are still fighting the inevitable. We get nothing but excuses. They don't want to address need. It's self-destructive. Why are they so stubborn? The reality of bankruptcy still hasn't sunk in yet. Geez! Anywho, this is what I posted today, frustrated by the defiance of certain individuals... Even if the market shrinks to just a third the size it once was, that's still millions of vehicles. Automakers must produce something. Consumers will eventually need to purchase something. Used vehicles only last so long and our problems with oil dependency and air quality won't go away unless we actually do something. All the excuses being posted don't face that reality. Unwillingness to acknowledge the need is a big problem. Keeping the status quo is how we got into this mess. This thread about the large number of consumers waiting for delivery of their new Prius makes it overwhelming clear that there's a market for midsize, midprice, clean, high-efficiency cars. Whether or not you like Prius itself has nothing to do with it. When the purchase occurs doesn't either. Each automaker should be offering a high-volume vehicle in that category. Stop evading that point.

6-24-2009 **Market Focus.** Why is it so difficult for some to admit the obvious? There's a large market for midsize, midprice, clean, high-efficiency cars. That's where a substantial amount of production should be focused. Those vehicles in the middle tend not to stand out, by their very nature of being so common. That lack of exciting draw is what keeps some executives from taking that market seriously. But now with the order wait-list for the new Prius at 200,000 in Japan, you'd think priorities would be easier to change. After all, strong sales is what sustains business. Perhaps when the June sales figures for the United States are released, then we'll see some attitude change. Given enough time, the harsh reality of bankruptcy may cause GM to focus on the market for the common consumer. After all, Ford is investing heavily in that now.

6-25-2009 **Fighting Change.** It's truly amazing how much resistance some still have to change. They fight you with every post, insisting you are somehow trying to cause harm. In a way, that is actually true. The short-term practices of the past are what contributed heavy to the financial meltdown and must end. Why is acceptance so scary for some? GM is the ultimate example of this denial at play. The die-hard enthusiasts honestly believe a FULL hybrid version of Malibu still is not necessary, despite Ford's recent success with Fusion. They figure the technology in Volt is the only solution required and that waiting the 6 to 8 years it will take for prices to become competitive and volume to grow to mainstream levels is no big deal. They believe status quo is just fine in the meantime and that current products will just be abandoned without resistance when the time comes. Doesn't this sound familiar? We went through this already both with fuel-cell vehicles and later with Two-Mode. Heck, they even tried pushing E85 as a new standard too. How effective were any of those beliefs? You can't just hope for a miracle solution someday, you must embrace the change today.

6-26-2009 **Test Drive.** Lunch was fun today. I got together with a friend who has owned an Iconic model Prius almost as long as I had. That made his impression of the 2010 a very important one. Being so aware of the hybrid system in the prior generation allowed him to immediately detect improvements. And boy did he ever! Being behind the wheel only a few seconds was all it took. The feel of vehicle handling and power of the system really captured his attention. The delight was quite obvious. And that was without the PWR button pressed! Later when he merged onto the highway, the argument of "*fun to drive*" was put to rest forever. It was clear to him that no one could use that line of reasoning again and still be taken seriously. But neither of us thrive on aspects of driving like that. We like what the display was indicating. Seeing an average of 56 MPG is the ultimate endorsement. All the other features, along with fantastic efficiency, makes the next purchase decision later an easy one. After all, his multi-vehicle household only has one Prius currently... and it makes recommending the 2010 to those asking about his Prius a no-brainer.

6-26-2009 **"Full" Battery.** I finally saw all 8 bars filled on the battery indicator of the new MID (Multi-Information Display). That isn't actually full. It's somewhere around 80-percent capacity, just like it was for the Iconic model. But with the 2010, you get much more play with electric-only driving. So, the thought of the many city streets I was about to travel made for a very exciting experience. It certainly wasn't disappointing either. The larger motor and the ability to draw more electricity from the battery-pack really contributed to a "*fun to drive*" story. That was a lunch escape to remember. It was a discovery process in the form of a smooth & silent cruise. For all those anxious people impatiently waiting delivery of their own 2010, it's stuff like this that make the painfully long delay totally worth it.

6-26-2009 **Status Quo.** It's anything but now. Sales of Prius are strong, consequences of bankruptcy are becoming apparent, and emissions & consumption are now a priority. Combine all that with the down economy to get a feel for where we are at now. This point in automotive history is remarkably clear. Within the past few days the tone has changed. My thought as to the cause is scope. This reaches out well beyond the market itself. Interest in Prius is attracting new people, those way outside of the usual crowd. The antagonists are taking advantage by making stuff up. New reporters are giving hybrid reviews a try, which also leads to stuff being made up. With the reporters, they are just guessing... and being quite incorrect as a result. As for the antagonists, they are intentionally misleading... and stirring anger as a result. It's a odd time. We are basically starting all over again. I like that. The 9 previous years of experience were great education. Sharing information about the 2010 with newbies while at the same time fighting off those who still fear change will be fun. Wide scale acceptance of hybrids is inevitable. Status quo is dead.

6-26-2009 **Clean & Renewable Energy Jobs.** Remember the nonsense of the past? Claims were made that hybrids would cause jobs to be lost. For short-term thinkers, that was true. But then again, those are the same people who took advantage of quick profit which contributed significantly to the current economic mess. It's the long-term thinks who prevail. And sure enough, the evidence is difficult to deny at this point. June sales statistics will easily confirm it. While most of the vehicles available for purchase are struggling, the better hybrids (like Prius) are thriving. That attitude change is being capitalized on now too. The House just passed a bill which will create many new jobs in the energy industry, all related to clean & renewable sources. Next, the Senate that same purpose. Some absolutely insist this will cause jobs to be lost. Why? How? It doesn't make sense. If we don't invest, other countries will. There is a tremendous growth potential. Shouldn't we be at the forefront of that? Don't we want those jobs?

6-26-2009 **Ford Loan.** They are now being lent money for development of fuel-efficient vehicles from the Department of Energy, which has a $25 Billion fund available to aid automakers achieving the 35 MPG requirement by 2020. That works out to a 40-percent improvement over current requirement by the next decade start with several stages to meet along the way. GM, Chrysler, and even Tesla have also requested money. But Ford is in a much better position to actually deliver results on the large scale. Being able to increase production volume of Fusion-Hybrid significantly while also spreading the technology to other vehicles (something competitive with Prius) would be fantastic. Obviously, we'd all like the industry to be much better positioned to deliver plug-in hybrids too. This will definitely help that goal... if the money is used appropriately.

6-27-2009 **Downplaying Features.** An obvious sign of change is when the message doesn't match now. We saw this with Two-Mode. It was heavily promoted as delivering highway efficiency much greater than single-mode hybrids, that it would be the technology to crush Prius. But as rollout approached, we heard almost nothing about that. Other features were focused on instead. The very design aspects we had originally questioned were now being downplayed. Little was said of those supposed advantages anymore. The same thing seems to be happening with Volt. The much touted "*Extended-Range*" feature is being downplayed. Focus is placed heavily on the electric-only drive now. Ever since that 50 city, 45 highway MPG estimate was published the enthusiasts just dismiss generator efficiency as not important. (Hearing about the new Prius delivering 55 MPG on the highway might have something to do with that.) Rather than being another choice of hybrid, their claims of superiority leaves them in an awkward position. At a competitive price, it would be easy enough to justify. But with such a huge premium, that's not going to happen. So, they downplay.

6-27-2009 **0W-20 Synthetic Oil.** Unlike the rollout of a certain competing hybrid many years ago, we actually have the new oil type already available at sources other than just the dealer. That issue really was a pain in the past. For the 2010 Prius, it's no big deal. I found this type at 2 different retail stores and a quick oil-change branch. It's not cheap. In fact, the price is about 50-percent more than usual. Put bluntly, I found it for $6.19 per quart. But I did also find out that "usual" is changing anyway. Oils like this are becoming the norm due to their efficiency benefit. Being synthetic is an obvious plus for those of us wanting to reduce oil consumption. Being so thin, I can wait to find out how it reacts in the extreme Winters here in Minnesota. It will be yet another factor contributing to the efficiency improvement beyond the prior model.

6-27-2009 **Profitable By 2011.** That's what the CEO of Ford (Alan Mulally) proclaimed today. Their turnaround plan includes "*more and more electrification, both hybrids and battery electric vehicles*". How can you frown upon that, especially with the loan money available for retooling? I wonder if the assembly plant just up the highway from me, where they produced an electric pickup back in the 90's, will be doing that again. Hmm? That would be interesting. Whatever the case, it clearly indicates a change in priority. This is the same leadership that pushed to finally deliver the hybrid version of Fusion. So, we know if the dedication is maintained, the outcome will be what we hope for. Market pressure should help. Opportunity for deep penetration into the mainstream has finally become realistic. There's profit to be made for those inclined to pursue it.

6-28-2009 **Speed of Progress.** Those really pushing technologies "superior" to Prius don't seem to have a grasp of just how long it takes for a paradigm shift. When hybrid rollout began here 9 years ago, it was obvious that it would take a decade to gain enough market share to even become thought of as the next standard. Adoption of new technologies of the past, like front-wheel drive, fuel-injection, anti-lock brakes, and airbags, all took a surprisingly long time. None of which require a change in behavior as profound as plugging in every night either. Considering just how much of a battle Prius has already fought and seeing that the war is far from over, claims of "mainstream" acceptance for electric-only drive in just 5 or 6 years require explanation of what they actually mean. With annual sales in the United States somewhere around 12 million, how many are they implying?

6-28-2009 **2010 Info-Sheet.** I am absolutely delighted to report that the first of the new content has finally emerged. Yeah! Some have been begging me to offer educational material for the new Prius. But learning what is important to document takes a very long time. You have to drive a lot of miles and study the many questions being asked. Eventually a pattern will be revealed or something quite unexpected will emerge. Today, that happened. The red color on the new MID (Multi-Information Display) can be difficult to see in bright light. Why would Toyota allow that... or was it intentional? The arrows on the Energy Monitor screen coming from the engine which some have complained about. Those of us having driven the 2010 enough with experience from an older model know there is little value from that information anyway. The new Eco-Meter replaces it and the use of red there is complimented by a large, easy-to-see "ECO" indicator. That's something to document. And thankfully, I have photos of it published. Those efforts are already showing benefit. I can't wait to find out what the next need-to-document discovery will be.

6-29-2009 **At The Park.** You've seen this particular location several times now with my previous 2 models of Prius. Now, the 2010 is contributing to the album. I snapped off a number quite a collection of digital photos just a few days after getting it. The weather was beautiful and the Prius was a shiny new hybrid begging to be photographed. How could I resist? This is the kind of opportunity I thrive on... photo album 135

6-30-2009 **Eco-Meter Photos.** I captured two great shots halfway through my weekend, both revealing amazing MPG results. The first was a pleasant drive through the suburbs. The average speed recorded (which include time the vehicle was stopped but still running) was 30 MPH. The distance was 11.2 miles. The result was 80.5 MPG. How about that? At the conclusion of that drive, I refilled the tank. That one took me 515.5 miles before indicating it was time to get gas again. The average speed (including stops) was 35 MPH. The overall average was a truly pleasing 57.9 MPG. This new model Prius is certainly delivering fantastic Summer efficiency. See... photo album 135

6-30-2009 **Insight Review.** The latest issue of Consumer Reports just tore Honda's Insight to pieces. The negative publicity immediately caused a stir of responses online. We've all see bad reviews before. Prius has lots of them. Performance magazines love to publish controversial content. It draws lots of attention to their publication... which rarely reviews any family car with favor. The fact that Prius is such a popular vehicle makes it a target. Insight is becoming the same way. But it doesn't have much positive publicity to fall back on. Rather than this non-performance source rating it as "*acceptable*", the theme was a terse "*disappointment*" feeling. They just plain did not like it. Ouch! I'm not sure how to interpret the outcome of this. The expectation was Insight would be a hybrid for some, not one getting such harsh criticism in this market.

6-30-2009 **Waiting.** No, not the wait for new Prius delivery. It's what happens in the next few days. At this very moment, GM is submitting plans to the bankruptcy court. The response to that will be very interesting. Many have a feeling not enough has been done. Meanwhile, the spin coming from their hybrid enthusiasts is stuff for the history books. By their claims, we are on the verge of abandoning all current automotive technologies, about to fully embrace the new designs still being developed. There's an obvious sense of panic at play. They know the results for the first month of 2010 Prius sales are about to be released. A high number destroys their arguments, especially in this struggling economy. So, we all left impatiently waiting.

6-30-2009 **Diesel Uncertainty.** There's been a lot of attention to them lately. Non-Hybrid models are supposedly coming soon. But virtually all reports come with a concern about emission regulations. The new "clean" diesels barely meet the current criteria. If they become more strict, the vehicles can't be sold. It's a business risk few automakers are willing to take. And the potential consequences from not being as green as the competing hybrids doesn't have a monetary measure. Being required to improve both emissions & efficiency isn't just a matter switching fuel. Fortunately, some are coming to that realization rather than repeating mistakes of the past.

7-01-2009 **Liquidate Assets.** Failure of GM to sell off some brands leaves them in a terrible position. Money from the government will stop, due to not achieving that bankruptcy objective they agreed to. They have to acquire funds from somewhere. Bills must still be paid. Financial obligations can only be delayed for so long. The result will be liquidation. It's the outcome no one in charge really took seriously. They weren't willing to make big sacrifices. Heck, they still aren't. Volt is still only planned as a premium product, rather than an affordable vehicle. Will they ever learn? This isn't the time for image to get in the way. Do what needs to be done. Get it over with.

7-01-2009 **June Sales.** There's not much detail available. In fact, even summaries are hard to find. Collapse of the automotive market is taking away the monthly sales totals, a source of the short-term thinking that heavily contributed to the problem. I could find overall counts for both Toyota (16,744 hybrids) and GM (1,454 hybrids) in June. Fortunately, we did get a number specifically for Prius (12,998), but how many were still 2009 models will probably never be known. The new model Honda Insight (2,079) count was provided too. But that's pretty much it. Needless to say, the progress and future of certain hybrids is shrouded in mystery.

7-02-2009 **Consumer Interest.** The loss of touch with consumer interest has basically destroyed the GM forums I participate on. There's a complete disconnect at this point. Image above financial well-being is the attitude. They simply don't care anymore. Vehicles which provide low but sustainable profit are of no concern to them. So much has been lost already, the thought of years to recover is too much. I can imagine the uncertainty is making them crazy. It's a mess. The voice of reason is gone. Selling more Camaros than Mustangs gets far more attention, niche rather than mainstream. That same "better" standpoint for Volt is emerging. Reaching the common doesn't matter to them. It shows that priorities are quite misplaced. Fortunately, those enthusiasts of limited scope will fade away, just like we've seen in the past with other constrained efforts.

7-02-2009 **More Info-Sheet Content.** I knew this generation Prius would end up being quite different from the others. Now newbies are discovering the same thing. Common questions are emerging. The biggest topic is the 4 drive modes. It starts with 2010 owners not even realizing there are 4. They see 3 buttons and just assume that's all there is. None depressed doesn't cross their mind as a choice. With driving a hybrid so new to them, observing subtle differences won't come until later. But for the prior generation owners, we notice right away. However, easily conveying the purpose of each remains elusive. That's the purpose of the Info-Sheet. It will serve as a resource for pointing out important aspects of the system to newbies. Now things are getting exciting. We are finally learning enough detail to teach about the design improvements!

7-02-2009 **Not The Same.** Remember that nonsense from years ago, where the antagonist was vague and attempted to alter definitions? That very thing is happening again! It was sporadic until recently. Now the Volt enthusiasts have joined together to force Prius in the same category as Insight. They consistently label both designs of hybrid as the same, calling both the "parallel" type. It's sad to see such blatant deception. In the past, misleading like that was fairly easy to get away with. But now, the typical consumer understands hybrids enough to know that there are different kinds. They are aware that some are more efficient than others. Desperation to make Volt a standout vehicle rather than mainstream competition is causing the enthusiasts to risk credibility this way. Don't they see how damaging that is?

7-03-2009 **Still No Tech-FAQ.** Have you noticed that none of the Volt enthusiasts have compiled one? After 2.5 years of the same technical questions & confusion over and over again, you'd think someone would finally deliver something. Instead, nothing. Having a resource like that would end their ability to be vague. Readily available detail has that consequence. It helps everyone involved. Meanwhile, the 2010 Prius has already exceeded them. Owners have posted more detail in just 1 month than then entire existence of Volt. We know extremely well how important it is to provide information to allow consumers to draw their own conclusions with.

7-03-2009 **Hostility.** With the ASSIST and TWO-MODE hybrids, it simply faded away after awhile. Real-World data ended the debates that went from constructive to hostile. Those argumentative posts were understandable. Attitude like that is to be expected when there is so much to lose. But with Volt, so much has already been lost and delivery is still 1.5 years away. So, the pressure continues to build. Unlike Ford seeing the success from their hybrid development efforts, GM has a very long way to go. The strong sales for Prius in an otherwise depressed market makes the situation even worse... to the point where some don't care anymore. It's really unfortunate. Having constructive posts being overwhelmed by attacks on the competition sours the appeal to lurkers. They don't like reading posts filled with insults and no attempt to address the actual issues.

7-03-2009 **992 RPM.** That's the lowest sustained engine speed (still using fuel) I routinely see while driving. It will climb to 1044 RPM without influencing speed or the 100 MPG reading at all. But when it drops to 960 RPM, the engine is about to stop. That's the indication the threshold has been reached. I love seeing sustained RPM that low. 1184 was the common low in the Iconic Prius. This larger engine combined with the extra power-carrier on the PSD and the changes to the internal maximums has obviously made a difference in suburb driving. On the highway, it's more difficult to detect the difference. But you can still see that RPM is lower than it had been. That translates directly to improved efficiency. Gotta love it!

7-04-2009 **Independence Day.** A recent upgrade to the posting options of the daily blog dedicated to Volt was the ability to reply to specific posts in a branching structure. With that, it became much easier to follow original topics. Sadly, what came with it though was the ability to rate. That gives each participant an opportunity to cast a quick opinion vote on the content without posting anything. Wow, is that ever revealing! The messages attacking Prius draw huge favor. The messages portraying Prius as an ally get harsh criticism. Those plus & minus tallies are blunt. They have clearly declared independence, wanting absolutely nothing to do with any other hybrid. Their choice is for Volt to stand alone. Ok. Fine with me. I was sick & tired of that group of enthusiasts constantly fighting the very vehicle helping to pave the way for mainstream plug-in vehicles. Whatever. Now they don't have to address a less expensive configuration. A smaller battery-pack aimed at making Volt affordable for the masses is obviously of no concern to them. Independent? Why? Unique is counter-productive. The point is to deliver a ubiquitous technology for significant improvement of emissions & consumption.

7-05-2009 **Iconic Comparisons.** It's hard to believe some are still trying to paint a pretty picture for the Honda hybrids by comparing them to the model of Prius no longer available. Not only did the article published today do that, but it also used the outdated Prius 60/51 rating as if it was no big deal compared to the revised Civic-Hybrid 40/45. Using information that old and never even mentioning the fact that there is a newer model available makes you wonder how gullible some people think we are. Both writer & publisher are at fault for misleading. Whether it was poor research or an intentional attempt to undermine, it doesn't matter. Damage results regardless. There's no excuse for comparisons like that.

7-06-2009 **#1 in Japan!** How does one respond to that news? Prius topped the chart in Japan for June. It was the very best selling vehicle there. That's a record you always hope for, but don't actually expect to achieve so soon after debut. I certainly didn't anticipate such a huge climb in popularity so quickly. Dethroning the #2 here, Corolla, is what I've been looking forward to. That in itself will be a major achievement here. But to shoot past Camry there, makes you wonder what the heck will happen here when production capacity is increased. The unique advantage of Prius being a hatchback does add a competitive edge. The ability to fold the seats down for a large cargo area from a non-truck is a great convenience all too often overlooked. That combined with amazing MPG is quite a draw. Time will tell. Sales are the ultimate endorsement.

7-07-2009 **Accelerator Feel.** The way antagonists twist perspective is quite surprising sometimes. Lately, it was the lack of aggression. Supposedly, the feel is too smoooooth. Of course, isn't that what those purchasing a luxury vehicle expect? Getting coarse feedback is what you'd typically associate with a massive engine truck, not a family car. Yet, they certainly try to paint that alternate picture for you. It's another example of how they undermine. Convincing you that expectations should be different works in online comparisons. Fortunately, it doesn't during a test drive... since the feel of the electric-motor is often commented about with high praise.

7-05-2009 **Understanding EV.** This mode is stirring lots of questions & comments. I chimed into an active discussion about it today with this: The purpose of EV is rapidly becoming a big misconception. It is intended only for stop & slow driving. That's it, not for suburb driving. STEALTH is for that. STEALTH is automatic. In fact, there isn't even a button for it. The maximum electric-only, engine-stopped speed is 45 MPH in this mode. STEALTH is indicated by the instant MPG indicator pegged at 100.

7-08-2009 **Surplus Spin.** Anything they can do to undermine the success of Prius. Geez! The latest twist now is that there's a "surplus" available. Rather than a lengthy delivery, no more delay. You can just buy a 2010 model in the United States right away. And since there's a huge wait list in Japan, this is supposedly a bad thing here. What kind of crock is that? Toyota finally got capacity up to the point of regular inventory, so antagonists attempt to make you believe that is a problem. It's just spin. In reality, it makes Prius mainstream... since that is completely normal for most other vehicles. Having a few available on the lot for immediate purchase is a good way to conduct business.

7-08-2009 **2010 Sightings.** I'm starting to see them now. 3 days in a row! First was a Black one. Then it was a White one. And today was a Brown one. At the rate they are selling, it won't take too long before I start getting overwhelmed by Prius sightings, too many too count. Gotta love that! Having a mix of generations on the road and quantities high enough for multiple sightings routinely must be the next level of "*mainstream*" acceptance. I suppose that's what qualifies as Prius as a "*ubiquitous*" vehicle. Sweet!

7-08-2009 **G8 Summit.** What more is there to say? Concerns for the environment keep getting pushed as a higher and higher priority. That's what we've always wanted. For the major powers of the world to get together and agree to important emission goals is great. How that will actually happen is what we anxiously await. Will this summit result in much? Probably not. The United States is a terrible burden still. We should be setting the example, using our wealth to lead by example. Instead, we are only doing token gestures. It's really sad... but understandable considering the collapse of the automotive industry here... which was a large contributor to the problem.

7-09-2009 **Diesel Propaganda.** Yet another example that uses the older model Prius for comparison. The hope is to sour appeal for hybrids so much that you don't discover the 2010 Prius for awhile still. It's a reason why Toyota chose to spend a lot on advertising initially. Toyota predicted the competition would take advantage of outdated information to push a few more sales in the meantime... and they were right! It's quite frustrating witnessing supporters of the competition intentionally mislead like this. But then again, taking such desperate measures is confirmation that they fear the new model. They already see how difficult it will be to compete against.

7-09-2009 **Full Disclosure.** I've been following the actions of the blogging website dedicated to Volt since the very beginning 2.5 years ago. The insincere attitude there always rubbed me the wrong way. The most frustrating point has been the continuous misrepresentation of hybrids. Prius gets called a "parallel" type so it can be lumped into the same category as Insight. The host simply never cared that they are not the same. He just wanted to distance them from Volt, which has always been called an "electric" vehicle rather than a hybrid. Now, I know why. He also hosts a website for all-electric vehicles... the one that just 2 days ago was responsible for that surplus spin. Not disclosing explains a lot. Of course, what I found even more interesting is that the consumer-test model electric car he's driving now is only delivering 70 miles rather than the estimated 100 miles. Makes you wonder what Volt will actually deliver, eh?

7-09-2009 **Review Anger.** It's hard not to get upset when the greenwashing is so blatant. You have to wonder how poorly informed some writers think their readers are to publish such nonsense. Needless to say, I couldn't resist holding back my opinion after reading it... Talking about intentional misleading! The data is for the 2009 Prius, yet the photo is of the 2010 and there is no mention whatsoever about the improvements from that new model or even its existence. The new model offers a definite MPG increase, creating an undeniable conflict for the "cost of ownership" purpose of the document. 54.7 MPG is the summer average from my 2010 as of 3,022 miles, which is clearly higher than the 51.3 MPG summer average from my 2004.

7-10-2009 **Emerging From Bankruptcy.** GM no longer has their legacy debt to worry about. That's official today. The automaker is now privately owned with far fewer models & dealers. They don't have the retirement obligations anymore either. That should help a lot. But they still don't have anything to compete with. Their brand new hybrid, just rolled out (Yukon Denali) is yet another monster-size SUV. Plans for a 4-cylinder hybrid car, something to compete with Fusion or Prius, remain elusive. Focus on being able to pay back the loans was stated as an important objective, but we have no idea how beyond the staff & asset reductions already in progress. You get the impression that it's just a smaller version of the same automaker. What will they be doing differently now?

7-10-2009 **Driving The Corolla.** That's what we drove the family around the cities in. The family got together this evening for dinner. That was the vehicle most conveniently available. Allowing me to drive it was an opportunity to observe if any maintenance was required. So, the decision made sense. I managed just fine before dinner. But the running around afterward finally got to me. I really missed the Prius. That 2002 Corolla delivers well, for the purpose it was designed. It's a comfortable & reliable car for a fairly low price. That's why it is so popular and will continue to be for many years to come. But it can't compare to Prius. The two cars clearly each from their own class.

7-10-2009 **Still Misleading.** The comparisons to Prius, with the older model presented as if it was the new, continue. This is really getting out of hand. With all the promotion Toyota has done to emphasize the availability of the 2010, there's simply no excuse for a reviewer to publish an article that makes no mention of it. Today, it was praise for Insight... comparing it to the 48/45 MPG that Prius offers. There was absolutely nothing included to indicate a model offering 51/48 MPG existed. An improvement available? No, readers are gullible and will accept what's written without question. It's hard to believe some continue to exploit like this. Misleading like that is very frustrating. To put it bluntly, excluding vital facts is dishonest.

7-11-2009 **Forgotten Foes.** Remember their awful undermining of the past? Many of those antagonists have vanished, as if they never existed. Too think of all the trouble they caused... now just a memory. All those claims of hybrid doom have become almost comical. It's hard to believe they'd say things so absurd. Back then, they took advantage of misconceptions. So, their online banter didn't seem absurd to those poorly informed back then. But knowledge of hybrids is common now. Fear of the technology has subsided. Those foes to supporters like me have lost their audience. With so many hybrids on the road now and such concern for emissions & consumption, just dismissing them as a fad or a risk doesn't work anymore.

7-11-2009 **Green Motors.** The idea that GM will compete as a "green" automaker is now drawn out. Taking longer to deliver less is the outcome of the bankruptcy. The bold (some say, unrealistic) goals of the past are still there, but the expectation is that very little will come in the next few years. Neither Two-Mode nor Volt, both once hyped as superior technologies, will be competing in the midsize-midprice market for quite some time now. Remember all the fear last year? That outcome is a focus on survival, then loan payback. Hybrids will follow. In the meantime, the newest generation of Prius will penetrate deep into the mainstream.

7-12-2009 **Winning?** The non-constructive nature of the "trophy" mentality is becoming a real problem. Discussions are being cluttered with cheerleading for prestige rather than actually focusing on a goal. Today, it was all about "winning". I asked: What does WIN mean? Needless to say, they didn't like me asking that or saying this: With the bankruptcy reality yet to sink in entirely, I could imagine some people still thinking that it means first. WIN should represent sustained high-volume sales at a profit.

7-12-2009 **Remote A/C.** I finally had a genuine opportunity to use it. That was very exciting! It was a blazing hot day. I was given the duty of stopping at Dairy Queen to buy an ice cream cake. I placed the order. They took it in back to inscribe the message on top. I then popped outside to push the A/C button on my FOB. The Prius came to life, without me in it. That was actually freaky. The dashboard illuminated as if the vehicle was running. The cooling system started to make operational noises. No one was inside. I stepped back in. When the cake was ready, I stepped out into a cool Prius, despite the blazing hot temperature outside. Sweet!

7-13-2009 **CR-Z & Fit Hybrids.** That was the big announcement from Honda today. One is coming early next year and the other by the end of next year. 2010 is definitely staging to be enormous in terms of industry advancement attempts. With the popularity of Insight in Japan and the weak sales here in the United States, it's anyone's guess how this all plays out. Price will likely be the most important aspect, since both new hybrids will be using IMA. That system type is an ASSIST design, which hasn't competed well with FULL hybrids. A steep rise in gas prices would have a huge positive influence. We shall see. Consumer awareness of what the different types offer continues to increase at a decent rate.

7-14-2009 **$1.49 Per Gallon.** Guaranteeing that price for a year is what Hydunai is offering as a new sales promotion. Remember the days when people believed that was all the more they'd ever have to pay for gas? I certainly do. Those fighting the progress of Prius absolutely insisted we wouldn't see much higher during the lifetime of the Classic model. They were obviously wrong, very wrong. Thank goodness those days of senseless guzzling are over. This is undeniable proof that priorities have changed. Of course, hybrids are far from the norm still. But at least the push to promote those that only deliver 22 MPG is now seen as lipstick on a pig.

7-16-2009 **Nothing Left, part 1.** The downward spiral came to an end today. GM launched their own social website for Volt. That put the already struggling enthusiast blogging site in a very awkward position. The shortcomings there could easily be addressed by this new competitor for attention... especially if the information source for the enthusiasts is no longer available. They've had almost nothing to report since the bankruptcy. And now that there's a new GM, relationships to the old may not carry over. We've went from some implying & speculation to nothing but. This is why I've been writing about the site. The lack of advancement indicated an outcome like this. After 2.5 years, there is still no Tech-FAQ and most threads die after just a single day of posts. With 1.5 years left to go, that wasn't a good sign... especially with such a negative attitude toward Prius still.

7-16-2009 **Nothing Left, part 2.** This is what I posted on that site upon hearing about the new one: Sorry to be blunt, but many here don't consider Prius an ally. So, my perspective on Volt will probably just be disregarded anyway... Volt discussions had already faded away. There was basically nothing left. Talk of the pre-production model vanished with the emergence of the new GM. It makes this new approach from GM introducing a social site for the technology not much of a surprise, especially since it has changed so much. Their "*How the Volt Works*" animation provided indicates the battery empty at 36 miles and makes no reference whatsoever to MPG with the engine running. That further reinforces what some had suspected for awhile. Volt now faces a market very, very different from which it was originally conceived. Can we finally be realistic here?

7-16-2009 **Nothing Left, part 3.** Reading about the hype still makes me really curious how things will play out in the next few months for Volt. Remember, the plug-in Prius will begin to be available in small quantity (500 total) for a handful of corporate fleets around the world this Fall. The data resulting from that will position Toyota well to compete later. What the reaction will be in the meantime is anyone's guess though. Old GM was known for propaganda that rarely matched reality. Enthusiasts still follow that mindset. New GM is clearly taking a new approach. That management is quite content with nothing left from that perspective. Starting fresh with more realistic goals is the only way to survive in this new market. Hype has harsh penalties... which consumers are well aware of. But will those old-school enthusiasts ever figure that out?

7-16-2009 **Nothing Left, part 4.** Remember, the hope was always that something affordable would also be offered. That meant an electric-only range much smaller than 40 miles. After all, the system was supposedly able to deliver 50 MPG after battery-pack depletion anyway. That could make it quite competitive... especially since there are many consumers will short commutes. 40 miles is overkill. Why not offer a choice of less? Of course, now the lack of data sharing is beginning to make people wonder about the efficiency expectations. In fact, there is really nothing left of the original concept vehicle anymore. The new GM seems to be accepting that and will hopefully gather valuable consumer input from their new social sire for Volt. It's only the original enthusiasts that are providing resistance now, unwilling to acknowledge the changes. The old market they still defend doesn't exist anymore. What's wrong with the option of an affordable model?

7-16-2009 **Nothing Left, part 5.** The desired outcome of the bankruptcy is to have nothing left. Legacy obligations are eliminated as a result of the courts intervening. Basically, the business volunteers for an amputation. Now, those holdbacks of the past are gone. They have been removed from liability. This has enables the once struggling automaker to start fresh, which is exactly what GM is now positioned to do. So then, why the heck are some enthusiasts still not acknowledging the outcome? It's truly bizarre. They still must have the urge to fight even though it is no longer necessary. Of course, it could be the reality that this GM must actually deliver on promises. All their excuses to not do so are gone.

7-16-2009 **More Park Photos.** These came from another nearby park. The 2010 Prius still less than a week old at the time. It was a much enjoyed opportunity to use the digital camera some more. I discovered how much lighter the silver paint is on this model than on my 2004. It makes the over-exposure problem even worse in bright sunlight. The Prius glows in contrast to the backgrounds filled with grass & trees. Oh well. What is difficult to work with during the day is quite the opposite at night. I'll be able to some really nice low-light photos at sunset. Those are always nice. Anywho, here's what I saw... photo album 136

7-17-2009 **2010 Recognition.** The timing couldn't have been better. I got spotted by an Iconic owner yesterday. He almost over-steered while abruptly realizing what he was seeing half way through his turn. The look on his face was priceless! I wondered how long it would take for something like that to happen. The new model is still too rare for the typical consumer to recognize. But owners of the Iconic model immediately notice it's a Prius... though it's different just enough to cause the loss of attention. Curiosity coming from a chance spotting on the road can be quite compelling. After all, I had just spotted my first Smart convertible. Seeing one with the roof missing pass me caused a double-take. Did I just see what I thought I saw?

7-18-2009 ***Roof-Rack on a Solar.*** The rack manufacturer finally provided the clip sizes and space recommendations. That meant rushing out to the store and spending a few hours making adjustments. The initial assembly gets quite involved anyway. But with all the accessories already added from my Iconic Prius, adapting it fit on the 2010 would inevitably take awhile. After all, not only was I trying to avoid scratches & dents, I also had all that glass on the roof to avoid. (Tip: use a thin exercise mat for roof padding during the install.) The larger dimensions of this new model Prius meant multiple attempts before finding precisely the right distance for each component. But in the end, all that effort totally paid off. The kayak rides great on top. To my delight, efficiency didn't take all that much of a hit either. The 14-footer on top, with cockpit seal, yielded a 54.1 MPG average after 11.3 miles of suburb (up to 55 MPH) driving. How about that?

7-18-2009 **Perfect Timing.** A close friend from work still hadn't seen my 2010 Prius yet. Wouldn't you know it, my maiden voyage with a kayak on top resulted in her pulling up along side of me. That's the first time we've ever encountered each other outside of work. That was perfect timing! It now gives me a great excuse to bring up the topic at work, especially since another coworker just purchased a kayak. Seeing the hybrid doing that is a great endorsement for the practical nature of the technology. What compromises are there? This model is large, powerful, and obviously quite capable of carrying substantial cargo.

7-18-2009 **Roof-Rack Photos.** It seemed like forever waiting for the rack supplier to finally provide the clips & measurements so I could adapt the roof-rack from my 2004 Prius to fit my 2010. Of course, the weather has been disappointing anyway. Cloudy & Cool is not what you want for kayaking. Nonetheless, I still needing proof that a new model Prius with the solar-roof package could indeed support a roof-rack. Some sales were contingent upon that information. Providing photos would easily solve that dilemma... and today, that happened. Adjustments took forever, but I managed to get that done and still have enough time to go out for a drive to test the fit along with taking some photos with a scenic background (despite the overcast sky). See... photo album 137

7-19-2009 **Kayak MPG.** Taking the one kayak with the sealed cockpit up to 70 MPH was no big deal. The MPG dropped about 8 MPG compared to the suburb driving, but that's hardly a value to complain about. In fact, that's pretty darn good. The next test was to put the second on and not have either cockpit sealed. That's a huge amount of drag added. Both interiors will grab the wind and the two bodies will funnel air through a narrow opening. Needless to say, efficiency plummeted on the highway. But even then, MPG around just 40 isn't exactly bad. Most cars can't even get that at their best, yet the Prius was delivering it and its worst. And to my delight, there was less noise than with my Iconic Prius. Not sure why, but that's nice. In the end, the roof-rack performed wonderfully. Everything held in place just fine under the pressure of 50 total miles of driving.

7-20-2009 **Smaller Vue-Hybrid.** It shrunk! I couldn't believe what I was seeing. It stopped right in front of me. I turned to my friends and pointed out that the new vehicle right there was a hybrid... a shocking smaller hybrid than in the past. What the heck? I didn't realize Vue was being transformed from a SUV to an wagon. But there it was. That vehicle now looked much like a Subaru Forester rather than the Saturn Vue we had all grown accustomed to. Evidence of downsizing that blatant is the ultimate sign of change. Each model of vehicle was expected to grow over the years. It was a silly way automakers promoted change. Now the trend is reversing. Well, it's about dang time! Hopefully, they'll find a desirable size and finally just stick with it.

7-20-2009 **New Undermining.** Well, I now know what the first educational document will be for the 2010 Prius. The topic of "*driving modes*" comes up pretty much on a daily basis now, by newbies... who ask genuine questions and typically get a constructive replies. That's great, but seeing the same thing repeated over and over and over and over again will even get to those with the best of intentions after awhile. Having a document readily available helps prevent much of that. It's also helps deal with those that intentionally attempt to cause harm, better known as undermining. With the modes, they see 3 buttons and tell everyone those are the only modes available. Combining that with extreme vague comments causes a great deal of confusion, misleading those wanting to learn about Prius. It's frustrating to read that without having something to easily rebut with. Soon, we will.

7-20-2009 ***Oops!*** The positioning, angle, and length of the tower connections for the roof-rack required quite few trial & error adjustments... as well as a keen eye of what to look for. One aspect I overlooked was the new height of the metal span with respect to the foot placement. Rather than the rear sitting directly on the bend like the front, it is now lower. The fit was quite snug, even without the need to tighten the clamp much. I did regardless, like with the front. Unfortunately, that caused a dimple in the metal on both sides in the rear. Oops! Fortunately, it's subtle and I will be able to warn others about it. I guess that means my 2010 Prius is officially broken in... since I broke it. Darn! Oh well. Being so close to the solar panel, the fine distortion may not ever be noticed anyway.

7-21-2009 **Comparison Reviews.** Where to begin after reading a review that starts with this: "*Hybrids are all about fuel economy, right?*" The complete disregard for smog-related emission reduction is nothing new. But this time, the supposed journalist went way beyond that. He compared a 6-cylinder AWD hybrid SUV to a 4-cylinder FWD traditional SUV. How is that even remotely constructive? Heck, comparing two traditional SUVs so differently configured wouldn't ever been taken seriously. Why did he think he could get away with that for a hybrid? Some are getting so desperate to stall the change now taking place they are willing to say just about anything.

7-22-2009 **Insight Sighting.** I was chasing rainbows with the digital camera yesterday, at the back of a storm front that just passed through. I had already got a number of stunning photos out in a wooded development where steam was coming off of the new soaked road. So, racing through the country on the hunt for a scenic location to get a few rainbow shots was a bonus. Finishing up and turning around to see my first ever second-generation Insight right there was quite a surprise. Cool part was I identified it by seeing nothing but the headlights & grille.

7-23-2009 **Roof-Rack Close-Ups.** There are new photos showing detail of that installation needed to carry my 2 kayaks on top of the 2010. I took close-ups of each tower, so you can see exactly how & where they make contact with the vehicle metal and the clip connection to lock that all in place. There are 2 photos of a more full view of the entire rack (both sets of bars) along with 1 showing a view from above noting how I temporarily protected the glass by using an exercise mat. It only take a few minutes to connect everything, so I am very happy with the setup. But again I should point out that over-tightening will dimple the metal. Be careful. The connection is quite secure without the need to turn the adjustment screw that much. Learn from my mistake. Of course, it's almost impossible to see unless the light hits it perfectly anyway. The point is that I haven't made any sacrifice. Summer play activities will continue with this new Prius just like with my older one. See for yourself... photo album 137

7-23-2009 **Reality Updates, news.** The history of hybrids is documented here, as it happens. Looking back later on without it, you're very likely to get a different impression of what people actually thought & believed. Day by day accounts prevent that distortion. And when it comes to the ever-changing Volt saga, there's much to look back on already... with each update further confusing matters. Yesterday, it was the reality that the expectation of efficiency in generator-mode being far longer than promised 2.5 years ago. It dropped from 50 to 30. That's big news! Another update we got was the actual temperature the battery-pack will be warmed to during the winter. The range is 68 to 77 F degrees. That's another big expectation change. We all thought the operating requirement would be just above freezing (32 F). It's now much higher and will obviously require unexpected energy consumption to maintain. Needless to say, the enthusiasts are exactly pleased by these particular updates.

7-23-2009 **Reality Updates, response.** I simply couldn't resists chiming in on the Volt enthusiast blog to the recent news with this efficiency reality: GM's own promotional material disagrees. It clearly states that a direct mechanical link is more efficient than converting from motion to electricity then immediately converting the electricity back to motion. 53.9 MPG is my average as of 3,988 summer miles... which recently included 50 miles of kayak transport on the roof on my 2010 Prius. How Volt will compete with a â€œ*much more than 30 MPG*â€• in generator-mode estimate poses a huge challenge for supporters, especially now knowing that the lithium-ion battery-pack will be kept at â€œ*68 to 77 F degrees*â€• . That means the engine will run more often than many cared to admit for those of us in the north with lower than expected efficiency.

7-24-2009 **Reality Updates, winter.** The detail about the battery-pack warming requirement for Volt is that harsh reality I've been waiting for confirmation of for over 2 years. Excuses of the past suddenly don't amount to much anymore. Stopping at the local grocery store during the dead of Winter here is likely all the longer it will take for the thermal limit to be reached. The temperature dropping below 68 F degrees will happen. Running the engine to raise the temperature back up will happen. It probably won't run long. But the absolute has been broken. That ideal of "*no gas ever*" is easy to see as greenwashing now. Volt will no doubt be extremely efficient overall, but it will still use some gas. Those trying to mislead by portraying the engine as just an emergency generator will now be seen as insincere. This newest information will go a long way toward finally making discussions constructive. It's about time!

7-25-2009 **Clunker Promotion.** The government trade-in program officially began yesterday. Advertisements are all over the place. We are getting inundated by them. What kind of vehicles end up getting traded and what the consumer ends up purchasing as a result is a fascinating topic to ponder. This is an intriguing method to get rid of the some guzzlers currently on the road, one that has already proven effective in other countries. But they didn't face a problem as deeply entrenched as ours here. We guzzle a lot more and until lately we were proud of it. The spin is that there will be a backlash when consumers discover this is a stimulus for sales rather than making it easy for consumers part with a vehicle they no longer want. Whatever. The resulting purchase data will reveal the true story.

7-26-2009 **Gross!** Living on the outskirts of a metro area does have some advantages. The beautiful scenery in the background of many of my Prius photos are the direct result of that physical location. Being so close to my places of recreation is another. In fact, there's a very nice paved bike-path that keeps me entertained for hours without ever seeing the same land twice just outside my back door. Traveling south just a little bit takes me into farm country. Today, it certainly felt like it. Rather than the Prius being bombarded by an occasional bug, I drove through a massive swarm that had just fed. Within just a few seconds, there was about 150 fresh splatters. Gross!

7-27-2009 **Coupe Hybrid Rumors.** For some reason, they got intense today. With Prius now larger and more powerful, in addition to being even more efficient, the consumer appeal is obviously feeding the desire for a small hybrid. Until this generational improvement, cost made the possibility unrealistic... but not anymore! It will take many years to deliver still and the risk of "good enough" traditional alternatives over-saturating the market makes that quite a challenge. Eventually, it will happen. How long from now is the question. Electric-Only vehicles will all be very small at first. The appeal of the coupe will be a draw factor. Dramatic reduction in the size of GM combined with the change in consumer interest, this is becoming a new market to explore. The opportunities are feeding rumors.

7-28-2009 **Driving Modes.** There's new document available to help clarify the choices owners have while driving the 2010 Prius. Like the other educational materials, a lot of effort was spent on keeping the content & presentation as simple as possible. The intent is to teach about those modes, as well as dispel the new misconceptions about them that greenwashers are attempting to spread. A big problem is that people see 3 buttons and just assume there are only 3 modes. There's also an assumption that modes must be invoked manually. Needless to say, that has been taken advantage of when attempting to undermine. But antagonists will have difficulty misleading when newbies have resources like this readily available. Stealth. Do you know what that is or how it happens when driving? Take a look at the mode summaries provided in the document... Driving Modes

7-28-2009 **Still At 60.** Having seen my efficiency exceed the 50's over the weekend from just regular driving, I'm quite excited that it is still that way. If conditions don't change the remaining 3 days of the work week, it will remain that way. Reporting a value of 60 MPG being displayed at the time of fill up will be a first for me. Efficiency that high hasn't ever lasted for an entire tank. It was typically just the right set of circumstances over the course of a single day. Of course, now the effects of break-in may be apparent... especially since carrying those 2 kayak on top at 70 MPH. Stressing the system like that will loosen components. We'll see. There's lots more Summer driving to come.

7-28-2009 **Kayak Photos.** The first set of photos using the roof-rack wasn't all that flattering. With the sky gloomy, there was definitely a challenge presented. The following day was totally different. It was astonishing how conditions had improved... quite colorful. So, I put the rack back on with both kayaks this time and took off. Prius & Camera at the ready, I very excited about what the next few hours would bring. The drive itself went well. There's always a little bit of apprehension the first time going 70 MPH with such a large load on a new roof, which in this case is glass. At the first location, the white puffy clouds started to roll in. Perfect timing! I got those photos setup on a website, along with one other from another location later that day. There's more on the way too. Here's what I have so far... photo album 138

7-28-2009 **Seriously.** How are you suppose to respond to a relentless antagonist who says that? This is how I did... That word eludes. We get long-winded responses that don't actually say anything relevant to the long-term, provide any product detail, or even address consumer need & want. In other words, where is the competitively priced GM vehicle that offers significantly improved emissions & efficiency? Consumers need 40 MPG as a standard, not 30 MPG. They want 50 MPG. GM's desire to deliver Volt would be fantastic if the need & want were also being addressed. But instead, all we get is hype about an expensive plug-in that won't be produced in large volume for another 5 years.

7-29-2009 **Divided Loyalty.** That wedge among Volt support is pushing deeper. The divide is growing wider. It's getting increasingly difficult to conceal. Finally! That's a true indicator of progress. Some are finally addressing the issues. Anywho, this was the question asked today after yet another set of executive updates failed to answer it: "*So what is the MPG in generator mode?*" And my contribution to the discussion... The game being playing is how Volt is portrayed. ELECTRIC has been the theme for many enthusiasts and GM itself. They treat usage of the engine as a rare need, emphasizing the ideal of no gas at all rather than a dramatic reduction. HYBRID is how the typical consumer sees Volt, an expensive way to dramatically reduce gas consumption. Some of us would like an affordable option, where the battery-pack is much smaller. But that is totally dependent on the MPG in generator mode. Each time the question is evaded, the belief that it could actually be competitive that way fades.

7-29-2009 **Hope.** That's what all the Volt enthusiasm boils down to. The very same arguments used for Two-Mode support years back (which I am so glad I documented) are now being used for Volt. The most common is to focus entirely on the engineering. They present efficiency calculations with no regard to actual production potential. Sales don't matter. Cost doesn't matter. Their only care is to win a single-vehicle comparison. Refusal to address the business of the automaker itself clearly reveals their insincerity. The automaker must produce millions of vehicles each year at a profit. The goal is not to win a trophy, which is actually all the troublemaker is hoping for. They want an exciting victory, rather than dealing with the somewhat mundane day-to-day needs required for financial well being.

7-29-2009 **Seeing 60 MPG.** The average climbed way up, then stayed. It was amazing! You always hope to witness something like that, especially with those in states without ethanol-blended gas reporting that routinely. This week provided the opportunity for me, despite the ethanol. So, I captured the moment. It wasn't with a good digital camera, but that's better than nothing. You never know what the right conditions will occur again. Summer doesn't last long here and Winter seems to linger forever. Of course, that's what makes being in Minnesota such a great endorsement for Prius. If you can drive it trouble-free here, it will pretty much survive anywhere else just fine. (The cold season is pretty harsh on all vehicles.) Anywho, I managed to document the experience with these 6 very exciting photos on this webpage... photo album 139

7-29-2009 **Oil-Change Supplies.** Purchased them today for the 2010. That was exciting! The switch from a metal casing to just a paper insert for the filter had me quite curious. What the heck did it actually look like? For that matter, what did the new ultra-thin synthetic oil look like? These are the items and their prices: $5.15 = Cartridge & 0-Ring (Element Kit, Toyota 04152-YZZA6); $2.09 = Plug Gasket (Toyota 90430-12028); $8.63 = Filter Wrench (Toyota 00113-30359-91016); $1.14 = tax; $17.01 total for parts (Gotta like that number!); $6.27 = quart of Mobil-1 0W-20 synthetic oil; $0.43 = tax; $29.48 total for 4.4 quarts. Ultimately, that came to $46.49 for the first oil-change and $37.24 for subsequent changes. I'm thinking it will cost a little less too... since 4.4 quarts is for a complete fill to the full line, which we don't actually want. 4 quarts is probably the ideal amount.

7-30-2009 **2 Door Buttons.** It took until today for me to wonder if the bottom of the door-handle had a touch-sensor too. Sure enough, there it was. It never ceases to amaze me how long it takes even the most experienced of us to make discoveries like this. Toyota thinks through their design choices very thoroughly. I remember it taking almost an entire year with my Iconic Prius before the discoveries subsided. Just think about the cold-weather operation improvements they've hinted at which none of us have been able to experience yet. The dead of Winter 6 months from now is likely to be very exciting!

7-31-2009 **Clunker Suspension.** Sales under the new incentive program will be suspended after today. The paperwork backlog has already become enormous and it looks like the entire 250,000 vehicle allocation has already been claimed. For the draw to be so fierce, the message from consumers should be difficult to spin. Rather than worrying about the expiration 3 months from now, it only took a week. I'm sure those opposing the move away from guzzling will find some way of the portraying the clunker results as bad. After all, it wasn't too long ago that we were dealing with the previous administration who had actually promoted the purchase of guzzling hybrids.

8-01-2009 **Easier To Sell.** When Prius was still fairly new and the land was obsessed with size & power, the idea of buying one was often responded to with laughter. That later transformed to fear. Those who purchased a SUV just for the sake of daily commuting saw change coming. This week, that change became impossible to deny. People jumped at the chance of abandoning their clunker so fast, the system was overwhelmed. In a few days, we'll get a report on how well this newest Prius has been selling. That number is expected to be a large one, showing strong results in an otherwise weak market. It's exactly what's needed to keep the momentum going, making the next round of incentives not much of an effort to get approved. Consumers are aware of oil dependency and environmental concerns. They know that all automakers need to take the next step. That makes the decision for Prius easier to sell... now seeing it as a mainstream vehicle.

8-01-2009 **Real-World Data.** As more of it becomes available for the 2010 Prius, the responses to it on the unfriendly forums grow increasingly hostile. Constructive posts are long gone. Efforts to even get participants to remain on-topic are futile. They simply don't care anymore. We all knew change was coming. Perhaps this is an indication of it having arrived. Going down fighting could be the only respectable way of accepting this reality. Rather than admit that consumer priorities have changed, they prefer to enjoy the final moments as if it was still the past. Fine. Whatever. This inevitable outcome was mostly a matter of patience for the mainstream anyway. Like antagonists of the past, these will just vanish as if they never existed. Of course, some of us used that wait time to document what they attempted as resistance to this... using it to learn from history, to prevent it from repeating. Add real-world data and you've got a powerful collection of information helping the effort.

8-01-2009 **Nissan Leaf.** The long-promised electric-only vehicle from Nissan was revealed today. Details didn't include price. It was the usual hype focusing on range & power specifications. One interesting bit of information was the intent to deliver 50,000 the first year, beginning late 2010. That's rather ambitious. The industry expectation is for plug-in appeal to take awhile to build. The first year would mostly consist of the die-hard collecting & sharing real-world data to help stir interest. That sounds familiar! Price isn't as much of a concern for the die-hard, but it's a very big deal for the typical consumer. After all, we really don't have any idea what the driving & plugging habits will actually be. Remember what habit discoveries we made after the rollout of Prius began? These are issues that extend well beyond just the specifications we were provided.

8-02-2009 **Argument Conflict.** I can easily see this one backfiring in an ugly way. Since the beginning 2.5 years ago, the "superiority" of Volt to a plug-in Prius was supposedly the simplicity of the SERIES hybrid design. Well, the even simpler design of electric-only vehicles is now being argued the same way... using the very same predictions those in favor of Volt have been using. They both assume high-volume production of Li-Ion automotive-grade battery-packs will result in a cost reduction of about 75 percent in 5 years. With a price so much less, solving the "range anxiety" problem would be as simple as just making the pack bigger. Why bother with having an engine at all? Consumer response is incredibly difficult to predict. This is very much uncharted territory. Heck, we still don't know how high Prius demand will climb and it doesn't even necessitate a plug.

8-02-2009 **More 2010 Education.** The next opportunity to document has already presented itself. I had always wondered how the new owner would interpret the new Eco-Meter. It now looks like there's a bit of a misunderstanding of how to use brewing. So, I posted this to solicit feedback on the topic... The "red/power zone", based on my observations, doesn't mean it's something to avoid. Otherwise, all you'd need is just the ECO indicator symbol. The fact that it has a dynamic range displayed helps to show the overall power being consumed, since it's not all coming from an engine RPM increase. Motor contributions are welcome. After all, that's what the hybrid system is for. Put to a motto: KEEP IT BRIEF. So, it's ok to see red. Just don't over do it. Accelerate at a more-than-modest pace (brisk), then back off quickly. There's no need to baby the system. We can now observe that efficiency does come without any disruption to the normal flow of traffic.

8-02-2009 **Drive-Thru Sighting.** My very first is occurring at the very moment I type this, here at the coffee shop. There it is, a shiny new Black 2010 Prius loaded with a mom, dad, and 2 children. I wonder what they ordered. Hmm? The cold weather we've been having to endure for weeks now is finally beginning to subside. Of all the silly things though, I just looked out at my Silver 2010 Prius. It is the only vehicle here parked under the shade of a tree. That figures. It's also the only vehicle here equipped with a solar ventilation system. I parked out of the way to avoid door-dings. The benefit of shade hadn't crossed my mind. I wonder if anyone else will ever notice. I don't think they saw the other 2010 Prius. It must be the "stealth" ability.

8-03-2009 **July Sales.** The month was amazing for Prius! That's no surprise though. With all the positive buzz about the 2010 model, strong sales were expected... especially considering how long some people had been waiting for delivery. The exact amount was 19,173 for the United States. Breakdowns for each hybrid aren't available yet. The total for Toyota brand was 22,853 and Lexus 1,442 here. From GM's perspective, that's more than enough information anyway. All of their hybrid sales combined only came to 1,487 here. The once much-hyped Two-Mode is clearly a business disappointment, 21 months after production began. I'm pleased that the market for mid-size, mid-price hybrids is growing like this. That's where production should be focused, as sales of Fusion-Hybrid should hopefully confirm. Time will tell.

8-04-2009 **Fusion-Hybrid Sighting.** I immediately recognized it as a hybrid, despite not having anything to really clue me into its identity other than a "hybrid" badge in an unknown location. The area was noisy and there was lots of people around. Why amongst the sea of Fusion I suddenly wondered if this particular one was a hybrid still has me wondering. Perhaps I never bothered to look until now, knowing how few there are on the road so far. But I attempted to find that badge. Sure enough, there it was. Too bad that's all the time I had. It was gone in only a moment. Oh well. That still counts as a sighting, my first Fusion-Hybrid.

8-05-2009 **Battery Bottleneck.** Not being able to provide Prius faster is big news of the day, even on the big GM forum. So, posted this there with the hope of getting something constructive: We've seen battery shortages before; however, back then opponents tried to spin it as a reflection of demand. At least now, it's fairly easy to see that increasing supply will increase sales. Current maximum production capacity is 500,000 per year for Toyota from Panasonic. That volume will double by next summer. For Ford, Sanyo is increasing their capacity. The magic question is how GM will respond to this. For every 1 Volt GM sells there will be 100 hybrids from Toyota. What are the plans for volume & price of Volt now? Only 10,000 initially at a price close to $40,000 isn't much for competition. For that matter, neither is the mild hybrid BAS. Will there be something competitive using Two-Mode? Too little, too slowly was the complaint from the auto task-force... long before the new Prius was rolled out. How is GM planning to compete?

8-05-2009 **First Oil-Change**. Time came to find out how different this new Prius is than the older two were. The 2010 uses a filter-cartridge. That's a paper insert which goes inside a permanent reusable housing, rather than a disposable metal object. Between that and the fact that the engine is sealed behind a layer of plastic shielding left me wondering what the experience would be like... especially since I'd be taking photos every step of the way to document the process... which meant lighting & background considerations, as well as lots of hand washing. It took about 2 hours total, including photo taking and talking to the neighbors who wandered over curious what I was doing with my new hybrid. Next time, I bet it will take about 30-40 minutes. Exactly 4 quarts of 0W-20 was used. Including the new filter-wrench I bought, that puts the total cost at $43.81 for this first-time change. That means about $34.56 for subsequent changes.

8-06-2009 **Deaf Ears.** The following fit the cliché all too well. It fell like a rock, with a hard thud. I would have been better off talking to the wall. Oh well, at least all this clunker discussion provides the opportunity to vent. Before this, not much attention was given to the troublemakers. People are losing interest in guzzling. Anywho, here it is: GM does not have anything in the high-efficiency class, just cheap compacts... nothing like Fusion-Hybrid or anything even remotely close to Prius. Having nothing to offer means making excuses to sell more of the same: guzzlers. Looks like lack of product diversity is a serious financial mistake GM is planning to repeat. It all boils down to WANT verses NEED. If you have the need for a truck, buy one. Using it for the purpose it was actually designed is fine. Using a large & powerful truck for daily commuting (1 person, no cargo) is not. Better choices are available, which GM should also be offering.

8-06-2009 **Eco-Box Cars, spin.** Remember how Prius was once lumped into the same category as them? It is no longer considered an economy vehicle. Consumers have noticed how much more it offers. The days of the cheap 80's excuse for high MPG transport are gone. Technology has come to the rescue, rather than using tricks of the past. Needless to say, there are a few antagonists attempting to convince people that isn't the case. They do it by trying to slip comments like this into their long-winded explanations: "*...just because people are putting all this hype on small fuel-sipping eco-box cars...*" It's difficult to know how effective that is. But the technique of being subtle is definitely a new approach, which is a clue that the old approach of being blunt doesn't work anymore.

8-06-2009 **Eco-Box Cars, reality.** The antagonists obviously hate me. I pay close attention and point out their attempts to mislead. Here is that for this situation... Spin all you want. It's getting harder and harder to conceal the reality that "*small fuel-sipping eco-box cars*" are not necessary. Prius has proven hat the car can be much bigger and much more efficient. In other words, expecting 50 MPG from a midsize hybrid is quite realistic. The nonsense that we will be forced to accept a lot less is actually just fear of change. GM is still out of touch with consumers if they think not offering the choice is actually a "market driven" production decision.

8-07-2009 **Market Disregard, part 1.** Yesterday's news about a certain GM executive pushing guzzlers sure stirred online discussions. There were lots of excuses posted. Fighting hybrids like Prius & Fusion has become an intense effort. Fortunately, much of it is so easy to debunk you can't imagine many openly agreeing anymore... since it makes them appear quite insincere. Seeing so many Prius on the road now make the argument that people don't care for them a challenge, especially with the population of clunkers rapidly declining. Reports of real-world data from the new model will further reinforce the demand. How can GM disregard the very market that offers the greatest potential for sales? The profit from mid-size, mid-priced vehicles is low... making the focus on high-profit guzzlers is quite compelling. But when that market is contracting, such lack of diversification doesn't make sense.

8-07-2009 **Market Disregard, part 2.** Frustrated that such nonsense should ever occur anymore, I ended up posting this in response to the absurdity: Until GM delivers a "40-50 MPG no-plug mid-20's priced hybrid", they are completely disregarding a major market. Also delivering the 3.6-liter 6-cylinder crossover is fine. But if that's all we get to choose from, what kind of decision is that? A hybrid with such a large engine as their most efficient model offered shows just how out of touch GM still is. Didn't they learn about being competitive from the bankruptcy?

8-07-2009 **2010 Convergence.** There were 3 of us at the same intersection today! 2 Silver and a Red, all within just feet of each other. I had just passed another (Black) moments earlier. 4 all at once would have been truly amazing. That opportunity was missed, but still having the rest of us there was pretty cool. For any to converge like that just 2 months after rollout began is quite impressive... even better was the fact that it happened just 2 blocks from my home! I wonder how long that will take to happen again. 2010 are selling fast.

8-07-2009 **Lexus HS 250h.** The new dedicated-hybrid luxury offering from Toyota is getting lots of attention now. Not having a traditional counterpart was thought of as a shortcoming for many years. Now the situation has completely reversed. That is seen as a benefit. Of course, we'll never know if that was really just spin or if there was something to the "stand out" aspect... since Prius is now becoming such a common sight. But then again, the practical shape of a hatchback cannot be denied. Whatever the case, a 250h is the prize for The Tonight Show clunker contest. They blow up the worst of the worst clunkers and give that owner the Lexus hybrid to replace it. Good deal, eh?

8-07-2009 **$70.93 Per Barrel.** The price of oil has been steadily rising, as has the price of gas & diesel. Meanwhile, we are getting the same old guzzler demand arguments as we heard years ago. It's like they learned nothing from the $4 gas last Summer. Some still absolutely refuse to acknowledge the dependency problem we have on oil and the damage caused from its consumption. They also haven't come to terms with the amount of time & resources it takes to respond to the change in demand. Supply lags behind for years and the investment it takes to deliver is huge. Waiting is too late. We need affordable solutions available in large quantity now!

8-08-2009 **Fuel-Sipper Smackdown.** The diesel supporters are not at all pleased. In fact, they are pretty upset. A well-known automotive authority published their results of testing 5 high-mileage cars. The overwhelming "champ" of the competition was Prius, beating the Jetta TDI diesel automatic by a very wide margin. Here's the results from each MPG category... City: 48.7 - 31.6 Highway: 47.4 - 40.6 Back Roads: 47.2 - 41.2 Overall: 47.6 - 38.1 ...so needless to say, you don't need a calculator to understand that large of a difference. To the benefit of Prius, the newest generation delivers a MPG improvement even in the harshest of testing conditions. To the detriment of the diesel, the MPG was lower than in years past due to the more stringent emission regulations now. In short, non-hybrid diesel simply can't compete anymore.

8-09-2009 **Two-Mode 4-Cylinder, issues.** That topic sure got a lot of attention today. I immediately sounded off by pointing out these issues... CYLINDER-DEACTIVATION is not available with a 4-cylinder engine, which takes away an efficiency advantage of that hybrid design. ELECTRIC MOTOR SIZE is physically limited, since the entire hybrid system is designed to fit into a traditional transmission housing. SYSTEM COST is not competitive, due to the added complexity for delivery of towing-capacity beyond Class-II (3,500 pounds).

8-09-2009 **Two-Mode 4-Cylinder, strategy.** Here's what the GM spokesperson stirring the topic officially stated on the topic: "*Our GM Hybrid system - the mild hybrid, belt-alternator starter technology - is our affordable hybrid technology paired with smaller displacement engines. Our Two-Mode hybrid system is our more capable, premium hybrid technology. Itâ€™s goal is to provide significantly higher fuel economy while maintaining the capability of the non-hybrid vehicleâ€™s cargo carrying, towing, etc.*" In other words, they are sticking with 6-cylinder engines... meaning no competition with Prius or Fusion type hybrids for a very long time from GM. They have no plans to offer something in the 40-50 MPG category.

8-10-2009 **UK Demand.** Rollout of the 2010 Prius has begun in the United Kingdom. There are already 20,000 orders waiting to be filled. Hooray! Demand like that is fantastic. It's not overwhelming like Japan, but that is actually better than the United States considering the population difference. Also, don't forget that they have more efficient vehicle choices available than we do. Needless to say, the initial response is a very good sign. Of course, there are only so many battery-packs. Supply will be even tighter for us now. Oh well. That's the burden of success.

8-10-2009 **Clunker Progress.** The effort to replace old guzzlers with new more efficient vehicles has been a huge success, even approval of the additional funding from both the House & Senate. There are shortcomings. But overall, it's been wildly successful. This is the ultimate verification that change has a price. Consumers are willing to move on when the price is right. The $4 gas gave us that impression and the 2010 Prius had begun to confirm it. Now, we know. That staunch resistance of the past has faded. Yeah!

8-11-2009 **230 MPG, announced.** Today was the big announcement from GM this morning for Volt. It was an insanely popular discussion topic online. In fact, it ended up causing the dedicated enthusiast site to go down. With an (unofficial) estimated city rating like that, it makes the hype absurd. What does that value really represent? How it was truly derived is a mystery, much more complex than the already confusing measurement. Just think of the openings it leaves for competition & spin. Heck, most people can't even agree upon what "city" driving actually represents. Imagine the mess the plug will introduce. Interesting, it counters the prior promotion of Volt being an "electric" vehicle. Having a MPG estimate puts it firmly back in the "hybrid" category.

8-11-2009 **230 MPG, posted.** I could resist chiming in, though I did wait until the end of the day. Here it is... YMMV gets taken to a whole new level. The difference between expectations and real-world results will likely be extreme. Even a small margin-of-error calculates to a large quantity when the number is that big in the first place. Add to that the hard time consumers already have understanding the impact of summer & winter and the role speed plays on efficiency. Itâ€™s not going to be pretty. The current hybrids and their plug-in upgrades have already demonstrated this. The variance is confusing. Itâ€™s also far from a guarantee. What purpose does 230 MPG actually serve, rather than just saying +100 MPG? The estimated rating seems to be going in the direction of horsepower & speed, meaningless beyond what the typical consumer actually uses.

8-11-2009 **230 MPG, questioned.** The skepticism didn't take long to appear. Using a more realistic measure of efficiency in terms of kilowatt-hours per 100 miles was addressed by GM. But not much emphasis was given, probably because consumers didn't have anything to compare that value to. The price was absent from the press release, leading some to immediately call the announcement misleading. With over a year to wait before limited rollout even begins, wondering what this hype will stir is an intriguing topic. I can see those skeptical revealing it as a diversion tactic. Technology advancement like this is great and will be used in some fashion many years from now, but in the meantime we suffer. GM still has nothing to even remotely compete with. What will people buy as they wait? Being stuck with 30 MPG vehicles to choose from makes the 230 MPG bittersweet. Volt is becoming the high-performance vehicle of the 21st Century. Very few consumer will actually own one. How exactly is that helping our emission & consumption problems?

8-12-2009 **230 MPG, noticed.** The result of yesterday's "230" announcement was a noticeable jump in activity on the website. That news from GM obviously drew lots of attention for hybrids, which leads to an interesting conflict for the Volt enthusiasts. They had been pushing the "electric" vehicle mindset. Seeing a MPG value now being heavily promoted counters that, reinforcing the "hybrid" aspect instead. Consumers see the estimate and clearly know without a doubt that the vehicle will consume some gas. How will enthusiasts, who had been fighting this very idea, respond? Remember all the "*gas free*" hype? That mindset doesn't work anymore. The "save" hype doesn't either. Focus is being should be shifted to how much is actually consumed. That's a point-of-view those pushing MPG differences don't like. This is getting interesting, still 15 months away from the first Volt being delivered.

8-12-2009 **230 MPG, concealed.** Looking back at yesterday's announcement, it's becoming quite clear that this is the result of GM refusing to answer the generator efficiency question. They absolutely would not provide a MPG value for when the engine provides electricity after the battery-pack is depleted. Heck, they wouldn't even let anyone witness that mode of operation. We all knew it was lower than what Prius delivers due to the extra conversion required and figured they were just stalling. Now it looks like they did indeed find a way to delay us from finding out what it is all the way until rollout begins. Now those previous discussions have all been concealed behind this new promotion effort. Keeping focus on the 230 value will keep people from asking the obvious question: "*What MPG will I get if I drive now rather than waiting for the battery-pack to recharge?*"

8-12-2009 **230 MPG, squashed.** It didn't take long. Nissan issued a press release in response to the "230" stating the MPG equivalent of their Leaf electric-only vehicle was 367 MPG. Needless to say, those in support of Volt were not happy. Only a day into this new hype and the content has already been perverted. Isn't it great how fast the nonsense spreads online nowadays? With the greatest of ease, a new promotion effort can be squashed. I find it amusing. This is all hype anyway. Only real-world data is what consumers really want. Paying so much for a new vehicle is nothing to be taken lightly. Advertisements alone don't account for much of the decision process when information is so readily available online. Being able to discuss concerns owners online is priceless. Forums go a very long way, reinforcing that strongest aspect of debate: owner endorsement. They have firsthand experience with MPG results, well aware of the influencing factors... many of which are never mentioned in press releases.

8-14-2009 **230 MPG, argued.** The number of those defending GM's choice to promote "*230*" is dwarfed by those arguing against the move. To some, it already looks as detrimental as the now much-regretted "*Live Green, Go Yellow*" campaign. Consumers know that GM has been struggling just to survive. They are quite familiar with broken promises, the automaker haunted by a reputation for over-promising and under-delivering. So, it's nearly impossible to have a constructive discussion about product planned... especially when that future is still so distant. Volt won't be available in large quantity at a competitive price for many years and some automakers are planning to offer electric-only vehicles instead and Toyota & Ford will be offering a choice of regular hybrid or plug-in upgrade.

8-14-2009 **230 MPG, greenwashed.** Whether intent was to mislead or the person was just misinformed, his claim of having done that math for generator-mode efficiency to come to this conclusion was not meant well: "*It's about the same as a Prius.*" Several of us know the background in this situation. I responded with this: GM's own marketing material contradicts that claim. Remember their arguments in favor of Two-Mode? They clearly stated not having to convert motion to electricity then back to motion again was more efficient. Two-Mode can skip it entirely. Prius takes a maximum hit of 28 percent. Volt is always 100 percent. That is not the same. In fact, estimate put it at about 10 MPG less... hence shifting to the full tank average instead.

8-15-2009 **New Technology.** That annoying superiority complex is alive & well. There are a few who prefer a rare trophy vehicle rather than something in everyone's driveway. Today's quote for that ended with this: "*...but new technology has passed it by.*" The concept of technology maturing eludes some; they only care about what's next. I said: So what? Traditional vehicles are a joke in comparison, but that's what a major chunk of the business will be focused on for the next decade anyway. Look at how much is still being invested in 6-speed automatic transmission development. Losing the "new" label is actually a good thing. Being well established is what you want. Having a technology be considered mature is where most profit comes from. The goal is for estimates to be replaced with owner experiences, providing real-world data to confirm the product actually delivers and wasn't just hype.

8-15-2009 **230 MPG - How?** That estimate is really getting questioned now. Some are taking the time to read through the SAE recommendations & concerns and are becoming concerned themselves. The newest criteria has not been ratified yet. In fact, there are new additional categories never even acknowledged by GM's recent press release. It's easy to see why they rushed the 230 MPG value out. There's nothing binding and it's all subject to change still. Simply shortening or lengthening a distance in one of the cycles changes results significantly. Those new categories consist of a cycle at -7 C degrees (19 F) with the Heater running, a cycle at 35 C degrees (95 F) with the A/C running, and a cycle of highway-only cruising in CS (Charge-Sustaining) mode. Each will have dramatically lower efficiency estimates. SAE also pointed out the difference between the aftermarket augmentation of Prius and the factory demo model offering AER (All-Electric Range), knowing the importance of comparing both to Volt and pure electric vehicles. Long story short, belief is low that the 230 MPG will equate to much more than just marketing hype. New estimates that better reflect what a consumer can actually expect is what will end up getting approved instead.

8-16-2009 **MPG Priority.** The greenwashing around MPG numbers has been a problem since the very beginning for hybrids. The other reasons consumers purchase a vehicle get ignored & dismissed. The new "*230*" marketing campaign is making that situation worse. Who will hear my cries of reason? I have no idea, but at least I'm trying... Diminishing returns is already well proven, countless examples are available in the computer industry. 0-60 acceleration times clearly demonstrated that in the automotive industry. For many years, that 10-second ceiling was a threshold long sought after. Then when the mid-size mid-priced finally cracked it as a majority, consumer interest faded. It met the need. They saw that faster really didn't provide enough real-world benefit to justify the extra cost. MPG is the same way. We got our first deep insight into that last year with the $4 gas. This year we are witnessing consumer priority toward efficiency based on the new generation hybrids being offered. There is a threshold. Whether it is 100, 150, or 200 remains a subject of debate. But the opinions collected based on the plug-in research over the past few years indicates that "*+100*" was what drew the most interest.

8-16-2009 **For The Record.** The always different position of the antagonists makes what you say appear as though it is spin, since they are constantly presenting it in a different way. Today it was about the absolute of using no gas ever. You can't just respond saying that's unrealistic. You have to explain the situation. So, I did... GM very clearly stated they will be maintaining an operating temperature of 20Â°C (68Â°F) to 25Â°C (77Â°F) for the battery-pack, ending all doubt that the engine will be used for warm-up in the winter when a plug isn't available. Li-Ion chemistry becomes less responsive (impedance increases) below 0Â°C (32Â°F), so it makes sense to ensure performance as well as protect longevity by taking advantage of the engine for heat. Consider how long a person is willing to wait for heat in a vehicle that's been sitting outside at -15Â°C (5Â°F) all day. It isn't long. People want heat right away. That's a common event here in Minnesota. In fact, it will stay that cold for an entire week, with spurts quite a bit colder. Using a small amount of gas is a sensible choice under those conditions.

8-17-2009 **Meaningless MPG.** Do you think the "*230*" hype will fade or turn into a meaningless measure to brag about? After all, acceleration & horsepower have become like that. Thankfully, we are seeing a rather surprising death of the size obsession. Vehicles grew so large they no longer fit in garages and they were difficult to park... not to mention how painful their tanks were to fill. Now it almost looks like the opposite extreme is drawing the spotlight. But in this case, rather than actual "size" it is just an estimate which may not reflect real-world results for many owners. Those of us in the north are well aware of the drain the heater will have while sitting in slow moving snow-impaired traffic. We don't see that estimate as a realistic expectation. Makes you wonder what will be the focus on interest. Maybe a more sensible way of conveying MPG will be created. What we have now leaves much to be desired.

8-18-2009 **Accepting Change, clunkers.** Reality is crashing down for those still in support of old GM business practices. Those wanting new GM to success are taking notice of what the rest of the industry is doing. The most obvious, actually quite blatant, is the CARS program (Cash For Clunkers). 750,000 consumers have decided to turn in their old guzzlers for $4,500 used for the purchase of a new, more efficient vehicle. Ford Explorer is the most "clunked" vehicle. I'm seeing lots of old pickups waiting for the recycler. What's intriguing is the purchase choice being made. Here's the top-10 list (number 1 is first): Toyota Corolla, Honda Civic, Ford Focus, Toyota Camry, Toyota Prius, Hyundai Elantra, Ford Escape (FWD), Honda Fit, Nissan Versa, Honda CR-V (FWD). All are much vehicles once considered "too small". Change happens!

8-19-2009 **Accepting Change, claims.** Here's what I posted on the big Prius forum along with a spreadsheet and a document featuring several samples: Anyone else tired of the vague & misleading claims from the Volt enthusiasts. Now that GM is pulling the same nonsense, the time has come for us to do something about it. What I did was create a spreadsheet which allows you plug-in (pun intended!) keys values of DISTANCE-TO-WORK and CHARGE-SUSTAINING-MPG along with individual entries to represent how you drive throughout the week. In others words, all the numbers are displayed for maximum clarity. After entry is finished (the purple cells), totals automatically calculate and the graphs generate. The estimate results vary dramatically based on some rather critical values that will be far from consistent from owner to owner... as you can clearly see by playing with the spreadsheet.

8-20-2009 **Accepting Change, capacities.** The topic of price with respect to Volt & Prius became a popular topic on the big GM forum today. One member responded to the question of Volt being competitive with this: "*No, unless it can meet the Prius' price point.*" How about that as a invitation for me to join in? I did... There's a market for the high-capacity Volt, but the 16kWh battery is simply too expensive to compete directly with a hybrid using just 1.3kWh. So, it will sell but not in the same quantity. A low-capacity Volt potentially could match sales quantity. CS mode for Volt is said to deliver 50 MPG. GM should be planning to ALSO offer this configuration. T hat's Prius territory, which is proving to be a large market. There's lots of potential sales a one-size-fits-all approach doesn't address. Killer would be cool. I'd love to see another hybrid also selling worldwide at a rate of 500,000 annually in the next few years.

8-21-2009 **Accepting Change, annoyances.** The only thing the few remaining antagonists have been able to come up with at this point is to create annoyances. They are discovering that Toyota did indeed provide many refinements to the design, improvements to even the most subtle operational functions. One that immediately noticed was the cold-engine shut-off. When the engine is at minimal temperature (just barely warmed up) and you stop, the feel of the engine motion coming to a halt was sometimes quite obvious. But being at such a predictable moment, it often got dismissed (much like the shifting of gears from an automatic transmission). Anywho, with the 2010, that halt is now remarkably smooth. My guess is the smaller motor is now being used to buffer the motion, spinning the engine down rather than just allowing it to stop on its own abruptly. Without my aftermarket gauge, that process is so smooth it would often go completely unnoticed. Yet, the antagonists intensely disagreed, claiming Toyota did nothing to improve the engine stopping over the prior generation. In fact, they even claimed it is a big annoyance still. It never was in the first place. But since most readers won't ever get to verify that, they think they can get away with the misleading. Fortunately, creature-comforts are a far cry from the compromises of the past they once claimed.

8-22-2009 **Accepting Change, choices.** The absolute refusal to accept change can be amusing to observe. It's denial to the extreme. And they just keep dishing it out. This is the response to my capacity post: "*You don't think any of us believe you really think that, right? A simple search for you over at PriusChat tells different. The only reason you would like to see GM do a VOLT with a small battery is so you can directly compare it to a Prius and discredit it.*" Some people just see conspiracy where there is none. Whatever. It gave me another opportunity to chime it. And I did... ALSO offering other choices is great. Product diversity has always been a trait of successful business. But to not offer a competitive hybrid (40-50 MPG, priced in the mid-20's) is business suicide. There are tragic examples of the one-size-fits-all approach failing throughout history. How is offering a choice of capacity different from other well-accepted auto-sales practices? Engine size has been a consumer decision for decades. Claiming that Prius owners wanting Volt to be offered in more than one configuration is an attempt to undermine is paranoia. After all, that's the plan for Prius already. How could offering a choice be bad?

8-23-2009 **Accepting Change, priorities.** It has been fascinating to watch the influence of the antagonists fade. They were once the voice of the forums, they'd command a great deal of attention. However, the "*230*" campaign has ushered in change they are quite unwilling to accept. You can see there posts haven't changed. It's the same old provokes as in the past. But now, too many other members are interested in those posts, which are non-constructive. As a result, they are now participating more. That drowns out the attempts to undermine. More are becoming interested in learning about Volt and the competing hybrids. Priorities are changing. The consequences of bankruptcy seems to finally be sinking in. Hooray!

8-23-2009 **Accepting Change, contributions.** One contribution to constructive discussion was a diagram featuring distance and the resulting overall MPG. It was an excellent example of clarification for the consumer. They could easily see how distance affects efficiency overall. This was my contribution to that... Think about how long it will take to use up a tank of gas. The variation of driving throughout that entire duration could be extreme, leaving the person wondering why their MPG differs so much from tank to tank. So when they take a long drive, they want to know what to expect. Try converting consumption-rate to gallons-consumed. In other words, if the trip to Grandma's is 50 miles each way, that means somewhere around 1.2 gallons of gas will be used. If it were 25 miles further each way, that would be 2.2 gallons. See how clear the distance perspective makes it? Remember, the rest of the world uses QUANTITY/DISTANCE rather than MPG. They want to know how much gas is actually being used, not how much is being saved.

8-26-2009 **690,114 Clunkers.** That appears to be the official tally, now that the second allocation of funding is used up. The monetary total comes to $2.877 Billion. Was it worth it? Probably. Of course, this will be the first year in automotive history where there wasn't an annual clearance. Excess inventory before the start of the next model year has already been cleared out. Hopefully, that means decent profit for dealers around the country. That could prove an effective way of stimulating the economy. And based on the clunkers I saw, not having those old guzzlers on the road anymore should be good for everyone. We'll see. If nothing else, it was a boost to the speed of change. The population of vehicles on the road is clearly different than it had been. Remember what things were like just prior to $4 gas?

8-27-2009 **Two-Mode Sighting.** It finally happened. I actually spotted one in use... on the road... one person... no apparent cargo. Funny part was, there was a Prius behind me at the time and two approaching from the other direction. What are the odds? I've had it with enormous vehicles like that. Back when we kept getting the promise of smaller Two-Mode configurations to follow, it was tolerable. But now that the idea of a 4-cylinder option has been abandoned and the 6-cylinder has been postponed to over 1.5 years late, there is little reason to find an 8-cylinder hybrid delivering only 22 MPG appealing... especially when smog-related emissions aren't improved at all.

8-27-2009 **Questioning Hype, today.** That was called an attempt to discredit just a few days ago. Now, no one seems to care. The hype itself is quickly dying. So many other people are questioning the "*230*" estimate that my voice has simply become just part of a crowd. Unlike with traditional vehicles or even the hybrids, YMMV (Your Mileage May Very) takes on a whole new meaning for plug-ins. It "may" is not the case. It will. Using that plug-in spreadsheet, I entered numbers looking for patterns. What became overwhelming clear was the DTW (Distance To Work) value made a huge difference, assuming 100 other miles were driving for non-commute use weekly. You had to lower it to 10 miles to fit within the distance often quoted as "typical". I always wondered why such a strange and unusually low value of 11,390 was used. Now, I know why. If you go much above that threshold, it makes Volt look bad. 17.25 miles is when things start to look ugly, despite the fact that it represents the standard 15,000 annual miles most publications use. I don't know if pointing that out is considered discrediting, but it certainly does provide detail previously not available.

8-27-2009 **Questioning Hype, years ago.** Remember the absurd obsession with Hummer? It's hard to believe that much hyped vehicle is now dead. Anywho, the main argument in favor of it (after consumers discovered safety was compromised due to its ability to climb obstacles, including guardrails) was how well of an investment it was compared to Prius. If all you looked at was the summary, the numbers did indeed support Hummer. But when you dug into the detail, the story changed. The agency doing the study stated Hummer had a lifetime of 300,000 miles and Prius only 100,000. Outrage from such misleading resulted in yet another need to dig into detail. The revised report changed the lifetime for Prius to 109,000 miles. What kind of nonsense is that? Needless to say, the lesson learned from that was what helped dealing with this. The annual mileage is stated as an unusually low value. Now, we know what difference that makes.

8-28-2009 **32 MPG Highway.** The hype of emphasizing only highway efficiency estimates in advertisements is turning into a big problem. The new Equinox SUV delivers an impressive 32 MPG highway, which is states as "*even better than the Escape hybrid*". What they don't tell you is the city estimate. For Escape-Hybrid, it's 34 MPG. For Equinox, it's only 22 MPG. That's huge! One vehicle offers a nice balance of city & highway efficiency. The other is optimized heavily for just highway. So, regardless of engine size or even vehicle size, there's a difference consumers may not be aware of. Promotion like this is quite misleading. It's the very same thing we saw before the bankruptcy. Supposedly, things have changed. I'm not seeing that though. I'm not impressed by 32 MPG either. That's setting the expectations pretty low for the technology we now have available.

8-29-2009 **Cold Summer.** Morning temperatures in the upper-40's and evening temperatures in the upper-50's isn't my idea of enjoying Summer's end. The second half of the hot season was only warm. You can clearly see that in my real-world data. The graph shows a clear drop of a few MPG as a result of the colder-than-usual weather. Testing out my heater for the first time last night wasn't exactly something on the agenda. I don't want the cold season to start so soon. There is much data to capture still, long before the snow falls. Don't rush me! I was having a lot of fun with the kayaks & bikes... not to mention taking advantage of having a sunroof now. Oh well. The return of Spring was always an exciting event with a Prius. Of course now, with all the thermal improvements in the 2010, it probably won't be as big of a deal. We'll find out.

8-30-2009 **Advertisement Spending.** This got asked on the big Prius forum today: "*Why would Toyota spend money advertising a car for which they cannot keep up with demand?*" Newbies typically don't have enough background to realize what factors are at play. The scope is simply to large. Long-Time supporters are well aware of the situation. This was my response... The biggest reason is to get the word out about the NEW GENERATION of Prius now available. It's far too easy for that to go unnoticed, especially in a now mixed up automotive market like this. Serious investment is being made in production capacity. Advertising is an effective means of increasing demand to support it. You build a large base of satisfied owners who will later spread the word about their positive real-world experiences. Those endorsements will be what sells Prius later, as supply increases. The timing should work out nicely. We've already seen how well anticipation works, several times throughout Prius history.

8-30-2009 **Middle-Market.** It was one of those absurd debates which resulted in that term emerging as an easy identifier. They weren't being the slightest bit constructive, just a bunch of die-hard old GM enthusiasts redirecting attention to their favor. This was my favorite quote: "*Toyota has nothing to compete with the Volt, Silverado, Camaro, Corvette ZR1, the list could go on.*" None of those vehicles are for the typical consumer. You know, the kind that would purchase a Camry or Corolla. Offering a product appealing to those wanting a mid-size & mid-price vehicle is very important. That's where a bulk of the sales come from. It's a source of profit which shouldn't be disregarded. Yet, the online debates don't focus on them. Those aren't vehicles which stand out. Since so many people own one, they don't draw much attention. Enthusiasts thrive on the extremes. The last thing they have interest in is that the market in the middle.

8-30-2009 **Horsepower Craze.** Remember how ridiculous it got? The result now is a loss of perception. Some have no idea what's realistic anymore. But they want to defend certain automakers move toward fuel-efficiency. Unfortunately, the move away from horsepower apparently means disregarding it entirely. I particularly got a kick out of the MPG claims this evening. No one had taken engine & weight into consideration. Curiosity compelled me to check out the acceleration times. The high MPG vehicles among the slowest, just like many years ago. Only now, Prius is much faster. Not wanting to really get into that argument again. I did some searches for horsepower values instead. It's nice to have a random sampling readily available. These are the values I found for base models: 170 Jetta, 169 Camry, 169 Aura, 155 Cobalt, 148 Mazda3, 140 Sentra, 140 Focus, 140 Civic, 138 Elantra, 134 Prius, 132 Corolla, 128 Scion xD, 118 Mini, 108 Aveo, 106 Yaris, 70 Smart.

9-01-2009 **August Sales.** The wait for these hybrid numbers came with much anticipation. There was finally a small sampling of real-world data available for those undecided about the 2010 Prius. And of course, the craziness behind the clunker money should have help with sales too. Results were an interesting mix. Prius did fantastic at 18,886 for the month. Fusion did well with 2,353. But that 239 more sold than Camry (2,114) sure was spun to sound much better. Insight was at 4,226. That makes it a hit compared to Civic at 717, but definitely not the runaway hit Honda had been hoping for. GM is still struggling with Two-Mode hybrids seeing only 222 for Tahoe, 214 for Escalade, 165 for Silverado, 126 for Yukon, and 61 for Sierra. The BAS hybrids are doing a little better with Malibu at 441, Vue at 414, and Aura at 65. But considering all the hype lately, that's not much. The other well-known Ford & Toyota hybrid midsize SUVs saw sales of 1,752 for 450h, 1,711 for Escape, and 836 for Highlander. The only less-known hybrid to grab any attention was Nissan's Altima, which did pretty well at 3,164. The Mercury variations were 391 for Mariner and 240 for Milan. The Lexus HS250 was new, which there were 543 purchased. Results were interesting, but it's next month that should help indicate what's to come. August was quite unique. We'll likely never see such odd circumstances ever again.

9-02-2009 **The Real Problem.** Sometimes a quote and a response just speaks for themselves: "*What happens when high gas prices or government handouts go away? Americans buy what they want. And it's usually not compact cars but powerful family sedans and sport-utility vehicles. That presents a problem for automakers.*" The want for high-efficiency family sedans and sport-utility vehicles has always been there. Last year's $4 just turned the want into a need. The real problem is automakers not embracing that reality. It's far less expensive for them to just increase production of very small cars than to embrace new technology. Middle market has been neglected. The shift to smaller cars is rather blatant evidence that consumers are ready for change. Serious automaker commitment (a large chunk of production) must finally be made. Consumers can't buy what isn't available.

9-03-2009 **Top-Selling Status.** Prius has been at the top in Japan for 4 months now. Last month's there were 21,669 sold there. The government incentives available are giving the new model quite a kick start. It takes awhile for enough sales to occur before you start spotting them on the road routinely... which is the ultimate endorsement. Enthusiasts can hype all they want. Antagonists can gripe all they want. The automaker can inundate with advertisements. There's still nothing as effective as just seeing them on a regular basis as you drive. With a top-selling status, that means it will become a reality sooner than usual. Hooray!

9-04-2009 **2004 Passenger.** I was one today. The instrument cluster, especially from that angle, looked tiny in comparison. I didn't realized how accustom I had become to the 2010 until that very moment. That experience was exactly like being a passenger in a Classic after getting my Iconic model. The thought of the difference being so big is quite unexpected. I guess the natural placement of the new MID and the wide arrangement of information for the "*just drive it*" experience made me forget how profound the Iconic design was way back in 2003. Toyota sure did their homework. When it takes us months to make discoveries, that's proof how much study it requires to find an interface so intuitive without being too distracting. There is definitely a balance. Find that with respect to everyday driving needs is a challenge... and it sure looks like they did well. I'm even surprised. Kudos.

9-04-2009 **Oil-Change Interval.** An interesting new rumor started today. It seems to have a bit of credibility to it too. The source is a bit of a mystery, but scope isn't. It appears as though a few new vehicles from Toyota which use 0W-20 synthetic oil will have there change interval increased to every 10,000 miles after the initial 5,000 mile change. That's pretty cool. I wondered how long the trial would last. It makes sense than an automaker wouldn't push it with a new oil weight and a cartridge instead of a filter. Oil-Change places have a hard enough time following instructions for the old-school changes. But my findings after 8,000 miles with 5W-30 were quite supportive of even longer intervals. After all, for the 2010 Prius, engine strain is even less than the previous models. That means my next change won't be until the dead of winter. Good thing I took photos of the first change; otherwise, new owners would be waiting a heck of a long time.

9-04-2009 **HS250h.** It looked really nice. Of course, after seeing Conan O'Brien blow up the nastiest clunker in the country, anything would have looked good. But the fact that the new Lexus hybrid, which has no traditional counterpart, was the prize for that clunker contest proved to be quite the incentive. The one they found was hideous. Watching it go up in flames was great! It's about time embracing new technology gets that much attention. The awful obsession with size & power is still quite an embarrassing chapter in our history. Moving away from that as quickly as possible sounds good to me.

9-04-2009 **Focus Change.** It's fairly common for a supporter to have their credibility attacked when a debate swings heavily in their favor. Shot the messenger when you don't like the message. That change of focus often works. But it's quite temporary and the damage from that desperation can last a very long time. Words from the head of Audi yesterday fit that situation quite well. Volt supporters were called "*idiots*". I didn't like that at all. Broad stereotyping is terrible. You shouldn't dump a large group so carelessly into a category like that. Being specific, on the other hand... I had a fantastic example present itself this evening. I couldn't believe it. A minivan pulls up along side of me. It caught my attention because all the interior lights were on and it was quite dark outside. When I looked over, the guy was leaning over to pick up a big mug, an easy task when you aren't wearing a seat belt, which he wasn't. What else he was also doing amazed me. The big mug was in one hand. The other hand was holding a cell-phone to his face while also holding a lit cigarette! That's drinking, smoking, talking, and not wearing a belt... all while trying to drive with distracting lights on. I feel pretty darn comfortable calling that specific individual an "*idiot*". But I'm not going to label others so generically. In fact, I do my best not to interject anything which could change focus in forum message posts. Here, I comment about observations and emerging trends.

9-05-2009 **Name Calling.** It's quite astonishing how rapidly the new label of "*idiot*" has swept the internet. That's the insult of choice now, leaving "*smug*" just a bit of interesting historical trivia. With nothing to discuss except vehicles not intended for high-volume production for many, many years still, it makes sense that discussions have degraded this far. The reality of bankruptcy is sinking in. The emerging market is very different. Change is absolutely undeniable. The days of careful indulgence are over. Some don't want to let go of that past. Some feel lost & uncertain. Some feel let down. The next few years are going to be rough, and they know it. The same difficult recovery, just like in the 70's, is facing the domestic automakers again. Name calling is evidence that the upcoming products themselves leave much to be desired. In other words, everyone knows there's a lot of waiting required and little to do in the meantime... except watch Prius dominate the new technology market.

9-05-2009 **Your Thoughts.** The days of a universal "attack the outsider" mentality are long gone. It's actually quite bizarre how some former foes now agree with me. Heck, they even acknowledge the irony. They are doing their best to accept change. Fighting the inevitable was always absurd, but was was easy with the crowd chanting to do it anyway. They've grown silent though. Things are very different now... except my message. I just keep repeating the same thing over and over again. And to my delight, there's far less resistance. When asked this "*So what do you think?*" on a GM forum discussing Volt, as I was today, the response was: The one-size-fits-all approach for Volt is the problem. With the efficiency of CS mode at 50 MPG, it simply doesn't make any sense to not offer consumers a choice of battery capacity. That would lower the price quite a bit, appealing to a much wider market. 16 kWh means low-volume production & sales for many, many years to come. Why not offer a second model?

9-08-2009 **Ramps.** I bought a new set 2 weeks ago and have been very excited about trying them out, despite the effort required to clean up the garage to the extreme that I could publish photos of. My old set was from the early 90's, rusted and too tall for the Prius to fit under. These are plastic and low-profile. For $35.99, why not? I finally got to try them today. They worked great. The next oil change will be nice, especially since the photos turned out really nice. It's all documented now. I'm sure glad I got that done already too, since there is now an unconfirmed rumor that the change interval could be extended. Anywho, you can see what I saw in the downloadable document... Changing Oil

9-09-2009 **Plug-In Prius.** Good news on my 9th Anniversary, cool! It was exactly 9 years ago today that I bought my first Prius. Shortly following, I made the comment about many years from now I'd be celebrating this particular day: 09-09-09. Who knew it would just happen to be precisely when Toyota made a special announcement. The plug-in model of Prius will be almost exactly like the 2010 which I'm driving now. The main difference, besides the plug itself, will be a high-output lithium-ion battery... which apparently fits perfectly into the existing location for the nickel-metal hydride battery. Higher energy density without a compromise of weight or packaging is great for keeping price down. Taking advantage of the existing production will really help. Toyota is clearly positioning this upgrade as an affordable option, rather than anything profoundly different. Consumers will see the price for it and the MPG boost provided, then make the purchase decision. With the 2010 already well established, that's a nice design benefit... eventually. Fleet rollout (500 worldwide) starts in the next month or two. Consumers rollout isn't expected until 2012.

9-10-2009 **Purpose Reminder.** Sometimes you have to provide a friendly reminder of the plug-in purpose for Prius, despite the fact that there's an antagonist intentionally attempting to undermine. The problem is that newbies usually have no clue someone would intentionally mislead. This was such a response: Don't forget that the purpose is to BOOST the overall efficiency. Any time the system is consuming electricity provided by a plug, there is a benefit. So, the mindset of "range" doesn't play into the big picture as much as the resulting higher MPG. With this approach, large volumes can be produced & sold and every owner will see an improvement in some fashion over the lower-capacity non-plug model. What I personally like about this is the targeting of middle-market. Affordability was given a very high priority. After all, not everyone has a long commute. And for me, all my shopping needs are within just a few miles from my home.

9-10-2009 **GM To Sell Opel.** It's official. The word today was that Magna of Canada and Sberbank of Russia will be purchasing the European division of GM, called Opel. That would appear to end & delay some of the plans for Volt here. The sale of Saturn caused problems for next Two-Mode debut. This will have some influence, especially since their much touted Opel version of Volt won't be produced. Ultimately, the smaller GM should be able to cope with change easier. But the giant we once knew is vanishing. Selling off this many assets is something supporters never envisioned. Much of the development of small & midsize GM cars took place through Opel, in Germany. Losing that resource could turn out to be quite a loss. The effects of bankruptcy are slowly beginning to emerge.

9-11-2009 **Cost Computing.** It was amazing to see how many who had heard about the upcoming plug-in Prius and just approximated the cost by adding the price of the upgrade battery-pack to the base model. What kind of computation approach is that? Pretty much everyone forgot to subtract the cost of the battery-pack already there. Sadly, I'm sure there were a few who did it intentionally. Whatever the case, high-volume is the key. Toyota (as would any automaker) wants to draw in new consumers. Those who would have settled for a 35 MPG traditional vehicle, not just the consumers who would have purchased a Prius anyway, are the target. That adds even more importance to keeping the price low. The decade-long goal of offering a hybrid option for every model builds upon efforts like this. Cost is a major factor. I'll sure be glad when computing it won't be necessary, when real-world examples are readily available. Until then, we have to put up with the forgetful, those who mislead, and lots of assumptions.

9-11-2009 **Auris-Hybrid.** We got details ahead of next week's announcement. This is a European hybrid Toyota is planning. It will be produced locally (in the UK), specifically for Europe. Auris is their equivalent to our Corolla. The specific model is a 5-door configuration. We call that a wagon here, since the back door nearly vertical. There, they don't distinguish between that and the nearly horizontal type like Prius here. Whatever the case, the hybrid system itself is expected to be the same as the 2010 Prius. The internal layout is intriguing. Rather than the new MID display near the windshield and a digital speedometer, it has the Iconic style Multi-Display and a traditional speedometer. What I especially liked about the official press release was frequently the new vehicle was referred to as a "*FULL*" hybrid. That term is definitely catching on, now that the choices of hybrid have become so diverse. I really like the idea of Europe getting a model of hybrid styled for their own particular appeal. That really opens up the opportunity for an exciting small hybrid from Toyota here. The problem has always been finding something for this very picking market. Body flexibility is a big plus.

9-12-2009 **On-Going Announcements.** There's been a steady flow of announcements for upcoming "electric" vehicles. The variety of configurations is extreme. Some are electric-only with substantial range (for a substantial price). Others are some type of hybrid with plug option. None are easy to understand. Just like with the computer industry, the measure of "better" is no longer based on simple factors. Remember when the processor speed was a good indication of overall computer performance? There's literally nothing to base quick comparisons on anymore for anything coming from the automotive industry. I'm hoping it will ultimately boil down to battery kWh and motor kW. Those components tend to tell the story of how the vehicle will operate. Unfortunately, most of the announcements lately tend to gloss over those points. All we are getting is basic "*something good is coming in the next 2-3 years*" type articles. Oh well. Every little bit helps to change the overall market mindset.

9-12-2009 **The CS question.** This was asked about again today, in a list of unknowns GM refuses to provide any detail for "*MPG when operated on gasoline.*" It was on the big Prius forum, of course. On the GM sites, they considering that question an attempt to discredit. I chimed in with: It's been a month since the "230 MPG" announcement and well over a year since some of us starting begging for the answer to that question. After all that time, the MPG during CS mode (Charge Sustaining) remains a complete mystery. GM simply does not what to tell us. Why? It would indeed make matters easier. After all, the decision whether to keep driving or run errands later focus will on that MPG value, not the overall efficiency. B ut then again, purchase decision is overall based.

9-12-2009 **Choice.** Any mention of Volt with a battery-capacity less than that of the "40-mile" configuration is considered a hostile threat now, a suggestion with only the purpose of discrediting. Paranoid is an understatement. But considering the bankruptcy pressure and the attention other upcoming vehicles are getting, that's understandable... but still quite inappropriate. I find it absurd that a choice won't be offered. The approach of one-size-fits-all isn't a good business practice, but to sacrifice affordable so blatantly is self-defeating. Anywho, it doesn't take a rocket-scientist to notice that the computer industry didn't force such limitations. I pointed that out too: Consider the evolution of computers and handheld devices. Our market is already quite accustom to progressive improvements. The next model being an upgrade is an expectation. Heck, we even welcome the choice of storage capacity sizes. Your worried feeling and resulting actions are clearly unnecessary. In fact, the one-size-fits-all approach is pretty much doomed. History is loaded with failure examples based on not being given a choice.

9-13-2009 **Counting Prius.** I see several Iconic models every time I drive. They are quite abundant. Counting that many would be pointless. 2010 on the other hand, that's a big deal. I saw 2 on the drive to the grocery store yesterday. Those are rare still... no where near as rare as Insight though, which I have only seen twice ever. Anywho, the second 2010 sighting was quite amusing. I had the roof open and took advantage of the opportunity to wave through it, as I made a left turn in front of a full 2010. Several of the people inside cheerfully waved backed. That was quite exciting! Of course, last weekend was hysterical. The other 2010 driver was turning and the sudden sight of mine caught him totally off guard. Being in rural Minnesota at the time, we were probably the only 2 for quite some distance. So, you could imagine the expression on his face, realizing he only had that very brief moment to exchange a greeting. But as fun as though sightings are, I look forward to the time when this new model becomes common too.

9-13-2009 **80's Flashback.** A bunch of "*economy*" vehicles are on the way. Several automakers have announced intentions to deliver models that deliver much higher MPG by means of size & power reduction. Remember when that happened in the 80's? Fortunately, it is somewhat different now. The existence of Prius certainly puts a new twist on this old methods of meeting efficiency needs. One of those upcoming vehicles is Chevy Spark. Its larger 1.2 liter engine accelerates from 0 to 100 km/h in 12.4 seconds. The smaller 1.0 liter engine power is unknown, but we can safely assume it's at least a second slower. That translates to a 0-60 MPH of about13.5 seconds. This market won't be too tolerant of that. Heck, some here even consider 10 seconds a compromise. So between the power downgrade and the subcompact size, it doesn't take much imagination to see sales being a challenge in this market. That could make it a terrible choice vehicle to offer a EV model of. Yet, that is exactly what's being considered. Odds are that it may never happen here. The market in India is getting attention for this first. Whatever the case, these changes in the auto industry certainly are not what was being considered just a few years ago. It's amazing the influence $4 gas and a few bankruptcies can have.

9-13-2009 **Shade Storage.** The almost non-existent hump on the floor in back passenger area sure is nice. Between that and the natural void created from the seat, the roll-up shade for the hatch almost completely disappears. It's the ideal place to store it. I wonder if that convenience was intentional or just a lucky coincidence for the 2010. With my Iconic model, that wasn't possible. So, I had to be careful with it when loading the car heavily with cargo & people. It's refinements like this that often go unnoticed... unless you take the time to think about it. Unfortunately, that typically doesn't happen until years into ownership. Stuff like this never crosses the mind of someone researching a purchase. Fortunately, the active online owners do try to point it out though.

9-14-2009 **Stripes.** I don't even think I've seen a Prius with large lateral stripes. You know, the kind found on racing cars. That's what "Herbie" had too. Anywho, I saw two recently... one yesterday and one today. What are the odds? The first was a Classic Prius and the other the Iconic. Too bad I wasn't able to get photos. Both actually looked pretty good. That's something I would have never thought of. But I suppose when you are looking for ideas to make an older vehicle stand out still, that could do it. Of course, the size and color you choose makes a big difference... not too obvious or not too subtle. There's a happy balance with the vehicle's color that both seemed to find.

9-14-2009 **Worried.** It's intriguing reading about how worried a certain Volt enthusiast is about how a smaller-capacity battery could destroy the plug-in market. He doesn't believe it will simply draw sales away or prolong widespread acceptance. He is honestly worried... to the point of it mutating into an irrational fear... you know, where everything less must be fought against with no regard to any reasoning. It's making constructive posts impossible. There is no consideration of market need. Traditional vehicle production is totally ignored. The only consideration of competition comes from other hybrids considering a plug option. I foresee a collapse of discussion. Nothing constructive can come from such doggedness. I suppose that's just another reaction possibility to change. At least being worried means that the underlying problem of oil dependency & consumption is being acknowledged.

9-14-2009 **60-Day Guarantee.** I'm not sure what to make of this. Supposedly, you can now purchase a GM vehicle and return it for a refund if you are dissatisfied within the first 60 days. This is definitely something where the devil is in the details. My guess is they'll have to finance through the dealer and will not be eligible certain other promotions. That could make a trade-in situation extremely difficult too. You may be obligated to purchase something else instead. No one really knows. This has never really been done before. Online discussions give that sense of unknown as well. We aren't sure what to think or have any idea how consumers will react. Whatever the case, the outcome is thought to be short-term. Who knows. At least we can give GM credit for trying. The circumstances of their bankruptcy point out a number of interesting problems... some of which they are still struggling to overcome. I guess we'll find out in about 60 days how this is working out.

9-14-2009 **Li-Ion.** It's coming. Cost is still a problem. Yield & Quality are improving though. We heard from Toyota that their testing didn't reveal much benefit for the non-plug model of Prius, so they'll be sticking with NiMH for that. For the plug-in model, that's different. The greater energy-density does indeed justify taking this next step in automotive electrification. I'm pleased so much can be done with the stock configuration. By just adapting the Prius in high-volume production, cost can be kept lower. Using a considerably smaller capacity than the most direct competition (about 5 kWh instead of 16) will help a lot too. In fact, I probably already sound like a broken record repeating the importance of affordability so often. But to achieve that ultimate balance between consumer & business need, it makes sense... especially considering the reduced risk. It's an easy step that can quickly lead to wide market acceptance.

9-15-2009 **HS Commercials.** The new Lexus hybrid sure has been getting lots of exposure lately. I'm seeing a surprising number of television commercials for it now. Being the first dedicated hybrid-only luxury vehicle makes it quite unique, and that is a rather effective way to get the word out about it. The catch is, the content of the promotion itself. Toyota's advertising focuses on the advanced technology features... which just happen to be the very same options available on the model "V" version of Prius. Getting to see & hear about them presented as luxury items really reinforces the reality that Prius is offered in a wide array of configurations. It makes you wonder how long it will take for stuff like collision-avoidance and dynamic-cruise will take to catch. For that matter, what about the "EV" button? Whatever the case, I'm enjoying the HS commercials. They are a dramatic departure from the horrible Hummer nonsense we were forced to endure.

9-15-2009 **Nicely Under $30,000.** Remember that comment from 2 years ago? A certain GM executive made it, now everyone who supported the idea is haunted by it. The announcement of an upcoming plug-in Prius with a moderate upgrade capacity actually meets that price-point. Using a lithium battery in place of the current one, changing the side panel, adding a few wires, and updating software isn't a big deal, especially since Prius is now mainstream. The much larger battery for Volt in a niche vehicle is a big deal though. A survey sent to key people today clearly confirmed that. The target price listed was between $32,000 and $38,000 after the tax-credit. The message forum discussions saw from this was a concern about that price and worry about what perception will be on it when the tax-credit ends. The competition is giving price a much higher priority.

9-15-2009 **Capacity Growth.** The well-proven business practice of capacity growth over time has been ignored by GM marketing. Volt has been portrayed as meeting the "*40-mile range need*" without regard to price. Imagine how unpopular a computer or handheld device would be with that approach. Rather than targeting a price that will result in a large sales quantity, a premium configuration is the only model being planned. Not even getting a choice of large or small doesn't make sense. One size most definitely does not fit all for those electronics, why would it for vehicles? After all, vehicles have been offered with more than one engine size for decades. Heck, try to find a popular vehicle that doesn't give you a choice. We've seen how well accepted the capacity options for music/video players have been. Different consumers have different needs & wants. And the move to larger for the manufacturer is a matter of shifting up models, making the larger now the price the smaller had been. Then each larger next generation model offers greater capacity for a similar price as the previous. Why can't a plug-in hybrid be like that too?

9-16-2009 **Superiority.** The discussions have turned into pointless arguments. I stress the MARKET need and the troublemaker (an antagonist undermining a Prius thread) posts about ENGINEERING superiority claims for Volt. We all know that for enough money, great technology is available. But being the "best" only earns you a trophy, not a paycheck. We need a vehicle that can be produced & sold in large quantities. This particular individual doesn't care though, he simply wants bragging rights. Ironically, this is the very same "*smug*" attitude he made fun of years ago. Now, he himself is guilty of acting that way. Why? Superiority is a terrible way of running a business. There is no balance when cost is dismissed. A vehicle which costs $40,000 is clearly too expensive for middle-market.

9-17-2009 **7th Coldest Summer.** I figured this one was heading for the record books. Sure enough, this Summer was the seventh coldest in the history for Minnesota. Barely getting any opportunity to enjoy kayaking was quite frustrating. Not seeing the effects of the solar-panel in an extreme was disappointing. Though, I can report that it was nice during moderate conditions, in other words the low 80's. Higher temperatures simply never materialized. It was a warm season with clear mornings and afternoons that were almost always overcast. What a pain. Of course, it should make the MPG statistics for my 2010 rather interesting if the Winter is on the warm side. Though, I would have rather had higher MPG from a warmer Summer. Oh well. Cold hopefully won't be the trend next year. My first Winter with a Prius was abnormally cold too. The next was much better. If nothing else, it is good for variety.

9-18-2009 **Marketshare.** The latest spin is rather thought provoking. Prius sales are now being portrayed as flat, no growth despite the 2010 model. That's fascinating. The desperation makes antagonist nonsense increasingly clever, yet still shallow and easy to disprove. In this case, the overall market has contracted dramatically. Sales from all automakers are dramatically less than we've seen for a very long time. Yet, Prius remained unaffected. Stable numbers actually translate to growth. What was once a modest number is now enough to put it in the top-10 list. Of course, continuing to maintain that rate will break the pattern, since the year-to-date total is smaller than what the year-end total will come to. The key to spin is to disregard the big picture and be vague. People like me easily avoid that, by stating the actual quantities. 180,000 is the target. That's a lot, nowadays. Ever better is that the current pace puts projections in the neighborhood of 225,000 overall for the first 12 months. Cool, eh?

9-19-2009 **$30,000 Again.** It's getting ugly. The importance of delivering new technology intended for a wide market under that particular price is really starting to become apparent. The diversity of upcoming vehicle announcements is very much putting that priority on the forefront. As word expands of exotic designs, the asking of "*So, what does this mean to me?*" happens more and more. There's a feeling of pre-disenchantment, where the new concept vehicle is immediately getting dismissed as unrealistic for middle-market. Remember how many once proclaimed they'd get fuel-cell rather than a hybrid? Well, now reality is crashing down. Promises from automakers are no longer taken at face value anymore. Consumers have been let down too many times now. This is a definitive sign that the market has learned, their awareness has grown. They are beginning to set expectations. Price is among the highest. $30,000 is that threshold emerging.

9-19-2009 ***Passing Power.*** It was my very first genuine opportunity to exploit that power increase the 2010 Prius delivers. On a long, narrow, country highway during the middle of a weekend afternoon, there were about 10 of us stacked up behind a small car only doing 39 MPH. The driver was either totally oblivious to all the traffic that had built up behind or simply didn't care. I did. My chance to drop the pedal to the floor had finally arrived. I pressed the PWR button, flipped on my high-beams for maximum visibility, then hit it. Nothing. There was no roar. There was no surge. The reason for a large digital speedometer became abundantly clear. There was no abrupt sound or feel change, yet the car was already going 71 MPH before the pass was even complete. It was sweet! That's the kind of response luxury vehicle owners pay a great deal for. Prius owners get it as a side-effect of significantly improved efficiency & emissions.

9-20-2009 **Superior Driving Experience.** One of the well known antagonists has been pushing the appeal of electric-only propulsion as superior, claiming consumers will be more than happy to pay a large premium for it. I responded by pointing out how delivering significant efficiency & emission improvement for only a small premium is what consumers have been asking for, not that. I summarized by pointing out how they are looking for a Malibu, not a Camaro. That provoked him to push the "*superior driving experience*" argument even further. He fiercely defends Volt, absolutely refusing to address the idea of offering the choice of a smaller battery capacity. I pushed back again, even harder with this... To be absolutely clear, why do you think CS mode (generating electricity on-the-fly from the engine) will deliver a different feel from drawing electricity directly from the battery? The same electric motor will be used to provide propulsion regardless of where the power for it comes from.

9-20-2009 **Ironic Timing.** The irony of my "passing power" experience yesterday, then the "superior driving" experience argument today is not lost upon me. For verification & validation & vindication to come so soon is something not to be taken lightly. I find such amazingly timed coincidences rather refreshing. In fact, that is where the term "happenstance" comes from... when you take advantage of those situations. In this case, I'm using it to reveal weakness in the approach to Volt. Ultimately, there is some good in the design. But the market currently being pursued doesn't actually fulfill the need. It's the difference between evolution & revolution. The computer industry has many examples of how to effectively deal with resistance to change. Certain automotive supporters refuse to acknowledge that parallel and the repeat of history now taking place within Detroit. Maybe that's the basis for ironic situations. Rather than make efforts to prevent, they take their chances and allow the consequences to play out.

9-20-2009 **Responding to Paranoia.** Nothing productive came from that particular person the rest of the day. His fear made his reasoning vague and off-topic. I hadn't realized it was paranoia that I was dealing with. No wonder logic wasn't working. Normally, there's at least a minor effort to address market need. But in this case, the defense of Volt was purely from an engineering perspective with no regard to consumer or business. The superior argument got more intense, placing both cost & time extremely low on the priority list. Concern for middle-market was totally absent. That lack of care made the decision of how to respond to those posts simple, just keep asking questions. I started with these... "*How much per-year consumption? What should the target price be? How many will be produced per-year?*" ...then after those were totally ignored. followed with these... "*Price to purchase? Price to operate? How many will be available*?" Needless to say, I expect those to fall on deaf ears to. When you're paranoid, it's easy to believe everyone's working against you.

9-21-2009 **$529 Million.** More government money is being used to help stimulate the new market. Today, it is Fisker Automotive getting a $529 Million loan. Tesla Motors recently got a loan too, $465 Million. Both are obligated to deliver all-electric vehicles with that money. What I got a kick out of is how the news of this from Minneapolis stated the number of jobs (5,000) this should help save, the approximate amount of gas that could be saved (821 million), and the amount of CO2 emissions that could be prevented (8 million tons). That's reasonable, right? Fox News, on the other hand, spun it entirely as being politically motivated. I wonder if bias like this is going to become more of a problem as pressure to produce grows. Consumers are beginning to expect innovation. Patience can only be stretched so far. If the big automakers don't deliver, why not seek out the small ones?

9-22-2009 **Electric Ford Focus.** Seeing it being used in an obstacle course on the new Jay Leno show sure was interesting. No attention whatsoever was paid to the fact that this electric vehicle made no sound. It was the ultimate demonstration of how an EV can be beneficial to the driver, allowing them to hear their surroundings better. Each person who drove this prototype spoke out the window while driving as if it was no big deal... something totally impossible with a traditional vehicle. The engine simply drowns out subtle sounds like that. It's really too bad the legislation being pushed through Congress now doesn't properly address this. Rather than focus on the driver, some want to put responsibility totally on the pedestrian. How loud will the artificial sound coming from EVs and plug-in hybrids have to be to overcome what the inattentive person listening to music or a phone have to be? Children at play run out in front of trucks anyway, so I don't see how that would help them anyway. But a driver would hear them from a silent vehicle. Arrgh.

9-22-2009 **Iconic & Classic Sightings.** How odd. I stop at the mall and the spot up front just happens to be right next to an older model Silver Iconic Prius, just like I had. That certainly brought back interesting memories... but not as much as what the next sighting stirred. Again, up front where I stopped to shop, there was a spot available next to a Green Classic Prius. This time though, I just happen to walk out right behind the owner. We ended up chatting briefly. She bought it way back then and had been driving it ever since. It was her baby and she simply was not interested in upgrading. It's the kind of bond I could have easily developed if it wasn't for the crusade I chose to fight in the name of cleaner emissions and much better efficiency for the masses. That was fun looking back like that, usually it's my 2010 that's the vehicle of attention. Of course, someday I'll reminisce about this one too.

9-24-2009 **Wounded & Frightened.** 5 days later, it seemed just like the reaction of a wounded & frighten animal. His responses seemed to represent GM as a whole. The past is lost and nothing will ever been the same. He screamed in a fit of extreme over-reaction, using the all upper-case letters in bold with the largest font available he posted "*get out, now!*" in a message stated I was clearly not welcome. Needless to say, when a top-poster does that, the entire thread disappears from existence. It was as if it none of that ever happened. Of course, I remember. He pretends something like that could never occur. I remember though, and I'll point out the thread's focus... it was a passionate debate about what to do for Corvette... but nothing even remotely heated as his out-of-the-blue response when Two-Mode was mentioned. No wonder the intense defending of Volt has become the theme. Bankruptcy has disrupted the entire industry, not just that particular automaker. Change on that scale wasn't expected. That's why logic simply hasn't worked. Reasoning was pointless. Mere survival is in doubt. Dealing with the success of Prius is just too much too accept. Embracing a formal rival is more than he can bare. Fortunately, most animals find a way to overcome near-death tragedy. He should be able to as well.

9-25-2009 **Price Increase.** Toyota announced price increases today, affecting 5 vehicles in mid-October. Prius is among them. The 4 current models will be $400 more then. The new lowest cost model will be offered at $21,000 as planned, but now only for fleet purchases (rentals). This well positions Toyota for the upcoming increase in both promotion & production of Prius. Basically, it will no longer have a modest profit. The price should be fairly realistic for on-going sales, especially when the market finally recovers. In the end, production here is a goal. That plant in Mississippi here had to be put on hold due to cash availability concerns. This should help. How will consumers respond to new of the price increase?

9-25-2009 **Prius Model I.** The low-cost model is now being offered... but only to fleet buyers. Consumers won't get the option to purchase one new. But then since fleet vehicles are resold early in their life, consumers will have an interesting low-cost used option later. I'm not sure how this will be perceived, beyond the $21,000 price. Features like touch-tracer, smart-key, satellite-radio, heater mirrors, cruise-control, and the rear wiper were easy to predict as removals which consumers probably won't miss anyway. Features like the rear cup-holders, rear speakers, and rear heater duct aren't though. Those may be considered essential. The tonneau (hatch) cover isn't included either, but you can simply buy that afterward. The EV button was also left off, but drivers will still have Stealth mode. The only other difference between this and model II is some underbody spoilers & spats, but they'll likely never even be noticed. Starting with fleet options is a good way of collecting data. What's purchased after the initial resale will help gauge overall market demand for such a configuration.

9-27-2009 **No Disagreement.** 2 day later, nothing. This time, it was an effort to rewrite history by portraying Volt as if things are no different now than they were a decade ago. Surprisingly though, the antagonist just gave up. I doubt my message was enough to sway, but it could have been the persistence. Whatever the case, this is what I posted: Way back then, no one in the auto industry had experience with batteries & electric motors on that scale. There were only small trials in limited areas of mild climate. The move to worldwide distribution into areas with hostile temperatures was quite new. Not anymore. GM is constantly reminding us of their fuel-cell advancements, their many models Two-Mode hybrid system, their upcoming new generation of BAS, and how they didn't kill the electric car. In other words, they have lots of experience now. Having 80 pre-production vehicles already on the road for an entire year before limited rollout begin sends a message subject to question. More and more it looks like GM is struggling to hold on to the "green halo" for Volt. The superior MPG they've promoted is getting pulled into the niche category by a price well beyond that of middle-market vehicles. Prius appeals to the mainstream, buyers of vehicles who would normally find a Corolla or Camry a good buy. The more we hear about Volt, the less it seems to be seeking that same market.

9-29-2009 **Consumer Data.** On the government sight for fuel-economy (where you get the EPA estimate numbers), there's a section where consumers can document their own MPG data. That information is compiled into averages. Someone posted them on the big Prius forum today. A quick look at them makes it easy to see why... 16 manual 2009 Jetta diesel owners reported an average of 40.2 MPG. 24 automatic 2009 Jetta diesel owners reported an average of 40.3 MPG. 46 automatic (obviously) 2010 Prius owners reported an average of 51.6 MPG. True, all the hybrid data is warm weather only, but that's also all during the break-in period. So, it's probably a wash. Whatever the case, over an 11 MPG difference makes any argument in favor of "clean" diesel (which has a much worse emission-rating that Prius) almost impossible. That's well outside of any margin-of-error. No wonder supporters were in a state of panic last Spring, promoting heavily against the older generation of Prius. Even before sales began, they could already see how difficult the 2010 was going to make things for them.

9-29-2009 **Plug-In Data.** We got a one-year report today from an owner who purchased the Hymotion upgrade for his Prius. It's hard to believe that much time has already passed. My favorite part was hearing about how it delivers a solid 150 MPG while driving 55 MPH. That's pretty sweet real-world data, even if it wasn't the older generation. The new one with factory plug-in from Toyota isn't even expected to have the engine start running until your highway cruising speed exceeds 62 MPH. So, you could reasonably imagine that 150 MPG at 65 MPH for it. Anywho, his overall average for the year was 126.9 MPG over the course of 9,594.6 miles.

9-30-2009 **Death Of Saturn.** Closing of the deal for GM to sell Saturn to Penske fell apart at the last moment. That's 350 dealerships and 13,000 jobs lost. The pain of bankruptcy is becoming quite obvious now. It's sad to see suffering spread like this. The efforts to raise awareness and sound warnings were mocked. Now the nightmare is playing out. It's hard to believe so much of GM is disappearing. True, they were spread too thin and didn't offer diverse enough products to compete. But even so, for much of that to end this way is bad. It really hurts when employees not responsible for the downfall are affected in such a significant way. This is exactly what executives never believed could happen, again. Detroit was caught totally off-guard, again. They are not struggling to keep what's left of the damaged company from collapsing entirely, again.

9-30-2009 **Great Fuel Economy.** The advertisements have become pathetic. GM is proud of their 20 MPG and Ford their 21 MPG. That's what their largest consumer vehicles offer, so that's what they consider efficient. This type of perspective certainly makes their other offerings of 30 MPG look more impressive. Some of us simply see the lowering of expectations as greenwashing though. Being stuck with large guzzlers is a problem for even Toyota, but at least they are working hard to permanently reduce that production. After all, how much of the market really needs more towing-capacity than 3,500 pounds anyway? Remember how GM submitted plans to the task-force that indicated their intent to increase their hybrid towing-capacity? How many do they expect to sell and why would the consumer choose that over diesel, especially when Two-Mode hasn't provided an emission benefit? At least Ford is balancing their product-line with Fusion, their hybrid that truly does compete (40 MPG). GM on the other hand, still has nothing to compete with. I don't consider that "great".

9-30-2009 **Last Standing.** At some point, you have to wonder if that's all this particularly stubborn antagonist was actually hoping to achieve. Participation on the big GM forum is dropping rapidly. The daily statistics for the big Prius forum dwarf it in comparison. A single vehicle drawing far more interest than an entire automaker tells a story in itself. Anywho, those final posts consisted of personal insults, engineering superiority, and failing to acknowledge business need. It's easy to get tangled up with issues involving the first two, but that last there is simply no excuse for. It's absolutely essential to deal with the business need. That's vital. How else will bankruptcy recovery be achieved, not to mention paying back the taxpayer loans? Needless to say, his efforts to remain on top through belittling & bragging ended up accomplishing nothing beyond a false victory. It's time to move on. Automakers need to sell vehicles. That means lots of sales of modest-profit vehicles, from efficiency technology people can afford. Everyone else seems to understand this but him. I hadn't realized seeing him alone would be so vindicating. But if you look at it from the perspective of having been abandoned...

10-01-2009 **Waiting For The Numbers.** Soon, we'll know how well some vehicles did and others didn't. This month's numbers are especially important. The cash-for-clunkers program caused a huge surge in sales, prior to September. That helped automakers clear out excess inventory. It ended abruptly. Stock was drained anyway. What would follow is anyone's guess. Now, we'll find out what actually did happen. It's a safe bet seeing stable Prius sales. The new model gave the impression of taking hold so well that Toyota is looking into heavily promoting it, along with a large increase in production. Prius is becoming a stable source of on-going profit. That's a fantastic sign for hybrids. The numbers about to be released will confirm this future. Transforming for "still proving" to "well established" is the next step Prius is about to take. Hooray! But first, there's a little bit more waiting.

10-01-2009 **September Sales.** They were relatively stable here, what you'd expect as "normal" with all things considered and clunker money long gone. The 10,984 for Prius was less than desired, but still not bad when in perspective of the market here (Prius ranked number 11 overall). In Japan, on the other hand, Prius is shattering sales records with 31,758 sold for the month. Watching Insight fall, down to 1764, wasn't a surprise. Civic only stirred 152. That actually does really hurt. The turn-around for Two-Mode isn't even a dream for supporters anymore, with Tahoe at 280, Escalade at 189, Yukon at 146, and Silverado at 120. Results for the 2 mainstream sedans could have been better, with Fusion at 1,116 and Camry at 872. But surprisingly, the new HS250h is still hanging on at 1,242. I was surprised to see Highlander with only 269 sales. Efficiency over power appears to be the theme with Escape at 787. But then again, the RX400h managed 1,168. Luxury must still be a draw. With Saturn dead now, BAS pretty much is too, unless Malibu alone with 156 can count for that entire hybrid type. The results for October should be interesting.

10-02-2009 **Those Numbers.** We got them. They aren't pretty. Sales totals are shrinking. Every automaker is struggling. Here's how much sales were down in this market: GM 45%, Chrysler 42%, Hyundai 27%, Toyota 16%, Honda 7%, Nissan 7%, Ford 5%, (Kia & VW are not known yet). The numbers make it clear why Toyota wants to capitalize on Prius... especially since its sales dropped too. But as the GM supporters pointed out, Prius is still selling better than Malibu. With gas prices relatively low ($2.35 per gallon), that's not bad. We know someday gas prices will go up though. That gives Prius a definite advantage over all the competition. It's time to make the hybrid a well-established product, a steady source of profit.

10-03-2009 **Traction-Control.** With my Classic Prius (2001), I rarely ever triggered it. With my Iconic Prius (2004), it engaged frequently. With my 2010 Prius, the behavior on snow is still unknown... but I got a taste of it this evening. I decided to leave the left turn lane and go straight instead. There was very little traffic, so I thought I'd push the larger engine & motor from a dead stop to see what it could do in that particular situation while still in ECO mode using standard tires. There was only about 2 feet of regular road surface available before reaching the large section of paint for the crosswalk. When the Prius hit it, rather than the usual brief power pause with the Iconic using high-traction tires, the wheels rapidly spun (I could hear them quite well) while the TRAC light flash on & off. That was intriguing. No pause, yet the traction-control engaged anyway... without stopping the wheels entirely! Looks like Toyota did some serious research and found that happy balance we had always hoped for. Sweet!

10-04-2009 **Plug-In MPG Assumptions.** The problems surfacing from GM's proclamation of "*230 MPG*" for Volt are starting to become evident. Prior to that, few middle-market consumers actually cared. Concern for accurate efficiency portrayal was really only in the realm of enthusiasts, who are fairly well informed. In other words, they don't assume. Unfortunately, those who only look at MPG estimates do make assumptions... and they don't realize the estimate was only an overall equivalent measurement, not actual engine efficiency. Put another way, some thought they could travel 230 miles with only 1 gallon of gas. This is the very thing some of us were trying to avoid, but instead got labeled as troublemakers attempting to discredit Volt. Arrrgh! It gets worse too. Those same consumers didn't know that estimate was only for city driving, without the A/C or Heater. It's the same ideal condition problem with a whole new level of complexity added. Hopefully, the official organizations contributing to development of a less confusing efficiency indicator will introduce categories. We really need to know about electric draw (motor efficiency) at specific speeds and CS mode (engine MPG after the battery is drained) efficiency, in addition to the kWh capacity available from plugging in.

10-04-2009 **Time Of Change.** Remember the battles with Two-Mode supporters and arguments with Volt enthusiasts? That's all fading away now. Getting back to business... survival ...is a pressing issue. Hype about what a technology could do isn't what pay the bills. The strangely depleted inventory of dealers cleaned out by Cash-For-Clunkers and others with lots entirely empty (due to closing) brings reality crashing down. We are now amidst transformation. Selling the same giant guzzlers which contributed to this mess is a terrible idea that most consumers are understanding of now. We are beginning to witness the demand for efficiency grow, rapidly... which brings us back to those supposed "better" hybrids. Two-Mode sales are terrible, Volt is far from being available, and BAS is so bad no one wants to talk about it anymore. That leaves GM without anything to compete. What the heck are they going to sell to both regain profitability and payback the taxpayer loans? How long can they continue like this, offering only vehicles barely getting 30 MPG? Shrinking marketshare of the remaining brands seems inevitable. The entire industry is changing, putting lots of pressure on all the automakers to scale back traditional designs in favor of practical & affordable motor/battery technologies. Those who don't embrace the need will vanish. That message is becoming quite clear. This is very much a time of change.

10-05-2009 **Saturn Inventory.** Production ended today. The inventory currently available, about 12,000 vehicles, is what marks the end. When they are sold, there will be no more. Expectations are that 4 months of sales remain. After that, Saturn will be nothing but a memory. How bizarre is that? The consequences of bankruptcy are becoming all too obvious now. It's a good thing the price of gas is still below the problem threshold. That nightmare looms. Shutdown & Recovery will be hard enough if all else remains stable. Another episode above $3 per gallon could make a mess of this already difficult situation.

10-07-2009 **Slow Climb.** The first 80 miles of my current tank of gas (actually E10) was with 2 bikes on the back, all highway driving returning home from Northern Minnesota. That combined with temperatures now only in the 40's is a recipe for lower MPG. But how much different will it be from the Summer? This Prius is designed to cope with the efficiency reductions normally caused by the cold season. And so far, those improvements are proving to be quite effective. I've been watching the average on a slow climb. Each daily commute has resulted in an day-end value of around 54 MPG. That has pulled the tank up to 51.8 MPG, despite the cold. All it takes is a quick check of my lifetime graph for the Iconic Prius to see that this month with the 2010 will reveal a pleasing gain. Makes you wonder what the dead of Winter will bring, eh?

10-08-2009 **Beauty Pageant.** That's what the troublemaker's arguments got reduced to. All I had to do was patiently wait for someone else to respond about the Volt engineering superiority debate. With so much attention now being given to automaker well-being and the need for change now, betting the farm on a low-volume vehicle causing a negative cash flow many years simply does not make any sense. People are embracing change now, at this very moment, when the economy is suffering horribly. Those who respond quickly will be part of the recovery. Those who delay are taking a risk they simply cannot afford... and that's becoming all too clear. Here's my contribution to what is becoming a priority awareness thread: Expenses don't get paid with a trophy. Middle-Market vehicles don't stir much excitement. Large volume sales don't come from a substantial price increase.

10-08-2009 **Highlander-Hybrid.** It's now being produced here, in the United States (specifically: Princeton, Indiana). It's at a plant which builds several Toyota vehicles and employs 4,200 workers. So, this is welcome news on several levels. It's good use of excess capacity caused by the now much smaller automotive market. Being an all-wheel drive hybrid which offers seating for 7 and towing-capacity of 3,500 pounds makes it a well positioned vehicle for the new emerging economy. It's a large size & power without being so extreme, as were the SUVs in the not-too-distant past. Being a FULL hybrid is obviously a good thing too. With the Camry-Hybrid having been produced in Kentucky for several years now, this next step really helps pave the way for Prius production in Mississippi. It's only a matter of time.

10-09-2009 **Frost!** It happened, Fall has officially arrived. There was a coating of fresh white on everything this morning. The sight is quite shocking too. Rather than just a coating on the ground like snow, frost adheres to all surfaces regardless of orientation or location. So, the scenery change is quite abrupt. Oh, well. This season can be nice too. The tree colors will soon arrive. Leaves don't have much resistance to this much of a temperature drop. Freezing water brings an end to all things Summer, including MPG in the 50's. But with this Prius, I have to wonder how far the efficiency will fall. The mystery adds a whole new excitement to the routine. This will be the 10th Winter driving a Prius; yet, I'm still making discoveries about what hybrid technology has to offer.

10-09-2009 **Surprise Sighting.** I think I actually saw my 2001 today! There were only a small number of Green Classic models around here in the first place. Seeing one with a hitch on it drive by me on the highway this morning really caught my attention. That's an extremely rare feature. Could it really have been my first hybrid?

10-09-2009 **MPG Drop.** Having an escape opportunity to Northern Minnesota come at the same time as dropping temperatures made my lifetime graph show a dramatic MPG drop. Fortunately, that was last week and the days to follow showed a nice recovery. Too bad most people won't realize I was dragging two bikes on back at highway speeds for a very long distance along with the interior of the Prius stuffed with cargo (including a 3-wheel recumbent bike) and a passenger. It was an excellent test of the conveniences a midsize hatchback has to offer. The average during that driving was 47.5 MPG. That's hardly anything to complain about, but it's certainly much lower than I've seen with the 2010 so far. Unfortunately, during the time I wasn't on the highway, trips were extremely short with a Prius that sat outside all night. Oh well. Being able to enjoy my hybrid is the point, not doing things to always ensure the the highest MPG.

10-10-2009 **Snow!** That was a rude awakening this morning. I really wasn't expecting Fall to only last a single day. But the garage door opened to reveal a fresh blanket of snow. What the heck? Now it's suddenly Winter! I guess that made the decision of when to winterize the Prius easy. With the temperature sensors now in a higher location than the Iconic model, the choice of leaving the upper-grille open didn't take much... especially since it is smaller with the 2010. I ended up blocking 3 slots in the lower-grille, in part due to only having 3 half-inch strips of foam pipe-insulation available. The remaining slot isn't full-size anyway, and I'd like to collect data with temperatures now in the low 30's before doing that final block. So, this evening's errand running was enough of a sampling of what's to come. Of course, for those living in less hostile environments than here in Minnesota, it won't get a whole lot colder than this. Hopefully, the snow was just a fluke and we won't see the stuff that doesn't melt away quickly for several weeks still. Stay tuned.

10-10-2009 **Heater Threshold.** His what I very excitedly posts on the big Prius forum this evening: This improvement discovery is a truly amazing experience for me to share with y'all. Let me start by saying: *Wow!* It snowed here this morning. The temperature this evening was only 32°F. Time to block the grille. For the 2010, I decided the 3 lowest slots needed blocking. Then, I went for a drive... figuring it would help with heat retention while waiting stoplights. Little did I know what the Prius had in store for me. Blocking is far from necessary. When the coolant temperature finally dropped to 145°F, to my surprise, the engine stayed off. Whoa! The Iconic model always started at that threshold. The 2010 didn't, despite the heater temperature set to HI and the fan on the second slowest speed. So, I decided to seek out a testing area. There was a mile-long frontage road nearby: no traffic, 30 MPH limit, non-stop loop at the end, starting with a coolant temperature of only 148°F. It was an ideal set of conditions. I drove 1.3 miles on it in stealth (engine at 0 RPM) before the engine finally fired up for heat. And to my surprise, it quickly shut off again, automatically resuming my stealth drive. I couldn't believe what I had just witnessed. The new threshold appears to be 114°F. The reveal in Detroit at the start of the year hinted at impressive improvements for us to discover later, but this one really blew me away. Prius driving in Minnesota sure is going to be exciting for me this winter. Hooray!

10-11-2009 **Harsh Change.** That troublemaker on the big GM forum is really taking a beating now. His focus only for the long-term without regard to price and no concern for GM being competitive & profitable in the meantime was obviously frustrating those trying to help the new GM get established. But that wasn't enough for them to turn on him. After all, they recognize the old GM thinking and still support certain portions of it. What set them off was his continuous personal attacks and distortion of intent. Those other members on the forum wanted no part of that. It gave them an excuse to bluntly point out the problems with his posts, even though he was once regarded as a voice for them. Change is proving to be harsh. I'm quite sure he didn't see this attitude shift. Those other members genuinely want GM to recover, emerging a much better automaker. They means doing what needs to be done, even if it requires turning on him. Mass penetration of hybrid technology quickly is becoming absolutely essential in this new market. That means being flexible, which clearly he was not. I wonder how he'll ultimately respond to so much negative criticism. Hmm?

10-12-2009 **Prius Winterizing.** Dropping temperatures indicated it was time to winterize. For my Prius, that means putting a brush & scrapper inside and blocking outside (to reduce the amount of cold air that enters the engine/motor area). I ended up blocking the entire lower-grille, all 4 slots. I used the squeeze method, simply pushing a length of foam pipe insulation tightly into each opening. The resulting small size and no need for any fasteners makes it a very appealing-to-the-eye approach. And for just $2 and the amount of time it takes to listen to an episode of Click & Clack, why not? My winterization for the cold season here in Minnesota was complete. The result is less of a MPG drop from Winter influences and a heater that works really well. But to convince other owners it's worth a try on the 2010, I needed photos. That moment came remarkably quick. We got a bunch of snow today. My digital camera was ready. Now, you can see my grille-blocking too... photo album 140

10-12-2009 **Fall Colors & Snow.** I had no idea just how amazing my photo taking experience was until afterward. Looking at the results, seeing those colored leaves covered with snow, is quite a rare thing. I certainly hasn't happened over other 9 years I've been driving a Prius. It was very unexpected. I'm sure glad I took advantage of the opportunity, but regret not having taken more photos. Oh well. What I did get turned out great... photo album 140

10-13-2009 **Heater Confirmation.** The heater discovery a few days ago had me yearning for the opportunity that presented itself today. I got to confirm the 114°F under real-world conditions. About 10 minutes into my commute home, I simply pulled over and parked. Sitting there with the heater set to HI, the fan-speed set at medium, and the system in ECO mode, I waited patiently. Sure enough, the engine stayed off until the coolant finally dropped to 114°F. I didn't pay attention to timing of how long that took or how long the engine ran. The thought hadn't occurred to me. Because at 39°F outside, it was quite warm by Minnesota standards. What I did observe was the shut off threshold. That appears to be 128°F. The engine RPM dropped significant then; however, the gauge revealed 130°F by the time the engine had stopped entirely. Not having the engine start back up at 145°F anymore sure is a nice improvement.

10-14-2009 **AdBlue Expense.** Remember the arguments a few years ago from the diesel supporters, who claimed the chemical additive used to cleanse diesel emissions (convert NOx) wouldn't be a big expense? Well, they were wrong... very wrong. It was their way of competing with hybrids directly. Rather than the expensive non-additive system, they'd favor the type that required a periodic liquid refill. The special tank to hold the AdBlue must be refilled every 20,000 km (12,427 miles) with 15.5 liters (4.1 gallons). The cost to do that is an amazing $140. That's over $34 per gallon, way higher than the $4 expectation! To make matters worse, I could remind them about the need for a heater below -11°C (+12°F) to prevent it from clogging the lines much like biodiesel does in the cold. It's an approach to dealing with emissions that sounded non-competitive & impractical from the start and is proving to be exactly that.

10-15-2009 **Blocking Data.** With the temperature here struggling to reach 40°F now, I'm getting a sampling of cold weather improvements this new generation of Prius has to offer. Last year was my first to block the grille for the entire season. Prior to that, it was only some testing near the end of Winter. The heater had always been warm enough and the MPG still well above all the other vehicles on the road. But with the 2010, the design has been improved to really deliver. So, it was back to basics for me. In the 80's, I remember it being common practice to block the radiator leaving just a small opening for basic cooling and for the engine to breath. With the underneath of Prius sealed so well and the lower-grille so perfect for nearly invisible blocking, I figured leaving the small upper-grille totally open would work extremely well. Sure enough, the coolant and intake-air temperatures (visible using an OBD-II aftermarket gauge) are behaving the same way they did during the warm season and MPG is holding strong above 50. I'm very excited about the data. This blocking approach is working wonderfully.

10-16-2009 **Economic Recovery.** That was the theme in the media this week. The DOW finally climbed above 10,000. There's an odd resemblance back to 1999. A similar consumer confidence rise, without solid reasoning, happened then too. Of course, gas is 2.5 times more expensive and will inevitably go higher. Oil closed at $78.53 per barrel. That's steady growth beyond the stable $70 we saw throughout the warmer months. That could in part be due to the recent change in season. On the GM side, there's a state of panic. The worry really did end up transforming to fear for Volt enthusiasts. That likely came from the 90-Day report combined with the end up pre-production and the beginning of public road testing. Whatever the reasons, the outcome is irrational arguing. The pressure from the wait must really be building up. Hearing about the 500 plug-in Prius being delivered to Japan, Europe, and the United States for fleet testing before the end of the year must be looked upon as a threat, rather than helping to establish the plug-in market. That's too bad. This economic recovery depends upon cooperation to build a better future... not fight those that are trying to help! Oh well. They'll eventually figure that out.

10-17-2009 **Driving Modes.** It has become overwhelmingly obvious which reviewers of the 2010 Prius actually took the time to research. We are constantly having to put up with the "*3 Button*" observation. They see the 3 and simply assume those are the only modes available. Having a 4th mode of using none of them is rarely ever thought of. Odds are, some never even try the basics during their testing. Because if they did, we'd likely hear about the 100 MPG driving. That's the 5th mode owners call "*Stealth*". You'd think they'd notice after complaining about EV only going to 25 MPH. Beyond that up to 46 MPH, the engine remains off and you can clearly see it on the MPG gauge just an inch from the speedometer. It never ceases to amaze that they wouldn't think of a mode being automatic. Aren't they supposed to be automotive experts? Shouldn't they expect something automatic, like an overdrive? Don't they notice that the engine is off sometimes? It's been 9 years now. What the heck have they learned about hybrids in that time?

10-17-2009 **Learning From History.** We've got two distinct groups of GM enthusiasts emerging from the bankruptcy mess. One is the big forum, which has become unashamedly hostile to anything Toyota. You don't even have to mention Prius to get a receive an insulting reply. Competition in general is feared. The opposite extreme is the dedicated forum for Volt. They actually welcome the constructive discussion. Some there don't like it, but they still try to make you feel welcome. It's amazing to witness such differences to the very same ideas. One is receptive, the other dismissive. The latter is in complete denial of Two-Mode, pretending price was never an issue and will not be for Volt either. The other is concerned. Whatever the case, both are well aware of the significance of 2012. Toyota will be offering a plug-in Prius. Nissan & Ford will be offering electric-only vehicles. Chrysler, BMW, Hyundai, VW, and others are hoping to have something available too. Then there's the aftermarket upgrades for FULL hybrids along with new companies like Tesla with EV aspirations. Just the thought of next year stirs wonder. It sets the stage for the big change coming. That's pretty much the only thing everyone can agree on. History will be made then. If they didn't learn from the past, that certainly will teach lessons of what was wise and what was...

10-19-2009 **Measuring Equivalent, optimistic.** Over a month ago, I posted the following on both the big GM forum and the dedicated one for Volt blogs: If consumers don't buy a Volt, what do they buy instead? 30 MPG cars will cancel out the benefit of Volt. Volume is the problem. Consider what's being offered overall. It's easy to see the difference that the small quantity of Volt makes will be offset much easier by a far less expensive 50 MPG car instead. Volt will optimistically use about 40 gallons of gas for 15,000 miles of travel per year. Prius will use about 300 gallons for the same distance & duration. A guzzler (30 MPG) will use 500.

Consider big picture sales, for 500,000 vehicles...
50,000 Volt + 450,000 guzzlers = 227 Million gallons
250,000 Prius + 250,000 guzzlers = 200 Million gallons

Consider big picture sales, for 5,000,000 vehicles...
200,000 Volt + 4,800,000 guzzlers = 2,408 Million gallons
1,000,000 Prius + 4,000,000 guzzlers = 2,300 Million gallons

Consider big picture sales, for 10,000,000 vehicles...
200,000 Volt + 9,800,000 guzzlers = 4,908 Million gallons
1,000,000 Prius + 9,000,000 guzzlers = 4,800 Million gallons

Notice the pattern? Even if 1 Volt was sold for every 5 Prius, it still wouldn't be meaningful. That's why I'm so persistent about GM also offering a lower priced model of Volt. To really make a difference, high-volume is essential, regardless of electric-only range.

10-19-2009 **Measuring Equivalent, realistic.** Despite that optimistic presentation, they still didn't like seeing the detail. It should have used GM's own estimate. 15,000 miles at 230 MPG is 65.2 gallons. And that's for city driving. We've been told highway is quite a bit lower. So, instead of that 40 gallons per year, it could be 80. That means we could actually looking at something around 2 Volts sold for every 5 Prius... just to break even. To really make a different, it have to be 3 Volts. That's why I've been pushing so hard for something efficiency of substantial quantity. In fact, I have repeatedly stated 60,000 for the second year of production... pointing out that's what GM has planned. How is the big question. Being realistic, you have look at how similar new technology confidence was praised for Two-Mode before debut and actual results fell far short of expectations. Is GM really going to offer something else in the meantime, allowing them to still compete during the long wait required for the battery cost to drop?

10-19-2009 **Measuring Equivalent, enigmatic.** The level of uncertainty is quite high. Today, we got the 100-Day report. Response to it was like the others, you're more puzzled afterward rather then finally getting some answers. GM's points out accomplishments, but expectations for the future are quite vague. Supporters are harsh to criticism, not wanting to hear anything negative. Everyone wonders what will happen next. That's why I push for some sort of direction. What do they want? The general feeling is that change is occurring fast enough. The hope is that recovery will somehow result just by the smaller actions taking place, rather than from any particular effort. Meanwhile, the price of gas & oil continues to rise. The barrel is just 15 cents shy of $80 and the gallon is now at $2.59, both enough to stir concern. Pressure is building. The entire industry is struggling. This is not a time for perplexing messages. That measure of equivalent is more important than ever. Consumers understand and respond to MPG.

10-20-2009 **Toyota Sai.** This hybrid was announced today. It doesn't have a traditional counterpart and will only be sold in Japan. The vehicle system & body is similar to the new Lexus HS250h hybrid we have here. The expectation is to sell 36,000 of them annually. Much like Estima or Auris, I wouldn't expect to hear much about this other than it being available. Prius is the premiere hybrid and the one which is being push hard into the high-volume production category. Toyota's goal is to make it an everyday choice, transforming it from new technology to a standard for the next decade. Diversity is very important though, so keeping up the demand for a variety of models remains a priority. Someday, they'll become common too... making traditional offerings just a memory of the past.

10-20-2009 **Other Markets.** Both South Korea and India are quite unique. Toyota just announced their intention to offer hybrids in both. For South Korea, it will be a model of Camry. For India, it will be a model of Prius. Size, Power, Efficiency, and Price expectations are quite different than all the other markets we have become acquainted with. Their desire to embrace change and competition with their own local automakers make this effort to expand very much an unknown. Going hybrid makes sense though. That's a new category, rather than being just another choice in a market that is already deeply entrenched with traditional vehicles. We'll see.

10-21-2009 **Plug-In Details.** We had a hint of what was to come back with the previous generation. That was just a prototype though, this was the real thing, a validation build. The plug-in Prius details we got today was the plug-in model intended for production. 500 will be delivered worldwide before the end of the year. Exactly as anticipated, the top electric-only speed will be 100 km/h (62.1 MPH). Faster is when you'll get the serious MPG boost. The lithium-ion battery will recharge in 90 minutes using a 220-volt connection. Pricing information wasn't provided, but the smaller capacity of the battery (20 km, 12.4 miles) was a clear indication that the design had lower prices as a high priority. The electric-motors and gas-engine were the same. The only real difference was the electricity supply and the information on the displays inside. That's very exciting! Now, it's just a matter of demonstrating patience.

10-22-2009 **Volt MPG.** This quote about Volt MPG from the line-director of the Volt development program sure stirred attention today: "*[It will be] better than any conventional car, and we're trying to figure out how close, or if it will actually be better than any hybrids.*" That made me where the pressure is coming from. As successful as Prius is, it could be the fact that the Fusion hybrid has won the hearts of many. Of course, it could be both Toyota & Ford. Regardless of where or who, the question has always been the same: What is the MPG while driving after the battery is depleted? GM absolutely refuses to reveal this, despite their promise for unparalleled transparency. It's a fundamental aspect of Volt still completely unknown, after almost 3 years now. Needless to say, the media used that quote for speculation. One actually proclaimed only 32 MPG. Most of the better informed, including myself, deduce (based on engine, weight, and conversion factors) it will be somewhere in the low to mid 40's.

10-23-2009 **It Snowed Again!** This time, it was faster, heavier, and wetter than before. By the time I was able to slip away from work and get to the scenic location I thought would look best, the temperature had warmed and changed the precipitation to rain. Fortunately, it looked great still... a light layer of fresh snow covering the colored leaves of the trees. Unfortunately, the rain meant wiping off the lens every other shot and having to struggle with an umbrella in the wind. It was worth it though. Unique opportunities like that are nothing to complain about. That combination of circumstances is quite rare.

10-23-2009 **Discussion Topics.** The lack of content about GM vehicles is becoming increasingly obvious. Even the "*230*" campaign is fading away. So much attention is being placed on the politics of the automakers survival that the products themselves are becoming an unknown. What they produce is suppose to be at the core of what an automaker is all about. Concern is growing that this isn't the case for GM. Unfortunately, when that concern is expressed from someone outside it is perceived as an attack and responded to with hostility. It's getting ugly. The "*too little, too slowly*" assessment from the task-force is now being noticed by some consumers. Mere survival isn't enough. Opportunities will be missed if an aggressive stance isn't taken. GM could again be struggling to catch up at this pace. Online discussions have served as a good gauge. Topics posted by enthusiasts indicated where focus was. And currently, they show almost no interest at all in vehicle production & sales.

10-24-2009 **Global Warming.** This is among one of the topics getting attention. Rather than the proper term of climate change and the addressing of carbon emissions, we get endless "*warming*" debate. Of course, that's only here in the United States. The rest of the world recognizes how warmer temperatures are only a small part of the equation. We get cold as a result too. It just matters where you're located. We get greater extremes, as well as more frequent storms. But some of that is lost within averages and the forgetful memories people have. Whatever the excuse, there really isn't any for not trying. Our children won't look highly upon us for having the technology available but not using it. In fact, when they become adults, they could be down right angry at us for not doing more sooner.

10-26-2009 **40-50 MPG.** More attention is being put to CS (Charge-Sustaining) mode efficiency. The 32 MPG conclusion drawn the other day was an interesting provoke. From an automaker who promised unparalleled transparency, not hearing anything despite all the cries for info, does provide cause for concern. Here's the exact quote we got from Lutz in response: "*If you have a 60 mile commute, you'll have 40 miles purely electric, the remainder of the mileage on very good gasoline mileage, and your average fuel economy will be somewhere between 120 and 150 miles per gallon.*" That of course was an indirect answer. GM is still trying to divert attention away from CS efficiency. That's frustrating, but acceptable. We can still do the math to see the 40-50 from that. But what I especially liked was the overall value provided. Considering a friend averaged 129 MPG for the year with his second-generation Prius upgraded to a plug-in, it does make you wonder how Volt will actually be marketed later. What MPG will they focus on?

10-26-2009 **$2.69 Per Gallon.** The price of gas continues to climb up. What does that mean for the shrinking guzzler market? The promoting of 30 MPG is still frustrates. We know that is primarily to make the 25 MPG not look so dismal. Don't those automakers see how much the pain at the pump hurts? No matter how they spin such low efficiency numbers to look more appealing, a 15 gallon fill up at $2.69 is still over $40 and it's hard to overlook the frequency that is needed at 25 MPG. Consumers won't want to purchase a new vehicle with only a modest efficiency increase. They'll be stuck with it for the next 8 to 10 years. Gas will obviously climb higher. There's a very high probability of another spike during that time too.

10-27-2009 **MPG Compares.** Anyone else sick of the Highway MPG advertising? Totally disregarding the City MPG is just plain wrong in the first place. But then when you look at the advertisement itself, the sincerity of the intent becomes questionable. The compares are only for the most efficient models. For example, the 4-cylinder Malibu delivers an estimated 33 MPG where the comparable Camry is 32. Then when you look at the 6-cylinder models, Malibu is 26 and Camry 28. The advantage is reversed. So, it is very much dependent on the engine size... just the opposite of what the advertisement leads you to believe. To make matters worse, the isn't any difference for the 4-cylinder model when you look at the combined Highway & City estimates. Both get an average of 26. So, even the original impression of "*more efficient*" is disingenuous. It's quite frustrating, seeing misleading like this.

10-28-2009 **Cruze Delay.** The news about Cruze being delayed from April to August or September next year really stirred the forums today. Europe has already had this GM replacement of Cobalt (a traditional efficiency compact) for awhile now. Taking even longer to finally be available here has obviously frustrated supporters... it worries them too. If this premiere vehicle is taking so long to come to market, what about GM's other plans. Production of Volt is much more complex. Taking the time to do it right is very important. But the promise of delivery by November 2010 was pledged years ago and continues to be confirmed. Will this be yet another example of the "over-promise, under-deliver" problem? For GM to be upfront about Cruze delay, it could be a change for the better. That would be a genuine difference from prior to the bankruptcy. Was this announcement a sincere effort to set more realistic expectations? That sure would be a nice change for the better.

10-28-2009 **Volt Pricing.** Lots of attention is being paid to GM lately. It seems as though they are taking a sincere response to it too. How about that? The quote today we got from the new CEO was: "*The price is still to be determined. I have a policy of pricing the vehicle when I get close to the market. I know the cost is close to 40 [thousand].*" No spin! That's impressive. The original goal of "*nicely under $30,000*" was incredibly difficult to accept. Enthusiasts accused those questioning that as intent to undermine, rather than an attempt to be realistic. Now, we've been vindicated... but without apology, of course. Oh well. At least the situation has been resolved long before rollout actually began. The bankruptcy has allowed GM to distance itself from those unfortunate chapters of the past. As for this Volt pricing revelation, what do you think the dependency on tax-credits will do to being competitive? Time is short and funds are limited.

10-29-2009 **Questioning Intent, part 1.** That comes up a lot. When a discussion goes bad, the antagonist likes to spin your purpose into something that appears to undermining. It's quite frustrating. Recent revelations with Volt have been exacerbating that. So, just an a confirmation for myself, I looked up posts from posts from a year before the $4 gas... back when the automotive industry started to fall apart... when the extreme discounting began. That was the Summer of 2007. To my surprise, some of my posts on the big GM forum read exactly as if I had just wrote them today! That's quite vindicating, seeing that I stuck to my purpose without allowing all the attention diversion to misguide or dilute.

10-29-2009 **Questioning Intent, part 2.** The following post example I came across was from July 2007, back when the intent of Two-Mode came to question. Remember how supporters were arguing that it was best to start with the largest vehicles, then later deliver a configuration for the smaller vehicles? I was so tired of hearing that, not believing it could be competitive with the midsize designs both Toyota & Ford offered. Now, some claim that was never said, that there were never any such claims for future Two-Mode offerings. Changing stories after discovering the technology was ill-balanced (over-powered & too expensive) for consumer needs is disheartening. I can imagine how some who believed those supporters now feel. Anywho, at least I have proof of understanding middle-market, as this post from then confirms: This hybrid is too small... Volt. This hybrid is too big... Tahoe. This hybrid is just right... Malibu. High volume sales will come from midsize cars. That's where the market is strongest and where the gas prices are driving demand. Whether automakers like it or not, that reality is coming. Offering the other sizes is fine, but don't neglect the middle.

10-29-2009 **Questioning Intent, part 3.** This next post was more of the same, me arguing for needs of middle-market. It was in direct response to this "*Actually, its smart of GM to sell the SUV's with the hybrids systems first...*". We all know how that turned out. There was very little demand for those giant SUV hybrids and focus was diverted over to Volt instead. Still nothing is planned to target the consumers who would like a Malibu delivering a competitive price & efficiency, despite the success of Ford's hybrid Fusion and the 2010 Prius. Couldn't they see the demand rising, how the market was accepting hybrids as mainstream. You'd think the years rolling by, proving misconceptions false, would lead an understanding of demand increase. Preparing for that should have been planned. Instead, there is nothing competitive and an extremely expensive hybrid not ready mainstream volume for many years still. Oh well. At least I can stir up that long silent thread to answer these questions posted on in my response: Ok. That's fine, now in 2007. But what about 2010? There is growing market for a car priced in the low 20's that delivers around 50 MPG, especially when you look outside the United States. What will those consumers be offered?

10-30-2009 **B-Class Vehicles.** They are still quite rare here, with little success in years past. In Europe & Asia, it's an entirely different situation. They purchase lots of small, efficient, less powerful, less elegant vehicles. In fact, the almost unheard of Fiesta in the United States is selling wildly there. Ford has sold 470,000 of them through September of this year. So, you can imagine how curious some of us are about the October results. Strong demand means profit. Part of the recovery effort planned for Ford is to push B-Class vehicles here. What will consumers think of that? How will they respond after a decade of being convinced to purchase large, guzzling SUVs... especially after being led to believe small equates to dangerous? Maybe their low-cost is enough of a draw. It should be interesting to see what happens, Prius is extremely well positioned for those who are looking for a reasonable choice in the A-Class vehicle category.

10-31-2009 **Dose Of Reality.** That summarizes this week's automotive activity related to GM. Not much happened with the other automakers, they're waiting for month-end sale's counts. Residual of the clunker activity had subsided and 2009 inventory thinned by October. So, it was a fresh outlook for many. (Chrysler is a mess, with much of its efficiency development programs dead.) GM is unique. They still position Cruze & Volt as premiere new vehicles; however, both are now not expected as soon or as efficient. Cruze (traditional compact) will be delayed from Spring to Fall next year and the 44 MPG combined is reduced to 40 MPG highway. Volt (plug-in serial hybrid) will now be delivered by the end of 2010 rather then by November and the hope for 50 MPG in charge-sustaining mode has faded away. Of course, many of us suspected the reason for fierce adherence to the 40-mile capacity was due to sub-Prius highway efficiency. Now, that is all but confirmed. Debut price near $40,000 has been set as an expectation. Being realistic has become the theme; otherwise, that first year could be filled with disenchantment. I think it's a great move for New GM. Old GM certainly wouldn't have done that. Remember Two-Mode?

11-01-2009 **Second Oil-Change**. This time took what seemed like forever. I was looking forward to a routine change. But with so much interest for the topic, it was necessary to investigate the many aspects of the process in great detail. I wanted to make sure I hadn't missed any nuance the previous time. It's easy to overlook a subtle instruction when you've been changing your own oil for decades. Turns out, the ramps weren't as tall as I had hoped. That isn't a big deal when working with such a clean engine though. The encasement of plastic sure makes the effort dramatically nicer. That protects for dirt & salt wonderfully. The catch is less room to work; however, that overhang makes for a very convenient place to set a small flashlight. So, it balances out. All went well. This time the cartridge was on sale and I already had the wrench, so cost was less. I used precisely 4 quarts of oil this time too. It came to $33.84 total.

11-02-2009 **10,000 Miles.** The area of the HSI (Hybrid System Indicator), that new vacuum-florescent display which provides the Eco-Meter, hadn't ever illuminated the pixels where the "1" was. So, immediately after saying goodbye to seeing only 4 digits on the odometer, they fired up for the first time since leaving the factory. It started out a deep red, then transitioned to a pink color. Since the time I see odometer reading is mostly just at system shutdown (an automatic behavior), I suspect it will take a few days before that "1" becomes the same tinted white as the other numbers. Then... it will be a number of years before the next "1" illuminates. Can you believe that many miles have rolled by already?

11-02-2009 **$40,000 Expectations.** When you pay that much for a vehicle, what expectations do you have compared to a purchase of only $22,000? Such an extreme difference does make a person wonder. Traditional vehicles priced in the 20's come with an occasion service need. Minor repair isn't a big deal though. It has been tolerable for the middle-market. That's just the way things have been. But when look at the expense of a much more expensive purchase, wouldn't you hold it to a higher standard? Can we expect those paying more to expect more? What will that mean for warranty claims and word-of-month endorsements? This isn't something anyone has wanted to discuss. Perhaps that's why we don't hear about Two-Mode anymore. The topic of expectations... especially when it come to real-world efficiency ...isn't something to be taken lightly.

11-03-2009 **Taboo Topic.** Sales data for the month of October was released today. Prius made the Top-10 seller list again. Reaction on the big GM forum was hostile; they absolutely did not want to discuss the topic of hybrids. It was incredible witnessing such an extreme response. With numbers so bad for Two-Mode that they were withheld, I can't imagine anything constructive coming from discussions anyway. There's too many former quotes readily available waiting to haunt them. So, what should be done? Taxpayer money is being used to fund a product without a market. It makes sense to divert funds to a design, configuration, or technology with greater potential. But they don't care anymore. The willingness to accept change seems to be gone. That pain of bankruptcy is becoming all too real. How do we proceed now? Being taboo is an ugly problem.

11-03-2009 **October Sales.** These are interesting times. Prius is in the top-10 best-selling list again, with 13,496 purchased this month. Beating non-hybrid Detroit sedans, like Malibu & Impala, makes for a bitter taste of reality. No matter what you say, it's likely to be misinterpreted. How do you encourage the hybrid growth without sounding condescending? Of course, that's more a problem here. When you take a look at the 26,918 purchased in Japan, the story is different. The new Prius well received, very much part of the mainstream. Looking back here at Camry & Fusion hybrid numbers, 1,407 & 1,226 respectively, you can grasp the overall challenge being faced. Here's the rest of the numbers, in descending order: Insight 1,739; RX400h 1,567; HS250h 1,527; Escape 868; Highlander 700; Tahoe 391; Altima 299; Civic 239; Yukon 215; Escalade 186; Silverado 167; Malibu 114; Milan 107; Mariner 81; Vue 56; GS450h 39; Aura 30; LS600hL 21.

11-04-2009 **Pressure.** It has got to the point where anything about GM not posted in a positive way is attacked, not just the asking about hybrids. Any positive information with regard to a competitor is considered an attempt to portray GM in a negative way. Witnessing others get accused of undermining, just for trying to be constructive, is pretty discouraging. I could handle all the absurd spin they did to me, but watching that happen on a much wider scale reveals just how bad things have become. Supporters are not dealing with change well, that's for sure. The latest sales results seem to have opened a dark chapter in our history. One automaker from Detroit is feeling confident about becoming "*solidly profitable*" by 2011, complete with expanded efficiency options. The other Detroit automaker is struggling to survive, without any competitive efficiency options and uncertainty of federal loan payback. The pressure to deliver has grown so high, they simply cannot deal with anything anymore. So, what happens next?

11-05-2009 **Not A Peep.** The topic of GM hybrids on the big GM forum and the daily blog for Volt is dead, no one wants to discuss them. It's as if Two-Mode and BAS never existed. With Prius sales so good here and twice as many purchased in Japan, that makes sense. Saying anything could easily be considered hypocritical. For the accusers of smug being guilty of it themselves, what could you say? The needs of middle-market were not met. So... do we just abandon it all? What resources will continue to be spent on those technologies that don't satisfy requirements? The criteria remains unchanged. There is still very much a need for high-efficiency clean vehicles priced in the 20's. Remember that "*nicely under $30,000*" goal? They certainly don't want to acknowledge it.

11-06-2009 **Tire Rotation.** Checking tire pressure weekly makes it easy to notice wear. At 5,000 miles, it was simply way too soon for the first rotation. So, I left them alone. At 10,000 miles, timing would be good. The odometer was at 10,236. The wear should be just beyond negligible and it would be just before the snow started to fall without melting immediately. Today is when I had the first tire rotation done. That turned out to be good change interval. The service itself went well too. They did the front-back pattern (no crossing), it didn't take long, and only cost $19. I suspect I'll be doing the very same thing when the odometer hits 20,000.

11-06-2009 **Reverse Chime.** It's just a single short beep now. The repeating beeps when in reverse are gone. Thankfully, it didn't cost anything. The dealer simply just did it at my request while in for the tire rotation. Toyota didn't provide a method for owners to change the behavior themselves with this Prius model. It wasn't much of an effort to have them do it anyway. In fact, an aware new owner could simply request that at the time of purchase. So, I didn't consider having to ask for the chime to be changed a big deal. It's done. No more beeping.

11-06-2009 **Generation Fallout.** I wonder if the Volt enthusiasts realize mentioning the need to wait for following generations before making judgment will cause a "first" backlash, a wait until later fallout. Wanting the Classic Prius to draw a diverse audience to establish a wide market was a big deal. They seem to be doing the very opposite, appealing to those with a "pioneer" mindset instead. Of course, waiting isn't really an option. How is GM going to be profitable enough to payback the taxpayer loan if there's nothing competitive to purchase? Maybe that focus on the distant future is the only thing that's comfortable to discuss at this point. After all, we hear that quite often compared to the virtually non-existent mentions of BAS and Two-Mode. It makes you wonder if GM supporters had any idea how much change would come about as a result of the bankruptcy. Whatever the origin, this new downplaying of the first generation does give reason to wonder.

11-07-2009 **Growing Anger.** The hostility is growing. My question of "*Where are the GM hybrid numbers?*" earlier this week in the monthly sales topic was the last post they got from me. I could see the emotion about to boil over... so much anger from asking a question. That intensity was familiar. Prius supporters have seen this behavior before during other troubled times. It was quite predictable. What wasn't was how bad the situation would actually get. This new topic emerged today: "*Too Many <Censored> Toyota <Bleeped> Fans at GMI?*" That big GM forum is shrinking, just like the automaker itself. The lack of positive news for GM has resulted in more and more negative posts about the competition, with Toyota as the target of their frustration. This is what was in that first post on that new topic: "*It's getting really, really bad when nearly every other post apologizes profusely for Toyota. What is going on at GMI?*" That feeling of being lost was quickly following by, to put it politely, extreme dislike. It will be interesting to watch this particular thread expand. GM supporters are really struggling to find their place in this market... which is emerging very differently than they had hoped.

11-07-2009 **Opel Chaos.** Detail would be a luxury. The best information we have is that the situation is real, not a rumor. GM was planning to part with Opel, their European division. That's where a lot of the automaker's key development takes place. So, the choice to sell was a big deal. Based in Germany, that meant opportunity for the German government. They would invest 4.5 Billion Euros in taxpayer money toward the recovery effort of Opel with the hope of retaining several thousand jobs. Local control was looked upon favorably, though still a risk in this rapidly changing market. Now, GM has reconsidered... just days away from signing the deal. They felt the recent sales numbers didn't warrant such a move. Many in Europe are quite angry. The abrupt choice reversal is causing chaos. What happens next?

11-08-2009 **Avoiding Spin.** Being absolutely clear about goals has been the intent. The nightmare called "Two-Mode" is the situation we all want to avoid, again. You get accused of undermining, even though your message hasn't changed at all. In fact, the hybrid system delivered by Ford met the criteria perfectly. Basically, when things go bad, those dealing with disappointment lose objectivity. That's frustrating for all involved. It makes it nearly impossible to regain focus. All just falls apart at that point. I've certainly witnessed that on the big GM forum. No matter what I say, they spin it. Thank goodness posts from years ago are still available. I doubt those fiercely "defending" will notice the pattern though. Not setting cost as a high priority or realizing how long it takes to advance to the generation design (investment recovery, development funding, consumer understanding, etc.) are the same shortcomings as before. Trying to avoid another repeat of history is posing to be quite a challenge. Thankfully, it's not all the same. Looking at the big picture, one of the big Detroit automakers did manage to narrowly prevent their demise. The absence of spin was a clue that their efforts were sincere.

11-10-2009 **Taxing Progress.** This is the topic that never dies, yet never makes any progress. Rather than using fuel tax collected to help pay for new development, some feel it should be used as a deterrent to excessive driving. That worked well in Europe, but it was established decades ago in an emerging market. Doing it after-the-fact in a well-established market here is too late. Penalizing those already struggling doesn't make sense. Credit & Clunker programs is an encouragement, quite the opposite of a deterrent. The talk of significant increases in gas tax (up to $8 per gallon) is still being hotly debated though. How will progress be made if people are encouraged to do less?

11-11-2009 **Addressing Cost.** There are a few attempting to address the true problem at hand. A technical solution doesn't work if people can't afford it. Yet, most everything we hear about focuses on engineering. This is why pressure is building and messages are mixed. Attempts to discuss anything beyond physical capabilities is quickly dismissed as spin. Some even regard numeric data as spin, with the exception of "*annual fuel cost*" summaries. Vague consumption comparisons without detail aren't resisted... mostly like, because they cannot be disputed. An article published today stated $774 as the annual fuel cost for Prius. That was literally the only number provided. What in the world do people think when they see that? Do they have any clue how it was derived or how much their current cost is?

11-11-2009 **Changing Attitudes.** It's really weird how much has happened in just this last week. On the supporter front, this bottom-line message made that clear: "*For plug-ins, the main differentiator will be the amount of all-electric range. Most people could care less if the gas engine is connected to the wheels.*" That's a huge change in attitude. The struggle to make a foe an ally is actually working. Taking priorities seriously tends to do that. The continued fallout of Two-Mode is probably helping with that a lot. The BMW based design is making progress, and the very limited market for it is already easy to identify as a niche. A technology for the masses is desperately needed. On the business front, all the talk of high-volume makes that necessity clear. Profitable vehicles that can be sold in large quantity is essential. The talk of "halo effect" is all but dead now. Attitude is surprisingly different from that of just a year ago. Remember the resistance to bankruptcy? Now, that's been accepted and the steps needed to become viable are starting to be taken seriously.

11-12-2009 **Hype Frustration.** It's the absence of real-world data. That reality is starting to make some supporters of Volt crazy. The desire to take the situation seriously is being impaired by the continuous barrage of detail-less promotion. Vague advertising is being looked down upon as senseless propaganda. I'm loving it. Others are now asking the very same thing I had been, only they aren't getting attacked by the fear of undermining. Being such a pronounced voice in support of Prius makes supporters of other automakers nervous. They have an extremely difficult time seeing past brand-rivalry, assuming support for better technology cannot cross that line. I see it as guzzlers verses hybrids. Those few growing frustrated of the hype are now too. Hopefully, they'll finally do something about it.

11-13-2009 **End of 2010.** Have you thought about what that will bring? GM will finally begin selling Volt. Toyota is supposedly planning a larger version of Prius in wagon or SUV form using a lithium-ion battery. Nissan & Ford will be promoting their EV plans. And of course, the 2010 will be well entrenched into the mainstream with reports of the plug-in data building excitement. It will make the nightmare of the monster-size guzzlers and the nonsense of fuel-cells distant memories. Efforts to get millions of consumers to purchase hybrids would have been achieved, transforming the fade belief into mainstay. Proof of viability, from being reliable to a good business choice for automakers, will be abundant. It's genuine progress that's easy to measure. To think though, it would have taken 10 years of effort here to make that finally happen. Phew!

11-14-2009 **Volt Education.** That's become the topic of interest. It took almost 3 years for Volt enthusiasts to finally realize that becoming a supporter requires action. Daily blogging simply doesn't cut it and the hope of automaker assistance has faded. They need to provide that information themselves, making it readily available for newbies. Resistance to following the success-model for Prius has been a big problem. The "think different" attitude has been a huge barrier... until yesterday. Someone took advantage of YouTube, producing a simplistic video comparing the plug-in SERIES hybrid to a pure EV. That was rather effective. Of course, without a "for more info" resource, not much will become of it. But who knows, the upcoming availability of 1080p resolution may open up more video education opportunities. As time progresses, I'll likely take advantage of that to illustrate the benefits of a plug-in FULL hybrid.

11-16-2009 **Loan Repayment.** It has begun for GM. The schedule maturity date of the loans from both the United States & Canadian governments is July 2015. Payments will be quarterly. The initial one will be $1.2 Billion. How such high positive cash flow can be maintained for so long will sure make for interesting economic studies. In the days of selling high-profit vehicles without investment into the future made that easy. The market is very different now and continues to change. Vague ambitions for being competitive make many wonder. What in the world will GM look like in 2015? Will loyalists accept will it must become to survive... not to mention thrive?

11-17-2009 **2010 Sightings.** The hope of a random sighting has been replaced by daily occurrences. Yesterday, I saw 2. Today, the count was 3. Seeing more of the new model Prius sure is exciting! Growth of the market is undeniable. The numbers easily confirm the ever-expanding reach of hybrids. Consumers spot Prius on the road often enough to provoke interest. People are curious and online searches reveal a wealth of information nowadays. I certainly see that with the website statistics. The counting game is on again! With the Iconic model, it became a bit of a chore there being so many. Now, it's a matter of how long this one will take to reach that same point. Toyota is planning a serious increase in production volume. That should make next year very interesting.

11-18-2009 **Fall MPG.** October was a strange month. It started with a trip up north, consisting of several days of short trips followed by a very long one carrying the bikes on back. That combined with the unseasonal cold temperatures and not having experimenting with grille-blocking yet resulted in a "low" month average of 48 MPG. True, that's certainly nothing to complain about. But comparing it to this month, which is providing high temperatures above average, the 4 MPG higher result makes you wonder. That's a very pleasing difference. Now, I'm really getting anxious to find out what surprises the dead of Winter have in store.

11-19-2009 **Marketing Blitz.** We've been inundated lately with marketing for Volt. The frequency of it resembles a blitz, which is odd since there won't be anything to buy for at least a year still... and even then, very few will actually get the opportunity. This has become blatant evidence that Two-Mode is suffering tremendously. Being available for 2 years already, expectations were for deep market penetration rather than the "too few to earn a profit" level we've been seeing. A niche product like that is not what an automaker recovering from bankruptcy can afford to sustain. A decision must be made. Shifting focus over toward the technology in Volt appears to be that executive choice. With so much attention being put on it now, I doubt many would argue that observation. Those on the big GM forum certainly haven't.

11-20-2009 **Calling It EV.** We're seeing resistance to accepting Volt as a SERIES hybrid again. We're back to the perspective that driving more than 40 miles daily and winter warm-up is considered an "*emergency*" rather than anything routine. That's going to be a hard sell for consumers who see the engine and know that hybrids designs differ. Arguing semantics is a diversion, a way of distracting from actual purpose. They like to do that, especially since price is such a touchy subject and CS-mode efficiency is still a big unknown. An interesting new twist is acknowledging that Prius has an EV button. But again, that is just another distraction. It sure will be nice when real-world data is finally available.

11-20-2009 **First Report.** The first reporter to ever drive a Volt beyond the depletion threshold published an article today. The vehicle was labeled as a "*prototype*" even though it was a validation build and he had driven an actual prototype in the past. That's an unexpected step backward. He confirmed that you could indeed hear engine sound and will notice the lack of feedback when accelerating. The antagonists will hate that. Some have been insisting it would be dead silent. Others have claimed the engine rev will match power demand. Whatever. Again, more distractions. What we really want to know is the efficiency in CS-mode. Sadly, that wasn't reported. Price was missing too. All this vague attention borders on propaganda, since volume isn't addressed. It's frustrating, but not at all a surprise.

11-20-2009 **Plug-In Rollout.** It is about to begin for Prius next month! That's why Volt is being marketed so heavily now. The competition knows the smaller battery-capacity (affordable price) and popularity of the non-plug model will contribute to rapid acceptance. The reality the Toyota has invested quite a bit in Panasonic-Heavy for the large-scale manufacturing of lithium-based automotive batteries makes the intent clear. Toyota is positioning for high-volume production. Putting 500 on the road (200 in Japan, 150 in the United States, 150 in Europe and elsewhere) in the hands of consumers will generate lots of real-world data quickly. Needless to say, the competition is taking this seriously. The end of traditional vehicles is approaching. Automakers must have something to produce instead. What will it be?

11-21-2009 **Plug-In Views.** On the big Prius forum, there is much anticipation for the plug-in Prius. Though, we like to wait for data before drawing conclusions, the opposite extreme of GM enthusiasts. So naturally, there's a curiosity from Prius owners about what the competition thinks. After all, few actually venture out into those hostile forums like I do. This was my post to sharing my observations about that other perspective: GM is stuck on how to promote Volt. It's a design that depends heavily upon a significant drop in battery cost, leaving them with nothing competitive to sell in large volume in the meantime (many years). They also have a post-bankruptcy image to be concerned about. They'd like to focus on the EV abilities, having you think of the engine as a emergency device rather than something used sparingly from time to time. That forms a mindset of being more advanced than the competition, even though the efficiency difference between that and a motor powered PSD with the engine stopped has yet to actually be quantified. CS (Charge-Sustaining) mode has become a PR problem. Knowing how efficient the engine is while generating electricity to propel the vehicle remains a big mystery, despite so many asking about it. The fact that its operation still needs refining at the validation-build stage makes it even more of a touchy subject. With an entire year to go before the select-market Volt rollout begins and Toyota advancing with their plug-in rollout, it is anyone's guess how this plays out. People want something to actually purchase, not just observational reviews.

11-22-2009 **Reality Shock.** Having to tolerate the hype before real-world data becomes available is one thing. But to deal with the shock that comes from incorrect assumptions is quite another. That first report about Volt instantly changed the stance of a certain antagonist from condescending to constructive. He went from claiming the engine sound was undetectable to "*how to tame engine noise*". That could easily be labeled as hypocritical, especially since it was only a week ago that those adamant claims were being made. Isn't it amazing how attitudes can change so dramatically when the discussion shifts from hope to reality? That's why I document these encounters... knowing that intense arguments can instantly end like this.

11-22-2009 **Grateful.** I know I won't get an apology for all the insults. Those attempts to discredit obviously hurt now that information has revealed I was indeed accurate. I won't get an opportunity to point that out in the forum either. I just have to take it like a person of good character an accept their inappropriate & non-constructive behavior as final desperate grasps at a past they know is vanishing. Finally moving beyond that nonsense gives me reason to be grateful. Not taking the need to reduce emissions & consumption seriously was very frustrating. Their boasting about "*superior technology*" didn't actually accomplish anything. Addressing the actual issues of consumer acceptance was long overdue.

11-22-2009 **Haunted By The Past.** This may be a big contributor to the struggle to be constructive. Popular forums contain a collection of superiority claims which didn't materialize. Two-Mode wasn't able to actually compete with Toyota's HSD or Ford's hybrid system. The need for an affordable design using a 4-cylinder engine was obvious to the Prius owners. Unfortunately, it took them year's of denial before finally seeing that. Now, there's a large collection of posts preserving that history. Someone could easily post a reply to any of them, many years later. That haunt fear could impair their actions more than anyone cares to admit. Of course, it could also serve as strong motivation to move on. We'll find out as 2010 progresses. Much should change then.

11-22-2009 **Prius Taunting.** Not all is improving in the world of hybrids. When you follow Volt threads on the big GM forum, it's best not to post unless absolutely necessary. They've grow accustom to routinely dropping bait. They taunt Prius until a supporter finally bites. It's their version of trolling. The twist is they try to make it look like you brought up the topic, intentionally attempting to stir trouble. In reality, it's their doing. That purity disruption they claim is very easy to dispute. There's no need though. Watching to see if they are interested in anything more than just bragging rights is my purpose. Sadly, many there are not. The forum now serves as a boasting venue. Fortunately, that's not true of the daily blogging sight dedicated to Volt. The attitude there is very different. Many genuinely want to prove that technology is competitive. It has become the education & information source the big GM forum once was. When will those troublemakers finally realize what they've lost?

11-22-2009 **Summer of 09.** It was one for the history books, that's for sure. Hmm. I wonder if it will become one of those frequently referred to times... much like the Summer of 69 became. This was most definitely a major turning point for the automotive industry and the collapse of the economy itself certainly will stand out as a major event. Whatever the case, I am already reminiscing about those times. And for me, that means sharing nice photos of the time, preserving pleasant memories from then. After all, who wants to focus on the bad stuff anyway? Of course, looking at those photos already makes it seem so very long ago. Placing the kayaks over the glass roof of my new Prius for the first time will certainly be something I'll refer back to many times over the years to come... photo album 140

11-22-2009 **Snow During Fall Colors.** That situation is extremely rare. I certainly haven't ever had the opportunity to observe it here before that freak opportunity last week. I almost missed it today too. At one point, the snow was coming down so heavy it wasn't wise to travel in those conditions especially only being mid-October. People aren't expecting winter driving so soon. They were still in the middle of enjoying the Fall Colors. That week was peak for them too. So, the opportunity to capture this quantity of snow was a great one. I scrambled to get to a scenic location. Then I fought with the umbrella & camera to capture it... photo album 141

11-22-2009 **Chasing The Snow.** The pile of wet lense-tissue grew rapidly, as I chased the snow south. That new cover of white was melting fast. But armed with a digital camera and determined to make the most of such a rare opportunity, I pushed on. Each stop required climbing out of the Prius attempting to conceal the electronics under the protection of an umbrella. It was windy though. And that snow had changed to a fine mist. That meant setting up for the photo without exposing the lense until the very last moment... then only getting a one chance to press the button before having to wipe drops off of the glass. It's a tedious process... repeated over and over and over again. But it was totally worth it. See... photo album 142

11-22-2009 **It Changed To Rain.** The snow had already melted. At that point, I had already driven deep into the country... quite a desolate & beautiful place to be with lots of Fall to see and a digital camera to capture it. The umbrella was needed more than ever then. But the rain was causing leaves to fall onto the road. Those speckles of color really added to the scenery. The effect looked great, especially when combined with the wet look. The excitement kept me running around. I was delighted by the variety I was witnessing. The location turned out to be a very lucked find. I was compelled to pursue photo opportunities. Where it took me was great... photo album 143

11-25-2009 **Coexistence.** This week, the argument was that if you are a strong supporter of Prius you must want Volt to fail. Some simply don't believe there is a balance between business & engineering, allowing for more than one viable option. The attitude is likely the result of pressure building from having all but confirmed CS mode will not be as efficient as Prius. Of course, the more efficient choice of direct propulsion over the generation of electricity was GM's own argument for Two-Mode. One solution does not fit all. That's why I like Prius. We'll be getting an option of having a plug. It's not required. Battery-Pack size influences price profoundly. Not getting the choice has always been my gripe. Now we see the reason for Volt not offering the option of a smaller one as a problem due to CS mode not delivering competitive MPG... something only now the enthusiasts are finally acknowledging. That's why the idea of the two technologies coexisting stirs so much emotion. Many barriers must still be overcome before mainstream volume can even be considered realistic. Perhaps this question that was asked today reflects the situation: "*What happens if Volt ends up a popular niche vehicle like Camaro?*"

11-26-2009 **Saab Sale.** Much like Saturn, the sale of this GM subsidiary was also terminated at the last moment. This was listed as part of the bankruptcy recovery. Now that it didn't work out, the fate of Saab itself is in jeopardy. December 1 is when a decision is expected. It could disappear just like Saturn. Continuance simply is not an option for GM; they cannot afford it. Each step forward is faced with greater challenges than anticipated. The nonsense we witnessed from the obsession with living in the moment and not taking the future seriously is really starting to become apparent. Of course, those of us who complained back then about those self-destructive practices sure are in a pickle now. What can you say that's constructive without sounding condescending?

11-26-2009 **Ice Driving.** I had a brief taste of it this evening. The temperature dropped to 27 F degrees. It was dark. I didn't notice the ice. So, my hard acceleration resulting in the traction-control engaging. I saw the indicator light flash on & off several times, as expected. What wasn't expected was to hear the sound of one wheel passively spinning. Rather than the sudden pause like with the Iconic model, the 2010 allowed the wheel to break free. It seemed to be the right balance too. The pointless spinning of non-traction controlled vehicles was always a frustrating sight. They leave a trail of glazed ice behind them without any concern. Prius engineers had attempted to prevent this entirely in the past, but discovered afterward that a modest amount of spin was better. Not all winter driver conditions (like really heavy snow) worked well with that setup. So, it was modified... and the modification appears to be exactly what we were looking for. We'll find out soon enough. Ice is already here. Snow is on the way.

11-26-2009 **Auto Show Expectations.** The upcoming appearances in Los Angeles next week sure are causing a stir already. Lots of hype about Volt lately certainly has contributed to that. It's an opportunity to advance the entire market a small step forward by promoting battery-powered vehicle interest. Toyota will be showing their plug-in Prius, but the mood is very different. For that augmented model of Prius, enthusiasts are patiently waiting for the real-world data to be gathered. It's quite subdued compared to the begging of Volt enthusiasts for just a tiny sample of MPG from CS-mode. They have nothing to work with still and know that late next year's rollout is only for a limited market with a limited quantity. Meanwhile, the production volume of Prius will increase significantly. So, the setting of expectations is especially high and the hope is that this upcoming auto show will provide something. What do you expect?

11-27-2009 **Defining Failure.** For an example of how Volt success could be judged, we don't need to look any further than Two-Mode. Purchase numbers have been well under expectations. Clearly, this hybrid technology is not meeting business objectives. However, the design has proven sound. In fact, we haven't heard any bad about Two-Mode at all in that respect. But good engineering alone is not enough. Profit must be made to sustain business. Without that, funding of future production is not realistic. The flow of cash cannot remain negative for too long. Failure could be defined as that point which the decision to continue changes. Now, 2 years after production of Two-Mode began, new models continue to be introduced... but with lowered expectations. If that hybrid technology become a niche (very low volume), it wouldn't necessarily be a failure if that's all they actually plan to sell. This is why I repeatedly ask what sales expectation will be.

11-28-2009 **Silent Sighting.** When you see 2 people sitting in a vehicle, the first thought you have is that they are just about to pull out of the parking spot. Since they were parked right next to me, in a big SUV, it would be prudent to delay my departure. But as I casually got closer, the vehicle still haven't moved. Something was wrong. Then it hit me. No sound. Sure enough, it was hybrid (specifically a Lexus RX450h). They were there eating drive-thru food, in no particular rush, taking advantage of the vehicle being able to run only using electricity. I guess that's going to become more of a common sight over time.

11-29-2009 **Military Ruins**. Taking these photos was an especially exciting time for me. It was way back in May, just days after getting my 2010. This particular location was considered quite remote a number of years ago. I've been there with my Classic & Iconic Prius capturing both photo & video quite a few times. You won't recognize it though. They removed a majority of the trees... revealing the concrete structures hidden within. It was a location where ammunition for World War II was produced & tested. Following our victory, the Army sold all that land to the University of Minnesota. Recently, the decision was made to begin developing it. That's an interesting place to visit. Much of the ruins are way off in the distance, difficult to get the Prius near. But I managed to get some in the background fairly well. It was a beautiful day and the trees remaining created a remarkable setting. I had a lot of fun taking them... photo album 144

11-30-2009 **40 MPG.** More and more downplay is taking place. It certainly gives the impression that GM is preparing enthusiasts for lowered expectations, because the enthusiasts are already acting as if 40 MPG for the efficiency of CS-mode in Volt is a reality. Even the most staunch attitudes seem to be changing. My seemed obsession with nuances of how this newest type of hybrid is both perceived & promoted are paying off. Whatever happens (most likely soon, in Los Angeles) will probably reveal some realities the die-hard Prius supporter are already well aware of. Heck, even GM's own educational material for Two-Mode states the inefficient nature of electricity generation makes direct propulsion a better choice. And of course, engineering alone is not how you run a business anyway. You must offer a product which can be sold in large quantity. So... what does that ultimately mean if CS really does only deliver 40 MPG?

12-01-2009 **Reality of 40.** The long-awaited Auto Show still won't start for another 3 days, yet we got our first public observation of CS-mode for Volt this morning. All the what-if scenarios were making people crazy, so this is a very welcome report (from a very reliable source). Remember how 45 MPG was begrudgingly accepted as "good enough" to compete with Prius directly? When that value started looking more like 40 MPG, some voices of discontent began to emerge. Today, that often warned about "disenchantment" feeling echoed throughout posts of enthusiasts. The report emerging from the half-hour driving opportunity resulted in readings between 32 and 36 MPG. That solidified the 40... which looking back, isn't much of a surprise.

12-01-2009 **Resignation at GM.** The fear of business realities not being taken seriously were confirmed this evening. The CEO of GM, whom had taken over control as part of the bankruptcy stir, announced his resignation. To those of us looking in, it was obvious the same problem of "*too little, too slowly*" had not been adequately dealt with. To those supporters looking out, they were either naive or in denial. Whatever the case, there is no longer any doubt that more much be done soon. The questions of who & how are emerging rapidly. The magnitude of such an unexpected event like this sure has some profound implications. What could happen now will likely be filled with much speculation. Confidence appears to have been shattered. Ask yourself what will the next CEO do about hybrids, especially with Two-Mode and BAS having made so little progress.

12-01-2009 **November Sales.** The market isn't exactly at its peak. Hesitation about purchasing a 2010 Prius just prior to hearing about Winter driving experiences should be obvious, but you know how antagonists can be. That brought out the diesel supporters. All TDI models offered from VW only totaled 3,667 this month here. How they can claim that's better than the 9,617 Prius purchased during the same period appears to be an act of bold denial. Last month, it was 3774 diesel to 13,496 Prius. So, perhaps they thought they could spin the lower November count to their advantage. Whatever. Others have been spinning counts in the other direction, pointing out the big improvement over last November. For me, I'd rather just wait for the entire first-year data. 12 months worth is much more revealing than drawing conclusions over just a few weeks of consumer choices. Toyota's total for the month was 14,473. Lexus 1,407. Ford 2,361. Honda 1,646. GM 1,020. Nissan 503. Market growth next year should make for fascinating analysis & speculation. I'm very much looking forward to that.

12-02-2009 **What Now?** The supporters of GM are quick to claim their automaker will recover just fine. But they don't state how or when. In fact, they don't say anything whatsoever. It's nothing but cheerleading at this point... the band played on as the ship sank. This is not the time for blind optimism. Doing what needs to be done, getting the painful transition over with, is required. However, no one seems to know what that actually is. They just expect "stuff" to happen and things to somehow be fixed. Needless to say, I got frustrated by reading posts like that today, responding with this: The problem the task-force sighted long before the bankruptcy still persists: "*too little, too slowly*". The failed sales of Saturn & Saab, combined with the tension of the Opel reversal, combined with the Two-Mode & BAS struggles, combined with the disenchantment from Volt (price & generator-efficiency), makes dealing with the remaining traditional production an overwhelming challenge... not to mention paying back the taxpayer loans. That's a lot of pressure. Of course, expectations weren't all that realistic to begin with. What should we expect now?

12-02-2009 **Dropping Temperatures.** True Winter is approaching. Temperatures are well below freezing now. Looks like I'll be able to confirm the improvements of this newest generation of Prius sooner than I was hoping. Does that mean we are going to have a really looooong cold season? That will make for a really good endorsement. First-Hand observation like this, especially when the car sits outside all day in sub-zero conditions all day while I work, sure build confidence for responding to the antagonists. They have an extremely difficult time refuting real-world data like I gather here in Minnesota... whether I like it or not. How long will it be before I can enjoy driving with the roof open again?

12-02-2009 **Understanding the Plug.** It's very clear the the typical consumer has no idea how the plug-in Prius works. The assumption of "range" will take quite a bit of effort to overcome. That lack of education from all the Volt hype is heavily contributing to this. Rather than thinking of the extra capacity as a increase to the efficiency overall, they focus entirely on the EV part. And I must admit, that part is quite compelling... but it's not the point. In response to the flood of posts today resulting from the 100 km/h (62.1 mph) top-speed engine-stopped info, I posted this: Never witnessed what happens when the battery is full, eh? At 65 MPH, you get a surprising amount of power from the electric motor. MPG shoots way up. The larger battery-capacity offers a BOOST regardless of speed.

12-03-2009 **Plug-In Prius.** We got a closer glimpse today of what's to come. An intriguing video showed the much larger capacity battery-pack is physically larger than we expected. It raises the false floor up about 1.5 inches. Fortunately, the cargo carrying difference will be negligible for most. That certainly won't interfere with my biking trips up north, where I carry a large 3-wheel recumbent inside. Operating voltage and the ability to both deliver & capture more electricity was stated as: "*resulting in greatly improved EV performance*" as well as providing a gain when it comes to normal HV driving. I'm curious about how robust Toyota made it. They tend to cover all the bases up front. You could see the size was only in part due to the Li-Ion content itself. There was obvious thermal management features in addition to control modules, all built into the case. We'll learn more later...

12-04-2009 **Lithium Spin.** The rewriting of history is taking place now that Toyota has announced plug-in Prius rollout is about to begin. Remember how critics originally spun the production-cost drawback as a "technically not possible" excuse? It was very frustrating back then. They claimed any argument against using lithium based batteries in a plug-in vehicle was really an attempt to discredit Volt... when in reality, it was actually a concern about consumer price and business profitability. And sure enough, years later they are trying the very same thing again... despite price & profitability being even more of an issue now. Why do some act with such non-constructive behavior, only seeing what they want? Engineering was never an issue. The automaker must make money too.

12-04-2009 **Green Car of the Year.** This has many people bewildered. How can an expensive, 42 MPG, barely clean enough to sell vehicle be named the greenest for 2010? Yet, that's exactly what happened. The A3 Audi TDI (diesel) was crowned with that title. The reasoning was that cars such as the upcoming Cruze & Fiesta would make far more of an impact to a better environment than a hybrid like Prius or a plug-in like Volt. So, they have shifted focus back to traditional vehicles instead. How about that for lowering standards? Even with large quantities of those vehicles, their dirtier emission-rating won't actually accomplish anything. Of course, if SULEV or better was award criteria, that would actually be constructive. But when the "best" efficiency is similar to Fusion-Hybrid and no where near as good as Prius (both also new for 2010), what is the point?

12-05-2009 **Dead Topics.** Remember the "taboo" topics last month? This month, not so much as the slightest peep was made about Two-Mode or BAS hybrid sales. So few are being purchased now that GM enthusiasts have become totally silent. They have completely eliminated those topics from discussions now. All effort is being focused entirely on Volt... so much so, not even mention of the plug-in Prius is made. It's denial to the extreme. This is why I documented past events so heavily. When things go bad, some try to pretend none of it ever happened. I find it fascinating that Toyota could make such a big announcement, draw so much attention from the media, yet GM enthusiasts ignore it. You'd think there would at least be some pointless debates; instead, we literally got nothing from them. Doesn't it make you curious what they're thinking?

12-04-2009 **I'm Just Saying.** When a well known troublemaker gets caught spinning information, they typically come up with some elaborate excuse attempting to conceal what they had done. This time, I got him good. He was going on and on about the recent Volt report about CS mode efficiency. He sighted a quick & crude comparison with Prius as hard evidence of that Volt was just as efficient. It was a sad attempt to greenwash... and all I had to do was quote him own words to point that out. He posted this in another thread: "*Yes, but that real-world data needs to be from a reputable source with a large sample size, verifiable statistics, and diverse demographics. Data from individuals is anecdotal and largely worthless.*" When I re-posted on that thread, he abruptly changed his attitude to an "I'm just saying" comment. Somehow, he thought that would somehow negate his stance, pretending it was a joke all along. I did find it amusing, proving his intent was to mislead.

12-05-2009 **Volume Fear.** That's what my guess is as to what GM enthusiasts are thinking. Prius never really had a "*green halo*". That was something the competition made up to draw attention away from Prius itself, claiming its very existence contributed to sales of Toyota guzzlers. Now, ironically, that is the very thing they seek. As supporters of Prius, we've pointed out sales of the actual vehicle. They absolutely detested that. Now, real hate is growing. Having an engineering trophy is something to be proud of during strong economic times. But now in this age of business struggle, consumer purchase of that praised vehicle are absolutely vital. Profit must come from something. Using less fuel is a very easy benefit to see. But it requires an affordable vehicle to achieve that. Waiting for a second-generation Volt before prices become competitive will harm business in the meantime... and they know it.

12-05-2009 **Sales Expectations.** What contributed to the change of GM enthusiast attitude likely came from Lutz, the GM executive who is now drawing much attention. He stated the total market (worldwide production) expectation for plug-in vehicles would only be 250,000 to 300,000 per year by 2015. The die-hard supporters of Volt hoped for that quantity from their vehicle alone. With the multitude of anticipated pure electric choices combined with the high-volume potential from Prius, that's obviously a let down. Large numbers are essential. But with a design that cannot be profitable until the second-generation, that simply isn't realistic. By 2015, I see Prius as so deeply entrenched into the mainstream that the plug-in model has become a common choice... much like the high-end option packages purchased today.

12-05-2009 **Saying Hello.** Leave it to my mother to point out the obvious. I completely overlooked this opportunity to be silly. She capitalized on it. Having driven an Iconic model Prius for 5.5 years, I got use to seeing "MAX" as the highest temperature setting available for the heater. So, when it switched to "HI" for the 2010, the message itself didn't stand out. She, however, did notice and nonchalantly asked why the Prius was saying hello. Huh? That left me befuddled for several moments. I finally noticed it myself. How silly! I hadn't realized the sight of that "HI" could be interpreted as a friendly greeting. Why not? After all, the displays always had a welcome screen.

12-06-2009 **Next Few Months.** Ready for them? It certainly will be intriguing to see what the upcoming auto shows bring and how consumers react. It's much like the good old days, where there are lots of prototypes with very little promise of them resembling that when they finally make it to market and not much chance of growing beyond a niche. They certainly do stir excitement... though, now they have a theme of responsibility rather than the obsession with size & power. It sure is nice that those days are actually over. Turns out that the predictions of change at the start of the next decade were quite correct... despite who & what were way off.

12-06-2009 **Older Model Reviews.** It's hard to believe we are still seeing a few new articles being published that pretend the next-generation model of Prius hasn't been introduced yet. Since most consumers don't expect 2010 models of vehicles to be available until the end of 2009, those hopefully for one last opportunity to undermine are taking full advantage of that. It's the same old greenwashing we've seen in the past. But this time, they are really pushing the ignorance of the market. People naive enough to believe what they read without question will see these and simply dismiss Prius from consideration. The data is real, but is now outdated. Those attempting to deceive don't tell you that. They hope you'll just assume it is current.

12-09-2009 **First Winter Commute.** It was a fascinating opportunity. This was my third generation of Prius about to reveal it's worth. What had Toyota improved? How would those differences translate to behavior changes of the hybrid system. I already had a brief taste of the improved traction-control. So, what I was most curious about now was how the heat-retention equipment would respond in real-world slow & slow traffic in such cold temperatures. I jumped in the Prius and started my intense observation of the coolant reading. How much heat would I get in the cabin? How much would the engine & emission-system need? How far could I drive without using any gas? After all, there are electric-heating elements and running the engine isn't always a bad thing. It's that magic balance engineers strive for. I stopped for gas, after crossing the river and warm-up was complete. Those 13.5 remaining miles to drive in heavy snow & traffic should still be very efficient, despite it being 21 F degrees. Sure enough, the result displayed as I pulled into the garage at home was 51.8 MPG.

12-09-2009 **Winter Driving Observations.** The MPG hit from warm-up is still a shocker for some, but not as nasty with the 2010 model. The first 3 minutes are generally under 30 MPG. It climbs to 40 something that 4th minute. On the 5th, that's when 50 MPG is finally exceeded. By around minute 10, coolant is reaching the hot level, so the heater feels nice. This obviously varies a lot based on outside conditions and how fast you are driving. Highway speeds provide melting heat, keeping coolant between 191°F and 195°F like normal during the Summer. Suburb performance was what I was quite curious about. I knew toasty warmth was the result, but hadn't thought about what exactly that meant for the coolant. Turns out, the system delivers that by maintaining a range from 141°F to 163°F. For driving speeds of only 30 MPH, resulting in an overall of 20 MPH including stop times, that's not bad considering how long the engine stayed off. Now, I'm ready to take on Winter. Not having any real-world data available yet was making starting to make me a bit crazy... there was nothing to respond to those researching a 2010 purchase with.

12-09-2009 **Small Car Oversupply.** It's very strange hearing about concerns like this already. But the entire industry is facing the need to deliver more efficient choices. The easiest solution is to build up the "B" class segment. Elsewhere, those vehicles are already a typical sight on the road. So, enhancing that market to broaden appeal isn't as big of a deal. Here though, that's a nightmare scenario. The obsession with size & power in the US impaired the "B" class from becoming much more than just an idea. The hope was that innovation would come to the rescue, rather than embracing cost & consumption improvement by just significantly reducing vehicle power & size. A flood of new "B" vehicles consumers aren't really interested in will bring tempting incentives to prevent over-production problems. What that means for hybrids like Prius is anyone's guess. Next year will be very interesting.

12-10-2009 **Climate Conference.** It's really weird hearing about the world governments getting together this week to speak about big environmental concerns knowing that your own (the United States) hasn't been willing to cooperate. Not only should we be part of that, we should be a major participant... since we are a major pollutant contributor. Talk of rapid renewable increases combined with phasing out of the inefficient & dirty technologies is, fortunately, something this administration is actually embracing. That sure is a welcome change to the past. Our prior stance of not doing anything until more evidence is available was a crock. Why shouldn't we try? After all, won't those new efforts create new jobs? Fortunately, those other countries are already investing in efforts beneficial to the environment, especially climate change. Change is the theme... there, at the conference... unlike here, where we still have quite a bit of resistance to deal with.

12-10-2009 **True Winter.** Whoa! My jump onto the highway for what I had hoped would be a typical morning commute was everything but. I certainly wasn't expecting the bottom to drop out so quickly. The mess remaining from the winter storm which had just passed was now frozen solid... making a slippery drive for all of us. At -2 F degrees, the snow transforms to ice quickly. That's not exactly a welcome sight for someone driving a new Prius, still discovery want has changed from the previous model. It was a slow crawl. I got to witness many differences. Heat management has changed a lot. The engine seems to start back up more often; yet, efficiency is better. Both acceleration & deceleration improvement are easy to notice. Winter has arrived. These sub-zero temperatures are the ultimate proof of a well thought out design. I'm enjoying it.

12-11-2009 **Nothing Now.** Talk of Volt has almost vanished entirely. The hype of the auto show in Los Angeles seems to have had the opposite effect GM had intended. We went from seeing the vehicle in action, to hearing about advanced new interfaces, to rumors of early rollout, to those rumors being squashed, to financial problems, to arguing politics. It all just fell apart. Why? How come attention waned? What does this mean for the upcoming auto show in New York? We know that Toyota's system isn't as flashy or sexy. Attention isn't the point. It's an affordable option that will appeal to those who don't want that, those who favor ubiquitous vehicles like Camry & Corolla. Could it be that Volt enthusiasts are finally beginning to realize how important market penetration is? Something comparable to a Camaro, but with a plug, isn't what will sustain the business. After all, how much excitement do ubiquitous vehicles stir?

12-12-2009 **Mega-Sighting.** Speaking of ubiquitous, at what point do you think Prius will become that? By lucky coincidence, this weekend's busy holiday schedule started with a run to the drive-thru. I obviously wasn't the only one with early plans. On that 2.6 mile drive to get my breakfast, I saw 1 Classic, 2 new 2010s, and 15 Iconic models, Seeing 18 Prius in such a short distance is truly amazing! For so many to be sighted like that, what other reaction is there except one of wonder. Someday, that will be the norm. Someday, there will be so many on the road it will be hard to believe hybrids were once ever questioned as the next logical step in automotive evolution. This newest generation certainly is helping to solidify that history. Someday isn't too long away.

12-13-2009 **Charging Time.** We got some interesting numbers yesterday and today, the kind of detail which makes supporters stop to think. That was most definitely the case with these. The electric Cooper Mini currently being tested offers 28 kWh of usable capacity from its 35 kWh battery-pack. That takes a little over 21 hours to recharge using a standard 110-volt, 12-amp home plug connection. The Nissan Leaf offers 19.2 kWh from its 24 kWh pack. That can be recharged in about 14.5 hours. The Chevy Volt offers about 11 kWh from its 16 kWh pack, recharging in about 8 hours. For the upcoming plug-in Prius, you get 3.56 kWh from the 5.2 kWh pack, which takes 1.5 hours to recharge. Notice how the amount of time required could become an issue at some point. I bet that isn't always taken into consideration. For a solution to be realistic, it must be both affordable & practical.

12-13-2009 **Plug-In Details.** They are better than expected. Rather than the anticipated target of 20 km (12.4 miles), it looks like the upcoming plug-in Prius will offer a range/capacity of 23.4 km (14.5 miles). Perhaps that's due to the improved Li-Ion battery Panasonic will begin producing soon. Based on the Japanese testing-cycle, it works to an efficiency estimate of 57 km/l (134 MPG). Also, the number of plug-in Prius that will be provided for fleet testing next year has been increased to 600. The real-world data (specifically the results of consumer usage behavior) should be quite revealing. Testing of this nature is always a challenge. Automakers need outside input like that. Sales to the general public are planned for sometime in 2011. I can't wait!

12-13-2009 **Eco-Mode.** We are getting snow now. That's providing opportunities to find out if the increased pedal-play from the ECO button provides any benefit with traction. Initial impression is that it doesn't matter, since the traction-control is improved so much anyway. Whatever the case, when in ECO mode, you will notice that the heater runs longer without needing to restart the engine. Even those really nasty, long stoplights are accommodated for now... in sub-zero Fahrenheit temperatures! Of course, the engine must first be warmed up. It's the threshold that's lower. Switching back to normal mode (pressing the ECO button again) is how to observe this without an aftermarket gauge showing coolant temperature. In short, the new mode works really well in Winter.

12-13-2009 **Eco-Meter.** I didn't take advantage of that new standard information gauge... until recently. Having an aftermarket one and wanting to do direct comparisons to my previous Prius prevented me from doing that. Fortunately, I've learned the patience required to resist goodies like that. Time came though. I finished observing Summer & Winter performance with the 2010 the same way I did with the 2004. This new meter is surprisingly informative, despite being a digitally presented non-linear analog gauge without any numeric values on it. The bar displayed informs you of the energy being consumed. You can actually see the electric draw... to the point of knowing precisely when the engine will start back up. In other words, when the ECO section exceeds the green zone into the white, the engine is needed. You can push right up to the threshold, keeping the Prius in Stealth (engine-motionless driving), much easier than in the past.

12-16-2009 **Song & Dance.** Believe it or not, GM has created both a song and a dance to promote Volt. It's footage on YouTube that you will make you wonder. What in the world were they thinking? Even if it was impressive, how would that help sell a vehicle? At least the useless promotions of the past, like climbing a rocky mountain or sliding sideways across a desert, had something to do with the vehicle itself. Song & Dance is pointless... or perhaps not. What we saw and heard was so bad, it definitely did draw attention. Maybe they were intentionally trying to get some negative publicity. After all, that kind of response has proven effective in other markets.

12-17-2009 **It Has Begun.** That much feared response has begun: Censorship. Messages are vanishing. The moderator on the daily blog for Volt simply does not know how to deal with the fallout we are now seeing as a result of that now infamous test-drive. Remember how speculation about CS-mode was so easily brushed aside in the past? That's because there was no data to support such negative connotations. Now, there is. But those who attempt to ask those same questions again are now faced with the prospect of their post not being seen. I was among those people today. No comment from the moderator, public or private, the message was simply deleted. It vanished, as if it never existed. That's a terrible sign. The opportunity for constructive discussion is gone.

12-17-2009 **Atkinson.** Toyota uses it. Ford does too. This engine pumping cycle (longer & delayed) is more efficient than Otto. It's less powerful though. But with the availability of a large electric motor, that's a non-issue. So, it makes a lot of sense using that for FULL hybrids... especially when you consider emissions are also improved. This is what everyone was expecting Volt to use too. The SERIES hybrid doesn't need a lot of power from an engine. It's intended for efficiency optimized operation, making Atkinson a seemingly perfect match. However, that's not what GM will be using. We found that out today. It was quite a surprise.

12-18-2009 **53 MPG.** Out of the blue, we got an announcement from GM today stating their planned dedicated FULL hybrid to compete directly with Prius was cancelled. Huh? I never heard of such a vehicle. In fact, several of us were at the edge of harassing GM supporters for exactly that. None of them knew about it either. Supposedly, it was included as part of the recovery plans from the bankruptcy. To think that those GM supporters could have retaliated against Prius owners for the last 6 months with such information. Instead, this is the very first any of us had heard about it. My guess is it was nothing but a comment some executive made and not a single thing was ever actually done about it. That's an empty promise to the extreme. Of course, now they are in an even worse position now by having officially declared they will not be competing in that category.

12-18-2009 **Saab Closing.** It was a small automaker based in Sweden which GM owned... but couldn't sell. Saab was known for innovation. They had a reputation for safety too. Operation was independent. The image of highly regarded. GM didn't invest in them though. In fact, they took technology from Saab for use elsewhere. Now they are letting that automaker die. Closing was announced today, as a result of not being able to close a sale deal. Thousands of jobs will be lost there, all related directly to the manufacturing. The loss of jobs here from sales are unknown. It doesn't look pretty. The size of GM continues to shrink. More than just volume is being lost. What's next?

12-19-2009 **Saab Back?** The upset yesterday really stirred a lot of attention. It even went as far as a renegotiation talk, the possibly of purchase terms being changed enough for the sale to occur. That sounds rather desperate though. With so much at stake prior to the closing announcement yesterday, it's hard to take day-after speculation seriously. How much could change, especially knowing how the other GM sales failed to materialize? What GM will look like a year after filing bankruptcy and how the industry will respond to the fallout will fascinate economists for decades to come. These are signs of a major turning point.

12-21-2009 **Ford Plug-In.** It looks like Ford will also be offering a plug-in hybrid in 2012. The expectation has always been that they would choose to compete directly with GM and Toyota early on. Our first hint of that came today. Details were beyond sparse. But the priority was clear. Ford will be placing far more emphasis on price, like Toyota and quite unlike GM. That makes sense. The FULL hybrid platform allows for lots of flexibility. Adjusting configuration to a nice balance of price & performance is good business. That's why I sometimes come down hard on GM with Volt. Their one-size-fits-all battery approach is quite limiting. How they'll reach a wide consumer-base that way remains a mystery... and risk, one Ford see's no reason to take. Until that actually happens, it's going to be a publicity battle. I can't imagine how they'll deal with MPG estimates. Setting expectations is a challenge for all offering a vehicle with a plug.

12-22-2009 **Lost in the Crowd.** Once a stand-alone vehicle, Volt is now surrounded by choices. Ford is the latest to announce a plug-in option. They are planning to offer a FULL hybrid with EV abilities, much like the upcoming Prius. Combine that with the wide variety of electric-only vehicles on the way, it's not hard to understand why those GM enthusiasts no longer have the attention they once enjoyed. I wondered how long they'd be able to retain the spotlight. All the way up to rollout an entire year from now was their hope. That bubble burst. It was when attention to CS-mode became the dominant discussion topic that the situation changed. The transition from ideal to reality wasn't kind. But then again, I find it vindicating with all the superiority nonsense we had to endure.

12-22-2009 **Price Fallout.** Remember how Two-Mode fell from grace? The technology worked just fine, only it was way too expensive. That's the very same reality enthusiasts of Volt are facing now. They see how limited sales will be due to having a price that isn't even remotely affordable. There's no way to compete with technologies which cost so much less. Consumers insist on a balance of priorities, with efficiency just part of the mix. They are not looking for extremes. Why is that so hard for some to understand? The engineering obsession blinds them from the realities of high-volume business. Those "*bread & butter*" vehicles, the ones which represent a majority of production, are not ones that will get you a supermodel passenger... which is what enthusiasts crave. They declare Volt as an everyday commuter, but the price certainly doesn't support that and neither does the performance. Volt is already becoming a niche, falling away from the mainstream even before rollout begins. What will this change of perception bring? Price should have been a higher priority.

12-23-2009 **Misplaced Priorities, acceleration.** That obsession lives on. Remember the size & power which clouded judgment in the past? Now rather than taking the form of a SUV, it is emerging as a plug-in hybrid. The characteristic getting lots of attention today has nothing to do with efficiency. It's all about acceleration. Volt enthusiasts are chanting the desire to prove superiority, rather than focusing on characteristics already well accepted as standard. Basing need on characteristics common to the popular middle-market vehicles of today is not enough for them. They insist the design must exceed that. Priorities such as price & efficiency are being placed lower as a result.

12-23-2009 **Misplaced Priorities, efficiency.** Think about that original 3-cylinder 1-liter engine. That smaller size was chosen with efficiency in mind. GM already had experience with that particular engine, it was what had been used with the Geo Metro all those years ago. But it didn't provide much power. The 0-60 acceleration wanted wasn't possible unless a bigger one was used. Hopes of 50 MPG from a generator engine vanished. Now, they have a SERIES hybrid which delivers acceleration in excess of the standard at the penalty of efficiency. Why was performance given such a high priority?

12-23-2009 **Misplaced Priorities, reaction.** I didn't have much to say. This is far from new. Two-Mode had similar misplaced priorities. Focus on price & efficiency were far too low on the list. It was doomed even before rollout began. Now we have Volt falling into a similar situation. Delivering a high-volume affordable alternative to the family car which uses far less gas is claimed not enough, even though consumers aren't asking for faster acceleration. I reacted to all the hype by posting this... Haven't you noticed how the top-selling vehicles don't highlight acceleration times anymore, since all of them have exceeded the required ceiling? The middle-market consumer simply isn't interested. Those 4-cylinder vehicles they purchase work just fine. They are plenty fast for their needs. The more we hear about Volt, the more it sounds like a Camaro rather than a Malibu.

12-24-2009 **Snow Storm!** When the weather forecast is for over a foot of snow, you know that opportunity to test your new Prius in an extreme is not far away. It turned out to be the really heavy, slippery stuff too. And I had no choice but drive in it. Fortunately, that was really late last night and there was little traffic. We normally don't allow several inches of snow to build up on the roads. Being so close to the holiday though, things were different. In other words, it was the perfect opportunity for the 2010 to show its stuff. I was impressed too. Even with lower traction tires than I've been use to, the improved traction-control really came through. Owners of the previous generation will definitely be pleased with the design change. This morning brought the opportunity to commute in even more of a mess. Fortunately again, the traffic was light. It was quite the experience testing out those improvements first-hand like that. Now, I'm more curious than ever what the sub-zero conditions in January will bring.

12-25-2009 **New Dedicated Hybrid.** In just a little over 2 weeks, Toyota will be revealing a new brand hybrid. Like Prius, it will not have a traditional counterpart. The body will be dedicated to being a hybrid only. It will be smaller, supposedly a subcompact. That will lead to quite a bit of speculation as to the efficiency expectation. I can't imagine how this will shake up the market. Expanding FULL hybrid offerings is exactly what's needed now. It's the next logical step before embracing the plug-in option. Mainstream availability of hybrids like this is required, so battery production can be sustained at predictable & profit levels. Many the choice realistic for middle-market is the key. A small FULL hybrid is a great opportunity for that kind of growth. Stay tuned for details.

12-26-2009 **Prius Attack.** Immediately before the holiday began, a Detroit publication published an article attacking the behavior of Prius braking. With the Iconic model, if you hit a pothole while braking hard, the split-second transition from regenerate to friction could be felt. It gave a disconcerting feel the first few times you experienced it. But those circumstances were rare and it never actually caused any braking issue, no danger. It was just an unexpected response, never causing any trouble after all those years. In the 2010 model, I have yet to even notice it after 7 months of driving. This is clearly a non-issue. Heck, if you slam on the brakes the regenerate feature is skipped entirely. Yet, the title of the article says "*Braking Loss*" and the subtitle calls the brakes "*defective*" and asks "*Pedestrian lives at risk?*" This is another a sad attempt to distract attention away from Prius, carefully timed to coincide with the upcoming big auto shows in New York & Detroit. I'm tired of this undermining nonsense.

12-27-2009 **Superiority Claims.** How many of them can you tolerate without any supporting data whatsoever? They become such an unproductive burden after awhile, mindless clutter in otherwise useful discussion. Some enthusiasts feel their claim simply doesn't require any support, it's the obvious future. Needless to say, this is the same old Volt is better than Prius we've dealt with since the beginning of 2007. They feel threatened now that the first phase of plug-in Prius rollout is about to begin. Welcoming it as a fellow plug-in, an ally to automotive electrification, is not considered an option. Here's how I responded today, with no expectation of anything constructive in reply: 3 years later, supporters still don't have a compelling argument beyond pointing out vague technical references. The current FULL hybrid system can deliver 100 km/h of electric-only drive. Altering the PSD components to favor faster EV would do what? Tell me the *outcome* differences. The optimization we see for them now is subject to change, just like Volt's engine later. There is no clear winner. But lack of diversity will impair business. There will be loss where a market is not fulfilled. What will GM offer as efficiency vehicles other than Volt itself? Larger? Smaller? Cheaper? Something that doesn't require a plug?

12-28-2009 **Decade's Best.** The very first of the decade's best lists has caught my attention already. In this case, it featured "*environmental moments*". Prius was listed as a "*game changer*", of course. But they didn't bother checking facts. It really bothers me when easily verifiable information isn't verified. They stated worldwide sales began in 2001. In reality, purchases outside of Japan began the Summer of 2000. A simple search for Prius history shows that, like on the Wiki. They also mentioned over 1 million Prius had been sold. It was heavily publicized last Summer that number was 1.4 million for Prius when Toyota exceeded an overall hybrid total of 2 million then. Now, the count is easily beyond 1.5 million. They were off by quite a bit. Sloppy reporting like this is frustrating. Makes you wonder what else they don't verify, eh?

12-28-2009 **Blatant Errors.** Talking about not verifying! An article titled "*Who Drives a Hybrid?*" from an unfamiliar so-called green publication really pushed the limits today. I started reading thinking it was a typical basic hybrid review. It claimed the typical 0-60 acceleration time of 10 seconds were slow and the initial cost was high. Then it got into success & failure examples. Nothing we haven't encountered before. Volt came next. Price was listed as "*same as Toyota Prius*". Efficiency was listed as 53 MPG. Plugging in was never mentioned. What the heck? Readers sure are in for a surprise when they discover how much they were misled. Such blatant errors should never be published... or was that intentional? You kind of have to wonder about intent, especially since the conclusion of the article raised speculation if hybrids were nothing but an expensive niche.

12-28-2009 **Attack Responses.** Attempts to tarnish reputation are nothing new. In fact, there are other more broad issues currently at play beside Prius braking. But it's obviously those "failure" claims that has Prius owner interest peaked. As a result, there have been some good responses. Getting back to the basics, we've asked how drivers first became familiar with ABS. Mine certainly caught me off guard. I didn't realize the brake-pedal in my 1994 Taurus would actually kick back, literally pushing my foot up to inform me I was braking too hard. Nowadays, they don't do that anymore. Instead, you get an indicator-light which illuminates. With the VSC feature quite new to drivers now, you get a beeping noise too. Is that all we need as an effective alert as to what the system is doing? How was the determination made for them? If those both ABS & VSC behavior differences were conveyed to drivers using simple light & sound mechanisms, why not this too?

12-29-2009 **850 Pounds Heavier.** None of us had really given the topic of weight much consideration. With an EV, it was quite a problem. But now with a vehicle like Volt using a smaller pack with a lighter battery technology, it seemed like a minor matter. Then again, Volt has a traditional engine as well as a high-performance electric propulsion system. That's clearly going to weigh more than the hybrid-optimized engine and smaller motors in Prius. We hadn't anticipated how much of a difference though. The discovery of being 850 pounds heavier sure was a surprise today. That certainly reveals a major contributing factor to low CS-mode efficiency. This doesn't fair well for on-going tire cost either. XL grade would be required to support that extra weight. Makes you wonder what modifications the next generation design will bring, eh?

12-29-2009 **First-Year Attacks.** We've seen them before. Competitors and their supporters desperate to sour the appeal of a new generation Prius rapidly growing in popularity attempt to amplify an issue and create disappointment. Here's what I posted to point out this repeat of history: Remember the credibility attack on Prius when the newest generation became available, 6 years ago? We were absolutely inundated with claims of MPG disappointment, none of which took the effects of winter efficiency into account. They just relentlessly slammed the new Prius as a failure, not delivering as promised. It was sickening to witness such undermining take place. It was blatant greenwashing. But back then, few were aware of what factors affected MPG. Then the warm weather finally arrived... after 6 months of Prius attacks. MPG shot way up, vindicating our explanations of seasonal effect. All of those who had made those terrible accusations vanished. None offered an apology for misleading consumers so much. Annual MPG averages revealed the efficiency was indeed an improvement over the previous generation. We'll never know the extent of the damage those attacks caused... just like the ones taking place now.

12-30-2009 **By 2010.** That distant future debated about so long ago is about to become the present, just 1 more day. Remember the arguments some made about hybrids way back in 2002? There were intense online battles coming from diesel supporters... which amounted to virtually no market growth at all here since then. There were staunch claims of fuel-cell vehicles and hydrogen becoming available to consumers nationwide by now... which obviously didn't come even remotely close to actually happening. There were fierce exchanges of harsh words for ASSIST hybrids in favor of the FULL type... which clearly hasn't worked out. Then, of course, there was the belief that gas would remain cheap (around $1.59) at least until now. And for the naive hope that size & power would dominate consumer purchase priorities, providing substantial profit well into the next decade, that has become a business nightmare of epic proportions. In short, those who didn't believe Prius would become a vehicle icon of the early 21st Century were dead wrong.

12-31-2009 **HDTV Analogies.** This is by far the most commonly used comparison example when discussing the advancement of rechargeable automotive traction batteries. Unfortunately, it is also a bad analogy. I'm not sure why people overlook what seems so obvious of a problem with that. Perhaps they just don't give it much thought. Each time though, the reaction is the same. It is later recognized as an entirely different situation. This is how I responded when the analogy of rapid battery cost dropping similar to the way cost did for HDTVs was made: The fatal flaw with that analogy is analog television and computer CRT produced ended completely. That 100% shift over to the new technology is what caused the kick. We aren't even remotely close to 100% of new vehicle production including a battery-pack of some sort. Also, let's not forget that the 16x9 shape of HDTV corrected a major television shortcoming. The widescreen view improved computer usability too.

12-31-2009 **Timing.** Sometimes we get a constructive question from the Volt enthusiasts. That was the of case today with this: "*So while the march toward electrification of the automobile may now be unstoppable, why do people in key position seem to ambivalent about it?*" Unfortunately, it turned out to be yet another example of engineering blinders, forgetting about the business aspect of technology rollout. Not all the responses were that way. But the theme was definitely not one that took economic realities into account. Here's what I responded with: How do you pay for an investment that won't deliver profit for almost a decade? For Toyota with Prius, gas was cheap, the automotive market was strong, and there was no urgency to reduce emissions & consumption. Also, the same platform could be offered in both plug & non-plug format. For GM with Volt, gas is a big expense, the automotive market is in the dumps, there is a pressure to deliver solutions now, massive debt must be paid back, the company is government owned, and they don't have an affordable non-plug hybrid to compete with.

12-31-2009 **New Twist.** The fire of deception continues to grow. Only now, some enthusiasts are starting to catch on... noticing the attack approach. In other words, they see how a "could be better" design improvement is getting blown way out of proportion. Antagonists are playing up the fear factor, screaming for a massive recall and punishment for the automaker who supposedly put so many lives at risk. Anywho, the original description wasn't stirring enough concern, so they changed the story... twisting facts. Now: "*When the vehicle hits a bump or pothole the regenerative brakes switch to friction braking. The friction braking slows the vehicle at a lower rate than the regenerative brakes which in turn makes the driver feels as though they are monetarily accelerating. The driver must then apply the brakes more firmly to return to the expected level of deceleration.*" That doesn't even make any sense, since the switch happens 100 percent of the time for braking, not just when hitting a bump or pothole. In reality, if you don't react at all the braking resumes as before a split-second later, the friction brakes slow at a higher rate, and there is no need to press harder.

1-01-2010 **It Gets Better.** What a great way to start the new decade! Prius owners and those taking test-drives have been trying to replicate the apparent braking issue... discovering it's considerably harder to trigger than the media has led them to believe. I hadn't even noticed for 7 months, assuming it had disappeared entirely with this generation upgrade. Driving over train-tracks while braking with hard regen, but not enough to require friction, was how I ended up triggering it. Geez! Those circumstances don't come easy. The tracks are on along my daily work commute. So, you'd think I would have encountered the situation long ago. It boils down to not expecting that response to striking something, then over-reacting when it happens. That leaves enough of an impression for an owner to file a complaint. After all, most owners don't participate in online discussions and simply have no where to ask about the experience... leading them to assume something failed. Then the media sees that as ammunition, something providing an opportunity to attack the automaker they don't like. So, they do.

1-01-2010 **$79.36 Per Barrel.** That's what the price of oil closed at for the year. A rise in consumer confidence (economy & employment) combined with holiday travel contributed to the climb. It pushed the price of gas here to $2.65 per gallon. Diesel has been, and continues to be, higher priced. Currently, it's at $2.79 per gallon. Seeing the oil at $80 per barrel is a realistic expectation now. Those who believed these prices could never possibly be the norm for 2010 sure are feeling regret. It's hard to believe Prius owners had to tolerate so many "lifetime" cost analysis that stated $1.50 as the price expectation. We knew back then how unrealistic that was. Yet, those so-called automotive experts insisted we would be incorrect. Who will consumers go to for advice about the future now?

1-01-2010 **Diesel Trouble.** Last year wasn't good for diesel. The rise in popularity of gas hybrids (from new models and excitement about plug-in plans) added to the acceptance struggle they were already dealing with. Today, the $1 per gallon tax-credit on biodiesel production ended. So naturally, there was an undermining response. In this case, it was: "*Plug-in hybrids may generate more eco-buzz when the calendar flips, but diesels could prove more powerful in revving up the automotive economy.*" Notice how that article quote attempts to divert attention away from non-plug hybrids, some of which are much cleaner and more efficient than the diesel powered cars. In response, I looked up my real-world data to post showing clear advantage for some non-plug hybrids... Using the 3 years of Classic Prius data I have collected, extracting JUN-DEC spreadsheet entries, the average comes to: 46.4 Overall: 45.4 Using the 5.5 years of Iconic Prius data I have collected, extracting JUN-DEC spreadsheet entries, the average comes to: 49.1 Overall: 47.7 Using the 7 months of 2010 Prius data I have collected so far, also JUN-DEC spreadsheet entries, the average comes to: 51.2

1-02-2010 **Spreading FUD.** That is the topic of discussion for the Volt enthusiasts this morning. It started out about the brake "failure" for Prius and the "risk" to pedestrian lives, then quickly led to reputation attacks. With all the resistance in the past to Prius being an ally in the crusade to change the automotive market, you'd think they'd never acknowledge anything in common. But now they are beginning to realize that undermining takes many different forms and there are many who will fight to keep status quo. The problem with the spread of FUD (Fear, Uncertainty, Doubt) is nothing new. In fact, attacks of that nature to impede the progress of new products is to be expected. Prius supporters are quite familiar with this. Anything that is different from expectations is subject to attack. The antagonists try to build up concern, attempting to blow the situation way out of proportion. And with this particular example, the outcome is still very much unknown. I'm quite curious where the Volt enthusiasts will take it too. They will be have to deal with their own FUD later this year.

1-03-2010 **Prius Bashing.** Sadly, that's what the Volt enthusiasts ended up doing. The thread devolved to simply bashing the competition, despite a few of the better known members attempting to keep the discussion constructive. An interesting aspect of those attempts was a posting of words they've never uttered before... a true indication of their desperation to retain credibility. For 3 years, I've been pointing out how Prius is not a "parallel" hybrid, that it's very different from some others available. One of the most argumentative opponents to that *finally* acknowledged it is actually a "series-parallel". It took that level of concern for Volt's reputation for it *finally* to happen. Who knew I've have to wait so darn long. Better late than never, eh? I'm still a bit upset though about all that greenwashing they *intentionally* did by labeling all non-plug hybrids the "parallel" type. They were well aware of their misleading, contradicting me on countless occasions. But now with the plug-in model of Prius getting so much attention, consumers are beginning to question why only certain hybrids are capable of supporting a plug. So, it makes sense to *finally* admit there's a difference. I guess that means something good actually did come about as a result of that topic. How about that!

1-03-2010 **Deep Freeze.** Yesterday's morning adventure was at -9 F degrees. This morning's was at -8 F degrees. In both circumstances, I left my insulated garage where the Prius was parked all night. The temperature on the gauge in there read 30 F degrees. I pushed the power button and drove away immediately. My drive into the horribly frigid air requires a climb out of a valley just beyond my mailbox. It becomes fairly steep, a challenge for most cars when we get heavy snow. Anywho, the 2010 Prius went into "winter combat" mode automatically, just like the my Classic & Iconic Prius always did during the deep-freeze of January. The hybrid system favors the electric-motor heavily to ease the burden on the cold engine. Having the ratio of power distribution change like during an extreme (in this case, cold) is fascinating. It both sounded & felt quite different. I knew Toyota had done that to allow the engine a more graceful warming. Why not? You certainly don't have to worry about the battery-pack overheating from high draw in those conditions. It's yet another real-world example of well thought out the design of the hybrid system really is.

1-05-2010 **Prius Sales.** It won't be until next week that hybrid count detail from all automakers are available. But we do have a few now. The monthly total for Prius was 11,775 in December. All things considered, that's pretty much on target for the short-term. The annual total here was 139,682 for 2009. That puts Prius at the number 4 position within Toyota here, following Camry, Corolla, and RAV4 respectively. This year should be interesting, especially as gas prices rise and the reputation of the 2010 solidifies. Competition should help to interest in the technology too. Just like there was with computers and the internet, there will be a tipping point reached that causes mass acceptance. That could happen this year.

1-06-2010 **Extreme Winter.** The sub-zero morning commutes are already growing tiresome. I miss the warm weather, especially the fact that opening the roof is totally unrealistic now. Fortunately, I get a taste of the higher MPG every morning. The displayed average creeps just above 50 by the time I reach work. But the drive home always pulls it back down to the upper 40's. That's nothing to complain about. But being only the first week of January doesn't exactly inspire hope. How many months of cold still? The 2010 does a remarkable job of handling stop & slow driving. Toyota's promise of improved heat management has indeed been fulfilled. Knowing the horribly congested traffic due to fresh snow won't result in that much of a MPG drop is reassuring. The improvement to traction-control is wonderful. Even with just the factory tires, I'm getting from place to just fine. Unfortunately, despite all the technology, the car itself does have a Winter shortcoming that will never really be improved. My Prius is coated with a nasty layer of salt & dirt. Isn't this time of year fun?

1-06-2010 **Longer Oil-Change Interval.** The rumors were indeed true. It was always suspected that the switch over to 0W-20 Synthetic oil would easily support changes every 10,000 miles. Sure enough, we got the official word today. That's great. Of course, I missed the opportunity to take advantage of that information... having already passed 5,000 miles twice with this Prius already. Oh well. That means the next change for me won't be until the snow is long gone. Gotta love that!

1-07-2010 **New Hybrid.** The rumors seem to be pointing in the direction of something based upon the Scion IQ. That small frame isn't used for any Toyota brand vehicle and you get the impression a hybrid system could fit well inside it. We'll find out soon enough. Supposedly it will use a 1.5 liter engine and deliver efficiency in excess of 60 MPG. Price target appears to be around $15,000 for this unique 2-seat hatchback hybrid. With smaller cars being much more popular overseas, whether or not it does well here isn't necessary. I have a feeling it will anyway. At that price-point, people can hold onto their guzzlers (like in the past, when they were used only for utility & recreation), using this new hybrid as a commute and driving around town vehicle could work well. After all, we already see lots of Smart cars in the suburbs. So, it's realistic to see others joining in. And if gas prices shot way up in the next few years, having a FULL hybrid that size & price could be a huge hit.

1-07-2010 **Commute Horror.** I can't imagine what those around me were feeling. This evening presented the worst traffic delay I had *ever* experienced. The stop & slow traffic was backed up way further than I imagined possible. The fresh snow had caused a big truck rollover accident. None of us knew that though. We probably all believed it was the typical congestion caused by particular ramps. It obviously wasn't. I enjoyed myself. It was the first opportunity to witness the 2010 Prius deal with an extreme. At only 10 F degrees, I was curious how long the heater set on low could remain warm with the engine off and if it could revitalize itself while the engine ran to replenish the battery-pack. Turns out, the system managed 8 minutes of electric-only driving. Then when the engine fired back up, I cranked the heater fan to high. The engine ran for 3 to 4 minutes, bringing the charge-level up from 2 to somewhere comfortably above 3. When the engine shut off, I turned the warmed heater back down to low and the cycle began again. 8 minutes later, same thing again and again and again... I was absolutely thrilled at how much less gas I was consuming than everyone else. (Keep in mind, that even when the engine runs it uses less gas than others that same size.) So, it wasn't exactly a horrific commute like it was for my companions sharing those same terrible few miles of wintery highway.

1-08-2010 **AdBlue Expense.** Remember how those diesel supporters absolutely insisted this emission-cleansing agent some diesel vehicles require (the engine will shutdown without it) would be cheap? That claim never really made any sense considering how much effort some automakers were expending with their attempt to avoid ever needing it. Turns out, it's still really expensive. In fact, Consumer Reports recently got charged $241.50 by a BMW dealer to refill (7.5 gallons) the AdBlue tank in their vehicle they were testing. And that was just for the fluid itself. The labor was an additional $75.49. Having to pay that much every year (they were at 16,566 miles) sure is something owners certainly won't care for. Of course, even at a tenth that cost would add up after awhile.

1-08-2010 **Diesel Particulate Filter.** It's information like this that diesel supporters go to extremes to steer you away from. It never crossed my mind that the DPF would need to be replaced in some vehicles. Turns out, a hybrid owner came across that particular bit of juicy rebuttal material during a debate which led him to read through an Audi owners manual. Clear as day, there it was. Upon reaching 125,000 miles the filter must be replaced. And since their argument for diesel is that the engine will easily deliver 200,000 miles of use, it looks like replacement of this component is pretty much inevitable. A quick search online reveals prices between $300 and $600 for passenger vehicles.

1-08-2010 **Losing Attention.** This is the peak of Auto Show season. Even now, we are seeing GM fighting to keep attention on Volt. Consumers are already losing interest in a vehicle of limited quantity priced well beyond their reach. They are dismissing it much like other niche vehicles... where they'd love to have one, but it simply isn't realistic. The large quantity of blog posts focusing on price clearly confirm that. Yesterday was the 3-year anniversary, highlighted by assembling the very first production battery-pack. That event didn't stir much attention though. In fact, it was over-shadowed by all the price discussions... debates... arguments. If this happening now, what comes next? That original goal of "*nicely under $30,000*" is coming back to haunt already. How will they keep attention from wandering over to the other choices that will be available?

1-08-2010 **Misleading Comparisons.** We are seeing quite a few posts from Volt enthusiasts comparing the most expensive most of Prius to the anticipated base price of Volt after subtracting the federal tax-credit and without taking the state tax or financing into consideration. That's wrong on so many levels, I don't know where to begin. They pretend as if the Tech & Solar packages for Prius represent the majority, where in reality they are quite rare. They simply dismiss the approximate $500 you'll have to pay in state taxes from that $7,500 federal return. And the charges your bank will add to the loan for that extra $7,500 you have to finance in the meantime are ignored entirely. They also only annual cost estimates based on distances easily falling within the electric-only range. In other words, only 12,000 miles per year. More than that or with gas at a price less than $4 per gallon skew results in favor of Prius. That of lack of objectivity is revealing the desperation. You'd think support would become more constructive as the rollout date approaches; instead, it's just more of the same greenwashing.

1-08-2010 **Best-Seller for 2009.** Over in Japan, the market for Prius was secondary. Up until last year, it was always the United States drawing the strongest interest in hybrid technology. 2009 represented a major change. But rather than interest dropping here, it surged there. Believe it or not, Prius was the best-selling vehicle in Japan for the year! We are now witnessing a huge shift in their home market. 208,876 on them were purchased and there is a six-month waiting list still. That kind of demand sure makes "*had been*" references realistic now. It makes plans for production increases far less of a risk too. Seeing so many of the new model on the roads sends a clear message of technology maturity and mainstream acceptance. This certainly is great news for the start of 2010. It sure looks like this year is going to be very fulfilling.

1-09-2010 **Questions & Speculation.** That appears to be the approach GM will take for Volt, my prediction for this year. With the extremely low sales numbers of their once much touted Two-Mode hybrid system (only 15,500 in 2 years), they have lots of damage control to tend to. Pushing publicity for their next hybrid attempt using a technique similar to "*raising doubt*" could be effective. With that, they simply prevent questions from ever being answered definitively, keeping speculation lively. But rather than causing concern, this will stir interest. Only trouble is it could backfire horribly. Interest in Volt is great if gas prices remain relatively stable and the competition doesn't experience rapid market growth in the meantime. Not having anything to actually buy is the problem. With planned production quantity so low and availability limited to just select areas, efficiency technology purchases will occur elsewhere... unless they are able to retain curiosity long enough. Expect lots of publicity with very little actual detail.

1-10-2010 **Substance.** The number of Prius already on the road is an underlying source of frustration for some. Regardless of how good their favored efficiency technology is, that constant visual consumer endorsement is difficult to overlook. To make matters worse, right about when the first real-world reports of Volt begin to trickle in is when the 2 millionth sale of Prius will likely occur. That's a difficult reputation to compete with. Ford may like that though, since it could represent market-demand for expanding their hybrid offerings. Diesel supporters won't be happy. Their inability to expand hurts more and more as hybrid counts grow. Substance is sales. No amount of publicity can cover up that reality... which is becoming obvious as time progresses.

1-10-2010 **Japan Numbers.** The market there has been far more active for hybrids that our market. 208,876 Prius were purchased last year in Japan. That's quite a bit more than the 139,682 we saw here. Of course, keep in mind that Prius was also the best-selling vehicle there. Overall volume is larger here. Obviously, that's a first for a hybrid anywhere... a rather significant milestone. Breaking the top-10 is one thing. To become the most purchased of any vehicle is another. Insight even did well; there were 93,283 of them purchased there making it the fifth most popular vehicle. This year should be interesting. What happens in the second year for new vehicles reveals much about their future to follow.

1-11-2010 **Honda CR-Z Hybrid.** Remember the CR-X from 20 years ago. Honda announced a successor today, in the form of an ASSIST hybrid. That left a lot of people scratching their heads, wondering what the point was. Configured with a 1.5 liter engine and a 10 kW motor, efficiency for the CVT version is estimated at just 36 city and 38 highway. There will be a manual transmission available too, but its estimate is just 31 city and 37 highway. Who is this hybrid designed to appeal too? It seems bizarre that a small hybrid would offer such log MPG.

1-11-2010 **Smaller Prius.** Toyota officially announced a new dedicated hybrid at that same auto show in Detroit today. The concept model is known as FT-CH. And with an efficiency expectation higher than the current Prius due to the compact size, the dismay about Honda's plan becomes clear. This hybrid will be about 22 inches shorter than Prius, making it pretty easy to understand why it's thought of as a smaller model. It will use a similar FULL hybrid system too. Price is expected to be well under $20,000. That sure will shake up the market. Time will time. Concepts don't represent change, sales do.

1-11-2010 **Selling At A Loss.** To establish a reputation with new technology while gathering real-world data at the same, in addition to refining production and educating employees, it is a wise move to limit volume. After all, that new technology is usually too expensive to make a profit from. However, promoting the heck out of it long before anyone has an opportunity to purchase risks disillusion. That drives up expectations while you scramble to reduce costs. Selling at a loss will only take you so far. How do you make the best use of the limited time available? GM plans to offer just 10,000 of their upcoming Volt the first year. Following that, they'll limit it to 50,000 or 60,000 for the next few. What else will they sell in the meantime? Won't hearing about Volt and having to get on a lengthy wait-list become to difficult to bear after awhile? Is it worth losing sales to the competition then, or is it better to accept losses by retaining consumers through increased production? That is what Toyota did. In the early years, there was barely any Prius advertising and much of its funding was diverted from profits other vehicles provided. Of course, back then times were good. There are no high-profit vehicles selling in large quantity anymore. What will GM do?

1-11-2010 **Winter Reduction.** We are all well aware of the efficiency reduction caused by Winter for traditional and hybrid vehicles. Since the engine is the thrust & heat source for both, seeing the seasonal drop in terms of MPG is an easy one. Even inattentive drivers will notice that, though the actual magnitude is often overlooked. Anywho, for plug-in vehicles, the impact is unknown and rarely addressed. Unfortunately, for the first 3 years of Volt development, enthusiasts absolutely refused to even acknowledge the topic. Well, give GM credit for being transparent on this particular instance. We actually got a real-world example today. Over the Thanksgiving weekend in Detroit, back when the Midwest was enjoying an abnormally warm November (freezing point), the range dropped from a 40 miles to just 28. That's well below the optimistic guestimate of 35. And considering how much higher that temperature compared to what I routinely experience throughout Winter here in Minnesota, it's pretty darn safe to use 30 miles in calculations now. That's really going to upset those who refused to accept the reality of factors like needing to power a heater.

1-11-2010 **Ever-Changing Plans.** How many times will we hear about different intentions for Volt? Now, GM is considering a pure electric version (no engine). This was flat out dismissed as a possibility before. Now, it isn't. Alternative models, including one offering a diesel engine, have been on & off too. Plans keep changing. It's just like what we heard about Vue over the years. It would be a FULL hybrid... then an ASSIST... then back to FULL... then there would be a plug-in model... the engine size would repeatedly change too. This lack of devotion is the very same counter-productive behavior we saw before the bankruptcy. Tell me how this is any different now. Stop the madness! Continuous plan changes confuse the heck out of consumers and send a terrible message of purpose. What is it? What are they hoping to achieve?

1-12-2010 **Lost Two-Mode.** Long overdue is the much touted smaller version of Two-Mode. By smaller, they meant a 6-cylinder engine instead of an 8. That means you only 350 horsepower. In other words, we get another gross overkill vehicle they'll only be able to sell a few of... especially since it will be made available in the body of a Cadillac XTS. To make matters worse, it looks like this system will only be offered with an 8 kWh battery-pack and a plug. Think about how incredibly expensive this vehicle will be. It could make sense if there was an affordable counterpart and this was the luxury version. But instead, all that we get is the luxury. What is the point when middle-market gets nothing?

1-12-2010 **Battery Facts.** I stumbled across these automotive battery facts today... The original Saturn EV1 had a lead-acid battery-pack that weighed 1,310 pounds and offered 18.7 kWh of electricity. The improvement to EV1 which came later was a NiMH battery-pack weighing 1,147 pounds offering 26.4 kWh. The battery-pack Volt will uses weighs 375 pounds and offers a capacity of 16 kWh. That's quite impressive, technically. Unfortunately, price is still a major drawback to mainstream acceptance. How many more years will it be until that aspect will no longer be an issue? At least they are proving robust in the meantime. Reliability is the ultimate proving factor, even above price.

1-12-2010 **2009 Totals.** There were 10.4 million vehicles purchased in the United States last year. It's remarkable to think that number once almost reached 17 million. The market is clearly much smaller now. Fortunately, the number of hybrids held strong at 290,280. That's interesting when put in perspective with the 59,850 diesels. This year should be one for the history book. Plans are to significantly increase production of hybrids. Traditional vehicles will continue their decline through daily hybrid sightings. There's nothing more potent of an endorsement message than to actually share the road with what had once been only talk of the future. The close of an odd year has brought about 2010. It has *finally* arrived.

1-13-2010 **Mixed Messages.** Depending on what you read, you get a different impression of what GM intends to deliver within the next few years. That Cadillac got lots of attention yesterday as an anticipated offering, but today it is just a concept vehicle which may only deliver 10 rather than 20 miles of electric driving capacity may not offer a plug or may not even be available as a hybrid. How could things be so confused after just one day? That sibling of Volt, called Converj, went from production planned back to concept in just one day too. Then of course, there's Volt with efficiency observations all over the place ranging from 28 to over 40 miles capacity and 35 to 50 MPG. What a mess of mixed messages. And that's without even a mention of BAS... which now seems to have vanished from existence, again. Don't even try to figure out sales location or quantities, those change continuously. It's amazing to see GM fall back into the same pattern of problems prior to the bankruptcy.

1-13-2010 **Hummer Dead.** This symbol of extreme excess will die early next week. That's when GM will stop producing Hummer. Ownership will transfer over to China then. The best sales year for this incredibly impractical vehicle was 71,524 in 2006. So, even at its peak, there was no real comparison to Prius... though a few greenwashers certainly tried. I still find it hard to believe how insane of a level of hype Hummer escalated to. The way it guzzled gas was horrible. The way it compromised safety of others was truly frightening. But what I find most ironic is how owners claimed the purchase was for their own personal safety... until it was finally pointed out that Hummer's design allowed it to climb over guard-rails... the ultimate safety compromise! Anywho, it's rapidly disappearing from roads here. Once a symbol of pride is now a symbol of excess. Don't you love how the market self-corrects like this?

1-14-2010 **Hill-Assist.** I hadn't really ever had the need to use it. But at that particular stoplight on a steep incline, why not? It was an ideal opportunity to try the hill-assist feature. After all, there was a bus close behind the Prius. So, I gave it a try. When the light turned green, I pressed hard on the brake all the way to the floor holding it there for a moment. A light on the instrument display illuminated and a single beep sounded. The brake would now remain engaged for a moment, after removing your foot from the pedal. That allows you to move over to the accelerator pedal without the vehicle rolling back. Sure enough, that worked fantastic, exactly as the feature had been described.

1-15-2010 **Hypocritical Arguments.** How can the identical question be asked, resulting in such dramatically different outcomes, without pointing out hypocrisy of the is situation? In other words, when a Prius owner asks a Volt enthusiast it, they get extremely defensive response and refusal to acknowledge the reality. Yet, now those same enthusiasts are asking the very same thing offensively toward upcoming plug-in competition battery-only vehicles. Here's the question: "*When factoring A/C, heat, and other electronics, what is the real range?*" For 3 years, I asked that. Most absolutely insisted that was a non-issue and kept pushing the perspective of the engine in Volt only being there only for emergencies to relieve range-anxiety concerns. The few who did reply weren't constructive, claiming those factors were only minimal impact. But now that real-world data is proving that isn't the case, they are using it to show favor for Volt... even though it is unfavorable for competing with the other hybrids. This reveals a big shortcoming with the one-size-fits all approach. No flexibility of battery size or whether or not a plug is including limits market opportunity. Of course, they're still in the trap of focusing solely on engineering anyway. Business reality will come crashing down at some point. Niche vehicles are not enough. What will be the high-volume profit-making offering?

1-15-2010 **Range Questions.** This one posted today certainly upset the Volt enthusiasts: "*When factoring A/C, heat, and other electronics, what is the real range?*" It's quite interesting seeing reactions, now that each message in the blog has a vote tally. I wonder what upset them more... the question itself or the fact that others are now asking the very same thing I had repeated asked in the past. Hmm? Wanting to know that information is quite constructive. After all, the most tenacious of enthusiasts pretend those factors don't actually influence range. They pretend a plug-in vehicle will always get the electric-only driving range estimate under all conditions, that the value is really just a pessimistic value. And now that real-world data from testing vehicles is trickling in, they are having a difficult time accepting the reality that the value was actually optimistic... that range can be significantly reduced by things like the Heater and A/C.

1-15-2010 **Still No Data.** 5 weeks later, nothing. Still no data for comparison, yet his complaints plagued us throughout the entire holiday season. It was maddening. A new Prius owner suffering from buyer's remorse had decided to take out his frustrations on us. The experienced members of the forum knew he hadn't done his homework before purchasing. With so many years of real-world data available, clearly showing the MPG caused by Winter, it was understandably embarrassing that he hadn't seen any of it. The assumption was that efficiency wasn't affected by season. His claims were that the drop was profound compared to his previous vehicles, yet never provided any data to support that. We didn't get anything more than a cherry-picked sample from his Prius either. Nothing to compare to confirmed our suspicions. Just like all those other diesel, hybrid, and traditional vehicle antagonists, real-world data isn't ever provided. They just argue with generalizations. We see right through that greenwashing, regardless of their motivation. No data means no credibility.

1-16-2010 **Fixing Profit.** Witnessing the success of Ford's sedan revitalization is something of positive acknowledge coming from GM. It's about time. To think of all those years we pointed out how the neglect of sedans in favor of SUVs... But now that the SUV is rapidly disappearing from roads (where did they go?) and new vehicles like Fusion & Fusion-Hybrid are emerging from Detroit, it's difficult to avoid noticing change. It is no longer a matter of just dealing with the well-earned merit of Camry or Prius. Blatant guzzling has lost its appeal and the profit from such monsters has evaporated. Hearing chairman Ed Whitacre say how Malibu must become a priority is a step in the right direction. Of course, like Volt, good intentions with limited production & sales won't make much profit. Hopefully, pressure from competition should help the situation.

1-17-2010 **Winter Efficiency.** The temp today hovered around freezing (quite warm by MN standards), so I took advantage by getting much-needed errands done. 101.8 miles of very mixed driving (average 32 MPH) resulted in a displayed efficiency of 54.1 MPG. The 2010 Prius sure puts a new perspective on January. The drop isn't as bad. Of course, that's a matter perspective. Traditional vehicles are always wasteful, all year long. Their least efficient time of the year is Summer, rather than Winter like the hybrids with SULEV & PZEV emission ratings. Heat is required to cleanse emissions. That's abundant when the temperature is high... but not when the temperature low, hence needing to consume more fuel to generate it. That's a reality quite unfamiliar to those driving dirty guzzlers and really appreciated by those who have owned older hybrids. In other words, I'm really enjoying this newest one.

1-18-2010 **Marketing Solution.** It should be no surprise at all that the executive vice-president of sales & marketing for Volkswagen made the following comment today: "*Hybrids are often more a marketing solution than anything else.*" That automaker has always resented hybrids for taking away sales from their traditional diesel vehicles. And now that sales of hybrids are nearly 6 times more than diesels here in the United States, the denial is growing deep. The so-called diesel "clean" is really just marketing. Those of us who do the research discover that Tier-2 Bin-5 rating is the opposite extreme of what many of the hybrids offer (SULEV & PZEV). It is the absolute minimum sales requirement, dirtier than the typical non-hybrid gas vehicle (ULEV). Interesting that someone who depends so heavily on marketing would accuse the competitor of doing that very thing, eh?

1-18-2010 **Phase Out.** How many times must one point out the purpose? After 3 years, you'd think those certain few extremely stubborn Volt enthusiasts would finally acknowledge it. But instead, it is this attitude of not having any control at all since the automakers only release certain information. Huh? It brings raising doubt to an entirely new level. Rather than avoiding conclusion drawing, they don't say anything at all. With concerns about the environment and oil-dependency, you'd think they'd at least make some references to purpose. Instead, we get nothing. It's very frustrating. Volt is very much a niche, yet they portray it as the future standard without any consideration to what the majority will actually by. When? Who? Needless to say, now that it's been an entire 3 years, the time to push has come. The purpose is to phase out traditional vehicle production. That means quickly selling the new technology in high-volume. Geez! My guess is they actually know this but fear the pressure pricing will put on their dream, so they pretend ignorance as an effort to pacify urgency.

1-21-2010 **Electric Heater Concerns.** Volvo revealed a unique strategy for their anticipated plug-in vehicle. They stated at the freezing point, you can expect to lose 35 to 40 percent of electric driving range due to the electricity a heater can consume. That's quite a bit, especially when you take into account the reality that it gets considerably colder here in Minnesota. Their proposed solution to prevent range from shrinking that much was to use a fuel-operated heater. A engine as small as 6 kW could run using ethanol to provide heat for vehicle occupants. There's something the purists didn't see coming. That's a highly specialized adaptation of an engine to provide an extremely efficient solution. Tiny engines used for generators create a lot of waste in the form of heat. Why not just use one for heat for that particular situation?

1-22-2010 **Hybrid Subclass, terminology.** Well, this is a new twist on an old greenwashing them. Certain Volt enthusiasts are still striving to classify both Prius and Insight in the same category, calling both "*parallel*" hybrids even though they are well aware of the "*split*" hybrid advantages over the "*assist*". The attempt to mislead today was to acknowledge the differences by just saying each was a subclass of the same overall class. Needless to say, I angered them by responding with: Based on that logic, Volt also falls into that same category. Think about the arguments EV supporters will pose… no engine at all. This very topic is why today's discussion (Advertise/Educate) is such a big deal. When you dilute by not pointing out fundamental differences like the number of motors, their sizes, and the ability to operate independently, you're asking for trouble. Vague references don't help anyone in the long term.

1-22-2010 **Hybrid Subclass, progress.** I'm quite aware of their lack of progress over the past 3 years. It's the same old nonsense, no real change. This is exactly the behavior we witnessed from Two-Mode supporters prior to rollout. They absolutely refused to acknowledge realities of consumer need & understanding, repeating arguments over and over again without substance. That came back to haunt them immediately following rollout. Attempts to prevent the same thing from happening with Volt been in vain. Supposedly, they think people researching a purchase won't ask the same questions Prius owners are now. With the quantity of 2010 on the road already (I saw 4 today), that's a weak argument at best. Hybrids are becoming common. The understanding of how they work is no big deal anymore. Vague superiority claims are drown out by abundant examples of real-world experiences.

1-22-2010 **Hybrid Subclass, advancement.** The next step in automotive evolution is the offering of a plug and greatly increased battery capacity. Consumer curiosity will grow, most likely at a rapid pace. Many of the misconceptions about electric propulsion are long gone and the internet now makes research remarkably easy. With the popularity of Prius, the fact that a plug-in option will simply be offered as a high-end model sure will make rollout easy. Owners like me will pounce at the opportunity to upgrade. Sharing our experiences and real-world data online will help to point out differences. The non-constructive push of a "subclass" will simply vanish. It's a weak argument at best already. Price & MPG will stand out even more than they already do. Greenwashing attempts to categorize will become even more obvious as advancement occurs. At some point, the few remaining Volt enthusiasts still attempting this will have to finally give up. Until then, we have to tolerate the nonsense.

1-22-2010 **Halo Benefit.** It's quite bizarre to think that a few die-hard Volt enthusiasts still believe the "*halo*" effect is beneficial. That's where a premiere vehicle draws attention to and raises credibility of an automaker, causing sales of lesser vehicles to rise rather than the vehicle actually responsible for the effect. How is that a good thing now? Back in the day, many years ago, it could have been argued. But now with consumers so empowered by the internet, it's easy to see how shallow that really is. Selling only a small quantity of a fuel-efficiency vehicle simply doesn't make sense anymore. Hybrids are well established. The phase-out transition has already begun. Traditional vehicle sales shouldn't go up as a result of that technology, yet it's the very benefit those certain individuals are hoping for. They've really got priority issues to deal with. Promote the new technology to help sell it, not the older stuff.

1-22-2010 **Price Consideration.** This is by far the biggest problem with some hybrid design still. BAS and IMA have demonstrated how much compromise can result from a system which costs too little. Two-Mode has demonstrated lack of wide appeal when it costs too much. (Volt is likely to do the same.) Prius is just right. Ford may also be able to claim that with Fusion. Why is the importance of price so hard to understand? Consumers consider current traditional vehicle pricing fair. So, a modest premium above that for a cleaner and more efficient choice shouldn't require a rocket-scientist to figure out. They are willing to spend a little bit more if they get something worthwhile in return. Don't skimp for the sake of only saving money. Don't try to deliver the absolute maximum either. That happy balance is what will draw mainstream sales. After all, that's what makes the top-10 list now. Price is somewhere in the middle of the purchase priorities.

1-22-2010 **Mentioning Competitors.** Some seem to forget the power of negative advertising. It's usually not a good idea to mention the competitor. And when it comes to hybrids, that's especially the case. Haven't you ever noticed how Ford doesn't do that with Fusion? They don't want consumers to discover that there's a hybrid version of Camry available, even though the hybrid Fusion clearly delivers higher efficiency. Ford knows there's an upgrade coming from Toyota. It will balance out the current advantage. Enthusiasts aren't always aware of all this. Some just obsess with market at one particular moment. Some dismiss the current market entirely, looking forward only toward the distant future. It's really a challenge when discussing competition. Even mentioning failed efforts within your own favored automaker can be considered taboo. Look at the mess they've woven. We are very much at a crossroads.

1-23-2010 **Two-Mode Death.** The same day annual sales total number were revealed, GM made an announcement about the intent to invest "*hundreds of millions*" toward fuel-efficiency improvements for pickups. Do you think the 8,791 total had anything to do with that? Selling so few (far below expectations) of the much touted Two-Mode hybrid system is a death blow, worse than anything anyone could spin. The numbers tell the true story of consumer acceptance. This is why I'm so hard on the Volt enthusiasts. They talk big, dismissing price and design limitations exactly the same way the Two-Mode enthusiasts once did. Middle-Market needs a technology that doesn't cost far more than they can afford. That's where the high-volume purchases come from. Sales won't be large if the price is too high. Do you think GM has finally figured that out? No mention of Two-Mode anymore certainly makes it look like they are least beginning to acknowledge realities of business, rather than obsessing over engineering trophies.

1-24-2010 **Endless Spin.** Recognizing certain names coming from Detroit is easy to do after awhile. There's one particular writer that has consistently mislead about Prius. Today was no exception. I saw the article, then braced myself. It was about the plans for the Prius family of vehicles. Right up to the end, it was a favorable read. Then came the spin with this: "*The hybrid segment is struggling.*" That's the typical lump-all-hybrids-together and only-report-about-sales-here tactic. To really enforce the spin, he used only percentages rather than quoting the actual quantity. I find it amusing. Prius was the top-selling vehicle last year in Japan. Prius is holding strong here despite the economy, appearing on the top-10 list from time to time. The fact that Two-Mode, BAS, and IMA have all fallen well short of sales expectations shouldn't be part of a generalization about hybrids, especially since Ford's new hybrid Fusion has demonstrated lots of potential. The spin is endless. Some continue to fight change. It's quite frustrating.

1-24-2010 **Diesel Deception.** The past has provided are many examples of misleading in the form of deception from within. Back then, they were easier to detect though. But with such a diverse base of Prius owners now, that's become quite a challenge. It takes a long time to figure out why disheartened posts appear. Most are simply awareness issues, how the owner simply didn't know about efficiency-influencing factors like tire-pressure, oil-level, and engine-warmup. You point out what to look for and what to do, then the owner happily goes on their way. Recently though, one harassed us for 6 weeks. It was relentless... and quite suspicious. Doing some searches, the true story was revealed. This particular individual had been been in the need for a high MPG vehicle since back in May. When the 2010 became available, he immediately jumped on the opportunity without actually doing any research... or so it would seem. Each post though mentioned diesel more and more. Sure enough, he was a wolf in sheep clothing. Despite continuously praising Prius, he'd lead you to believe rare circumstances were common and impact was greater than it actually was. In short, it was the same old cherry-picking diesel supporters had attempted in the past... but this time the perceptive was different. That concealed intent for a surprisingly long time. Fortunately, our patience allowed it to be exposed. Phew! Glad that's over.

1-26-2010 **Leaf Advertising.** Wow! It's everywhere now. I'm constantly encountering promotions online and over the radio. Nissan is going all out to stir attention for their upcoming all-electric vehicle. I wonder what typical consumers think of this. Are they excited about it? Have any actually considered buying one? Will this be thought of hype, just like the fuel-cell promises for 2010 have become? What is all this advertising doing for their image? How is this helping the industry? We know the days of engine-only vehicles are over. It's much like the days of computer-processor speed. Choices were simple in the past. Options were very limited. But now, the market is changing. Decisions about what to purchase will become quite complex. Most consumers aren't ready for this. Perhaps that's why Nissan is starting with their awareness campaigns so far in advance. You think?

1-28-2010 **3-Degree Drive-Thru.** Why do some people crave ice cream when it becomes incredibly cold outside? I certainly did this evening. That diverted me to a drive-thru, where a big Excursion SUV beat me into line by just a second. I had a bad feeling about it. Sure enough, it took absolutely forever. The driver must have been ordering a large quantity of food to bring home to a family. I couldn't figure out why it was taking so long... all the while, being enveloped by its exhaust. Fortunately, I had switched to recirculate immediately upon entering the line. Then I backed up, after discovered ordering was far from concluded. Finally, I got to pull up to the speaker, then pull around to pay & pickup. What a pain. Watching that monstrous guzzler waste so much fuel... then realizing my Prius hadn't used any the entire time, despite the heater blower being on throughout the duration of my drive-thru saga. That sure was nice... and finally getting a bite of that ice cream made it even better. Of course, I would have preferred it to be 90 degrees warmer. Oh well. The 2010 Prius performed wonderfully in that extreme cold.

1-30-2010 **Setting Goals, one month later.** With the demise of Two-Mode now providing the best example of a hybrid technology failing to capture marketshare, I began an aggressive push to prevent that again. No more hype that leads to disappointment. The key is knowing what the market actually wants & needs. Without that, automakers would just be guessing... and it should be common knowledge that they don't like risking profit. That typically means slow rollout and modest advances. For Volt, it has played out to be limited production and price considerations abandoned. In the meantime, sales of Prius continue strong and have become a great frustration for them. The start of this weekend included running a few errands before arriving at the coffee-shop for a relaxing drink over lunch while typing personal logs. I spotted 6 other 2010 Prius sharing the road with me. So, you can imagine how sights like that combined with the intense Nissan Leaf advertising has caused emotion to rise. The solution is to set goals. Focus on needs. Don't get distraction by things that don't actually make a difference.

1-30-2010 **Setting Goals, asking questions.** That's my primary approach. Make the discussion wide open, leaving the opportunity for diverse feedback, by asking questions. Many of the Volt enthusiasts have fallen down to the depths of just Prius bashing. At some point, true supporters are going to get upset and the fighting from within will get ugly. We've seen it before. Two-Mode is the prime example... and we are well aware of that being a failure do to goals not being met. But at least it's easier to move on knowing that. Unfortunately, those goals were never realistic in the first place. They (both automaker & supporters) expected high-volume sales from the biggest guzzlers, which would help to lower price and save gas. Sadly, they didn't accept the reality that simply downsizing to a more practical vehicle would achieve the very same thing. Consumers would pay less for the vehicle and gas by no longer purchasing monster-size vehicles. Asking questions is how to figure that out ahead of time. What do consumers really need? What does the automaker need to produce a profitable platform? If those needs (goals) are dramatically different, the effort is doomed from the start.

1-30-2010 **Setting Goals, expectations.** Goals are often long-term in nature. Volt is clearly aimed at that, despite all the hype about it somehow taking away from Prius sales even though it will only have very limited availability. Expectations are what? By the time the first owner reports appear, 4 years would have already passed since debut. That's a heck of a lot of hype to sort through and quite a number of changes along the way. How will initial impression differ from the first full year results? What duration will the media & consumers wait before drawing conclusions? After all, the other plug-in competition will stir impatience. The pressure to return to profitability will obviously build too. Promises cannot go on forever. Something must eventually be delivered. Will delivery of 10,000 over the first 12 months (a few to each dealer) satisfy? Will that disenchant those still waiting? Will the following year bring much higher production, say 60,000? What about the next? It's difficult enough to figure out automaker motives & abilities. Not knowing what the heck supporters are expecting make interpreting results pretty much impossible... and great fodder for spin. Why wouldn't you want to prevent that?

1-30-2010 **Setting Goals, retaliation.** Attack the messenger has been the theme. Don't take any risk by actually being explicit. Vague at best. Blame the automaker rather taking any responsibility yourself. The response from the most outspoken Volt bloggers is exactly like those for non-hybrid diesel. It's just the same old propaganda without any actual substance. Many times, I've asked "*What does successful launch mean?*" in attempts to get detail. I've also asked "*Without having any goals, how do you measure the outcome?*" But rather than falling on deaf ears (being ignored), then attempt to divert attention away from the fact that none of those questions ever get answered by retaliating on me. You know, it's the same old stuff we've seen for a decade. Your online activity is due to be employed by Toyota. It's a simple scapegoat excuse that has never had any credibility. Even if we did work for Toyota, why wouldn't you set goals and how is attacking the person asking ever appropriate? Being rude & defensive to someone being polite & constructive sends a terrible message of intent.

1-30-2010 **Setting Goals, insincerity.** You know the situation is getting really bad when the simplest of open-ended questions are met with hostility... when they express statements of unity & civility, then absolutely refuse to declare what their goals actually are. That's insincere. For that matter, it's actually quite hypocritical considering the Volt enthusiasts expect that of Prius owners but Prius owners cannot expect the same from them. Nonetheless, I pressed on. Now 3 weeks with nothing constructive from them yet, I continued to ask the most basic of questions whenever the daily bloggers attempted to celebrate their support of Volt and fight against to retain the media spotlight by posting this: What is hoped to be achieved? When? Quantity? Price? Who? Where? Why? Tell me about Volt, not the competition.

1-30-2010 **Setting Goals, milestones.** Now with literally nothing new from Volt itself, the enthusiasts are digging deep into politics & leadership. The hope is that struggling competitors will result in a positive gain for them rather than the entire market experiencing weakens sales and reduced confidence. Detail once available about Volt has vanished, faded away into the daily off-topic blog posts. It's really unfortunate that a single thread contains so much variety and is rarely ever referred back to. Facts disappear just into an obis. Remember how the hope for a guaranteed 40-mile range under all conditions ended the moment real-world data revealed how unrealistic that actually was? No? They hope you won't either. That's why there still isn't a Tech-FAQ after all these years. Looking up a troubling fact like the electrical system adding 800 pounds, making it far heavier than other vehicles that size, would be too easy. They hope you'll forget that; however, they don't provide anything constructive to focus on instead. Goals would be serve that purpose well, especially when they can be measured along the way. So, I requested: Give us some targets to shot for, milestones we can gauge progress with.

1-30-2010 **Setting Goals, hopelessness.** It's like beating your head up against a wall. They continue to celebrate success without providing any frame of reference. Pointing out the big Prius forum and my own website accomplished nothing. Vague references are all we get for Volt. So much promotion long before rollout has resulted in harm without having had set any goals. With each enthusiast having their own expectation, no unity with others, in was inevitable that they'd get lost in the crowd eventually. Some actually did want a vehicle capable of competing with Prius sales volume. Others wanted an electric hybrid Camaro. That mix of mainstream & niche is impossible. Consumers differ too much for those categories to blend. The practicality of Camry is a good match for Prius. No one has ever pushed for Camaro replacing Camry. That simply doesn't make any sense. Yet, it does for Prius with Camry. The economics of high-volume sales contradict the very nature of a stand-out limited-quantity vehicle. What is the business goal for Volt? Hope is lost when discovering the realization of sustaining-profit requires.

1-30-2010 **Setting Goals, betting the farm.** The concern has always been betting the farm on a single option. There is no choice. Requiring the plug means those without outlets available are out of luck; they must settle for the traditional vehicles. It was always believed that the "*40-mile*" range promotion was really just a capacity statement, an expectation loaded with disclaimers which would come back to haunt promoters later. The reasoning was simple. If Volt's charge-sustaining mode truly offered 50 MPG efficiency, it made no sense not to offer a non-plug model. Why stick to only one configuration, especially considering how much the large battery-capacity added to the price of the vehicle? That's not the way to sell large quantities of a vehicle. In fact, the only way that could actually be realistic is for the long-term. Sacrificing sales in the meantime, waiting many years for high-volume potential, isn't leapfrogging. It's simply the next step. In the short & mid terms though, what happens? How will the automaker remain competitive?

1-30-2010 **Setting Goals, doing the minimum.** The mindset of observer makes me crazy. Why would you just watch history unfold when you have the opportunity to be part of it? Participation allows you to influence the outcome. Your contribution helps to push results in the direction and at the speed you actually need. Hoping that happens is quite a gamble. Yet, the daily bloggers feel that's all they can do... even when examples of what else is possible are provided. They just dismiss success of the past. Why? How are automakers suppose to know what consumers will buy without the consumer ever making their desires known? It's a guessing game, one doomed to disappoint. Automakers don't risk profit. Unless we push for change, it won't happen at an acceptable pace. History clearly shows that doing the minimum is preferred. That's the lesson to be learned from the past. You can't just hope for the best.

1-30-2010 **Setting Goals, being proactive.** Those enthusiasts of Volt who did set goals originally should be given credit for that effort. Back then, when they were unaware of how unrealistic 50 MPG and $30,000 was for a SERIES hybrid was, it was acceptable. But now, after having learned the limitations of the technology at this point, they have decided not to say anything rather than adjust accordingly. The education has rendered them silent. We'll never know if it's from disappointment or the realization that the FULL hybrid supporters did actually have enough experience with the situation. That's because some of the Prius owners push. We don't just observe. I posted the following to make that overwhelming clearly: PROACTIVE = Stating a goal, then actually doing something to make it happen. REACTIVE = Just watching it happen. It boggles the mind that such obvious leader & follower outcomes are simply dismissed. To make a difference, you actually have to do something. And to achieve the desired outcome, you must state what's needed to fulfill it.

1-30-2010 **Setting Goals, to summarize.** They aren't happy with me. In fact, there's anger. They see hybrids like Prius as an obstacle, rather than a vehicle that's aggressively pushing high-volume production of automotives batteries. The mainstream acceptance of non-plug vehicles is considered a wasted effort, rather than a step to help phase out traditional vehicles quickly. Sadly, they never even acknowledge markets outside the United States either. There was some spirit of cooperation in the past, but that has faded away as rollout approaches. The existence of those 80 pre-production models now being real-world tested locked them into a mindset of competition. It's not a matter of hybrid verses traditional anymore. It's not even a matter of accepting other plug-in options. It's a one-size-fits-all approach. How is that a wise decision?

1-31-2010 **Setting Goals, grading system.** A very effective technique of measuring hybrids in the past was to grade them. Criteria was identified, making value easy to see based on the gain each feature provided. For example, a hybrid offering electric A/C had a clear advantage over one that relied on an engine running to operate the condenser. Because it was a relative scale, that worked extremely well. Comparisons without technical were easy. The grading system ended many IMA verses THS debates. Later, the same was true for Two-Mode and HSD. In other words, the criteria was the goals. What do you want the hybrid to deliver? If it doesn't and another does, they clearly aren't equal. This is why certain Volt enthusiasts have went to extremes to keep discussions vague. Detail reveals shortcomings. Grades make that simple to see.

1-31-2010 **Setting Goals, education.** The topic of hybrid education is a big one. It has been a huge problem for a whole decade. Consumers typically don't know how traditional vehicles work anyway. So when they encounter all the misleading & greenwashing nonsense I routinely deal with, their searches for information are hit or miss. Yesterday provided a great insight to this. There was a Honda discussion on a green blogging website, which draws a diverse audience, a great place for wide-ranging market feedback. It was pretty astonishing to read posted comments. Differences between Insight and Prius are a huge mystery still. Many have no idea how fundamentally different the design & operation are. The lack of component awareness is frightening. In general, people have absolutely no idea why Prius is so much more efficient. The fact that its larger and more powerful, yet delivers much higher MPG, completely baffles still. That's a sign of trouble. An urgent need for education should be obvious. We don't want people spending their hard-earned money, then being disappointed later after discovering shortcomings of their purchase decision.

1-31-2010 **Setting Goals, keeping up-to-date.** A common problem with hybrids is the reliance on outdated information. This morning provided a fantastic example of that. A website known for misleading about hybrids published an article sighting a poll that ranked Fusion as the "favorite" hybrid. I had a difficult hunting down the source. Only percentages were listed. So true participation is unknown. So, there's no way to tell how many people the difference between the 26% for Fusion and the 23% really was. One thing we do know for certain though is the poll was from late last summer. Remember the craziness between waiting-lists and cash-for-clunkers back then? Poll results were published on October 1. Yet, the article today portrayed results as if the poll had just taken place. How many were aware of the difference between the 2009 and 2010 Prius back then? For that matter, how many even knew a new model was available? Keeping up-to-date is vital. Don't rely on information if you don't know when it was gathered. Old facts may no longer be relevant.

1-31-2010 **Setting Goals, purchases.** Isn't the point of hybrids to replace traditional vehicles? How will a highly-promoted, low-volume vehicle accomplish that? If automaker production remains primarily unchanged with the new hybrid doing little more than just capturing interest, the goal has not been met. Or was there never one set for that? Is the hype really just to generate a "halo" effect? Is concern only for the long-term, sacrificing competitiveness over the next few years for advantage in the following decade? Shouldn't it be about purchases soon to be made? A vehicle now will remain in service for many, many years to come. One that's only ULEV emission rated and delivers only an estimated 30 MPG is a terrible goal. Prius is much cleaner and much more efficient. It doesn't require a plug either; that will be an option. Is a hybrid like Volt with a charge-sustaining efficiency of roughly 40 MPG and a 30-mile Winter range estimate a worthy goal? What about the price? How many will be purchased if those are the goals set?

1-31-2010 **Setting Goals, urgency.** The most realistic excuse for those terrible attitudes is looking at the situation from the perspective as if there is no urgency. Why set a goal when 30 MPG is perfectly fine for the next decade still? After all, there's no such thing as "global warming", there isn't a problem with the air we breath, and there's no reason to be concerned about oil dependency... right? Just let the next technology mature in the meantime... right? Consumers will be content waiting, without any desire for a 50 MPG vehicle... even though no goals were ever set for whatever that next technology should actually deliver. When they simply dismiss details, making no effort to be constructive, something is wrong. They are accepting the minimum. Why address the problem now if you can delay answering questions until later... right?

2-01-2010 **Accord Crosstour.** I waited to comment until I actually saw one of these new vehicles in person. I walked up to it in a parking lot today. It's enormous! What in the world is Honda thinking!?! The thing is clearly a guzzler, disguised as something efficient. Sadly, the numbers confirm that. The MPG estimates are 18 City, 27 Highway, 21 Combined. That's terrible. Opinions online agree too. What's the point of creating something like that as the guzzler market rapidly shrinks? My guess is they made the commitment to build it when they thought the market was recovering from $4 gas and never expected the bottom to fall out instead, then consequently got stuck with contracts to expense to back out of. Whatever the circumstances, the impression is that it won't appeal to many. A quick scan of the typical parking lot clearly reveals big change. Where have all the guzzlers disappeared to?

2-01-2010 **Hybrid Reality.** Of all things unexpected, reading a long article from an automotive publication praising Prius rates as one of the top shockers. We've waited for an event like this for an entire decade. This summary was published back in 1999 by Car & Driver about Prius: "*A fascinating, and costly, way to save cheap gas.*" Remember that? Probably not. But what you likely do remember is me continuously complaining over the years that all they focused on was efficiency. We'd get nothing but MPG information without any mention whatsoever about emissions. That sure has changed, rather abruptly. Now, they actually point out how much a dirtier "clean" diesel vehicle is compared to a traditional gasoline vehicle. They make it abundantly clear that the term is only a relative measure compared to "old" diesel, with the hybrids like Prius still offering far better emissions in comparison. Anywho, with this particular comparison performed by Road & Track, the 2010 Prius absolutely slaughtered the Golf TDI (a diesel smaller than Jetta) in every single MPG category. It was wonderful to see that. Here are the numbers... Easy Suburban 57.5/41.1; Suburban Sprawl 66.7/39.0; Mixed Suburban 62.3/43.1; Canyon Carving 40.8/30.9; Freeways 53.8/45.0; Dreaded Commute 57.8/47.4; The LA4 50.5/31.6; Cruise Control (no A/C) 57.3/53.5; Cruise Control (with A/C) 55.8/49.2; Summary (336 miles, 31 MPH average) 54.5/42.7.

2-02-2010 **Promotional Video.** Taking advantage of new mediums to reach consumers is resourceful, especially in this new emerging automotive market. Though, how successful that can be remains to be seen. In this case, it was a new video posted on YouTube by GM. They took the opportunity to push the "not a SERIES hybrid" mindset again. But this time, they went much further than expected. Volt is portrayed as traditional vehicle when not in "EV mode". There is no MPG expectation of any kind anymore. It's gone! The entire "230" escapade is now as if it never happened. They appear to have abandoned that idea of efficiency measure entirely. Instead, focus is exclusively on the electric-only driving with the engine only there for special circumstances. In an ironic twist, it makes the FULL hybrids appear as though they are only ASSIST with respect to a plugging in. That would actually be ok too, if price differences weren't so drastic... quite unlike the nearly identical prices between Prius and Civic-Hybrid. Volt will be considerably more expensive requiring a 16kWh capacity battery-pack rather than the 5.2 kWh planned for Prius. Of course, that wasn't mentioned in the video.

2-02-2010 **January Sales.** The disturbance in the force has made looking back at the past month somewhat meaningless. Toyota halting production to divert resources to recall efforts has never happened before. Outcome in the short-term will be unique, perhaps not even hinting at what the long-term will bring. Whatever the case, there are still some numbers to report. Toyota sold a total of 12,190 hybrids here. 8,484 were Prius. 2,313 were from the Lexus division. What will happen in February is anyone's guess.

2-03-2010 **Kick Them Hard.** There's lots of deliberate misleading right now. It's quite irritating seeing posts coming out of no where that are intended to cause harm. The hate for Toyota, who planned ahead, has been building for quite awhile. Even GM once talked about the difficulties the next decade would bring, but they didn't take that future seriously. Now it has arrived. So those attempts to level the playing field are understandable, but quite inappropriate. I'm curious to see how much all this lingers. How long will some continue to raise doubt? How much will some portray rare circumstances as common? Will this provide competitors an excuse for emissions & efficiency to be disregarded? What's next? Raising awareness & expectations could backfire and harm the entire industry. Sadly, many take what they read at face value. And with so many vague & misleading reports now, restoring credibility could take a very long time.

2-04-2010 **We're All Going To Die, hysteria.** The most effective approach to taking away marketshare from Toyota has been to build up a sense of fear, to make people believe they are in certain danger. Taking advantage of the accelerator & brake post-sales updates (one a recall, the other voluntary) already under way is how the troublemakers have been doing it. They compel owners to think harm will come if they don't speak up... even though action has already been taken. Interestingly, Ford is providing something similar for their hybrid braking system, yet there is no retaliation toward them. In reality, it's primarily media hype. They thrive over stuff like this. Dealers are not getting flooded with owners lining up for the work immediately. Accidents aren't happening either. It's just a hysteria caused by those wanting to cause harm. Reports of brake "failure" haven't reveal any actual danger, only the need for improvement... which is already taking place.

2-04-2010 **We're All Going To Die, exaggeration.** The best example of blowing the situation out of proportion is to report that the braking transition takes long enough to react to it and it can happen at any time. In reality, it's a split-second and will only occur when heavy regen is taking place without any friction braking. In other words, your foot pressure on the pedal must be light and speed cannot be faster than about 30 MPH. If you press down hard, regen is bypassed entirely and the system goes straight to friction-only braking. So, the estimate of a car traveling an extra 90 feet when braking from 60 MPH doesn't even make sense. It's clearly an exaggeration. Any request to stop from a driver going that fast would engage friction braking along with regen... meaning at no time would there be no brakes slowing the vehicle... invalidating that estimate. And of course, the odds of striking a pothole large enough to trigger the "failure" sensation from a highway are quite rare... not impossible, but no where near as often as the hype is leading people to believe.

2-04-2010 **We're All Going To Die, outcry.** Notice who's actually screaming about Toyota problems? Based on the official complaints filed, which sadly are quite lacking in detail, the number of Prius owners is less than one-tenth of one-percent. Yet, we are being told this is a horrible crisis which must be resolved immediately because hoards of people are now afraid to drive. Really? It's certainly not good to downplay any situation involving safety. But since remedy actions are already in process, why all the screaming from non-owners? What do they hope to achieve after the fact. Awareness has been raised. There was no imminent danger. Recalls are nothing new, and for Prius one wasn't even issued. People continue to drive those vehicles afterward. Isn't turn-around within a few months acceptable? Those in charge are actively engaged already. A congressional hearing is scheduled to ensure all concerns have been addressed. What's the outcry for at this point?

2-04-2010 **We're All Going To Die, attacks.** We got quite a few on the big Prius forum this morning. This particular one from a member who just joined and doesn't even own a Prius posted this: "*I'm sure the 'veterans' above can swallow their words now and actually consider that when newbies report serious issues with their Prius, they're not making stuff up.*" My response was much like the others in the endless stream of attempts to stir concern. It's hard to take the word "serious" seriously after driving my own Prius for so long without any trouble whatsoever. I posted this: Don't twist what we said. We said the situation was rare and there was no need to give into the hysteria. We've been driving Prius for years without incident and know improvements are always on-going. Nothing was dismissed. We just demonstrate greater patience... something required from the very beginning when we had to wait many months just for delivery.

2-04-2010 **We're All Going To Die, pointless.** What's the point of posts that aren't the slightest bit constructive? This particular one, from the same person as the prior attack, really irritated me: "*Latest news from Japan. Potentially a Prius-gate for early 2010 Prius adopters. I'd like to see all the hardcore fan-boys continue to defend the issue as a normality or 'feature' of the ABS system now.*" From that, it's pretty clear that stirring trouble was the objective. My reply was this: Your attempt to blow the situation way out of proportion, feeding the hysteria, is a great example for my blog. Thanks! Pushing that "OMG we are going to die" belief is really sad. We've seen many, many improvements to the design of Prius over the years. Why would you try to convince people that the brakes wouldn't be improved too?

2-04-2010 **We're All Going To Die, perfection.** Unrealistic expectations stemming from not really knowing what a hybrid is designed to do in the first place contributed to the escalation of emotion. With such an incredibly diverse market now purchasing Prius, it should be no surprise that revelations about the automobile itself are being made. Sadly, that is actually the case. Some have been overwhelming surprised to discover efficiency influencing factors like MPG dropping during the winter has always been a problem. But with traditional vehicles so wasteful and not offering a display screen to provide that information, people simply never noticed. Hybrids exacerbate the drop too, leading to even greater upset from the discovery. Combine that with other revelations, like SUVs actually being more dangerous rather than safer as they had been promoted, you've got a consumer base that's now quite disillusioned. They dreamed of perfection; instead, they are getting improvement.

2-04-2010 **We're All Going To Die, software.** A fascinating revelation for me is the discovery that many consumers have no idea a vehicle's computer can be upgraded. They are under the impression you are stuck with whatever you originally purchased unless you pay to have devices replaced with newer ones. That's the way the business has been for an entire century. The fact that you can now get a software update at no cost when you bring your vehicle in for routine service (like an oil-change or tire-rotation) never crosses their mind. It's simply not common knowledge yet that such a thing has been happening already. Iconic Prius owners already know this. They've had their ECU updated a few times now. That's why those who have traded up for a 2010 haven't panic about getting the brake update. They know software upgrades are not a big deal. The mechanic loads a device with the update, then connects that to the vehicle's ODB-II port to transfer it.

2-04-2010 **We're All Going To Die, promptness.** I understand the concern some have about addressing unexpected brake behavior. Without an indicator light or beep, it indeed can be disconcerting. The pulse happens so quick, you don't get the opportunity to take it all in... and obviously, some people panic in response... hence claimed of a failure, even though nothing is broken and the odds of an even a minor fender-bender are extremely slim. Nonetheless, it's still a fair expectation for a prompt response when a complaint is made. What does prompt mean though? The automotive industry has a history of being painfully slow to respond to safety requirements. Even when forced with legal regulations, they are well known for doing the absolute minimum. Recent events have clearly changed that. The power of the internet is emerging in a way few ever expected. People can learn about things far faster than ever imagined, even compared to just a couple of years ago. Promptness is quickly becoming an expectation.

2-04-2010 **We're All Going To Die, empowering.** Newer owners, those who have been driving 2010 Prius for a few months as well as participating in discussions online, are now really starting to feel a connection to the technology. The hysteria nonsense is turning out to be an empowering event for them. There was a void rapidly growing larger as Iconic owners said their goodbyes. The model of Prius they had supported for years was no longer the topic of interest. But those new owners didn't feel it was their place to step into positions where years of experience had just held. They do now though! Taking that chance to speak up and voice their own opinion was immediately redeeming. It's something that would have normally had taken a year or two to occur. Instead, the craziness of the media "accelerating" that and there's no way to "brake" from that now. (Yes, I know... really bad puns.) That's a positive, a gain the competition will later be shocked to discover they contributed to. Thanks!

2-04-2010 **We're All Going To Die, under-deliver.** Remember the recent "setting goals" fiasco? It continues. Claims that GM won't over-promise is the only thing that seems to draw any type of passion for Volt anymore. However, none of those enthusiasts chanting that ever clarify what it actually means. They just say they are thankful GM won't under-deliver like Toyota. What are they going to say if expectations differ from what consumers are actually expecting from Volt. With all the mixed messages over the past 3 years and continuously changing plans, there's no possible way any type of unified message will emerge on its own. They have to explicitly state something... just like Prius owners are doing now. It would be hypocritical not to. Yet, all we get is vague comments. When paying for a $40,000 vehicle, what do they expect? The intolerance of Prius brakes being even the slightest bit different even in rare situations seems to make it quite clear that this will come back to haunt them later. Under-Deliver what?

2-05-2010 **We're All Going To Die, attention.** Discussions being undermined by posts about Toyota must really be upsetting to those on competitor forums wanting to have constructive posts about the usual topics. On that blog for Volt, it has become totally pointless to even attempt to discuss Volt. Some there absolutely cannot resist interjecting harmful words about Toyota & Prius. For me to try to intervene would be a waste too. They are so sick of hearing about bankruptcy troubles that this has emerged as their vindicating event... even though there isn't actually any merit to support that. After all, issues like brake sensation & response won't emerge until long after rollout, when rare circumstances & behavior are finally encountered. Anywho, I really got a kick out of the posts on the big GM forum. They started a thread with the purpose of creating Prius carnage. After several pages of posts, some members started to call me out. I remained quiet, letting them wonder why I hadn't made an appearance. When I finally did, they weren't happy. I pointed out all the bait they had dropped, making in painfully clear that they were guilty of trolling. When attention is diverted so far from the norm, you know they are getting desperate... fearing a better relationship with consumers could emerge in the end. After all, that is what happened when the Lexus division first debuted. Toyota made the best of a really bad situation and ended up recovering unexpectedly well.

2-05-2010 **We're All Going To Die, fallout.** Finding out that Ford is also dealing with the same braking situation for their hybrids and seeing how differently the media is treating them sure is a head-scratcher. Reading about the American interpretation of the Japanese approach can be eye-opening. You'd think those differences would have been better understood at this point. In the end though, current problems will be resolved and the next step will still have to be taken. We obviously won't all die from killer cars that accelerate out of control and cannot be stopped. What will happen is having to deal with the grim reality of emissions & efficiency. Don't forget how many used this unfortunate situation to distract from that harsh reality. We still have GM struggling to just deliver a 40 MPG non-hybrid vehicle. Trust & Reliability are very important, but so is the need to reduce dependency on oil and prevent the air we breath from getting any worse. The lesson to be learned is that fallout of a terrible event shouldn't distract from the mission as a whole.

2-07-2010 **We're All Going To Die, looking back.** Remember the first article written about this? It came from a Detroit publication saying the brakes in the new Prius fail and asking if this puts pedestrians lives at risk. I titled my blog entry about it "Spreading FUD", knowing that was something certain enthusiasts would capitalize on. Sure enough, they along with others milked it, playing up the Fear, Uncertainty, and Doubt the topic of braking can stir. Rather than a constructive approach, we got emotional responses growing to the level of hysteria. Looking back, what really gets me is all the intentional misleading and blatantly incorrect information. That only led to confusion and blowing the situation way out of proportion. When you know that some of us have been driving the new Prius for 7 months now without any trouble and new owners are parking theirs with the fear of having an accident, you know that rationale thought is no longer happening. We're not all going to die. In fact, with all the raised awareness, the next step for hybrid market growth could actually be easier. We no longer have to point out the new Prius. People are now well aware that its more than just a size & horsepower increase. It's sad though that so many emerged with attempts to damage reputation.

2-07-2010 **We're All Going To Die, closure.** Here's my thoughts I posted as this situation hopefully draws to a close... Seeing people drop the pedal to stop and drop it to start, resulting in wheels skidding & spinning, is routine here. That's clearly the wrong approach for driving traditional vehicles on snow. Yet, they don't give much thought to the circumstances and do it anyway. So, feeling that brief hybrid pulse then reacting under the assumption that something just failed makes sense. After all, many of the reports state the driver thought something went wrong. Now some are angry at the lack of reaction from informed owners who knew it was an automatic system response similar to TC, ABS, and VSC. That means what we want now is an official update followed by the formal hearing. Closure is necessary when fear is felt, regardless of the reason it happened.

2-08-2010 **We're All Going To Die, stigma.** That's what many are pondering about now. When the update becomes available, owners will bring their Prius into the dealer and it will be done. Not much more will be said about it, right? Recall sounds like such a terrible thing, but the point is to prevent. A month or two from now, that objective will be achieved. Of course, awareness alone will go a long way. The upset came from owners not knowing. In the future will they resent not having known sooner? Will they worry about some other unknown emerging? Will safety concerns plague the industry? After all, people once worried far more about "crash tests" than accident avoidance. That "survive a crash" mentality is how the monster-size SUVs drew appeal. Now, it's all about not having an accident in the first place. So, it would seem as though no stigma could be realistic. The actual brake issue rarely occurred, yet concern became hysteria. That resulted in an update. We didn't all die.

2-08-2010 **eWork.** Here's a new topic, one very different from anything recent here... or for that matter, ever! We got snow, lots and lots of it piled well over bumper height. For the very first time in my career, I actually had everything necessary to do my job entirely from home. Having enough capacity & power to run all the software I need while also video-conferencing to discuss that work (computer programming) while doing it was just plain not realistic. Now, it is! So, why bother with a long & risky commute when that is no longer necessary? My poor Prius. It didn't get to go out and play today. That's rare. But as time goes on, I can see the idea of "eWork" become somewhat routine. Right now it's quite challenging though, when so few have the hardware like that. It's something we've heard about for decades. I'll certainly be working long enough to see it become common. The time & fuel not wasted by driving quite a bit less could really add up.

2-09-2010 **SSC-A0B.** That's the brake recall for the 2010 Prius. It's an ABS (Anti-Lock Braking System) control ECU (Electronic Control Unit) update. Updates to the ECU are nothing new for Prius. Those of us who had an Iconic model already experienced this firsthand. The mechanic at the dealer plugs his computer into your Prius computer via the ODB-II port and the update is transferred. "AOB" is the SSC (Special Service Campaign) number for this update to the braking system. It took them 45 minutes to do mine, including waiting for them to wash & detail the car afterward at their expense. That was a nice touch.

2-09-2010 **Fueling the Fire.** To stir fear & concern, articles questioning the reputation of Toyota are now interjecting vague comments about Prius. This one really got me riled up: "*The vehicle has also had trouble with headlights going out.*" What kind of impression does that make? It leads you to believe both fail, the owner is left in the dark (pun intended), and it is a common occurrence. In reality, it is almost always just one or the other. An easy remedy is to just switch them off and back on again. And this only happens to the HID models (when they get old), an option most models didn't even have. To make matters worse, it allows you to make the assumption this is a problem for the 2010 too. It's not. The better lighting option is now LED, rather than HID. That's a totally different illumination technology, which should prove more reliable since it's already used in many other unrelated products. But none of that is ever mentioned.

2-10-2010 **Something Constructive?** It's nice actually encountering a comment like this: "*The big takeaway from the Toyota debacle for GM is that the Volt has to be absolutely damn perfect out of the gate.*" I chimed in to that forward looking perspective: Did you notice how vague the issue actually was? Anything even remotely related to safety causes the media to swarm, resulting in a hysteria filled with fear & lawsuits. The brake recalls proved how easy it is to have a situation get blown way out of proportion. Expectations are set extremely high now. New vehicles like Volt are entering a very visible market, one where consumers are demanding change but are quite intolerant of variance. That contradiction is going to be quite a challenge to overcome. This is the very problem people predicted about 2010 an entire decade ago, back when hybrids first entered the worldwide market. Standards are a moving target. Traditional vehicles continue to be refined, causing new technology to race to get ahead of them. Pressure from ever-growing gas prices combined with increasing congested roads make the situation even worse. This year certainly is going to be interesting.

2-11-2010 **New Complaints.** Reading this frustrated me: "*...should we complain to them now while all these media is hot?*" It was an owner looking for an opportunity to capitalize on. He got this from me: Why such a negative approach? Rather than labeling it as a problem and complain, why not just ask? Take advantage of this new tool we have, the internet. People need to get over the old-school mindset that the only way you'll get an automaker to provide something is by forcing them with a recall. Computers routinely get their software updated. How come that isn't a common practice for vehicles? When the Classic Prius was first offered, it lacked cruise-control. Many found that a big shortcoming. But rather than complain or do anything threatening, WE JUST ASKED! Within a few months, Toyota offered a upgrade kit. The hysteria that resulted from the brake update clearly shows that it would be wise to try different approach. After all, you can attract more with honey.

2-14-2010 **Prius Hatred.** To read such an unloving reference article from a popular Detroit publication on Valentine's Day, you have to wonder. It claimed there's been a lot of celebrating lately. It called the voluntary recall (braking update) a "*manufacturing fault*" and stated that has led to an "*outbreak of global gloating*". Then it went on to explain: "*Where does this Prius hatred come from? A lot has to do with what some people see as a holier-than-thou attitude by Prius owners.*" Who are these supposed owners? The ones I know of mostly just drive it, some hypermile, none gloat. They aren't doing anything that fits the smug satire we all got a good laugh over years ago. Yet, they are now being gloated at. Such hypocritical behavior. Of course, what I like was the closing quote: "*And, by appearing so obviously fallible, the Prius' role as symbolic savior of the planet has clearly been undermined.*" Interesting, eh? It actually confesses how they attempt to undermine Prius. None of the owners actually claim Prius is perfect, they just say it is a better choice. But the greenwashing attempt to distort that message, making it seem as though we are exclaiming Prius the end-all and be-all. This nonsense is irritating. It provides a good reason to return the hate sentiment. We don't though. We wait for the next update or upgrade. That's all.

2-14-2010 **High-Profit Vehicles.** Their appeal is rapidly shrinking. Volume of the past is totally unrealistic now. Yet, some still think those previous sources of high-profit can sustain the business. Why can't they see that those guzzlers are dinosaurs, old technology unable to deliver the clean & efficient needs of the future? Whatever. Thinking that some reader of the thread may actually care, I posted this: The market for traditional vehicles is changing before our eyes, yet all that is seen is activity of hybrids. How very interesting. The denial runs deep. Reality is that those high-profit vehicles from years ago are rapidly disappearing. People are driving them less and purchasing even fewer. The market is clearly changing. Again, the computer industry was forced to accept that shift. Why would the automotive industry be any different, especially when so much more pressure is on them to change?

2-15-2010 **Leadership Perception.** Some of the nonsense we've been reading lately is amazing. It sure is nice having documented what actually happened rather than having to rely on the perceptions emerging now, looking back long afterward. People used to say "*only Toyota knows how to do environmentally friendly cars*" according to Lutz. Really? What the heck was EV1 then? Quite a bit of interest was stirred by fuel-cells a few of years ago too... led by who? It's a mind game. Reality is that Volt production plans just got lowered and this is a way of lowering expectations. Now through the end of 2011, the plan is to produce 8,000 to 10,000. All along, it had been 10,000 through the end of October of that year. Now as component production begins, they scale back. Seeing so many Prius on the road already makes you wonder who the perceived leader really will be then. What will happen in 2012?

2-16-2010 **Not The Same.** It's no longer just a problem with the technology differences. Now the greenwashing includes attempts to mislead about history & purpose too. Today it was claim that GM will be following the same path Toyota did. This was to make us believe their slow pace is perfectly acceptable, even though GM already has extensive experience with motors & batteries and that dependency on oil isn't a concern. Back in 1997 when Prius debuted, that wasn't the case. Now, it is. Now, that excuse isn't available. Yet, some try to use it anyway. I responded with this: Toyota built a hybrid targeted at middle-market (mid-20's price) and kept that effort quiet for the first 5 years of rollout. Remember 2003? It wasn't until then that the concept of "halo" emerged, looooooong after the 1998 model-year rollout. GM promoting Volt to death well before it makes it to market and the pricing, even when subsidized, is still well out of reach of middle-market.

2-16-2010 **BMW X6 ActiveHybrid.** Want a distraction from the current hysteria? Look no further than this $92,325 beast. The hybrid city improves MPG by 2, bringing it all the way up to 19, and the highway by 5 to 17. Isn't that amazing? Not sure what the point of this particular hybrid is? How about a 0 to 60 acceleration time of just 5.5 seconds. At least with the Lexus it was a demonstration that a powerful rear-wheel drive FULL hybrid offering SULEV emissions was possible. But it was by no means a centerpiece vehicle. This is. It's what BMW chose to do with Two-Mode. So if you need 480 horsepower and need to tow 6,000 pounds or go 130 MPH, look no further. It's pretty sad when the "efficiency" choices being offered don't even deliver 20 MPG.

2-17-2010 **Owner Measurements.** There's nothing like an empowered owner, especially one with an accelerometer skilled at collecting data for graphs. We got that today. One with a reputation for being very thorough, took measurements before and after getting the braking update. He observed the switch-over pause change from 700 to 200 milliseconds. That's quite an improvement. Of course, that original fraction of a second wasn't that long in the first place. Now, it's even less. In fact, that should easily fall within the "too fast for a human to react" category. Whatever the case, it sure is nice having someone collect & share actual real-world data like that. Heck, he even posted a photo of the pothole he had found to recreate the scenario with.

2-17-2010 **Winter Heat.** When you own a Prius, all the facts not mentioned about Volt become a source of frustration. You get irritated by how easily people can be mislead. A great example of that is heat in the Winter. When driving a Prius, you become acutely aware of when the engine is needed to keep you and the emission system warm. With any plug-in vehicle relying on Li-Ion batteries for power, there's the extra need for heat from the battery itself. It's impaired when the temperature is below freezing. Today's quote about Volt in that situation was: "*The engine-generator system will provide energy to heat the battery if it was not plugged in or to supplement battery temperature.*" We already knew that. Waiting 3 years to hear something so vague is patronizing. They have no intention of sharing any actual detail. That's how they were able to get away with the 230 MPG claim. There was no way to either prove or disprove it. We know the engine will run, but for how long? How often will the engine be needed for heat? What is the minimum operating temperature?

2-18-2010 **Pothole Size.** Remember how Toyota had no idea how far people would drive after the refill warning would sound? It now seems pretty clear they didn't realize how bad potholes could get either. I certainly didn't. No wonder I hadn't ever experienced that braking sensation. I had no idea what a "pothole" actually was. Based on my driving, it was this little hole about a foot wide and several inches long. Now we know, those aren't what people were actually encountering. They were slamming into holes the size of craters, large enough to swallow small cars. That's amazing! Here in Minnesota, the opportunity for road construction is limited to a rather short warm season. That means we can't ever allow a pothole to get big. It would be a disaster trying to repair a road during the dead of Winter. The frozen ground would make that nearly impossible. It's also much more expensive allowing the problem to grow. Preventative maintenance saves money. Anywho, it makes sense that Toyota didn't realize owners were encountering conditions like that. There's no "cover up" when you're not aware of an issue in the first place. Too bad the industry doesn't have a better way of reporting such things... yet. Obviously, they will end up with one as a result of this. So, it's not all bad. It does make you wonder about how big potholes will still be allowed to grow though. A struggling economy means roads will be neglected. Budget cutbacks are a sad reality.

2-19-2010 **Not E85 Capable.** That was the big news about Volt today. It sure does make Prius look boring in caparison... you know, predictable. It's yet another planned ability that won't be fulfilled. This is why the vaporware arguments are pointless. What they now call Volt has very little in common with what consumers will actually get. Anywho, here's what I posted in response to this latest revelation: Remember the promises Detroit made to the previous administration about making a large percentage of their non-hybrid vehicles E85 capable, a technology that's been available since the mid-80's? Well, that hasn't happened. So, thinking we'll see it was a hybrid already stretched beyond the hype is really pushing it. Over-Promise, Under Deliver.

2-21-2010 **Abandoning 230, hype.** In August year, there was a mammoth attempt to draw attention away from the GM bankruptcy by focusing on the future. That was a good idea. Why dwell on the past? Unfortunately, what they chose was hype rather than realistic. It was a large advertising campaign for Volt featuring an estimated city efficiency of "*230 MPG*". That was followed by a media blitz. People were very excited... until they started asking questions. Too many went unanswered. As the hype began to subside, even the enthusiasts began abandoned the idea. By the time the big auto shows opened at the end of the year, there was barely even a mention of it. Sound familiar? Remember the "*Live Green, Go Yellow*" campaign? Excitement is stirred. But as so as it sours, they abandon the idea as if it had never existed.

2-21-2010 **Abandoning 230, questions.** The most simple of questions made people wonder. If that "*230 MPG*" represented an estimate for city driving, what was the highway estimate? What about when the Heater or A/C is used? How efficient will the engine be when the battery is depleted? That last one was the big one, it's called CS (Charge-Sustaining) mode. Originally, it had been hyped to be 50 MPG. But that too was abandoned. (Notice a pattern?) Well, believe it or not, we actually got an answer (though indirect) to that question. A dedicated supporter was offered the opportunity to experience CS-mode. Unfortunately, that lowered expectations. But it was a genuine observation, rather than just an estimate. 40 MPG was a more realistic value. One efficiency question (after years of asking, with increased exposure due to the 230 campaign) was finally answered. Phew!

2-21-2010 **Abandoning 230, another**! To our surprise, we actually got another real-world observation during that same period (end of year). It involved real-world Winter driving while depending upon the electric heater for warmth. That also lowered expectations. We now had confirmation that battery-pack capacity available for propulsion would drop by roughly 25 percent due to Heater and driving-condition changes during the cold season. That matched observations drivers of other pre-production electrically propelled vehicles had pointed out. It was a good sign that honest attempts to prevent misleading & misunderstandings were underway. Was there hope?

2-21-2010 **Abandoning 230, hope.** All was lost as the new year started. Toyota began both necessary & voluntary recall efforts. It was an opportunity for the competition to attack. Slander attempts were abundant. Misleading was absolutely awful. Hysteria was fed by claims of fear. The worst in those hoping to take attention away from Toyota, especially with the success of Prius, had emerged. Some were blatantly cruel. It was sickening. Sadly, plenty of examples of that could be found on the website dedicated to Volt. Daily blogging there was overwhelmed by discussions about Toyota's demise... even though they were the one who knew best that a software update for Prius wasn't a big deal and Volt could require an update of its own later too. Hope of a constructive outlook was lost.

2-21-2010 **Abandoning 230, data.** Collecting of real-world data began immediately after the "*230 MPG*" campaign. I wasn't about to let vague estimates undermine the progress of Prius to later offer the option of a plug and improved battery. It was greenwashing easily prevented by having some data available for reference. That meant documenting the distance driven each day... which is quite convenient with a 2010 Prius, since the odometer value automatically illuminates *after* shutting off the power. So, that's what I did. It was interesting to see the fluctuation from day to day. That variance is something never mentioned with estimates. All we had ever been provided was a vague statistic. Generalizations like that are what lead to trouble. Disenchantment comes from having false expectations. Preventing assumptions by providing real-world data has already proven very helpful in that past.

2-21-2010 **Abandoning 230, history.** How many times has the reference to "*over promise, under deliver*" been made? It was so common of a problem from GM that the effort to promote "*230 MPG*" was immediately responded to with doubt. I like pointing out actual occurrences in hybrid history to make that point clear, especially when in comes to Volt. Today, it was posting this: Keep in mind, history has taught us that it can repeat if mistakes of the past are not understood. In advance, it was easy to see Two-Mode would be very expensive. It was also easy to see the added complexity would make integration into other vehicles quite a challenge. And of course, the MPG claims always seemed questionable. Sure enough, after rollout began our fears were confirmed. Volt has the same set of problems to deal with. Expense, Integration, and MPG have all raised concerns long before rollout. Yet, supporters just shrug them off and refer back to the earliest days of Prius, disregarding the reality that the market has changed dramatically since then... in part due to failed hybrid attempts like Two-Mode.

2-21-2010 **Abandoning 230, goal.** What is it? We get an awful lot of trophy mentality, where the goal of transitioning away from traditional vehicles is neglected in favor of bragging rights. If Volt were as efficient as Prius in charge-sustaining mode, why wouldn't they offer a model with a smaller battery-pack? Some still claim MPG with after depletion will be 50. Others say even higher. That simply doesn't make any sense... especially when the test-drive in early December by a well-known supporter only delivered MPG in the upper 30's. Attitude is dismissive. Cost is exorbitant. Goal is puzzling. Why is GM betting the farm on just this technology? In does not seem a realistic choice for the replacement of traditional vehicles.

2-22-2010 **Abandoning 230, document.** Back when the hype began, I created a spreadsheet you could insert a typical week-long scenario into and get an estimate in return. 6 months later, I've collected enough real-world data to do calculations with. No need to "what if" anymore. There's actual numbers to work with now. This information compiled into a new document tells an interesting story. Of course, we all had a feeling that the "230" claims were just ideal condition claims anyway. Now, you can see that along with reasons stating why. Check it out. In the meantime, I'll continue to collect data. Another chapter awaits as the next season arrives. Misrepresentation is very frustrating. Having something like this available sure helps to provide perspective... Plug-In Analysis

2-23-2010 **$2.75 Per Gallon.** With the price of oil slowly rising to $80 per barrel, it's a given that gas will become more expensive too. That's a hint of the economy recovering. Sadly, the result is more traffic to deal with. A certain large automaker hoping gas will remain at the $2.49 level for many years to come still is already in trouble. We have already witnessed the end of the SUV age. Those expensive leases for those terribly inefficient vehicles have expired. Consumers are trading them in cars that don't guzzle instead. The unwanted SUV lease-returns are shipped out of the country. Hopefully, they'll actually use them for utility... quite unlike what we did here. Using them for daily commuting was a terrible waste. But when gas was cheap, people didn't care.

2-23-2010 **Wonderful Sighting.** There's nothing like stopping at the local store and seeing several Prius nearby in the parking lot. There were 3 Iconic and a 2010 all within throwing distance of mine. What a sight! It was wonderful. That was a fantastic reality check from all the hysteria we had been dealing with. It's hard to believe things got so blown out of proportion. To think panic can so easily emerge. Just imagine what things could be like if gas climbs up to $4 again, but this time doesn't come down as quickly or as far. With Prius better established now, much due to this newest generation, the choice of buying one is much easier. Prius is already a common sight on the road.

2-23-2010 **Recall Perspective & Awakening.** With the "unintended acceleration" recall being Toyota's first involuntary recall in its 52-year history here, those who have been struggling to with their own problems had the ultimate distraction... or so they thought. Turns out, the congressional hearing which began today served as an awakening. Perspective was given by pointing out how common involuntary recalls have become. Other automakers had several last year. To be fair, this is due in part to standards being raised. Of course, some don't want to be fair... pushing the idea of absolute certainty, no possibility of a failure ever under any circumstances. That's not realistic. What is realistic though is better communication among all parties and improvements to the overseeing authority, NHTSA. Much good can come out of this. How long do you think some will dwell on the bad though? It got pretty ugly over the past month.

2-24-2010 **Hummer Is Dead.** The effort of GM to sell Hummer to an heavy equipment manufacturer in China fell apart. It was yet another failure to unload assets. So, this brand will die too. Production is winding down. Sales were way down already, just a few hundred per month. Someday, we'll actually get good news from GM. But now, it's the on-going need of recovery from the bankruptcy... which is inherently bad news during this phase. Do you think anyone will miss this gas-guzzling behemoth?

2-24-2010 **In The End.** This quote truly upset the Prius supporters: "*The MPG drop was just one of my concerns in the Prius and turned out to be the least one in the end*." It came from an owner who harassed the online community, complaining about his MPG in every possible manner you could imagine. We got over 1,000 negative posts from him. It was horrible! Tolerating those complaints about his trouble with the Winter drop causing financial strife was making us crazy. His purchase decision was all about saving money from fuel expense. But he clearly hadn't done any homework before purchasing. He just heard MPG 2010 reports during the Summer and assumed he'd get that all year long. It's was a clear case of buyer's remorse. He later declared his desire to trade in his new Prius for a diesel to compensate for the MPG he required for his daily long highway commutes. What did he end up getting in the end? It was a Hyundai Sonata. What the heck! The MPG estimate is only 22/32. That choice doesn't make any sense. He flat out denied MPG was ever problem. Talking about hypocritical.

2-25-2010 **Makes Others Better.** An interesting theme emerging from all the attention on Toyota's reputation is that it will somehow raise the status of the competition. The supporters of the other automakers don't believe the raising of standards actually at issue will affect them too. They just see it as an opportunity to sway the poorly informed away from interest in Toyota vehicles. That will probably work in the short-term too... if all the consumer is looking for is a basic traditional vehicle. If they are looking for a solution to the ever-climbing gas prices, Prius will continue to be the first hybrid they research. What's a mystery is that 40 MPG market, where there's a mix of choices emerging. How will consumers be convinced those are better? What makes them the best choice from the point-of-view of a poorly informed consumer?

2-25-2010 **RAV4 Hybrid.** We got news of this being official today. Spring of 2012 is when it's expected. As some of us anticipated, the physical size & power growth of Prius has opened up opportunities. In this case, the same size engine will be used. In fact, that was officially stated as becoming the automaker's "core powertrain" for hybrids. It makes sense. Having driven mine for 8 months now, I see it as an excellent balance of wants & needs. Anywho, this particular new hybrid is direct competition with the only other smaller FULL hybrid SUV available. That should make things interesting. Competition in the practical-size market should benefit everyone, especially when in comes to improved emissions & efficiency.

2-26-2010 **Thinking About Trading.** This caption above a photo in an article about Toyota today sure caught my attention: "*May owns a 2010 Prius, a recalled model, and he's thinking about trading it in on a new one.*" Don't you love how things can so easily be twisted or blown out of proportion? What the heck does that actually mean? Is he really concerned about the recall or was this just a simple case of buying the base model and seeing an opportunity to upgrade? Since the recall is nothing but a software update, trading for that reason alone is completely pointless. Software is updated in computers routinely. It's no big deal. In fact, programming improvements are an expectation... not an exception. What possible concern could that owner have? It would be unfortunate to discover a salesperson motivated by commission is pushing the idea of trading for a new version of the same package. Unfortunately, we'll most likely never find out why.

2-26-2010 **Shoveling Nonsense.** That new document couldn't have been better timed. Yet again, a certain Volt enthusiast posted extremely misleading & vague numbers, then attacked when I pointed out a revision was needed and provided data to support it. There's no opportunity for constructive discussion. If you don't like their talking points, your posts are considered bashing. It's pretty sad. In this case, I pointed out how the lifetime portrayal of 120,000 miles of driving did not reflect an accurate depiction of gas gallons consumed due to using only the city estimate of 230 MPG. Saying the car would never be used on a highway (which has much lower MPG) its entire life was just plain not realistic. His response to that was anger. So of course, when I pointed out the use of a 40-mile city estimate was also misleading, it fell on deaf ears. He simply does not want to deal with real-world conditions, like heater use in the Winter. It's the same old nonsense from a supposed leader there. Over and over and over again, we get it shoveled to us. Do they honestly think setting up expectations based upon ideal conditions without disclosure is going to help?

2-26-2010 **Believing Nonsense.** Sadly, there are some who take information posted at face value, never searching to confirm whether or not it is correct or misleading. Simple proof of that is the number of comments still posted by those who claim Volt will "*use NO GAS at all, and after 40 miles, 50MPG*". That's absolutely false. We know for a fact that even in the optimal conditions, Volt will still run the engine an absolute minimum of 10 minutes monthly. Fluids must be circulated and that is the longest duration GM will be allowing. We also know that the 50 MPG estimate was from the original 1.0 liter 3-cylinder engine. That was dropped in favor of an engine we know is less efficient even under ideal conditions, a 1.4 liter 4-cylinder. We even have test-drive observations stating 38 to 40 MPG. Lastly, we know for a fact that Winter will require the engine to run for warm-up and that battery capacity will be less and demand greater, reducing the range from 40 miles to somewhere around 30. Yet, knowing all this already, some continue to post what they hope for rather than something realistic.

2-26-2010 **Ending Nonsense.** The point of my pestering is to end the nonsense. I do it for Prius too, not just Volt. So those who think I'm showing a bias haven't bother to actually do any searches. Any misleading portrayal is confronted. Prius supporters have seen the damage (far too many times) caused by having inflated expectations. When new owners discover what they read about was an ideal, rather than real-world, they become very upset. Yet, that's exactly what some Volt enthusiasts are doing without disclaimer. It's far too easy for the uninformed to expect the nonsense (that's hype they believe). The reminder of YMMV (Your Mileage My Vary) is excluded, intentionally. It's very frustrating to witness that.

2-26-2010 **Disproving Nonsense.** I'm planning on another Prius upgrade. (It sure is nice they hold their value so well.) When the plug-in model becomes available, I intend to be among the early deliveries. That's why I'm so diligently collecting real-world data now. Later when I do finally get that opportunity to plug, I'll have a great basis of comparison available. It's worked well already for comparison of prior generations. My same commute results in clear evidence of MPG improvement. But with this next model, we'll have the added challenge of disproving nonsense spewed by other competing plug options, not just traditional offerings or less capable hybrids. Their claims are based on estimates, which have inherent shortcomings. Real-World data takes care of that.

2-27-2010 **Statistical Nonsense.** Something that has irritated me more than anything, an inspiration to collect daily-driving information of my own, has been the endless quoting of GM's claim that 80 percent of people drive less than 40 miles each day. We never really knew much about that particular statistic, despite heavy use of it. Later, we uncovered the reality that the sample size was only 1,000 drivers. What are the odds that it doesn't represent a wide demographic? Well fortunately today, another survey was revealed in a new Argonne study. The sample size it had collected was 84,000. And you guessed it, the percentage was less. It was only 62. Just think how much lower that could be if the survey had sighted 35 miles in Winter. More and more, Volt is becoming just another efficiency option that will be available... rather than a leap-frog, make everything else obsolete technology enthusiasts have been claiming. Add that to the pile of nonsense observed long before rollout began. Then when it does, we won't be accused of rewriting history. Those concerns about misleading are well documented already.

2-27-2010 **Lexus CT 200h.** This is the newest hybrid just revealed by Toyota. Advancement goes on, despite the crazed market at the moment. It's a luxury compact. That should make things interesting. Downsizing of vehicles is hitting all types of vehicles. What that will translate to for MPG is a topic for pondering. Being smaller than Prius but using the same size engine should give it some kick, yet still deliver very nice efficiency. Not much else is known yet. We'll have to wait until closer to the end of the year when it rolls out.

2-28-2010 **Bulletproof.** We've seen this type of misleading before when it comes to greenwashing. If you over-inflate expectations after-the-fact, it creates a sense of disappointment. That's what we've seen a lot of with the reputation for Toyota lately. Those hoping to portray it in a light of dwindling success are claiming owners purchased those vehicles with the belief that they were bulletproof... meaning they would never need any repair of any sort, that the vehicle would operate perfectly its entire lifetime. Since when is that realistic? And of course, where's the proof that the situation they describe is actually true? Have you noticed that nothing reported to NHTSA is actually validated? It's far too easy to make assumptions & generalizations.

2-28-2010 **Reliability verses Interface.** Have you noticed how these are being interchanged? Devices like brakes & accelerator pedals have always been looked upon as the interface for drivers. If they need adjustment or replacement, they weren't really considered part of the reliability factor. When you ask a consumer about a vehicle being reliable, the thought that almost unanimously comes to mind is the propulsion system. That's probably because those interface devices are something you can interact with, something you have the power to easily manipulate. When in comes to the engine & exhaust, you're pretty much at the mercy of the vehicle leaving that interaction to the mechanic. Heck, even filling up with gas hadn't been considered reliability... until the idea of safety was introduced. The problem is, everyone has a different opinion of what "safe" means to them. It's subjective. Measurement isn't as simple as something no longer functioning. There are varying degrees as to what people deem acceptable. The market is most definitely changing.

3-01-2010 **Outside Perspective.** An article from China pointed out the response by the United States toward Toyota is being looked upon as an over-reaction. There's no hysteria in Japan. In fact, it's quite the opposite. The response here is generating a greater sense of loyalty. After all, support for a local automaker is important when your local economy is struggling to recover. Sound familiar? You have to admit, there was intense reaction for GM during the bankruptcy. What this means going forward is anyone's guess. Cultures are still quite different. Americans do suffer from both short-sightedness and forgetfulness. That's not good. The type of risks we takes are different too. At times, that has actually proven beneficial. At others, it has been disastrous. In this case, there could be harm to long-term relationships. It's another one of those "getting lost in the moment" situations, where everyone needs to step back to consider the big picture... and with this situation, listen to the perspective from someone outside of it.

3-01-2010 **Recall Fear.** Sure enough, the idea of rolling out a small number of Volt early has been dropped. With the bar being raised, expectations of flawless operation has made it too much of a risk. GM simply can't afford to deal with any type of negative publicity. Of course, it's at least in part self-inflicted. When you hype a new vehicle to such a high standard, people are going to want that to actually be delivered. It's really too bad the market here is becoming so intolerant. An update of any sort is labeled a recall. That's resulting in fear on many levels. Change is becoming more difficult. That's a step in the wrong direction. Bummer.

3-01-2010 **Speed Greenwashing.** Part of the irritation with how Volt is being portrayed is the way enthusiasts mock the 100 km/h (62.1 MPH) maximum electric-only speed of Prius. They do it in such a way that people assume there's no benefit from plugging in if you drive faster than that... which couldn't be further from the truth. Anyone who's driven an older model down a mountain knows this quite well. The resulting very full battery gives a heck of a MPG boost even with the old 42 MPH limitation. Those who have battery augmentation see quite an improvement, despite also being limited to 42 MPH for electric-only. The engine simply runs at an extremely efficient rate when driving faster, allowing the electric motor to contribute more thrust than it normally would.

3-01-2010 **Good For The Economy.** Remember than claim. It came immediately after 9/11. That was the nonsense we had to endure as part of the massive push for acceptance of the monster-size Pickups & SUVs. We were suppose to disregard the fact that they guzzled so much in favor of the benefit they would provide for our economy. Jobs were more important. Sustaining business was paramount over concern for emissions or oil-dependency, which was rather trivial back then. Remember how cheap gas was? Anywho, those vehicles purchased back then are now approaching the end of their service. What do you think owners will now be replacing them with?

3-01-2010 **Other Recalls.** Prior to this big event with Toyota, how would have consumers reacted to other recalls? For that matter, how will they react to the 1.3 million cars being recalled today by GM? In this newest, it's in response to over 1,000 complaints about the power-steering failing in various models over the past 5 years. Hopefully, we have already peaked. It would be terrible to see hysteria again. Amplifying fear like that didn't seem to accomplish anything. In fact, people are already mixing up information... not remembering what update or replacement was needed for which vehicles.

3-02-2010 **Short Month.** Sales figures are now starting to be revealed. Despite Camry being in the midst of the biggest Toyota recall ever and the sales halted, consequently creating a very short month, it still outsold GM's Malibu. I can only imagine the stir that will cause. 16,552 was the total for Camry. 15,150 for Malibu. For Corolla, it was 16,996. All things considered, that's not too bad. Impala is the other sedan GM now wants to sell lots of. That came in at 11,740. For perspective, the vehicle which once commanded the spotlight was the large Tahoe SUV. With only 3,325 sold, you can understand how ugly it would get if I asked how many of those were Two-Mode. Cobalt is the traditional compact being phased out with Cruze as a replacement. 14,101 of them were sold. All those numbers are just snapshots in time, for the sake of documenting what was holding interest at the moment. So, don't take them too seriously. Always consider the long-term results. Prius is holding steady at 7,968. In perspective, that's not bad. But then again, Ford is expected to do much better overall than GM during these uncertain times and they actually offer a nice hybrid. So, comparisons could be considered cherry-picked. Realistically, Prius needs to get back on track for the desired 15,000 per month originally plan. Hopefully, that's not far off. This was an especially good example of why consumers in general shy away from first-year production. Though, who knew it would be part of so many other quite unpredictable events. Whoa!

3-02-2010 **Lutz Retiring, Again.** This is the GM executive who is famous for stirring the pot by speaking out, then others having to deal with his comments afterward. It's actually where some of the "over promise" comes from. High power muscle-cars were his specialty, so it's no surprise that Volt exceeds the performance needs of the middle-market it is supposedly targeted for. It's also no surprise that Two-Mode was given so much emphasis on power rather than efficiency. Of course, he's best known for his "*crock of @#$%*" comment about the effects of carbon emissions. I personally like his "*nicely under $30,000*" the best. So, it's been a bit of a joke knowing where his priorities really are. In the end, he was planning to retire last Spring... then the end of last year... now in the end of April. Whatever the case, it is yet another leader in the Volt project to step down. Can we hope at least a small of that has something to do with the need to scale back specifications to achieve the necessary pricing to make it competitive? Remember, he was the one who said hybrids don't make financial sense to produce & sell.

3-03-2010 **Auris-Hybrid.** A little bit more detail about this upcoming European hybrid from Toyota has been released. It will be a compact similar to the Lexus recently revealed for this market. That's no surprise. Reuse of frame and interior layout is a good cost-saving measure. They adapt the body-style and features offered to a particular location. It's actually Europe's version of Corolla. It's even available with a diesel engine. The hybrid propulsion system is the configuration we're already familiar with, the same as that in Prius... which could make the projected sales for the first 12 months of 130,000 units fairly realistic, since the technology itself is already proven and the non-hybrid Auris is already common. We'll find out soon enough. Sales begin in July of this year. It's certainly nice knowing that all the craziness lately isn't affecting rollout plans.

3-03-2010 **The Need.** A friend of mine summarized the overall problem well with this: "*GM needs a leader that believes in hybrid technology with a vision to mass produce a realistic car.*" We've seen lots of interest in producing hype, a hybrid that draw a massive amount of attention at the penalty of a limited target audience. Why deliver an over-powered vehicle when the cost make it too high to reach middle-market? That's something Lutz was never interested in. After all, supposedly mundane vehicles like Camry & Corolla don't draw much attention. How could they? So many are sold every month that you see them everywhere. Why produce a ubiquitous business-sustaining vehicle when you can deliver a high-cost trophy to be proud of?

3-04-2010 **Jumping Ship.** We've been told to be patient; meanwhile, gas is now at $2.79 per gallon. We've been told price will be taken as a priority; meanwhile, target market appears to be well above the middle. We've been told the second generation will offer many improvements; meanwhile, many of those in leadership are stepping down. This is why the well informed are becoming so frustrated with Volt. How long? How much? Who? To make matters worse, if you point out any of that, you get labeled as a "troll" for disrupting the status quo. Sound familiar? That's exactly what happened when things started looking bad for Two-Mode. When the potential for mainstream became questionable, the reaction by die-hard enthusiasts got intense. In fact, it was rude & hostile. History has taught us that it is best to jump ship at this point. Hopefully, a much more affordable model will emerge from the ashes. It's unfortunate the die-hard currently feel that a balance of price & performance is considered too much of a compromise.

3-04-2010 **30 MPG.** This most definitely is regarded as the standard for "*efficiency*" nowadays. Talking about an effective campaign to lower standards! The latest effort, which at least shows the shift away from SUVs back to the sports car, was an announcement about the upcoming new Ford Mustang. Its 3.7 liter engine with a 6-gear automatic transmission will offer an estimated 31 MPG highway. Impressed? I'm not. The city estimate is only 19 MPG. But that's not what they focus on. Promotion has been that the 31 is better than Corvette's 29. It sure puts the 50 MPG some people see daily in perspective.

3-05-2010 **Reality Check.** The price of gas is going up as the economy recovers. Toyota & Ford both really want to push hybrid growth. Consumer priorities are shifting over to efficiency. Price continues to be a major purchase decision factor. GM hasn't strived to meet requirements of the market. Volt is poorly configured to address those realities. It's the classic want verses need problem. Unfortunately, history has taught us that with clever marketing we can be convinced to buy something we don't actually need. Time is working against them. Those of us with years of market observation know that pressure is building and the hype is going to be intense. Studying their wild claims now is how we prepare to deal with that inevitable upcoming greenwashing storm.

3-05-2010 **Production Intent.** Isn't it for hybrids to replace traditional vehicles? If that's the case, how come I get so resistance when asking for confirmation of that from the Volt enthusiasts? Some of their responses lately have been quite rude and almost hostile. Prior to rollout is the most appropriate time to verify important information like that. After all, Prius continues to be the top-seller in Japan (over 27,000 in February alone). So, it's not at all unrealistic to want to know what GM's production intent is. Will they scale back traditional volume with hybrids instead? If not, what the heck is Volt suppose to be? More and more, it's looking like a plug-in Camaro rather than an everyday vehicle like Camry or Corolla. Stating explicit goals, like Toyota's desire to produce 1 million hybrids annually within the next few years, is what we want to hear about... not MPG hype.

3-05-2010 **Return of the Sedan.** Remember those days before the SUV craze? The sedan was king. It was a midsize, midprice vehicle for middle-market. It was the ultimate balance of providing a steady source of reasonable profit for automakers. Unfortunately, the draw of high-profit from the monster-size vehicles really messed that up. The business model which has served the industry so well for decades was broken. To make matters worse, consumers were compromising emission & efficiency values to purchase them. Turns out, they were also over-extending their financial responsibilities to do that. Needless to say, that put us in an ugly place. So, seeing 2 hybrid Fusions today was a very refreshing sight. That was an undeniable sign of change. It's not just Toyota pushing to offer FULL hybrids for middle-market anymore.

3-06-2010 **Plug Required.** It's not too difficult to understand the perspective of a Volt enthusiast. They see great potential from an engineering point-of-view and have no concern for the business. It's all about building a better car. As batteries improve, so will the appeal. Range can increase and price can decrease. That sounds like a great plan... 6 years ago. If it were still 2004 rather than 2010, that would actually make sense. Gas was still cheap then and there were no real dependency or environmental concerns. It was an optimistic time. Since then, we've encountered quite a number of market problems, including battery shortcomings. Business is struggling. GM is proposing a future with nothing clean & efficient for those without an outlet for plugging into. You'll be stuck with a vehicle only getting around 30 MPG. Volt isn't like a FULL hybrid, where the plug is an option. It's required. Not offering the choice is what some see as disingenuous.

3-07-2010 **Spring Time.** Opened the roof today. It was fantastic! Spring finally arrived. That transition from the warm season to cold is always an awakening. No matter how much you prepare your mind for the lower efficiency and the entrapment of always keeping the windows closed, it doesn't hit you until you realize how long it will truly be until that changes again. Then one day, you discover it has warmed enough to allow a slight breeze to come in. And with the 2010 Prius, it can happen from above. I pushed that button I hadn't touched for over 5 months. The glass lifted and slid back, providing a sound & feel not experienced for what seemed like forever. That's how I knew it was Spring.

3-07-2010 **Back To Basics.** There are now lots of newbies asking lots of questions. With the chaotic nature of the market, it's compelling those new owners to speak out too. Think about the inventory situation. There are Prius to choose on dealer lots from and zero-percent financing available. That equates to opportunity for some. Also, Winter is over. That tends to contribute to sales for the uncertain anyway. After all, people are more likely to want a new car after the snow & ice are gone. All the attention on Prius has brought it to the forefront. The thought of it being a niche is long gone. Hybrids are clearly the next step in automotive evolution. That debate is over. So... we have to get back to the basics. Simple information about how things work is wanted. It sure is nice. There's nothing left to prove anymore.

3-08-2010 **Debugging.** Have you heard all the debating as a result of Congress wanting to know more the recall causes? It's madness. People don't have a clue about how software actually works. This is the same problem Microsoft has when attempting to explain the benefits of a new operating system. Far too many incorrect assumptions are made. In this case, some believe Toyota has a "black box" that captures every little detail about what happens as the vehicle is driven. It does occur to people how much memory thousands of data captures per minute for a large array of component would consume or how much processing power it would take to accomplish that... not to mention the cost. They don't understand the nature of logging itself either. Having 25 years of programming experience, I know all too well the shortcomings of logs. Unless you have an extremely good idea of what to expect in the first place, all you get is generic activity information. Sometimes that's all we need. Other things, the debugging effort requires a software update to capture specific detail. Hmm?

3-10-2010 **Asking Purpose.** It's getting to the point where you simply can't ask anything anymore. Sound familiar? The parallels of Volt to that of Two-Mode history is remarkable. I asked this: "*Isn't the purpose of Volt to replace traditional production?*" The response was anger. They claim it will be a game-changing vehicle, yet absolutely refuse to clarify what game they are talking about. In a way, no matter what they actually mean, that will indeed be the case. Supposedly it is a replacement, but what will be needed to accomplish that quickly is nothing short of a miracle. Failure to capture market will open up greater opportunity to FULL hybrids like Prius. We saw that with the realization of Two-Mode being priced far beyond the reach of consumers and not actually delivery efficiency as good as promised. Why so much resistance to asking purpose?

3-10-2010 **Devil's Advocate.** The hostility had grown to the point of becoming an embarrassment to others. Fortunately, GM itself came to the rescue. Those particular troublemaking Volt enthusiasts suddenly had a reason to behave. The insults stopped. It was a truly amazing change of attitude. Hmm. I wonder how long that will last? They still probably won't be constructive, but at least they are civil. Anywho, this was accomplished by having a contest where he 10 most worthy get the opportunity to test-drive a Volt. So, when a certain someone started complaining again, I interjected with this: Anyone asking questions contrary to the status quo had been called a devil's advocate, since their goal was help clarify & solidify purpose. Now, they are just labeled as trolls and the idea of co-existence or diversification is simply dismissed. You do realize that oil isn't cheap anymore. Waiting for those "later models" leaves consumers hanging, business weak, and sends a message of uncertainty.

3-11-2010 **Revelations, call.** This week certainly has been one for the history books. There was an "unintended acceleration" incident. Immediately upon reading the flurry of articles published about it, something seemed wrong. Things just didn't add up. How could a driver go 90 MPH for 23 minutes while also talking to a 911 operator without being able to stop? Many online chatters have seen the YouTube video demonstrating what happens when you shift to neutral at that speed. It's no big deal. And for a man that's 61 years old, he certainly would be well informed about shifting to neutral while in motion. Manual transmissions were pretty much the only choice available in his time. Anywho, listening to the 911 call revealed a very different story than the heavily abbreviated one we had been told by the media. It didn't resemble his interview afterward either. The operator told him over and over and over and over and over again to shift to neutral. He didn't try. It was very strange to hear, for someone to call for help yet refuse it when offered countless times for 23 minutes. What the heck? The instant fame and seizing of his vehicle does provide reason to question events. After all, the media feeds on hype and fraud has been confirmed on several occasions. Was this someone starving for attention or wanting a new car? Why did he repeatedly ignore what the 911 operator said? The shifter was just inches from his hand. Yet, he bent over to check the floormat. How come we are suddenly getting reports like this, but in the 9 years prior... none? Owners complain about everything online. It's amazing how trivial some items are too. We take the time to listen anyway. So, something like an acceleration issue would really stand out. Antagonists would love to exploit an opportunity like that. It never happened though. This is only a recent development, exactly when Toyota's reputation has become uncertain. That's suspicious. So was the call.

3-11-2010 **Revelations, hysteria.** The madness really has to make a person wonder. You hear a report on the television then read details about the same incident in a variety of articles. They don't match. Sensationalism is clearly a problem. You get a distorted impression of the event simply by them attempting to summarize. Sadly, background is either brief or missing entirely. It quickly becomes a challenge figuring out what the situation really is. Unfortunately, people generally don't and just jump to the conclusion that something serious is wrong. In this case, it's that the vehicles are terribly unsafe... even though some of us have been driving them for over 9 years without ever having heard of such events. They are just out of the blue and all very recent. Human nature has found that to be a real problem. Behaviors are misinterpreted or exaggerated as a result. That leads to hysteria, which prevents reason and allows people to dismiss findings. It becomes a mess.

3-11-2010 **Revelations, witness.** I was actually witness to one such event many years ago. It was amazing! The owner of a new car was about to back out of a perpendicular parking spot at a busy local McDonald's. I was standing across the aisle with my brother, looking right at it. Good timing. I couldn't believe what happened next. With the wheels turned pretty much all the way, the car accelerated in reverse as what appeared to be full throttle. It smashed into the car next to it so hard it spun around almost entirely so it was facing the other direction, all while clearing a path for the two other vehicles next to it to also be struck. Within just a moment, it was over. There was crushed metal and a crowd of people wonder how the heck that could have happened. I noticed it didn't have a license-plate yet, since I was the one who reported the accident. I also pointed out it was a Ford, purchased at the dealership next door. The initial impression was either driver error or distraction. Too bad I never find out what the cause was concluded as.

3-11-2010 **Revelations, stop gap.** The nightmare has become irony. With reputation now taking the forefront, the impression of a technology is once again clouding judgment over actual need. The fact that history reveals the victim now to be the original source of the problem is truly ironic. Yes, I talking about Volt and GM. They've become apprehensive upon the recent revelation being stirred by consumers and the media about Prius and Toyota... to the point where detail is overwhelmed by promotion. Yes, that stupid "*stop gap*" nonsense is back. It was first used to confuse the market, giving the impression that hybrids were a wasted effort due to fuel-cells being available in just a few years. That made consumers hesitant about purchasing the second generation Prius, figuring that by 2010 the market would be entirely different. Well, that clearly didn't happen. Now Volt is facing the same type of propaganda with electric-only vehicles. And since they have an attitude of mutual exclusiveness, it's really becoming a problem. They haven't been willing to accept a mixed market, so the "*stop gap*" perspective is really starting to upset them... even though the very person responsible for the phrase is now the one in charge of the Volt program. Talking about having to deal with the very mess you created. It's a great example of how things work out over time, how getting hung up in the moment impairs stepping back to consider the big picture.

3-12-2010 **Revelations, hoax.** Just a day later, the internet is stirring with revelations that the person who called 911 was in very deep financial trouble, about to lose his only remaining vehicle as his lease soon expires. That information provided very strong reason to believe he would be motivated to attempt deception. After all, this wouldn't be the first time someone has tried a publicity stunt with the hope of fame & fortune. But with this particular situation, the facts are so much against him that it's difficult not to just dismiss him as taking advantage of the opportunity. Will we ever figure out the truth. Who knows? The repeated refusal to take the advice he was given over the phone really does make you wonder, even without knowing anything about his background. Reading about a comment given in an interview afterward about not wanting to sue or profit from the ordeal hoping to get a replacement car out of it does make you wonder. It's all way too convenient, especially the timing.

3-12-2010 **Revelations, timing.** Speaking of timing, it's not just events on the calendar. Think about how different that 911 call would have been had there been a CHP officer closely available. Whether or not the driver refused to comply with the operator's request to shift to neutral would be much easier to dismiss if it hadn't dragged on for 23 minutes. But his repeated defiance makes you wonder. Imagine how easily that could have been overlooked with video footage too. But timing wasn't on his side. Continuing to drive at such a high speed for so long give reason to doubt. None of the other incidents reported lasted more than a minute or two, some only a few seconds... others not even Toyota vehicles. That sense of something being wrong with that particular story really stands out when you consider how long it lasted. This will now make all claims to get a much closer look. Each event could look different the more you consider all the facts available.

3-12-2010 **Revelations, fear.** If a person is fearing for their life, why would they be worried about the fate of their transmission? Questions like that have popped up in response to the puzzling story being given about that runaway incident. Facts just don't add up. In this age where election campaigning includes a great deal of appealing to fear... terrorism, health care, employment ...there's no surprise that it captivates audiences. After all, that's what Hollywood has thrived on. The "electronics" in new vehicles are mysterious to most people, especially those who grew up without them. Fear manifests itself for them where someone who grew up with the internet wouldn't be even the slightest bit intimidated. How do you deal with that? For that matter, how do you even detect it? Most people don't admit they are afraid, especially if you are not.

3-13-2010 **Apprehensive Now.** Cruze is the other new high-profile vehicle from GM. They've already rolled it out in quite a number of countries around the world, but not here. In fact, the US debut has been pushed way back. Now, that turns out to have been for good reason. Being apprehensive about rollouts is nothing new. Recent events have added to that, making it far more of a risk. Bad publicity is a serious concern. So, when there is fear of a problem, an automaker is much more likely to stop operations now. And sure enough, Cruze activity has been halted in Australia. There appears to be a faulty fuel hose, which could lead to a leak. Sales & Deliveries are on hold until further notice. Do you think we'll be seeing even more responses like this from automakers in the future?

3-13-2010 **Two-Mode Reminder.** We have lots of new people discovering hybrids now, never having paid any real attention to them prior to the 2010 and all the hype related to the recalls. They simply see a new market emerging. To them, the previous 10 years were only a proof-of-concept test by the treehuggers. The thought of mainstream purchases prior to late last year is looked upon with bewilderment. In a way, that perspective is quite understandable. We have indeed seen failures throughout the previous decade. The biggest isn't over yet though, and it was indeed intended for the mainstream. It's the Two-Mode design. We routinely have to remind those newbies just how poor sales have been. February sales numbers were: Tahoe 83, Yukon 86, Silverado 106, Escalade 146. The total for 2009 was 8,791. The total for 2008 was 6,992. And all those sales were with a $2,200 tax credit! For an efficiency technology so heavily hyped and so deeply invested in, that's terrible news. If it was just a proof-of-concept, it would be easier to abandon. But instead, they're stuck with only that to compete with. In the meantime, the 27,008 Prius purchased in Japan and the 7,968 purchased here last month should make newbies wonder. If those aren't mainstream consumers buying Prius, who are they and why aren't they interested in Two-Mode?

3-13-2010 **Nobody Believes.** Some still like to portray Volt as a product once proclaimed to be "vaporware" that will in fact make it to market. It's a victory enthusiasts desperately want to obtain. Those of us paying attention scratch our heads in wonder. We also point out the goal of doing more than just reaching that particular milestone. It was never a race to prove it could be produced. The point was to deliver a vehicle for the masses... and many of us still don't believe an affordable offering in large quantity will happen. Here's how I responded to their spin today: The claims of it not being made have already been satisfied. What they call Volt now looks absolutely nothing like it did then, efficiency of CS will be considerably lower, and price will be quite a bit higher. What's actually in question now is volume. GM is very good at producing niche vehicles, those objects of envy that few get the opportunity to actually buy. Delivering a mainstream product is an entirely different matter. Meeting that minimum criteria of 5,000 per month (60,000 annually) is going to be a challenge.

3-15-2010 **Tax Deduction.** Remember how the previous administration announced hybrid tax incentives just prior to their re-election but withheld detail until afterward? We saw right through that greenwashing. Sure enough, it was indeed a let down... but too late, they got votes from the vague. Those details we got afterward showed it was just a token effort only providing a small number of tax credits. Actions like that irritated for the next 4 years. They'd talk big but actually did very little. Sadly, another aspect of that deception was to end the deduction after the credit expired rather than just reverting back to it. So when I was doing my taxes this year, I wasn't eligible for anything from a hybrid purchase. That deduction was long gone, vanished years earlier. However, as a temporary economic stimulus from the current administration, new purchases between February 17 and December 31 of last year for any type of vehicle (including non-hybrids) qualify for a deduction. That means I get some money back from my 2010 Prius purchase anyway. Of course, now that the automotive market is beginning to recover, that deduction will vanish too. Fortunately, there is still some incentive money available... 4 times as many people will have the opportunity to get it too. It's the credit for plug-in vehicles. But when that's gone, then what? I prefer deductions since it offers a modest incentive, a small fraction of what credits provide. It other words, there's a huge difference between roughly $500 and $7,500.

3-16-2010 **No ER, No Sale.** Remember how the staunch Volt enthusiasts would sign each of their posts with the "*No Plug, No Sale*" motto? It got to the point where they ended up just using the NPNS abbreviation. That was so common, everyone readily understood what it meant. For 2 years, they held firm. They weren't too concerned about Prius either. That's because Prius was so well branded as a hybrid already, even later when it offers a plug, calling Volt an electric instead was easy. Then came Leaf. That's becoming a big threat. Nissan intends to provide more and at a lower price. Focusing on the plug alone no longer makes sense. They are now back to it being a hybrid, but rather than using the proper SERIES term, they are using "ER". Extended Range is a term created by Volt marketing. Some see it as a compromise. This switch motto adds to that. What else do you think will change as sales of vehicles offering a plug progress.

3-17-2010 **Grille Unblocked.** For a brief moment, I saw 61 F degrees appear on the outside temperature gauge. Spring arrived early! Most of the commute home was 59. The coolant reading on the ScanGauge climbed above the usual 191. It stayed flat at 195. That's still within the normal operating range, but enough to get me to experiment. Every other exit, I got off the highway and removed a length of foam blocking a slot in the grille. Each time, the temperature remained at 195. That was impressive. My Prius was happy with the warmth. Even with the entire Winter covering removed, I continued to see the 195 while cruising on the highway at 65 MPH. When I slowed down to 55 MPH, it dropped only a little. I had to remind myself that this generation was designed to retain & maintain heat. Witnessing the behavior firsthand under a wide range of conditions is quite impressive. The 2010 design is proving to be extremely well thought out.

3-18-2010 **Driver Error.** Tired of the onslaught of runaway Prius stories yet? The media thrives on stuff like this, especially if it becomes an on-going controversy. Fortunately, it isn't. The easy excuse a hardware failure provides to conceal human error is just too tempting to resist. Nothing is surfacing as reason to be concerned though. Hype is fading now that a model-wide design flaw isn't turning up. At the very best (for the media), a failure in an individual vehicle is the only remaining hope. And since that has happened for decades, though rare, it isn't anything to stir much consumer attention with. They've lost their exciting new topic to fill webpages & printpages with. Driver error is common. That's why they call them "accidents". We make mistakes. We panic. We attempt to conceal & mislead. There is no quality-control cover up. People aren't driving death traps. It's just an industry dealing with extreme change in an extreme way.

3-19-2010 **Realities of Business.** They will come crashing down. It's just a matter of time. The pointlessness of posting anything other than cheerleading content on the daily blogging website for Volt has become painfully obvious. But with all that hype now taking place, why not still attempt to insert a dose of reality? I tried... The need for profitable & competitive sales will require tough decisions. Even with the tax-credit, some have admitted the price is still too high. And once that's gone, then what? Heck, we've already witnessed the abandonment of the "*no plug, no sale*" motto after 2 years of devoted use. How will Volt break out beyond niche volume? How will the technology be expanded? Whenever tough questions get asked, rather than a constructive debate, the post simply gets a negative vote. How will high-volume sales be achieved?

3-20-2010 **Driving Modes.** It's nice getting back to those basic questions again. This morning started out with an interesting one: "*Which mode is most similar to a Prius II which has no selection of modes?*" NORMAL is pretty much what resembles the Iconic model. ECO is very much like the Classic model was all the time. Dropping the pedal to the floor and letting the computer decide the best way to achieve maximum acceleration became standard practice as a result. I find myself doing that quite often when needed to accelerate quickly while already in motion. POWER is what I take advantage of when pulling out into busy traffic from a dead stop. It's nice having that extra punch from by informing the system you'd like to consume electricity at a greater rate than usual. Of course, let's not forget that the Classic model only offered a 33 kW electric motor and the Iconic a 50 kW. The 60 kW in the 2010 combined with the highest voltage provides greater efficiency opportunity regardless of mode.

3-20-2010 **Power Mode.** Speaking of modes, new information came out yesterday to disappoint the Volt purists even more. Their "*gas free*" claim was never realistic, knowing that gas would be consumed from time to time for the sake of preventing it from getting too old and for engine up keep. A brief mention last year on a video got them concerned. They heard a comment about the engine being used as an electric power assist during hill climbing. That would be an unacceptable use of gas, as far as they're concerned. So, they simply dismissed it. Unfortunately for them, the recent test-drive opportunities revealed a little insight about the "sport" button. Pressing it requests more power. Having a mode that causes the engine to contribute power prior to battery-pack depletion raises questions from people like me and concern for those who want the engine to only be thought of as an emergency backup. Why would you want this ability from a vehicle marketed as an electric? Those purists absolutely insist Volt is not a hybrid.

3-20-2010 **Runaway Prius Claims.** Over this past week, we've heard from Toyota and NHTSA about their findings. Nothing surfaced from the first claim to support something in the vehicle actually failed. There's simply no evidence. Not finding anything certainly makes the suspicion of it being a hoax much more likely, especially considering the background of the driver. With the second claim, it was a very different situation... but it also raised doubt. A worker driving her employer's Prius on a private road down a hill onto a country road stirs questions. How often, if ever, had see driven that Prius? How busy was traffic? Did the lack of street lights have any influence? Was see distracted by reason she had been sent out to run an errand? What would be the consequences of having destroyed her employer's vehicle? Well, it turns out the investigation shows that the driver never braked at all, proving her claim was false. It was either driver error or she lied. Of course, with these claims having come out of no where and none the previous 9.5 years Prius has been on the road here in itself causes suspicion. Blaming the vehicle or just wanting attention is far too easy when an automaker is being dealing with recalls exploited to the point of hysteria.

3-20-2010 **Credit Dependency.** Oil may be getting lots of attention, but the other dependency isn't... the tax credit. Gambling that the cost of Li-Ion batteries will drop 75 percent between introduction and the time credit expires isn't wise. The "*if we build it*" scenario hasn't been successful enough in the past to justify the risk being taken. Yet, that's exactly what we are seeing with Volt. Remember how the cost gamble didn't pay off for Two-Mode? Volume is the key. But even if that miracle cost drop actually occur that fast, all it would do is compensate for the loss of the $7,500 credit. The price of a base model at around $32,500 will still make it a heck of a challenge to sell in high-volume. No matter how great the technology is, consumers only have so much available to spend on a vehicle. Imagine if the price of gas skyrockets. That would make justification of the purchase easier... until you realize how much that would drive up the cost of living. Remember what happened when gas shot up to $4 per gallon? Lack of diversification has been and continues to be the concern. Requiring a plug and only offering a single capacity is quite a risk, especially in a market struggling to redefine production & profit. What happens if cost doesn't drop fast enough?

3-20-2010 **Double Sightings.** It must sound like I'm being incredibly harsh on the efforts of Volt. But after 10 years of hybrid market awareness, it's hard not to be concerned. Running weekend errands today, I saw not 1 but 2 Prius at just about every stoplight I got stuck at. I spotted quite a few while driving too. The thought of Toyota & Ford being positioned well to deliver large volumes of both high-efficiency hybrids and plug-in hybrids while GM struggles with their one-size-fits-all approach isn't comforting. Our economy is tied to them being successful too. Our dependency on oil and the environment is as well. Failing to be competitive hurts everyone. The consumers Volt targets are a niche, not middle-market or apartment dwellers. Diversifying to offer a choice would help reduce risk. Unfortunately, all those who could make that happen have resigned. Why? Meanwhile, the number of Prius we all see will continue to grow. How long will it be before I can report triple sightings? Of course, being in a Prius myself, the other 2 at the same intersection brings the count to 3 already. So, I guess it depends on your perspective!

3-21-2010 **Journalist Research.** Reading about this sure did feel good, it was quite an extreme from the usual hype we get from reporters... who sadly, quickly write articles with little to no research... they just report whatever draws interest. With a true journalist, they do their homework. In this case, resources were plentiful too. 25 staffers were assigned to review the NHTSA database for 2006 to 2010 models through September of last year (over 52,000 records). Turns out that of those, 30 percent of the original complaints were miscategorized and 26 percent were duplicates. There were also hundreds that weren't complaints at all, just suggestions & comments. None of the hysteria articles ever mentioned any of that. It was just an exploited opportunity for reporters... and sadly, lawyers too. Imagine all the legal expenses which would reveal what, a manufacturing defect? How perfect (current rate is 500 per million here and 15 per million in Japan) should a component yield be? What should be done when one is found? Does raising attention to the level of panic actually accomplish anything?

3-23-2010 **Getting The Story Wrong.** That's an interesting twist on the usual spin. Someone got rather angry about the way Two-Mode was being portrayed. But the numbers speak for themselves. 16,579 sold between Jan 2008 and Feb 2010. It's not profitable to have sales that low for that long, especially when each included a $2,200 tax credit. That's not good business no matter what you call it. Two-Mode saga is an ever-changing story. It was meant to be the single-mode (two-speed) hybrid efficiency killer offering rapid integration and wide scalability at a competitive price. All of that feel short; meanwhile, the competition is expanding the market. GM will have nothing to compete with. Supporters pretend there's lots of time available still and a major drop in battery cost is coming very soon. Wasn't it that type of approach that contributed heavily to the bankruptcy. Remember... too little, too slowly.

3-25-2010 **Sales Rise.** There's a variety of reasons for GM recovery. As supporters begin to celebrate, I inject a dose of reality. Short-Term thinking is what got them into trouble in the first place. Falling into that trap again is way too easy. Of course, rather than being called a devil's advocate for attempting to keep focus on the true goal of financial stability, they'll likely label me as a troll for not letting them live in the moment. Whatever. Late last Summer, their reception was hostile. Improving upon that should be easy. After all, comments about Two-Mode sales aren't challenged anymore. Anywho, here's what I posted: Ready to discuss the future? It's great that traditional offerings are now providing a solid financial basis to build upon. Next is how to deal with the replacement competition. Priority is clearly shifting over toward clean & efficient technologies, away from size & power. What should the planned sales/profit be for that?

3-25-2010 **Lowering Expectations.** What if they change the plan prior to rollout? Does lowering expectations before that point count as over promising? For years, GM has been saying the second year production capacity of Volt would be "*up to 60,000*". Now in an article today, the volume potential has changed to 50,000. Why? What happened? We already know that first year production plans have been changed from the 10,000 they've been saying all along to "*8,000 to 10,000*". Are they later going to spin this as a 625 percent increase by saying demand grew from 8,000 to 50,000? Remember the disconnect between production & profit and how statistics can easily be misinterpreted when not associated with actual quantity. Needless to say, this Volt saga is very much an ever-changing story just like it was for Two-Mode. You never know what they'll say next.

3-26-2010 **Fascinating.** As an outspoken Prius owner, the outspoken Volt enthusiasts truly believe you only have interest in Prius. No matter how much you point out the repeat of decisions match to Two-Mode, they just don't hear. Ironically, that's exactly the same way Two-Mode enthusiasts responded back when those decisions were made the first time. They simply dismiss what you say. It boils down to basic economics. You won't be able to sell high volume of a new product if it is priced significantly above the current offerings. We've seen that in many markets, especially automotive. No matter how great the technology is, the mainstream simply cannot afford it. And with so much financial risk having proven to be tragic lately, why would anyone want to risk falling into a trap like that again? As outspoken enthusiasts, they have an opportunity to influence change... rather than just accept choices that don't actually fit consumer priorities. Sound familiar? When that line between need verses want becomes blurred, it's a sign that objectives won't actually be met.

3-26-2010 **Purpose?** With the fleet average requirement as of 2015 being raised to 35.5 MPG, a big increase from current 27.5 cars and 23.1 trucks, you'd think sales potential would be taken more seriously. It was a huge gamble that already failed for the monster-size vehicles. What about a technology that depends upon a plug? Why no choice? How come asking questions about the purpose of Volt is responded to with such resistance? Frustrated by their complacency, I posted this: Ran across this [on the big GM forum] yesterday for someone else: "*Your post count is relatively low so you might not know how this forum work... People who speak accurately, logically and based on sound business principles and experience are immediately labeled as trolls.*" Continue to dismiss constructive questions as just attempts from the competition to undermine. That choice had dire consequences with Two-Mode, once those who were clearly associated with GM itself started asking the very same thing.

3-28-2010 **Blind Hope.** Over the past decade, we've heard a number of wild claims about various new efficiency technologies. Most fell apart as soon as you started looking into the detail. When all factors are taken into account... acceleration, emissions, heating, cooling ...the hope falls apart. And that's without even addressing the topic of cost. So hearing from the Volt enthusiasts without anything to support their claims, it becomes quite a concern. They aren't taking the need seriously. Blind hope doesn't solve problems. Today, that concern came from Cruze, the car which can be thought of as Volt's non-hybrid counterpart since it shares the same engine and similar body. It doesn't take much to wonder how some can still hope for a 50 MPG average from Volt when Cruze is only expected to get 40 Highway and low 30's City with the manual transmission. That simply doesn't make any sense. So before the discussion topic got too far off-topic, I asked: Optimized to it finest, that engine delivers 40 MPG. Running at that same peak performance, Volt has to deal with the conversion loss from mechanical to electrical as well as weighing an extra 1,000 pounds or so. How could it possibly do any better?

3-29-2010 **Mazda Deal.** I hadn't expected this, especially since Ford owns 11 percent of the automaker. Mazda has signed a license deal with Toyota. That will help increase production of certain components supplied directly (like the ECU, electronic control unit) by Toyota and will obviously hybrids penetrate deeper into the market by reaching Mazda consumers. It should be good for battery volume too. This increases the pressure of supply & demand, shifting the market even more toward hybrids. The thought of them being only a fad is ancient history now. The technology is well proven. News like this of expanding commitments to hybrids clearly supports that.

3-30-2010 **Price Importance.** Nissan announced the price of Leaf today. The plan is $32,780 before the federal credit. You could imagine the stir it caused. That's what Volt is expected to be after that credit. With such extreme pricing differences, what happens next is anyone's guess. The importance hasn't been taken seriously up to now. Enthusiasts simply claim it is worth the extra $$$. It's as if they believe no competitor could ever deliver an equally appealing electric drive. Why not? How much more is a consumer really willing to pay? After all, this topic has been a major priority for the entire decade hybrids have been around. It certainly is going to be interesting, especially since 5 to 6 times as many Leaf as GM is planning for Volt. It also begs the question of Volt will qualify for any state incentives, since it still has a gas tank and engine as opposed to Leaf having neither. Sales are what ultimately make a difference. How will initial pricing differ from long-term?

3-30-2010 **Snowless March.** 2 years ago, we got an absolutely amazing amount of snow in March. The high-traction tires on the 2004 were overdue for a change. Climbing up steep hills covered with snow triggered the traction-control repeatedly. Then I had new tires put on (same type & brand), figuring my timing was terrible and all the opportunity to take advantage of the improved traction had been missed. To my delight, we ended up getting way more than I had ever imagined. It was the ideal for comparisons. Just days later, I was comparing the difference between tires at there wear limit to brand new ones. Under the same conditions, I could zip the same hill. What a contrast! Needless to say, I was intrigued to find out how the 2010 would do with just factory tires that already had about a third of their tread worn down. No such luck. We didn't get a single flake of snow all month long. What is normally the snowiest month turned out to be snowless. Oh well. There's always next year.

3-31-2010 **59.3 MPG.** Seeing that displayed as a result of my commute to work and back today was quite rewarding. After enduring low 40's from the dead of Winter here in Minnesota, having the efficiency shot back up from the return of nicer weather sure is nice. The change of season variety is always refreshing with a Prius, but this year it is especially so. I can open the moonroof. At some point, I'll push that button for solar cooling too. I wonder if there's anything new still to discover. Hmm? That went on for over a year following the purchase of the two other generations. With this one though, we're extremely well informed about. Heck, we even know a lot about the plug-in performance already. Being able to so effortlessly cruise along using electricity is what I find most enjoyable. Of course, the punch from the PWR button is handy. It doesn't seem to affect MPG either. Seeing 50's all Summer long is certainly something to look forward to. The first taste of it today was a great start.

4-01-2010 **World Green Car?** How does the Volkswagen Polo get named "*World Green Car of the Year*" when it isn't even available in a major market? The United States hasn't seen this subcompact, which is even smaller than Golf. Yet, it is supposedly much more popular than Prius. How can that claim be made when there is no choice? It's not available! And what about the fact that Prius gets a much been emission rating? Part of the problem stems from diesel-related smog being disregarded as a problem. Fortunately, change is on the way. Greater emphasis on all types of emission is coming. The so-called "clean" diesel is getting revealed as an incomplete solution. Heck, even electric-only vehicles won't be considered emission-free in a few years. Having "green" being taken more seriously is long overdue. Evidence of that is Polo getting this award. It really makes you wonder who's making decisions and how much effort it takes for genuine improvement to occur.

4-01-2010 **11,786 Purchased.** Sales of Prius continue to be stable. Sales of Camry & Corolla shot through the roof. The media hysteria certainly didn't have much of an effect on the short-term for consumers. For the mid-term, I suspect some lofting goals to be scaled back and the bottom line to not be as impressive. But then again, the economy is still struggling. The long-term could still be quite strong. Much of that could be based upon where consumers priorities shift. With respect to hybrids, Prius is extremely well positioned for that growth... which has pretty much flat lined. But stable is good. Another 3,000 per month would be better. That was the original plan before the bottom dropped out. We can still call Prius a "runaway success" though! I certainly like the fact that several 2010 sightings per day are common for me now. The new model is taking hold. The economy will recover. Gas prices will inevitably rise.

4-02-2010 **Volt Test-Drives.** Remember that contest? Those hoping to get the opportunity were polite at first, then turned nasty after being chosen. Their defense of Volt, even in the face of obvious business shortcomings, became intense. So naturally, I was quite curious what kind of reports they'd publish after getting that opportunity to drive it. No surprise at all was the performance aspects of the electric propulsion. Supposedly, it's so impressive people will be more than happy to spend lots of extra $$$ to get it. We all know that is not an economic reality, but they believe it. No surprise either that GM revealed absolutely nothing about CS-mode MPG. Making much-desired niche vehicles that sacrifice cost & efficiency for the sake of a very appealing ride is something which they are very good at. Making vehicles that are affordable & profitable high-efficiency with the same appeal is not something the current executives haven't expressed interest in. Fortunately, there's an opportunity to change that as the last of the original blockades is about to step down. So, what happens next?

4-02-2010 **Terminology Spin.** A few days ago, Hyundai introduced a hybrid Sonata. It features a 2.4 liter direct-inject 4-cylinder engine along with a 30 kW electric motor. There is no power-split-device. There is no second motor. It uses an automatic-transmission with 6 gears allowing motor interaction via a clutch. They call it as FULL hybrid, based on the sole ability of being able to operate at 62 MPH. They also claim no other hybrid can deliver that, despite the fact that the plug-in Prius already does. The fact that it doesn't offer any serial abilities in itself disqualifies it from being "full", yet a few have claimed it is anyway. Where the heck will the electricity come from if it only has just one motor? The ability to generate & consume at the same time is missing. Being able to sustain long electric-only driving and provide much electric A/C is impaired too. In other words, this is yet another attempt at misleading marketing. That's too bad, since it a rather nice ASSIST hybrid configuration. It even utilizes a lithium battery-pack.

4-02-2010 **Almost $85.** The upcoming holiday weekend brought a spike to oil prices. Closing price was $84.87 per barrel. That caused gas to jump to $2.79 and diesel to $3.05 per gallon. It's a bad sign. Imagine what will happen during the travel season, especially when Memorial weekend and the 4th of July take place. Vanishing SUVs is a fascinating reality. It makes you wonder where the heck those unnecessarily large & powerful vehicles went. They have disappeared, far from the dominating the roads here anymore. Seeing on-going gas prices around $3 will continue to push them out of the spotlight. Guzzlers have little appeal when it costs so much to keep their tanks filled. The time for hybrids has arrived. Which types will be most popular is now the question.

4-03-2010 **Greenwashing Victims.** How do you deal with an enthusiast who doesn't understand that they are using an incorrect definition, one that was intentionally created later to undermine? They are a victim of greenwashing and don't even know it. They'll even go as far to argue with you claiming that the definition you recite from many years earlier is really just marketing spin. The recent example of this is what FULL hybrid means. Somehow, the ability to generate & consume electricity at the same time is no longer part of the definition. How can something be missing yet still be deemed as a "full" design? That's easy, be a supporter of a new hybrid that only has one electric motor. Dismissing abilities the second motor provides is easy then. After all, most consumers don't understand detail like that anyway... right? Turns out, they do. They see that the designs are not the same through real-world operation. You notice the supply & use of electricity is considerably less when you have one motor trading off abilities for what two would do simultaneously. They figure it out. Too bad the passion runs so high in forums & blogs that the victims don't make the same observation. Of course, admitting to not being aware of something is very difficult. My advice: Choose your battles carefully.

4-03-2010 **Back To EV.** That outcome of that infamous "*230 MPG*" campaign is now so negative that GM is doing everything it can to re-label Volt again as an EV, even though it has an engine and still uses gas. Fine. Whatever. Arguing semantics & definitions doesn't achieve anything without real-world data anyway. Of course, when the numbers are finally revealed, that's a different story. In this case, we still know virtually nothing about CS-mode. The test-drive reports so far clearly didn't accommodate learning about that feature. Isn't that strange, a key design feature still remains a mystery despite claims of unparalleled transparency? Again, whatever. Changing promotion to focus exclusively on EV driving will likely make consumer perspective easier anyway. More and more, hybrids about being considered the affordable choice for mainstream consumers. EV will remain a highly desired niche. That clears a path for heavy penetration of plug-in packages for the FULL hybrids. The plug will just be a high-end model rather than an entirely separate vehicles. That's great for both consumer & automaker. Wide acceptance quickly is the key.

4-03-2010 **Assist Types.** We are quite familiar with IMA. That is what Honda offers. It integrates an electric motor directly to the engine. It is permanently attached. Operation coincides with RPM. That sharing is a limitation. Flexibility isn't available due to the lack of a power-split-device. Having a CVT helps though. Adjustment to operational speed through it provides efficiency gain. Hyundai took a different approach. There is still only one motor, but rather than being integrated directly there's a clutch. Also, it uses 6 gears instead of a CVT. Being able to disconnect entirely is similar to what GM did. That added complexity & cost though and the benefit was minor. Lacking a second motor to supply electricity is the same shortcoming Honda has. Will they still sell lots of these? Will consumers notice the difference? For those who don't place as high of an emphasis on MPG, it may not be much of a concern. What about the emission rating? Remember how some hybrids have ended up dirtier than their traditional counterparts?

4-03-2010 **Tax Credit Surprise.** The devil really is in the details. According to an article I just read, the federal incentive money (tax credit) available to plug-in hybrids & electric-only vehicles is limited to 200,000 per automaker and... get this... only applies to the 2012 to 2016 model years. No wonder Toyota isn't in any particular hurry. Refining production of the newest Prius and testing the heck out of the plug-in configuration along with the switch to lithium batteries in the meantime could pay off big time. The worry is that once that $$$ runs out, the market will collapse. Volt faces the biggest challenge with that, due to having the most expensive design and not having a base product established. Prius is quite the opposite. The plug-in model will simply just be a high-end package, taking full advantage of the cost savings from high-volume production of the non-plug model. That means Toyota will be able to reach a wide market at an incredible speed... hopefully not being affected by the loss of incentive afterward. How will the other automakers deal with this. And what the heck do those purchasing 2011 models with plugs get?

4-04-2010 **Increasing Inquisitiveness.** It's amazing how much attention my Prius now gets from casual acquaintances. Heck, even some relatives are developing new curiosity. When hype from the media develops into opportunities to share information about Prius, that's a good thing. Some aspect of opportunity out of so many attempts to undermine is nice. It's unfortunate that it got so blown out of proportion. But we saw it coming. Detroit was absolutely desperate to get the attention off of them and those in the struggling news industry were yearning for something exciting to report about. It was definitely dramatic. It was a learning experience too. For Prius to not have any trouble for 9.5 then suddenly turn into a death machine overnight simply doesn't make any sense. Yet, people were screaming in terror anyway. Now, they've begun to calm and see reason over panic. Asking questions is a great next step.

4-05-2010 **35,546 Purchased.** That was the total number of Prius sold in Japan for March. Whoa! The odds of maintaining a strong position to achieve the title of "*top seller*" for the past 12 months is looking pretty good. It's actually becoming a reality. Hybrids are demonstrating the potential to replace traditional vehicles. No more talk of niche or fad. The next step in automotive history is taking place at this very moment. As with other technologies of the past, desire for the new is being decided by actual purchases. Of course, with hybrids it has been more of a challenge. Even though their benefit was clear like other technologies, such as fuel-injection, there was fierce resistance. Change was not welcome. It was a battle to get even acknowledgement of the need. Taking responsibility for emissions & consumption simply wasn't a priority. Thankfully, that's changing... though at a slower pace here than in Japan. We are witnessing a paradigm shift. Phew! It's about time... long overdue.

4-07-2010 **Oil Prices.** Rather than going down after the holiday weekend passed, they went up a little bit. The slow creep to $86 per barrel is the trend. Meanwhile, gas is still at $2.79 and diesel has climbed to $3.15 per gallon. This isn't what an automaker planning to rollout a plug-in which will remain extremely expense for several years still wants to hear. However, that could mean a boost to traditional efficiency vehicles sales. That all depends on the non-plug hybrid market though. Prius has been the top-selling vehicle in Japan for 11 months now. Potential for that happening here leverages heavily upon oil prices. $2.50 gas is the tipping point. How much more does it take for top-seller to become realistic?

4-08-2010 **Huh?** Out of nowhere, there was a new article titled "*Prius just keeps worries accelerating*" published today. It said nothing new though. In fact, it didn't even say anything specific. All it contained was a collection of random quotes all attempting to provoke reason to be concerned. It was a fantastic example of spreading FUD. (That's short for Fear, Uncertainty, and Doubt.) In other words, it was a very slow news day and the particular provider was hoping to milk the attention-drawing topic of unintended-acceleration one last time. Most consumers have already moved on. Heightened awareness has already influenced automaker & policymaker decisions. Of course, the ultimate motive was obvious. The final paragraph revealed the intent to undermine Prius by suggesting the purchase of a traditional vehicle and just carpooling instead to save gas.

4-08-2010 **Anything Different.** Remember in ages past when new owners would ask about the operation of the hybrid system? That's gone. Anything different from that of a traditional vehicle is now thought of as a problem. Just yesterday some posted their official complaint on the big Prius forum. There was no reference to the speed of the vehicle actually changing, it was just an unexpected sound & feel while driving at 20 MPH without a foot on either pedal. What if it was just the engine starting back up for cabin heat or to cleanse emissions? That startup isn't absolutely seamless, especially if heat is needed to purge captured exhaust. Unfortunately, new owners are now just assuming there's a problem... filing a complaint before asking any the experienced for information. That's a bad outcome; however, it's clear proof that people who have no idea how the system operates are buying hybrids. That's the mainstream. Most don't know how traditional vehicles operate either.

4-09-2010 **Shifter Hype.** Most people aren't even aware of this. But back when the Classic model Prius was the latest & greatest hybrid, the media went nuts over it. They couldn't find anything wrong with the technology, so they just invented something to draw attention. In those days, Prius still had a traditional shifter. However, instead of it moving in a clockwise manner, you pulled it toward you. How such a trivial difference, which had nothing to do with the actual act of interacting with traffic, would get so blown out of proportion left supporters amazed. It was our first encounter with hype. We had no idea that "anything Prius" was newsworthy. So years later when the acceleration & braking hysteria began, it was another "not again" moment. The media was at it again. With so many now struggling for readers & revenue, it's no surprise that they'd exploit opportunity like that. But it can be rather maddening to have to deal with mislead consumers afterward.

4-11-2010 **Making Profit.** With so much attention being put on Toyota lately, it's about time GM finally provides a financial update. After all, their recovery effort is far from complete. Records show that $4.3 Billion was lost in the second half of 2009. Much of it was due to settlement, liability obligations, and one-time charges. So, none of that will reoccur in 2010. However, money is still being lost. Profitability is expected this year though. The method doesn't inspire much confidence. Among the concerns is reinstating 660 dealerships which were deemed unprofitable. Those closures were part of the bankruptcy solution. Pension funds are still an on-going expense. $5.9 Billion in profit is needed to meet that commitment in 2013 and $6.4 Billion in 2014. How will that be possible, without even taking the money-losing production of Volt into account? It doesn't make any sense. Who's approving these risks?

4-13-2010 **50 MPG Target.** This was recently mentioned by a GM executive and suddenly became an achievement celebration. Many enthusiasts simply assumed success... without any actual confirmation. In fact, we still don't have details on the "*230*" nonsense from last Summer. It's just more of the keep-people-guessing promotion. Target indicates a goal. But even with that being met, which generation design would offer it? After all, we already know there's a second-generation battery-pack planned for testing late this year. A third has already been designed too. So, when is a relevant question. Whatever the case, how that could be achieved without the conversion loss we've already observed so far is a big unknown. It's enough to make a person crazy, especially when you take cost into consideration. The promised "*unprecedented transparency*" is really quite opaque. Target for what?

4-13-2010 **50 MPG Sales.** Same old question. If Volt did actually deliver 50 MPG when running in CS-mode (electricity from the gas engine rather), wouldn't it make sense to also offer a version with a much smaller battery-pack? The cost, complexity, and weight reductions, along with increased production volume, could make it competitive. That could reach a much wider market too. Yet, no such configuration is ever addressed. It's as if the option simply doesn't exist. Why? With all those recent test-drive opportunities, how come not a single one of them ever used the engine? All were on small courses where speed was limited to about 25 MPH and distance was far too short to ever use up the 40-mile charge capacity. Things just don't add up. What's missing? We are clearly being mislead by the omission of vital facts... and many of us are documenting that for reference later, after rollout begins.

4-14-2010 **Hinting At The Future.** That EV button gives people a taste of what's to come. It's something they can easily anticipate improvement from. Many owners complain about how soon it disengages without noticing how the engine remains off anyway or realizing what's needed to continue like that. Looking at the gauges available, you get more hints. The MPG stays at 100 and the Eco-Meter stays in the green. Switching to Li-Ion for the battery will contribute to the future, giving part of the improvement needed. Whether we'll actually see any of it with the upcoming non-plug hybrids remains to be seen. Weight & Size reduction is obvious. But increased density & capacity can really only be taken advantage of with a plug and active thermal control. That extra electricity allows the 60 kW motor to express itself. Getting a taste in advance of what's to come is part of that Prius Genius we first heard about 10 years ago. Each step forward is carefully planned long ahead of time, before particular components can be utilized to the fullest... driving the future.

4-15-2010 **PHV Prius Test-Drives.** Unlike with Volt, this plug-in hybrid vehicle test-drive experience actually offered the full range of speeds. No small coned-off course on a mall parking lot or driving around the perimeter of a parking ramp. This was the real thing. There was a 10-mile course where you could test acceleration and get up to highway speeds. Reports were glowing! Being able to get up to 100 km/h (62.1 MPH) using only electricity was truly a delight for all who experienced it. Regret from that brief drive ending and the reality of a wait for another almost 2 years for a purchase opportunity was obvious. Some described it as agony. In the meantime, Toyota will be collecting real-world usage data from a small fleet of drivers around the world. For us in the United States, that limits the number to just 150. Fortunately, the result of the research is to rollout a configuration for the masses in large volume immediately following the testing. That should work well considering the newest generation Prius along with the upcoming second generation Camry-Hybrid will be well established by then. Uncertainly about hybrid technology will be long gone. The plug will simply be a new high-end Prius package at a reasonable price. Sweet!

4-15-2010 **Plug-In Battery.** We got some new information today. No need for 220-volt charging was emphasized. That requires special equipment and professional home installation, currently priced at about $2,000. Since the battery-pack is smaller, it only takes 3 hours to recharge using just a regular household 110-volt connection. 220 is also available. Coincidently, 220 is also how much weight (pounds) the increased battery-capacity plus control & cooling components adds to the vehicle. Interestingly, the pack itself is divided into 3 sections. The first very much resembles what Prius currently has and operates the same way, except it uses Li-Ion rather than NiMH. The other 2 sections are the same, both dedicated to EV driving. The system automatically switches to the other as one becomes depleted. When both are, that third takes over. For longevity, this could be an worthwhile strategy... hence lots of real-world testing prior to mass rollout.

4-15-2010 **PHV Assurance.** Certain individuals who stubbornly endorse Volt want purity, declaring the engine as only an emergency device that will rarely ever be needed. In reality, you'd have to live in a region where temperatures never drop below freezing for the engine to remain unused for regular driving... since battery warm-up via the engine is needed during Winter. Of course, even in Summer it would still have to run from time to time for routine upkeep. So, no gas ever isn't realistic. Anywho, that purist perspective is what they argued most against the plug-in Prius... implying the engine would still be needed for acceleration. Turns out, that's not the case. The extra oomph from the Li-Ion and the 60 kW motor handle it just fine. And if you have a commute like me, where a 55 MPH route is available, you can totally take advantage of that design. Squeezing out up to 20 km (about 13 miles) from the available capacity is quite realistic. Of course, if GM did end up finally offering a choice of battery-pack size, the purist argument would fall apart anyway.

4-16-2010 **Greenwashing Still.** Years ago, claims like this in published articles were common: "*Were it not for the energy recuperated during regenerative braking and coasting, hybrids would have little or no fuel economy advantage over a car powered by a similarly sized gasoline engine.*" Now, only the truly desperate attempt such blatant misleading. We all know that isn't true. If it were, the competition would have simply offered a similar shaped vehicle without any of the advanced technology. Heck, we even have Insight now for comparison. The second-generation model closely resembles Prius in aerodynamics, yet doesn't even come close to the efficiency... and it's smaller! The unwillingness to finally accept change is truly amazing. Greenwashing people to prevent progress is just plain wrong. How long do they think production of vehicles without any type of electric propulsion will continue?

4-16-2010 **2 Sunsets.** I went on a trip with the Prius, hauling 3 bikes up north with me. That drops the MPG average. But it's totally worth it. Besides the obvious fun of biking in lake country during early Spring, the scenic vista of pines & birch combined with water background makes for great photo taking. The opportunity was not wasted either. One particular location was especially exciting... and not just beside I've taken photos there with the 2 other Prius. My newest digital camera captures unbelievable exposures... even when aimed directly at the sun. I took advantage of that. The solar roof on this Prius made a contour silhouette shot very exciting too. But to my surprise when finished, that valley I was in revealed the reality that the sun had only set there due to its edges being much higher than the horizon. That left just enough time for me to race out to the far side of a bay on a nearby lake with a flat surrounding... allowing me to take sunset photos a second time the same day!

4-17-2010 **14 Minutes of EV.** I almost managed to get the entire 15-minute display to show all 100 MPG segments. Weekend construction slowed the 70 MPH highway down to a crawl. With 2 bikes on back, I wasn't too thrilled about the efficiency impact anyway. So, I welcomed that change. At 64 F degrees outside, the Prius was happy to oblige. It hadn't even occurred to me to check the display until later. I had just pushed the EV button and enjoyed the quite stop & slow traffic jam. Congestion like that is a pain to deal with. I was actually surprised that the engine had only fired up once momentarily that entire duration. I even had a camera to capture the moment. Unfortunately, the midday sun was quite intense and road conditions were rather demanding. Experiences like that sure put road repair into perspective... for FULL hybrid owners. Makes you wonder how much gas everyone else consumed during that same drive, eh?

4-17-2010 **Two-Mode Future.** Supposedly, it has one. Sales have been well below expectations, so small it's clearly just a niche. GM still hopes to change that. The sighting I had of one today makes me wonder why. What's the point of such a massive hybrid? How many do they actually expect to sell? Plans are to deliver a second generation 2 to 3 years from now. It's not intended for use in smaller vehicles or with a 4-cylinder engine. Instead, their mild hybrid technology called BAS will be improved. How remains a mystery. There's only so much a single 15 kW electric motor can do. In other words, we are left wondering what has changed. It sounds as though nothing is different from what was planned before the bankruptcy. Heck, even the "*too little, too slowly*" remains a concern.

4-18-2010 **Coffee Shop Adventures.** My opportunity to catch up on log entries, while sipping a morning coffee. First major intersection, there's a 2010 Prius. What a great start! Next intersection, the two cars in front were... you guessed it ...both 2010 Prius! They saw me approaching too. One driver was frantically waving to get my attention. With only 6 vehicles at that particular light, including mine, having half of them 2010 Prius was truly a moment to remember. I'm thrilled by how quick the newest generation is spreading. It sure adds to the delight of the rapidly shrinking of the monster-size SUV market. Of course, looking up right now and seeing yet another 2010 Prius is truly remarkable. I've only been out for a short time and have already spotted 4. Hooray!

4-19-2010 **Demand for Gas.** It's going up here in the United States. The highest ever was 9.6 million barrels per day. That was back in July 2007, when we were drowning in a sea of monster-size guzzlers. Almost 3 years later, that market has shrunk dramatically and many of those already on the road have vanished. The importance of fuel efficiency has climbed quite a bit in priority; however, overall consumer hasn't actually dropped much. Roads continue to become more congested as the population grows. Economic factors have likely played a role in the outcome too. So, what did that mean for March 2010? It was the consumption of 9.3 million barrels per day. That's not good. Automakers not preparing to shift enough production over to vehicles & technologies which offer much better MPG are in for a rude awakening.

4-19-2010 **No Choice.** That's been the argument from the very beginning. Not getting a choice, being told what we need, is the concern. On a discussion thread about Volt in the big Prius forum, the questions was asked why GM's current approach is stirring so much upset. I reiterated purpose with this: Only offering a single configuration is the problem. Even if there are only a few thousand of them available initially, that's still better than none. No variety is bad business. In other words, with only one engine size and one battery size, they are telling us what we want rather than allowing us to make a decision. You scale up what sells well. The one-size-fits-all approach is quite a risk.

4-19-2010 **Hybrid Minivan.** Speaking of choice, it was revealed today via a Japanese publication that Toyota will finally be making a hybrid minivan for our market. They've had one for years (called "Estima") but it was smaller than Sienna and in a market that still embraced minivans. Here, the other automakers were abandoning them. Ford and GM stopped their production. Sales fell for the others. Things are changing though. The SUV as a family & commute vehicle is dying. There's opportunity for a minivan again. Toyota sees it as the first platform for the non-plug hybrid switching over to Li-Ion. This new one will be it, sometime next year.

4-19-2010 **Yet Another.** Well, believe it or not, after all this quiet we finally got another report of an "unintended accelerated". I say finally due to the harsh reality that this so-called problem didn't exist for the first 9.5 years on the roads here and suddenly it was an epidemic. That's awfully suspicious... especially when the reports abruptly end without any repair. Sure enough, this one was a hoax too. She didn't jump the curb and smash into a wall for attention though. That was a genuine accident. The trouble is she blamed the vehicle for her own mistake. Driver errors happen, that's why you have insurance for liability. But to claim there was a malfunction then get caught lying is an entirely different matter. She didn't know the entire incident was captured by a security camera. The evidence didn't match what her report claimed.

4-21-2010 **No Numbers.** 3 weeks into the month and we still don't have numbers from GM. Sales of their hybrids have been so bad, they are now being withheld. It's past the point of embarrassment. Poor results have escalated to the degree that stockholders would be furious, if there were any. Unfortunately, the stock is no longer public and taxpayers are enduring the financial burden without getting a voice about the business decisions being made. GM continues to push the idea that the next generation designs of both Two-Mode and BAS will offer substantial improvement. How a monster-size truck or a mild assist system could so dramatically improved sales borders on the act of miracles. The problem is not acknowledging what the mainstream actually wants... an affordable family sedan or hatchback which offers significant emission & efficiency improvement. Failing to offer that is lack of diversification, a business mistake GM executives should have already learned their lesson from. Bankruptcy was supposed to bring about change. So far, that's not happening. Withholding sales numbers is an obvious warning sign. The same old mistakes are being repeated.

4-21-2010 **Loans & Bailouts.** There was a big announcement today from GM about them having paid back the government loans. That made it sound as though their financial obligations were now fulfilled. In reality, it was only the money used from TARP which was affected... and even that claim was misleading, since it was really just an escrow account which was used for repayment. That came to about $6.7 Billion. What about the rest? Remember that GM was actually provided $52 Billion from the U.S. They also got $9.5 Billion from Canada. None of it was ever called a "*bailout*" though. Remember how stubborn they were, absolutely insisting that would all be paid back? Well, it hasn't yet. In fact, about 60 percent of the automaker is still owned by the government. What about that $30.9 Billion lost in 2008 or the $10.3 Billion in 2009? Think about it. If GM still isn't making a profit, where the heck did the money come from?

4-22-2010 **MPV5.** Today, GM revealed this SERIES hybrid in Beijing, China. It's a small plug-in SUV (19 inch wheels, seating for 5 and 30.5 cubic feet of cargo space) which will use the same engine/motor/battery configuration as Volt. The fact that it's bigger in length, height, and seating explains why the EV range is reduced to 32 miles. That reduction explains why its not intended for the market here... since GM has absolutely insisted anything less than 40 miles isn't enough for us... even if it sacrifices interior space. Should I call that a crock? Interestingly, this news comes 2 day after GM having stated: "*With battery technology as it currently stands, extended-range vehicles that are larger than the Volt - luxury saloons, trucks and SUVs - aren't really possible.*" If it wasn't possible just 2 days ago, why is it now? This is a prime example of the same mixed messages we were provided prior to the bankruptcy. You could never figure out what to believe.

4-23-2010 **Electrification.** I stumbled across a lengthy article about where the automotive industry is heading, focusing on the variety of plug-in configurations that will be available. Lumping all current hybrids into a single category was the first reason for concern. The second came when it gave praise for diesel vehicles without any mention whatsoever of emissions. From there, the article fell apart. The plug-in Prius performance was dismissed based solely upon observation of the aftermarket offerings for the second generation model. The reference to Volt based the definition of the design on the range available, as if that was the only technology difference. Apparently, there was an assumption that Prius could never offer greater battery capacity and Volt could never offer less. It was a very disappointing article to read, seriously lacking detail, never stating what the need actually is. It just randomly mentioned facts and ended with this: "*Plain hybrids simply don't offer enough fuel savings to warrant their technological and monetary investment and EVs are too compromised for widespread adoption.*"

4-23-2010 **6,635 Reserved.** The opportunity to get in line for the purchase of a Nissan Leaf began 65 hours ago. That number is the quantity of people who went through the registration process, which included a $99 refundable deposit. It's much less than the 115,000 who expressed interest, but pretty much on target from my observations... about 5 percent actually take the next step. Want and what's actually realistic typically differ to that degree. It's a harsh reality some have learned the hard way. I have a hunch Nissan already knows this. Too much of a delivery backlog isn't good anyway. We'll see how it plays out. There's still much that happen in the meantime. That reservation count is a worthwhile amount anyway. After all, that's almost as much as GM sells of Two-Mode hybrids in an entire year.

4-23-2010 **Purpose & Approach.** The pressure is growing. Discussions on the big GM forum about recent activity are becoming more and more dismissive. Discussions on the big Prius forum about those same particulars are resulting in heated responses. Defenders of GM there claim profits will soon be posted and the newest products are becoming highly acclaimed. Even that happened, how long would it last? Focus on the short-term had always been a problem for GM. Volt does the opposite, moving focus to the extreme long-term instead. What happens in the meantime? What about the education of consumers? Awareness has been raised. They are much better informed. Anywho, my comments were: What part of the task-force assessment of "too little, too slowly" needs explanation? The analogy of a sinking ship comes to mind. GM's bucket is too small and they can only maintain the effort for so long. When the water starts rushing in at a faster rate, then what? In other words, as long as gas prices stay under $3 and the demand for competitive fuel & emission technology remains flat, they'll be fine. But later when that changes, what will they compete with? Volt is unprofitable in its most competitive configuration. It also depends upon tax-credit money.

4-24-2010 **Killer Commute.** I'm not actually sure what the magic formula was. But for some reason, maybe something to do with it being Friday, efficiency was on my side. The MPG displayed was higher than usual... in very pleasing territory throughout the morning drive. And to my delight, the conclusion of that morning commute ended with a 60.5 showing. Whoa! Seeing MPG in the upper 50's is great. Wandering into the 60 territory is fantastic. I can't wait to find out what this particular tank ends up averaging. The week started with above average temperatures and we are obviously using summer-formula gas now. It all adds up. The influences of Winter are just a memory now.

4-24-2010 **Downsizing.** I still remember the advice all those years ago (nearly a decade) from one of my mentors. He said the obsession with larger and larger vehicles will eventually crumble. The reality of purchase-price and operating-expenses will someday be their downfall. Sure enough, patience prevailed. That's exactly what we are seeing now. In other words, common sense is finally sinking in. To look out into parking lots and now longer see a majority of them no longer oversized with power & ability that will never been utilized is wonderful. Vehicles like that are for work, not running to the local market. Downsizing to something more practical is long overdue.

4-25-2010 **More Adventures.** Today's productive escape to the coffee shop was to begin assembly of the 2010 Users Guide. I've been researching the content for over a year now. Letting go of prior experiences to focus entirely on the newest generation is difficult. It takes time for that perspective to develop. So, again with the patience. Anywho, on the way there, just as I was leaving my residential area, the corner of my eye caught a silver streak race by. I instinctively knew it was a 2010 Prius. Sure enough, when I got to the hill it was climbing, the tail end disappearing under the horizon confirmed that. At the intersection near the bottom, I caught up. The driver wasn't paying attention. But rather than tap the horn, I shot off like a bat out of hell when the light turned green. His turn to catch up to me! Sure enough, at the next intersection, there was a older gentleman (retirement age) waving franticly trying to get my attention, then gesturing to open my window when he did. To see that kind of ownership excitement was so fulfilling. And of course, I saw 2 other Prius along the way and another in the drive-thru at the coffee shop itself. Gotta love it!!

4-25-2010 **Ford verses GM.** The drive home from the coffee shop placed me directly behind an Escape-Hybrid. That was a not-so-subtle reminder of how different the approach Ford took with hybrids compared to GM. Ford targeted the mainstream, using a midsize vehicle with batteries inadequate for the long-term. The original pack used industrial D-cells, which were large, heavy, and required liquid cooling. That didn't matter. There was room in the SUV for that and provided Ford with lots of real-world experience while waiting for better batteries. When the better ones came along, Ford rolled out Fusion-Hybrid. That worked out great... for the mainstream. GM has done nothing but focus on extremes. Two-Mode was developed for only monster-size vehicles. BAS barely provides any efficiency improvement and nothing for smog-related emissions. Voltec is apparently only for smaller vehicles and will be extremely expensive. How come it wasn't configured with something affordable for the mainstream first, offering improvement later like Ford did?

4-26-2010 **Solar Behavior.** Forgot to mention this. Back when I was on that bike trip, I ended up having to wait in the Prius for about a half hour. Surprisingly, the temperature was quite a bit warmer than it's been lately. That provided the opportunity to actually observe the solar panel in action, rather than just catching it as it was shutting down. I wondered how long, if ever, some owners will take to notice what I did. The system remains idle for about a minute, collecting up a charge in the meantime. I had always assumed the solar panel operated the fan continuously. That's clearly not the case. When it does start up, something rather noisy happens prior to the fan blowing. I have no idea what. Maybe there's a miniature compressor building up pressure. All I know is that the fan blows softly for about 12 seconds, then it kicks into high for whatever duration it can maintain based on the supply of electricity available. Since solar activity varies based on clouds passing overhead, so does the amount of blowing. That second stage varied between about 8 to 12 seconds. It was surprising to discover there was an operational cycle, rather than just a simple fan circulating fresh air.

4-27-2010 **Plug-In Effect.** Ever wonder how long it will be before the diesel supporters begin to panic about the influence plug-in hybrids have on the industry? They've been able to shrug off electric-only vehicles due to the range-anxiety. But the hybrids don't have that. Volt isn't really competition, the extreme price makes it easy to dismiss. A plug-in Prius on the other hand, is a very real problem for non-hybrid diesel. It's affordably-size battery-pack will provide a significant MPG boost... pushing efficiency well out of the reach of diesel using only an engine. Emissions will be reduced even more from the plug too. How will then respond to that? The effect it will have on the minds of consumers could easily equate to a paradigm shift. For the mainstream to suddenly be exceeding 70 MPG would most certainly impact marketing. It sure puts a 22 MPG hybrid into perspective. But what about the 40 MPG dirty diesel?

4-27-2010 **Six National Sites.** That's what Toyota is setting up for early testing of the plug-in model of Prius. It feels like it's 1999 again! Back then, the Original model of Prius was provided to around 20 families each for 6 weeks in exchange for valuable real-world data to help with the Classic model rollout. Combined with information they were able to collect from various reviewers, that proved quite valuable. In this particular example today, Portland State and Portland General Electric (both in Oregon) will be participating in the studies over Spring & Summer. They'll be getting 10 plug-ins for the collection of business & personal driving feedback. That's fantastic! In total around the world, efforts like this will include a total of 600 plug-in Prius. Why isn't GM doing the same thing? Why such a different approach?

4-27-2010 **Strasbourg Plug-Ins.** This historic location in France gets 100 of the plug-in Prius for testing. Wow! That sure would be nice. I guess there's a little bit of jealously on my part. Oh well. Reading through the 68-page promotional document I downloaded about it, the information states that their testing effort will last for 3 years. So, I bet the outcome of consumer rollout there later will hinge about what happens here in the United States first. What's most intriguing is how the 100 km/h top EV speed and the 20 km electric capacity seem so natural for them and so greenwashed for us. It's really unfortunate that emissions & consumption aren't taken anyway near as serious here. For us, it's a struggle for any type of improvement. For them, it's more a matter of overcoming a past deeply engrained with diesel. The fact that the plug-in model of Prius offers a solution for both is great. Just think what things could be like after this studies conclude. No need for timid rollout afterward. Toyota will be well informed, allowing them to deliver a large quantity right away.

4-28-2010 **Niche Confirmation.** For years I've been asking how Volt will appeal to the mainstream. Lutz just confirmed Volt's initial niche stance, sharing a similar position to other high-profile low-volume vehicles. What will change to allow Volt to expand beyond that? Needless to say, the enthusiasts were quite angry when I posted that. How could they argue? Their own leader confirmed what I had been saying all along. More and more, evidence of a vehicle being designed to appeal to the elite is emerging. This isn't a vehicle for the typical consumer. After all, if it was, it wouldn't stand out. Popular sellers like Camry & Corolla certainly don't. They are business sustaining vehicles. They provide a modest profit without creating much risk. Consumers who simply want reliable transportation for an affordable price buy them. That's why so many Prius are purchased. Appealing to the mainstream meant owners not treating the vehicle as if it was a niche... in other words, just driving it. Volt enthusiasts crave the label of "special". They really don't what it to become an ordinary vehicle. That's a conflict which will be very interesting to observe as it plays out.

4-28-2010 **Historical Equivalent.** Quotes like this always get me worked up, "*Just like all early technology, it will become mainstream once the early adopters drive the price radically down...*", since there's a catch not mentioned. It assumes replacement of a single option to another single option. The most obvious example is the advancement from VHS to DVD. There was only one reason choice prior to and afterward. Though there were several which competed initially, only one format emerged as a standard. That will not be the case in the automotive industry. There will be lots of choices based on a variety of unrelated technologies. That diversity will slow the dramatic price drops we've become quite familiar with from other industries due to high-volume production and the abandonment of the outdated. I posted this in reply: Quite true; however, that requires a standard product. Since the automotive industry options will remain diverse, it's not going to happen at that magnitude. Traditional vehicle production will continue, rather than being phased out entirely. Some hybrids will offer a plug, others will not. That will influence both demand & investment. But unlike with those other technologies, the luxury of time isn't available. Forces beyond our control (like oil & emissions) cause pressure mainstream adoption doesn't have a historical equivalent for.

4-28-2010 **Bias Survey.** Don't you just love when a survey is published, but then notice that none of the answers provided actually fit the question asked? I was so disgusted with the "what consumers want" plug-in survey discussed today, that I don't even what to mention the absurd bias it reflected. The topic focused on the tradeoff of range & price for a plug-in, but none of the options listed were actually realistic. The entire sampling was designed to skew results. In other words, it was greenwashing propaganda. Seeing that was quite frustrating. Have you guessed what I didn't like yet? It was price. The source avoided the "nicely under $30,000" like it was the plague. Yup, they just expect people to pay considerably more... they as in GM, which is quite frustrated with Nissan pricing at the moment. Here's the survey suggestion I posted that wouldn't exhibit such blatant bias... You're planning to spend $29,999 on your next vehicle. Which would you choose: 1) An electric-only vehicle with a range of XXXX. 2) A vehicle with an electric-only range of XX plus an engine so you can continue driving after the batteries are depleted.

4-28-2010 **Amazing FUD.** It's hard to believe a Volt enthusiast would be so desperate to undermine the plug-in Prius that he'd actually post this: "*Only 60 kW of motor power could possibly be damn dangerous in some situations at freeway speeds.*" He then followed by quoting several recall numbers, attempting to portray Toyota vehicles as something to fear. That's just plain wrong. Prius doesn't rely exclusively on one power source or another. It's a hybrid! That means there's 134 horsepower available (motor & engine combined), not just the 80 claimed (motor only). Of course, his approach was somewhat flawed anyway. Think about Volt climbing a mountain. Once the battery-pack is drained, what's the power source? It's an engine. The output is 55 kW. That in itself makes you wonder. But then when you realize the one in Prius is 73 kW, it's pretty easy to question claims being made. They certainly look like amazing examples of FUD.

4-28-2010 **Missed Photo.** I didn't have a digital camera handy. Darn! I was cruising straight, with a nice tailwind, for 15 minutes on a 55 MPH country road. That resulted in a solid 60 MPG reading on the display. Seeing that uniform quantity, spanning all 15 segments, was pretty sweet. Think of how rare that situation is. Being able to so consistently travel like that just doesn't happen. No traffic to slow you down or push from behind. Heck, for that matter having a road you can drive along non-stop and at a constant speed like that really adds to the unlikelihood of such an event. So, not capturing it as a keepsake to share was a bit of a bummer. The last time I encountered a situation like that was with the Classic model. How many years ago was that?

4-29-2010 **They Saw It Too.** Certain writers for certain publications have an agenda. One who's name I've become quite familiar with did it again today. The article was a praise piece on the 2010 Golf TDI. He practically worshiped the vehicle, proclaiming how impression the 30 MPG city 42 MPG highway efficiency was. What the heck? That's no impressive from a compact, especially considering how dirty the emission-rating is... the opposite end of the clean spectrum from a hybrid like Prius. Yet, he mocked Prius anyway... not even trying to be constructive, stating the price of Prius was $30,550. You know it's total greenwashing when the TDI price mentioned is the base-model and the comparison vehicle is the high-end model. Fortunately, quite a few readers noticed the extreme bias. They saw it too. I hadn't ever seen that many negative comments directly posted on a article before. It's almost as if that publication knows about the controversy he caused and enjoys the attention it brings. That's sad.

4-29-2010 **The Point.** To sell a large quantity of high-efficiency vehicles at a mainstream price. Why is that so difficult for some to understand? They genuinely don't care about the realities of business, that's why. Bragging rights plays far too heavy of a role in their perception of success. A token number of outstanding performance vehicles offsets a majority of under-performing inventory. Rather than raised the efficiency of the middle, they feel focus on the extremes offers greater benefit. For all those who cannot afford one though, I couldn't disagree more. In other words, a $40,000 plug-in compact and a $50,000 Two-Mode full-size are not vehicles that actually help the mainstream buyer. They get stuck with traditional vehicles. That's the point. Certain automakers are neglecting that market entirely. Too bad supporters refuse to acknowledge that. Makes you wonder who will get that business, eh? Who will be selling lots of affordable high-efficiency vehicles? Can you image a consumer wanting 50 MPG for $25,000?

4-29-2010 **100 MPG Minimum.** Is that a realistic expectation? Reading this post today does make you wonder: "*I was hoping for a minimum of 100 mpg.*" For the past decade, consumers have been placing a very high priority on price for high-efficiency solutions. What would make the plug-in model of Prius different? A level such as 100 seems quite arbitrary. How much MPG increase is worth how much money? Prius has always been about finding an engineering solution which balances the purchase & ownership experience, not striving for an extreme. Anywho, here's my response to that: With an aftermarket upgrade or very short drives, you still could. But that's not the point. Toyota wants heavy market penetration, not a trophy like GM with Volt. That means a configuration which will yield a substantial improvement, yet still be affordable for the masses. Their testing effort is to collect data about real-world performance for that configuration. Having confirmation that 75 MPG is typical will go a long way for effective & speedy rollout afterward.

4-30-2010 **Almost 70 MPG.** There's a hill along my commute where I finally recover from the cold start and quick acceleration up to 70 MPH. At that point, the MPG typically climbs to 42. That's the beginning of the recovery. At the slow down about a mile before my exit, it will usually hit 50. At that hill, I noticed it was already at 56. Whoa! I certainly wasn't expecting that!! It was a warm spring day. A heavy morning shower had just cleared, leaving the road edges damp with vehicle travel paths becoming dry. Put another way, the road surface offered very little resistance and the air being drawn into the engine was quite moist. That's fantastic for efficiency. On really good days, I can hit 60 just prior to parking at work. Today was extraordinary though. Conditions were perfect. I was curious as heck what the result of this particular commute would be. The display revealed a remarkable 69.6 MPG. I was absolutely delighted.

4-30-2010 **Sales Numbers.** It's the end of April. That makes it official. GM never provided their hybrid sales numbers for March. We knew they were beyond horrible. In fact, sales have been so low that inventory is likely very old at this point. 2009 models could still be stuck on dealer lots. Anywho, we already knew that Two-Mode was far too expensive and BAS didn't deliver. Taking a look elsewhere, that's where the story gets weird. Ford offers a very nice hybrid, Fusion. It competes directly with the hybrid version of Camry, even though it currently offers better efficiency. The strangeness starts with the 1,670 Fusion purchases and 1,549 Camry. You wouldn't expect them to be so close, especially in the light of all the negative Toyota publicity. Then it really gets strange when you look at Lexus HS250h, since there were 1,494 of them purchased last month. Makes you think, eh?

5-01-2010 **Today's Coffee.** That was close! I only saw two 2010 Prius on the way to the coffee shop. My expectations are high. More is better. Thankfully, there was one in the parking lot. Phew! The owner was just getting out of it, so he was captivating by the approach of mine. Same color too. I can't imagine what it will be like a few years from now. The growth rate of this generation is strong and there's no end in sight. Mainstream acceptance is clearly well underway.

5-01-2010 **Retirement.** Will it really happen today? The GM executive who intensely fought against hybrids, well known for his "*stop gap*" criticism, is now supposedly retiring with a vehicle about to rollout which fits that description. Nissan sees Leaf as the true future, with Volt an unnecessary step that doesn't even fill the gap. Lutz sees Volt as a vehicle in the same class as Camaro & Corvette. So, purpose is a pointless debate anyway. His other achievement for the mainstream will be Cruze, which will supposedly only deliver 27 MPG city. What kind of premiere non-hybrid efficiency vehicle is that? Of course, unlike Volt, it will actually be affordable. Whatever the case, this is his third attempt to retire. The first was when the recovery-plan was delivered, prior to the GM bankruptcy. That ended up being postponed to the end of 2009, which obviously didn't happen either. Today, it is suppose to again. Think it will?

5-01-2010 **Weekend Sightings.** I ended up seeing 5 more 2010 today, bringing the total up to 8. That sure is nice, especially combined with the countless number of Iconic & Classic models I routinely spotting as I drive. It won't be long before the "ubiquitous" label becomes appropriate. At that point, the threshold of mainstream penetration becomes so deep that purchase consideration is no longer based upon technology. It's just like other advancements. In the past, other technology improvements (like front-wheel drive and fuel-injection), were also no longer new. They somehow became the new standard. When is a matter of perspective though. Those attentive to traffic would probably agree that occurs sooner as opposed to a consumer not in the market for a new vehicle. For those who already own a Prius, they would likely argue the technology has been mature for many years already. After all, it's the competing automakers claiming the market is content with 30 MPG vehicles still. What do you see when on your weekend drive?

5-02-2010 **Accepting Criticism.** I sure am glad to hear a lot of complaining about the upcoming debut of Cruze. It's constructive stuff, none of the FUD (that's Fear, Uncertainty, Doubt) the Volt enthusiasts are spreading about the plug-in Prius. My favorite was the fact that the 60 kW electric motor in Prius didn't offer enough horsepower. One person actually had the gumption to portray a sense of fear claiming it wasn't powerful enough to get you out of harms way, attempting to give the impression that Prius doesn't also have a gas engine available for power too. Another attempted to spin the situation claiming peak horsepower was misleading, even though the 100 km/h cruising speed was clearly the topic. I've read posts about Cruze stating the model configurations vary too much, causing concern about that ultimately harm reputation. It will make Cruze appear to be just another small car choice rather than being a fuel-efficiency leader. Too bad acceptance of criticism for Volt is rare. If you say anything negative, it is simply assumed to be an attempt to undermine. Denial doesn't solve problems.

5-02-2010 **Perception.** Reading acknowledgement from Lutz that Volt won't actually be the "*numerical game changer*" heavily implied originally is intriguing. Of course, considering the timing, it's not a surprise. His departing claim is that Volt will be a "*perception game changer*" which will provide a halo effect for the other vehicle's GM produces & sells. Reading between the lines, that was always the message anyway. But certain individuals on that big GM forum especially, were intensely pushing the idea that Volt would be the first of a new industry standard instead. And by the word intense, I'm politely trying to avoid mentioning their rude & hostile posts. At one point, it really was that bad. Prius was deemed evil and represented a serious impairment to progress. They honestly believed that. Contributing to high-volume production of increasingly better automotive-grade rechargeable batteries was something Prius was somehow preventing. That doesn't even make any sense. But when you are playing a perception game rather than one of actual changer, logic doesn't necessarily have to apply.

5-02-2010 **Goodbye.** I had to post something on the big GM forum. This departure was long overdue. How do you deal with an executive who did actually deliver a lot, but what's needed now is not his specialty. In fact, he really doesn't have any interest in the type of change which is needed. Let the replacement make a name for him or herself by ushering in that change. Old school business practices and a mentality for sacrificing emissions & efficiency for the sake of power was never a good idea, especially going forward. So, I avoided any type of insult for all the grief he caused us over the years by responding politely with just a touch of sarcasm. Hopefully, that will just be accepted at face value and we can all finally move on... Oddly, I can thank him for that and wish him a enjoyable retirement. His "*stop gap*" label and intense negative campaigning served as inspiration. Prius could have become just another hybrid if not for his influence. Instead, it got pushed to the top.

5-02-2010 **Oil Disaster.** We first heard about it last Monday (almost a week ago). Some of us immediately knew it was a situation doomed from the moment of the explosion. A drilling platform in the Gulf of Mexico claimed a dozen lives, then sank as a result of the fire which followed. Oil squirting from a well is hard enough to deal with on land. Under all that water, it's much worse of a situation. I didn't even both to mention it in my personal logs... knowing the frustration of all the size & impact speculation would get the best of me. All that stupid "*Drill, Baby, Drill*" chanting in the previous presidential election and the continued pressure to still open up new drilling opportunities is so frustrating. Increasing consumption is not the solution. Now we have what is becoming the biggest oil spill ever on the verge of hitting shores and ruining the livelihood of those who depend on the water there, like the seafood industry. Think of all the wildlife which will die by being poisoned from all that oil too. The risk is simply isn't worth it. We must significantly reduce our need for oil.

5-04-2010 **Mountain Mode.** Something genuinely new about Volt. That's refreshing. What it does is move up the depletion point. So rather than allowing the battery-pack to drop to the 30 percent level before starting up the engine, it will happen somewhere in the 40's instead. That is a simple software adjustment, likely available via a button on a screen. Offering the option makes sense... especially when you discover the maximum output of the engine is 55 kW. Hearing that silenced those who had just recently been gloating about the 111 kW electric motor. Unfortunately, when I pointed that out earlier, they continued "muscle" flexing and pretended that wasn't true. But then when an executive confirms it, the topic becomes taboo. Perhaps it had something to do with this: "*There is the possibility of severely reduced performance once the battery reaches the depletion point.*" Too bad they just don't want to be constructive.

5-06-2010 **GM Perseveres.** Reading that in a blog title about Two-Mode on the Volt website makes you wonder. With only 1,922 total sales so far this year, from 5 different vehicles, you have to wonder. Reading the comments was scary. Some have absolutely no clue how that particular hybrid system actually works. Some have no concern for the fact that it will at best serve only a niche market. Some have no idea of the complexities involved with respect to size or cost. Some continued to spread the propaganda about "saving" gas. Some attempted to greenwash with the same old nonsense we've heard for year. So, it was heard to believe anything constructive at all could come out of that discussion. Reading this provide a glimmer of hope: "*This lack of availability across the pickup spectrum leaves one to wonder if GM is really *in* the hybrid business or is their hybrid offering simply being used as a halo.*" But then it turned into an argument with this: "*To all you -1 clickers, the Prius model has succeeded and continues to succeed even with Toyota's image in the dumpster! Who can argue with that? The numbers speak too loudly. Re-read Lutz's interview yesterday and there is only one conclusion you can make. Volt is dead, R.I.P. Fanboy posters still talked on and on about Volt gens 2, 3, and 4. Do they honestly believe GM will can Volt, but later come out with a stripped-down version?*" Needless to say, I stayed out of that topic entirely. I posted all that in the past. Now others are feeling the burn of fears being confirmed. Interesting, eh?

5-07-2010 **Drill, Baby, Drill.** Describing the situation as a disaster doesn't tell the whole story. Those who have argued that drilling our way out of the oil dependency problem have grown deathly silent. Their claims of "safe for the environment" have been proven horribly incorrect. There's a massive oil leak and a mess which will impact that area for decades to come. What was feared to happen actually did. Strangely, this whole mess has caused the price of a barrel of oil to drop, from $85 to $75. Perhaps investors have already figured out that the industry is severely damaged from a profit perspective now. Things will never be the same after the events in the Gulf continue to unfold. The price of gas seems to indicate problems are beginning to stir. It jumped up to $2.95 per gallon here, which is still quite a bit less than other areas of the country. To think of how incredibly unwise guzzling has become. Makes you wonder what the unprepared automakers will do now...

5-07-2010 **Real Test-Drives.** There's nothing like watching a video of some friends driving a plug-in Prius, unrestricted. None of that "crock" we have had to endure from GM. This was the real thing on an open road, not a small closed course. You got it, they had the freedom to accelerated beyond the silly restrictive 25 MPH limit imposed on those test driving a Volt. It was wonderful to witness. The speedometer climbed up to 65 before the engine started. This model of Prius depends heavily upon the electric motor. It's like stealth at much faster speeds, where the flow of gas ends as quickly as it started... only you can be more generous with the pedal. The engine becomes nothing but a brief power assist. Sweet! Oddly, watching that made the wait to get my own even easier to endure. Patience will really be rewarded. That's clear to see... an extremely efficient system that will be both affordable & abundant. Yeah!

5-08-2010 **Test-Drive Reports.** I can only imagine how exciting this news is for some. Knowing some of those directly involved, I'm aware of the amazing things to come and just have to practice patience. For those uncertain of where the industry is heading, that's different. Some see it as long overdue. Others see it as something that was naturally supposed to happen as oil prices increased anyway. What delights me is how long the drives themselves lasted. The first we heard about was 45 minutes long and over 15 miles. They were allowed to deplete the EV supply of electricity entirely. The experience Toyota offers is the opposite extreme as GM. Who provides unprecedented transparency? Another report covered 17.2 miles of driving, of which 14.1 were using only electricity... which didn't all come consecutively. The system will revert to regular hybrid mode with a significant efficiency boost when additional power or speed is needed. Overall the results was 99.9 MPG displayed with the indicator stating 61/39 for the EV/HV ratio. The next morning, he got a chance to drive to the airport. That too displayed 99.9 MPG, despite having traveled over 37 miles that time. Interestingly, driving in "stealth" does not count toward EV in the ratio value, since that's part of the regular FULL hybrid driving experience without a plug. Needless to say, I sure hope the competition is taking Toyota seriously. The plug-in Prius is generating great reports from current Prius owners.

5-08-2010 **Sectioned Battery-Pack.** The aftermarket upgrades offered for Prius have been in the form of an add-on. The owner presses a button to switch over to a bigger battery when they want to drive in EV mode. That left the existing battery intact for HV driving. In other words, the pack was actually two components which were designed to co-exist. The same is true for the upcoming factory offered plug-in model, only there will be 3 batteries and the pack will be physically integrated together into a single component with sections inside. It will also be liquid cooled. The intent of this configuration is to offer you generous EV power automatically. The EV button is removed. The gas engine is used sparingly. For me, that means the first few blocks of my commute will be solely on electricity using an EV section, followed by a chunk of 70 MPH highway driving relying on the HV section, then back to an EV section for the remainder of the trip. I can't wait to find out how much of a MPG boost that provides.

5-09-2010 **Technology Confusion.** Understanding what's coming is hard enough. Once sales begin, marketing & greenwashing will be added to the propaganda already at play. How in the world are consumers going to know the difference between facts on paper and events in the real-world? They often vary dramatically. Design aspects which sound good prior to purchase don't translate to the meeting of expects in practice. Actual results depend heavily upon conditions most consumers simply are not familiar with. Experience for most is crude, at best. Think about how not having MPG feedback allows people to assume they are getting the values listed on the window sticker, never realizing how speed & climate significantly influence efficiency. Naivety is one thing. Confusion is another. When the purchase of a plug-in is consider, it will likely be the first time many consumers ever give cost verses efficiency serious consideration. Questioning benefit is very difficult if you know little about the technology involved. Volt has one big battery which depends upon a gas engine after it has been depleted and for winter warm-up. Prius will have a section battery, where part of the pack will operate exactly as it does with the non-plug model and another part that allows it to operate as an EV under a variety of situations, switching perhaps several times as you drive. How do we prevent being confused about how each works? And how does price factor into the purchase decision?

5-09-2010 **Plug-In Pondering.** My recreational drive to the bike-trail I spend some Summer days enjoying requires 10 miles of suburb driving before reaching the highway. With the plug-in Prius, I'd reach it entirely using EV propulsion. The HV section of the battery-pack would remain unused, topped off by plugging in. The merge onto the 65 MPH highway would only need it at the final moment and greater capacity would be available, due to it being Li-Ion instead of NiMH. That's a new situation, better than anything ever experienced in the past. What kind of MPG average can I expect? With all that driving using only electricity and the boost from the improved battery & plugging, it should be significantly increased. However, there is still the long cruise on the highway and the extra weight from the bigger battery-pack. Confused yet? Add into the equation the effect A/C has. Factors like that are fun for me to ponder. Mainstream consumers won't be as enthusiastic researching detail like that. Real-World data will be the ultimate reveal. Waiting for it will be a challenge though.

5-10-2010 **230 MPG, to be lowered.** We knew this was coming. It was also very easy to predict it would not occur until after a certain executive stepped down. What the new value will be and what the implications are of the change is anyone's guess. Basically, it just adds to the ever-changing story coming from GM. Talking about mixed messages. Anywho, one of the first post of the day for this discussion topic included this: "*Personally, I think they should leave the numbers to Cafe and the city/hwy CS mpg and city/hwy AER.*" I responded with: That seems like a sensible approach, for Volt. But then when you consider the FULL hybrids like that from GM itself, Ford, and Toyota will be offering with a plug, not to mention others considering it like VW, Chrysler, and Hyundai, the situation becomes a mess... since they won't always have a distinct switchover from EV to HV. Of course, even that would contribute to confusion and misleading hope due to Volt operation during the winter. Real-World data will play a significant role in the determination of a new measurement system. That won't come for a number of years, since there is virtually nothing to work with still. For that matter, there isn't even much of a basis of comparison available yet. The effects & accuracy of the most recent EPA revision are still being determined. Remember, consumers still have a very hard time accepting that the window sticker numbers are just a basic standardized measure for the sake of purchase decision. They do not represent an expectation.

5-11-2010 **230 MPG, mixed messages.** Yesterday's discussion went no where. Again, it needed to be pointed out that the MPG reference itself is fundamentally flawed... which is why most of the rest of the world uses *unit/distance* measure instead, specifically *liters/100 km*. That message got lost in the chaos though... as did the understanding of the 230 value itself. So, I pointed out the situation with Volt and the confusion promotion of it brings again: 230 mpg is specifically the estimate for CITY. How come after all this time (9 months) we still haven't heard anything at all about the estimate for HIGHWAY driving? We know that value will be considerably lower. And since we are constantly reminded that Prius has a top EV speed of 100 km/h (62.1 mpg), higher speed travel is apparently very important. Yet, it's never discussed. Either HIGHWAY driving is important or it isn't. Sending mixed messages isn't constructive. Choose.

5-11-2010 **In The Low 40's.** No, not efficiency. That's still in the low 50's thankfully. It's the daily temperature. High's have only been in the low 40's lately. The season of Spring is really mixed up. We got May weather in April and April weather in May. How can they be swapped like that. Will cold & rainy conditions now rather than a month ago help get our crop planting back on track? Seeing a commute temperature of only 39 F this morning sure makes me wonder what's to come. I certainly don't want to have to endure another cold Summer again. Last year, it did warm up until late July. What a pain. When the temperature climbs up into the low 80's, the Prius is really happy. I see some amazing efficiency then. Warm enough to keep the catalytic-converter hot without the need to run A/C to keep you comfortable is the key. Lately though, that seems like just a distant dream. It's a bit nippy here still!

5-11-2010 **Oil Nightmare.** The testimonies were today. Oil is still squirting out of the broken pipe 5,000 feet below the ocean surface. The scale of this disaster is getting very ugly. No one wanted to accept blame. I can't imagine anyone taking the suggestion of deep-water drilling plans seriously anymore. For that matter, all types of oil expansion will face intense opposition now. With no end in sight for the damage, the impact of this is anticipated to be enormous. The nightmare is massive. In fact, it puts a whole new perspective on the "*too little, too slowly*" problem. Concern about being caught off guard is quite real now. Certain automakers have nothing to offer. Vehicles providing MPG averages in the mid-30's are not what people want when the price of gas gets very expensive. They want affordable vehicles similar to Prius... midsize, midprice, with a significant efficiency increase.

5-12-2010 **$1.2 Billion.** Hearing that in a quarterly profit report about Toyota sure puts things in perspective. That's how much they made from January through March of this year. All the negative publicity and the no-interest financing incentives may have lowered the bottom line, but it still very much was in the positive. Ford is managing their financial situation as well, avoiding bailout disaster. GM, no such luck. Even with all the taxpayer help, they are still bleeding money at a horrifying rate. Supposedly the billions being lost still will end in the next few years. But how much more of this can they handle. Will offering public stock make any difference? It will help relieve the burden on the government, but making profit is still required. In this new age of efficiency being a priority over power, what will they sell that's competitive?

5-12-2010 **8-Speed Transmission.** When will the insanity stop? Adding more and more gears to squeeze out a minor efficiency improvement at the expense of increased cost & complexity doesn't make any sense. Yet, that's what Audi plans to do with their A4 sedan, A5 coupe, and Q5 crossover for 2011. The Q7 already has it. At what point will they no longer be able to avoid substantial redesign? It's bad enough that quite a number of vehicles now have very large tires, allowing them to gain highway MPG by sacrificing city MPG. The way fleet averages are calculated, that works out to an improvement. But in real-world driving, it can be a detriment. But consumers don't notice that, so the avoiding continues. Cost of more gears will be difficult to not notice though. The appeal of shifting more often is an unknown too. Maybe we'll never find out. Market growth for Prius and the upcoming plug-in vehicles could draw attention so far away from automakers touting more gears that they just give up and finally pursue substantial efficiency improvements.

5-13-2010 **Suzuki Swift.** This fall, testing of 60 of them begin in Japan! Reading that sure was a surprise. How did this plug-in hybrid come about? Currently, it's a traditional vehicle about the size of a Cooper Mini available elsewhere in the world. It hasn't been in the United States for over a decade. Will it come back as competition for Volt? That's right, it is a SERIES type hybrid using a 54 horsepower engine (0.66 liter) as a generator power source and a 74 horsepower (55 kW) electric motor for traction. The battery-pack is just 2.66 kWh. That's interesting. It's tiny compared to the 16 kWh in Volt and almost half the size of the 5.2 kWh in the upcoming plug-in Prius. So, you could imagine this particular plug-in as quite affordable. Oddly, the smaller size engine and vehicle size overall doesn't help with efficiency in regular hybrid mode. 60 MPG is the combined estimate on the JC08 (Japanese) testing cycle. That's sounds good, until you discover the plug-in Prius estimate is 72 MPG. Estimates when measured with the plug taken into account are 88 MPG for Swift and 134 MPG for Prius. With the numbers so much in favor for Prius, it looks even more like competition for Volt. After all, some people have a very short commute. The price could make it worthwhile for that.

5-14-2010 **Sigh.** Do you like when this question gets asked: "*Is the Prius slowly just becoming another car now that it's been around for awhile now?*" Different people ask it at different times. Today, it came from a newbie with basically just an ownership excitement. Passion of the past is long gone, since that often originated from understanding the engineering itself. Now, it is perceived from a more simple perspective of improved emissions and real-world sightings. Aspects of design are lost due to not needing that knowledge anymore for purchase. I find that confirmation of Prius becoming mainstream. Hasn't that been the point all along? Don't we want it to be thought of as just another so-called "boring" family mover like Camry, a profitable top-seller so common it becomes part of the roadscape? After all, when the plug-in model rolls out, it will be looked upon as a new high-end package option rather than an entirely new concept. That will make it easy to sell. People will see that the plug offers a MPG boost. Simple. So simple, it kind of makes you sigh. Intentional fading of enthusiasm is a strange sign of success. Ubiquitous products blend in, so popular they are purchased without question. That status is starting to emerge. Yeah!

5-14-2010 **Prius is Top-Seller**! It's official. The numbers have been tallied. Prius was the top-seller in Japan for 12 months in a row. Maintaining that highest-count title for an entire year is fantastic! Makes you wonder if that could ever happen here with such a diverse market. Local production would help. Inventory shortages are just a gas crisis away. Of course, there they've been more tolerant of long waiting lists. That helps. Paying a true price for gas, rather than the subsidizing we have here, would make a difference too. So far this year in the United States, there have been 40,793 Prius purchased. For perspective, the 5 models of Two-Mode combined (Escalade, Yukon, Tahoe, Silverado, Sierra) over the same 4-month period have only resulted in 1,904 sales. So when you think about Japan selling twice as many Prius, it really makes you think. The newest generation is drawing more attention. Priorities are changing here. Time will tell.

5-14-2010 **Too Bad, parting thoughts.** I tired of dealing with it. They've sealed their fate. Learning from history... the Volt enthusiasts haven't. They simply dismiss your references to the past. The very same pattern we saw in the past with diesel and several hybrids is repeating. Heavy emphasis on either the engineering or business is a key that something is jeopardy. That lack of balance is the problem. In the case of Volt, exactly like it was for Two-Mode, the business with respect to market need was almost non-existent. Rather than actually focus on what consumers actually need, all attention is placed on what they want instead. The situation is so misguided, they cannot even tell you what the difference is between want & need. When you point out the "*too little, too slowly*" assessment now, all you get in response is "*too bad*".

5-14-2010 **Too Bad, consumer need.** As exciting as a superior driving experience can be, that isn't actually what most people need. Just ask anyone if they'd prefer a Lexus over a Toyota. Of course the choice will be the luxury vehicle over the mainstream... but that isn't what they end up buying. They don't need the lavish improvements. They want them though. So if you ask, you can easily predict the response. But when they sign the dotted line for a purchase, that's an entirely different matter. That's why vehicles like Camry & Corolla sell in such large quantity. They represent a well-balanced configuration of performance verses cost. Their success is why Prius is configured the way it is. Toyota targeted the same market... middle market... the bulk of the consumer base. They designed a vehicle people need, one that can be produced in high-volume and deliver a business-sustaining profit.

5-14-2010 **Too Bad, business need.** How can a response like "*too bad*" be even the slightest bit constructive? That attitude is what got GM into trouble in the first place. As much as they want to build & sell vehicles like Camaro & Corvette, that simply isn't realistic. They serve only a niche market, clearly confirmed by the low-volume sales. Modeling Volt after them doesn't make any business sense. It's just like targeting Two-Mode at the large truck buyers. There are so few of them, what's the point? The choices are already spread too thin. There are lots of trucks to choose from and the argument in favor of diesel instead is a fairly strong one. Why would you invest so much on a new technology where so few sales are expected? As much as a 40-mile range sounds appealing, achieving that by sacrificing affordability doesn't make any sense. The business need is for a high-efficiency vehicle priced similar to what middle-market currently spends. You target the mainstream, not niche buyers.

5-14-2010 **Too Bad, actions.** We've seen almost nothing from Volt enthusiasts beyond just daily blogging. In fact, the activity on the topic from the day before dies a quick death as soon as the new one is revealed. Those topics often aren't even about Volt either. Posts stray very quickly too. So, most become just a collection of random thoughts within hours. Forum discussions have never emerged. All is lost in the chaos after only a few days. It's pretty sad. Lack of action on the part of participants is what killed other hopes of the past. Why can't they see that pattern? They wait to see what GM will do next. They claim they have no power of influence. They complain, yet do nothing but blog. Oh well. It's not like I didn't try to point out the history being repeated. Today, it was with this: Waiting for the automaker to take the next move after rollout begins is certain doom. Studying history reveals that success up to the consumer, not the automaker. You must transform from a reactive enthusiast to a proactive supporter. Will you be purchasing a Volt, routinely posting your experiences with it, then push GM for modifications that will contribute to market growth?

5-14-2010 **Too Bad, approach.** I followed up by also posting this: GM's one-size-fits-all approach has always been a big concern. It's 40 miles or nothing. Changing cell count changes the overall voltage. You cannot just plug in another module or add multiples. You can with the plug-in Prius though, since each runs totally independent of the others. It's not just one big battery-pack supplying power all at once like Volt. Not meeting basic design requirements for market growth is a big purchase deterrent. Another is not being able to easily reduce capacity to reduce price. Too much is being gambled on a design that doesn't support multiple configurations. Offering a plug-in model as just a high-end package on a hybrid that is already part of the mainstream makes for a very strong business case, reducing risk significantly and using a platform which could draw a lot of consumer interest very quickly. It also lowers price by taking advantage of high-volume production. That's great for Prius configurations. What about Volt? Being only available with a plug in itself is limiting, not getting a choice of capacity limits it even more. Think about the MPV5 concept with its larger cargo area and seating for a fifth person. It would use the same powertrain as Volt, but the increased vehicle mass reduces EV driving range to 32 miles. Too bad just plugging in another battery module isn't supported.

5-15-2010 **Too Bad, competition.** Looking back at yesterday, considering the enthusiast point-of-view, it's easy to see why the are so dismissive. After waiting over 3 years, having the rollout of Volt obscured by competition like Leaf and the plug-in Prius must really be frustrating, especially with Swift suddenly entering the picture. Their assumption of having the market to themselves and having lots of time was always naive. But the not-so-subtle assessment coming from the task force should have been a wake up call. Yet, they still haven't reacted. They don't even see the need. Read the blog posts. Comments focus around Leaf and Prius losing sales to Volt. Market growth is not a concern, it's a niche mindset. Why not push for more? After all, the purpose of Volt is... hmm... what the heck is GM hoping to accomplish?

5-15-2010 **Too Bad, rollout.** It does make you wonder what will end up happening. A number of the enthusiasts who blog heavily have already said they will not be getting a Volt due to the pricing. What kind of message does that send? What will be the source of real-world data? Will a newbie be welcomed into a group who isn't accepting of outside opinion? They certainly haven't been reception to constructive comment. What if an owner creates a new forum to share information from? Those wanting to provide genuine support will gladly abandon a daily chatter website for one that is actually productive. We have already seen how powerful of a draw that can be with the generations of Prius. The usual greenwashing propaganda will be easy with rollout starting only limited areas. Focus on the concept rather than the outcome.

5-16-2010 **Too Bad, for everyone.** The point of Prius was always to develop & expand a platform for the masses. 13 years later and over 2 million later, that platform is still expanding. My gripe with GM is that Two-Mode was developed exclusively for trucks and Volt exclusively for compact cars, with both being well out of the range of being affordable for everyone. Meanwhile, we have Toyota spanning HSD implementation from Yaris to Highlander... including midsize vehicles, which GM still does not have a solution for. Their only option offered is BAS, which offers little for efficiency improvement and nothing for smog-related emissions reduction. Spending so much development money on technology to reach so few is wrong under normal circumstances. Doing it with taxpayer money (GM is still privately owned by the US government) is even worse. Let's not forget about the 2008 bailout money either. What will people buy & drive for years to come?

5-16-2010 **Too Bad, solving problems.** How will the problems of oil-dependency and air-quality finally be solved? Not taking the situation seriously is very frustrating. Remember that even if Volt miraculously becomes affordable quickly, there are still lots of consumers who don't have a plug available. Apartment and condo dwellers will be out of luck for a very long time. The expense & liability of offering outlets in parking lots & ramps is a big challenge to overcome. Also, think about all the people who have homes with nothing but a carport or who routinely park along the street. Figuring out how to supply a secure 110-volt connection is difficult enough, not to mention the added complexity of a 220-volt. In other words, there still must be an option provided which doesn't require a plug. Oil price & drilling is an unpleasant topic. It's only going to get worse too, as demand grows... contributing to increased road congestion and pollution. Giving these problems to our children for them to solve is terrible.

5-16-2010 **Too Bad, expectations.** What are they? What does the typical consumer actually expect? Remember the promise of hydrogen fuel-cell vehicles? Talk of that was so intense at one point (thanks to the "*stop gap*" campaign) that hybrids were simply dismissed as a unnecessary step in automotive advancement. Thankfully, the history which followed debunked that. Heck, by now hydrogen availability was suppose to as common enough that the future of fuel-cells would be seen as inevitable. That obviously didn't happen. Among the many reasons why, cost was a very big factor. It is with plug-in vehicles too. That's why Volt has a "daily" sized battery. But is that the way consumers will see it? Aren't they more concerned about the price of a vehicle rather than whether it provides 40 or 30 or even 20 mile capacity? How much are they really willing to pay when there's an engine to supplement anyway? After all, they've been greenwashed to consider 30 MPG as acceptable.

5-17-2010 **Too Bad, greenwashing.** It's truly amazing how leaving off certain bits of information can be so misleading. Winter temperatures, driving more than average, highway speeds, less expensive gas. They all reduce the difference. Price of the vehicle itself is missing too... That was the beginning of my rant today. Turns out, there was nothing more to post. Reading the same old greenwashing garbage for well over a year now goes way beyond frustrating. It's clearly quite intentional. You push, they sometimes respond with a half-hearted token gesture. Then, it's back to the routine. Just keep repeating the same selective facts hoping people won't ever question any of it. Too bad, I do. Believing you can sell a product by pushing particular circumstances doesn't say much for who they expect you to be. Simply accepting things at face-value is never a good idea. As the say, the devil is in the details. And when it comes to a plug-in vehicle like Volt, that is very much the case.

5-17-2010 **Too Bad, huh?** This is a recent quote that got me really worked up: "*I drive 19,500 miles a year. I expect that if I got a Volt, and the range extender/generator gets 50 MPG at it's steady-state RPM efficiency, then I would save about $15,000 on gas...*" The hope was that the poster, a very stubborn enthusiast, was just clumsy & hasty with the calculator. Turns out, he wasn't. He was dead serious. Totally dismissing the price of the vehicle itself is one thing, but to make wild gas-saving claims like that is quite another. Even if Volt really did deliver 50 MPG in CS-mode, which is highly unlikely even under ideal conditions, how is a figure like that realistic? At $3 per gallon, $15,000 of gas comes to 5,000 gallons. At 50 MPG, without ever plugging in, that much gas would take you 250,000 miles. To think that he actually hopes someone researching a new vehicle purchase would actually believe that without question boggles the mind. Talking about greenwashing to the extreme!

5-17-2010 **40 MPG Fiesta.** Ford is thrilled. GM is crushed. It's hard to believe GM actually thought they'd have the entire market to themselves. They officially don't. The EPA estimates are in for this newest traditional economy offering from Ford. Of course, that 40 MPG is just the highway rating. For city, it's only 29 MPG. Achieving that required a 6-speed dual-clutch transmission too. Complexity like that isn't what you'd normally find on a vehicle of that class. This is a sign of change. But then again, it is a 2011 model and that is for when the efficiency standards begin to rise. Fleet averages must increase. Vehicles like this are hoped to be a major contributor toward that. We'll see. Domestic automakers have expressed little interest in vehicles like this up until very recently. How much change have they really embraced?

5-18-2010 **Regen Misconception.** This is one of the few which never die. Many people still think regen (Regenerative Braking) contributes heavily to the efficiency of hybrids. In reality, it's just capturing a small amount of energy that would have otherwise been lost. After all, how often do you actually brake while cruising at highway speeds? Almost never. Yet, it's still quite normal to hit 50 MPG on the highway. For anyone observant, you can easily quantify the electricity. It's displayed. For the Classic & Iconic models, the multi-display illustrated 30-minute segments indicating 50 Wh of energy for each regen icon. The most I ever saw at any one time was 13. Normally, it was around just 5 for the Iconic, which could capture more regen than the Classic. For the 2010 model, the most I've ever seen (so far) is 13 also. However, that display only illustrates 15-minute segments and each icon represents 30 Wh. Doing the math, you get 0.39 kWh. Even that maximum isn't much. It obviously helps, but the contribution to efficiency won't be a "*few more miles*" like the latest speculation about the plug-in model makes.

5-20-2010 **Third Oil-Change**. It could have been my second, but the official "*10,000 mile change-interval*" hadn't been announced prior to my second. So now, there will be an unnecessary expense of $33.84 on my maintenance log. Oh well. It does irritate a little bit... seeing how remarkably fresh (relatively transparent still and surprisingly thin) the oil was after 10,000 miles. Having an engine which doesn't have to work hard, mostly due to the large electric motor, obviously makes a difference. Of course, starting with the best synthetic 0W-20 oil does too. I like the fact that there is no metal filter casing to discard afterward either. That paper cartridge insert is all there is for waste with this Prius. Accessing it has become easier as well. Not being afraid to tap on my socket metal filter-wrench makes unscrewing the casing very easy. I was too timid last time, so it slipped off. The whole work area is still remarkably clean too. Having a layer of plastic & insulation for heat retention keeps all the dirt & salt out. That sure is nice. Anywho, I won't need to see that part of the Prius again until the odometer hits 30,000 miles.

5-21-2010 **Horrible Mess.** The magnitude of the size of the oil disaster in the Gulf Of Mexico has grown dramatically. Some always felt it was an extreme. It wasn't until BP become more forthcoming about the information they collected that worst-case scenarios started to become a grim reality. They don't have a clue how to stop the oil from squirting out of the ocean floor. Nothing they've tried has contained the leaks. In the meantime, shore damage has begun. The impact to water & wildlife is no longer speculation. The amount of destruction caused by carelessness & greed will likely take many years to truly understand. It's on a scale so grand, we simply do not have a basis of comparison. Contamination isn't always easy to detect. Cleanup is a massive undertaking. Remember the arguments about the amount of oil still available... how supporters dismissed the reality that the oil itself would be more difficult to extract and of lower quality... both adding quite a bit to cost. Risk wasn't ever really discussed. The cost of an accident is monumental in comparison. Liability will cause investors to be much more hesitant. Some may leave the business entirely. Change is coming. The oil will stain the reputation of the industry in a way they never imagined. It's a horrible mess they have gotten themselves into.

5-22-2010 **Choice.** Arguing the realities of vehicle production & sales to a group of enthusiasts simply interesting in aspects of performance has been futile. I kept at it anyway, hoping the vehicle being developed with niche intentions would somehow be pushed into also offering a configuration the mainstream would actually be interested in. No choice means fewer sales. It's a simple formula. A vehicle supposedly designed for families, yet priced well beyond their budget, doesn't make any sense. After all, diversity is a key element to success. The one-size-fits-all approach is very risky. Anywho, I was surprised to actually get some positive response to this... perhaps those wanting Volt to be popular are *finally* starting to see why Prius has captured the hearts of so many: Obsession with the engineering has led to a dangerous imbalance, to the point where some simply dismiss business logic. Take the topic at hand. Rather than adapting the platform to serve a wider demographic, some staunchly argue that the 40-mile capacity with engine is the only configuration necessary. One that reduces capacity to reduce price and serve those who don't have a long commute anyway isn't taken seriously. Eliminate the engine entirely and offer greater capacity instead, that's blasphemy! How will GM thrive without offering choice?

5-23-2010 **EPA Combined.** Just a quick reminder that the combined estimate value from the EPA is weighted. 60 percent is represented by the City estimate. 40 percent is represented by the Highway estimate. This is obviously why much of the advertising & bragging focuses entirely on Highway efficiency. Proper representation of actual driving habits is the reason for this choice by the EPA. It's too bad casual readers of blogs & posts aren't of aware of this reality. They just accept numbers at face value. That's why getting detail is so important. It's very easy to be mislead without.

5-23-2010 **Very Hard Rain.** Having a new digital camera with me and very good timing, I just happened to be in a scenic location... new roads out among the trees, covered with the after effects of a very hard rain. It's boggles the mind that it was last Summer already. So much time has went by, keeping me so busy I wasn't able to get back to publishing those photos until now. You could imagine how many I took. That requires painful decisions about which make the cut. It's totally worth it though. I enjoy reminiscing like that, especially with a Prius less than 2 months old at the time. Here's the 12 photos I chose to share from that storm which had just passing, leaving a wet photo opportunity for me to capture... photo album 146

5-25-2010 **$2.49 Per Gallon.** That's been the average price for awhile now. It fluctuates much like the price of oil, which has been in the mid-70's for awhile too. Remember all those experts who never believed this could ever happen? Heck, remember the craziness when a barrel of oil exceeded the $60 price level? It was madness. There was panic! Then it started to climb and eventually exceeded $100. Did anyone seriously expect it to finally fall back to the 40's as it had been at the beginning? I still remember $36 per barrel, since that kept the price of gas per gallon under $1. Hard to imagine that anymore, eh? Well, it's what contributed heavily the market growth of very profitable guzzling SUVs. Prius was mocked then. Dependence on oil and concern about the environment was only for "treehuggers" back then.

5-25-2010 **First Year.** It's hard to believe an entire year has went by already. With the down economy and struggling automakers (for a variety of different reasons) the time has really flown by. Of course, with a new Prius, that's bound to happen anyway. The discovery process is an exciting to experience. You are never quite certain how the new system will react under new climate & driving conditions. For me here in Minnesota, that was especially the case. The design of the 2010 obviously kept dealing with extreme cold temperatures in mind. The same is true for driving on slippery surfaces too. It's improvements like that which really make the differences in generations clear. Much thought went into the upgrade. I sure was lucky to have the opportunity to experience it right away. Lots more real-world data to collect! But to sum up the first year as a whole, all that I need to say is: *50 MPG*

5-25-2010 **13,000 Refundable Deposits.** The interest in Leaf is growing at a surprising rate. Makes you wonder what will happen with Volt. GM's first year production is just a small fraction of what Nissan will deliver. The publicity draw from actual owners is much stronger that anything advertising can stir. Of course, promotion can easily be swayed by the media. What do you think they'll be interested in? What makes Volt stand out is it having an engine. But having an engine makes it a hybrid as far as most of the non-technical world is concerned. The question about engines always is MPG. The supposed problem with hybrids is price. Where do that put Volt in the eyes of consumers? Now compare that to Leaf, which is both more efficient and less expensive. How does range affect interest? What do all these deposits tell us about long-term interest? Can't wait until the plug-in Prius ordering begins, eh?

5-26-2010 **Biggest Disaster.** Hearing about the oil spill grow beyond levels we've ever dealt with before sure is humbling. All the effort over the years to help make the technology in Prius become a standard has become vindicated. None of the oil pushers ever imagined a mess on this scale. It's becoming the biggest disaster caused by humans ever. This isn't a slow damaging effect, like the influence of carbon emissions changing our climate. This is a very specific event, something that happened on one particular dark day in our history. Ironically, it was *Earth Day* that the drilling rig sank, which caused the oil leak. This is something which will make the argument for raising efficiency standards much easier. Think about the effect $4 gas had on consumers. The damage from this will have a much greater reach. It's not temporary like price spikes. That region of our coast is destroyed. You can't clean up marshes like you can with sand & rock. Habitats simply cannot support the life it had anymore. They won't be able to protect from hurricanes either.

5-27-2010 **All They Hear Is Prius.** It's fascinating to witness history repeating itself. As product rollout draws closer, the supporter becomes less and less receptive to constructive feedback. They simply block out all criticism claiming it is just a ploy to undermine by the competition. This particular example is quite blatant too. In this case, Volt enthusiasts fear Prius. Each new success milestone for Prius makes them more belligerent. Even though nothing you say ever mentions Prius or even the technology, all they hear is Prius. They cannot fathom why someone who has supporter another automaker would ever want to help. Why they don't understand the desire to expand automotive-grade rechargeable battery production through cooperation across brands is still a mystery. It's as if the traditional market doesn't even exist. All they see is one plug-in technology. Devote focus is great, but denial of the realities of current production is detrimental. The fact that other plug-in hybrids could help end that production much sooner means nothing. It's the purist mentality, sacrifice all for a single objective... regardless of cost. That's exactly what we saw for Two-Mode. No cooperation. No interest in balance. One size fits all.

5-28-2010 **Shot The Messenger.** That has been the typical response to not wanting to deal with an issue. They make it personal with some type of insult, hoping to distract attention away from the actual topic at hand. This time though, I found a way to avoid that entirely by clearly stating the reasoning and leaving the question itself rhetorical: Go on accepting the status quo (too little, too slowly) by watching the competition gobble up market opportunity, rather than actually stepping up and doing something. It's the consumers who drive the market, not the automakers. Hasn't the lesson of EV1 taught you anything?

5-28-2010 **Listing Requirements.** Not doing that has been the heart of the problem from the very beginning. Consumers like Prius because what it delivers is very clear and easy to see the benefit of. Supporters like Prius since it actually achieves requirements they've listed and have pushed automakers for. Volt enthusiasts have taken a very different approach. Rather than actually stating what they want, they just accept whatever GM is willing to offer. It's like they are afraid asking for anything different will cause the development program to end. After all, GM did claim consumer demand for EV1 was so low it wasn't worth continued production... even though most of us never had an opportunity to actually make that choice. That's why it has become the responsibility of consumers to speak up. That's also why Prius has been so successful. Toyota has been very receptive to comments. We told them what we want.

5-29-2010 **Follow or Lead.** I'm still dwelling on that problem the Volt enthusiasts are allowing to continue. Actions are reactive, rather than proactive. It's been that way for years. Since many of the daily bloggers aren't even planning to purchase for awhile, how will the activity change? Their reason for not getting one as soon as it becomes available is price... which is the very thing I've been concerned about from the very beginning. GM didn't design a platform which could gradually be improved as battery technology & prices improves. Instead, they built the end-product hoping for a major breakthru and intending to keep production low in the meantime. That keeps consumers in the follow position. They cannot become leaders like Prius owners have if their only option is to wait. It's easy to promote something others can actually buy.

5-29-2010 **Percentage Greenwashing.** The diesel supporters are still at it, attempting to mislead through the use of percentages. I saw this today and just shook my head in disbelief: "*Clean diesels outsold hybrids in 2009.*" It was a short article which stated nothing but percents. That was the only numerical information provided. For anyone who takes the time to actually look at statistical data, they can see how easy it is to greenwash by not including actual sales counts. Think about it yourself. The first year of sales for Volt is 8,000. If the sales increase to 24,000 for the second year, that's a 200% increase. For Prius currently selling at 140,000 per year here, that increase of 16,000 more only represents an 11% increase... even though it is the very same quantity.

5-29-2010 **56 MPG.** The temperature was 90 F degrees. The headwind I was traveling into was in the 20's. It was a hot & windy day, perfect for a bike trip on a trail primarily canopied by trees. That meant a driving almost 60 miles each way to enjoy it. I was curious as heck how my now broken-in 2010 Prius would handle those conditions. To my delight, the MPG hung around 53... despite use of the A/C set at the lowest temperature with medium fan. I couldn't wait to find out what the return trip would bring, several hours later when it would be a tailwind on that 65 MPH highway instead. I was such a fulfilling sight. Outside temperature & wind almost identical to earlier that day. A/C running. I watched the MPG average slowly crept up to 56. Yeah!

5-29-2010 **Latest Attempt Failed.** There's not much to say. The latest attempt to stop the oil failed. The spill keeps getting larger and larger and the damage gets worse and worse. There's no end in sight anymore. All the "easy" options have already been exhausted. This is the worst and now goes deep into unknown territory. We've never had a mess this bad to deal with, ever! It's a disaster with nothing encouraging on the way. How long will the oil flow (not really a spill, since the supply is very much a mystery) continue?

5-30-2010 **Both Types of Emissions, part 1.** Discovering that someone who's been pushing an increase in the MPG standard for years was unaware there were 2 unrelated types of vehicle emission was quite a shocker today. It came up in a discussion about diesel efficiency. I chimed in with a basic comment, assuming most everyone already knew what I was talking about. Instead, when I checked on that thread the next day, my claim had turned into a controversy not supported by any proof !! If haven't figured it out already, it was on the big GM forum... where emissions are almost never discussed... mostly due to that not being a priority for GM. In fact, their Two-Mode hybrids are actually dirtier than their gas counterparts. But I didn't mention that. They can be their discovery when researching emission ratings.

5-30-2010 **Both Types of Emissions, part 2.** This is what I posted, still in disbelief about the lack of awareness there: I had no idea people were still lumping together *BOTH* types of emissions... CARBON is the type directly related to fuel efficiency. SMOG is the type that usually *INCREASES* as a result of higher MPG, which is very much the case with diesel. This explains why the greenwashing is still so rampant. Adding cleansing equipment to meet minimum sale requirements (which diesel does now) is one thing, but to achieve an emission rating of SULEV or PZEV is entirely another. Cleaner causes a MPG penalty... something the gas hybrids overcome much easier than engine-only diesel. All of the Ford & Toyota hybrids have delivered either the SULEV and PZEV ratings from day one. The diesels being discussed are "50-state" rated, which is a level dirtier than ULEV and 2 levels dirtier than SULEV.

5-31-2010 **Peak Oil.** A decade ago, those of us supporting hybrids got mocked about this topic. We said 2010. But since hydrogen fuel-cells would supposedly be available by then anyway, it was just brushed off as a non-issue by those who weren't mocking. Neither extreme wanted to take the issue of oil dependency seriously. The topic of "global warming" wasn't even a consumer controversy back then. Gas was cheap. Emissions were only for treehuggers. Few grasped the reality that the hybrids would become the new standard, that everyone unwilling to change would become greenwashers... those who believed the "*Too Little, Too Slowly*" was just politics. Now, reality is quickly coming crashing down. Oil has indeed become expensive. The easy to obtain stuff is vanishing. The high-grade stuff is vanishing. The belief of safety is vanishing. The consequences are becoming overwhelming apparent.

5-31-2010 **Chasing The Storm.** Further down the road, now in open country out from all the trees, there was that same Summer storm off in the distance. In the bright sun with a background of falling rain, it was a recipe for rainbows. Sure enough, one emerged. I just happened to be in an area where there was a variety of landscapes too. By tall corn, by golden wheat, and by green hills with trees, I was able to capture the colorful optical effect with storm clouds behind it. That sure is rewarding when you are in exactly the right place at exactly the right time with a camera. Those are opportunities I really look forward to. You can see why... photo album 147

6-01-2010 **Sierra-Hybrid Sighting.** I saw my first today. Considering how rare they are, it was definitely noteworthy of an experience. Of course, that probably sounds belittling or sarcastic. Perhaps it is. The market for such a large hybrid pickup is tiny anyway. It most definitely does not target mainstream consumers. In fact, it doesn't even target those who traditionally purchase large pickups either. Many who actually use a truck like that for purposes it was designed prefer diesel. It's just as efficient and provides much more power. In other words, this particular hybrid configuration is an oxymoron. It's too bad there isn't a practical configuration available, something smaller and much more affordable. They absence of choice is what irritates. It's that same old one-size-fits-all problem I've been complaining about with Volt as well. Only a single engine/motor/battery configuration isn't wise for business and certainly doesn't help consumers.

6-02-2010 **One Year Later.** Declaring bankruptcy was an interesting page in automotive history. They claimed the situation would never come to that. It did. They claimed marketshare for foreign competition wouldn't grow even more. It did. They claimed interest in climate change and dependence on oil would not become a consumer priority. It did. Being wrong over and over again is bad enough, but not changing one year after admitting to those problems is worse. We're starting to see the same old mindset re-emerge again. The trophy-mentality combined with short-sightedness doesn't inspire confidence. Remember the "*too little, too slowly*" assessment? That advice clearly wasn't taken to heart. Recovery isn't easy. Allowing bad habits to take hold again makes it even harder. What now?

6-04-2010 **Get Ready.** As the rollout date for Volt draws closer, the comments from those frustrated with the approach seem to be drawing positive attention. Complaints about lack of disclosure of Price and MPG in CS-mode are gaining merit. How come other upcoming vehicles already share information like that, yet GM remains dead silent despite having claimed unprecedented transparency. Will that equate to constructive discussion? Can goals finally be objectively analyzed? After all, the counter-productive trophy-mentality can't last forever. Remember how that completely fell apart for Two-Mode shortly after rollout? Anywho, here's what I posted with surprisingly little upset afterward: At this point, we all know GM should have promoted Volt as a "*progressive improvement*" platform rather than a "*bet the farm on Nov 2010*" vehicle. Had they taken the other approach, aspects like price & mpg wouldn't matter as much since consumers would just expect it to change. Instead, we're getting a slew of mixed messages and uncertainties without any idea what consumers actually want or what will happen next. It's setup to unfold abruptly in 5 months. Get ready for that.

6-05-2010 **Forgotten Classic Photo.** Stashed away in my digital archives, there it was. I was shocked to realize such a scene had been forgotten, from over 8 years ago. My purpose was to survey a parking lot in front of the state capital to see if it would be practical for the first-ever green event there, featuring hybrids. It wouldn't happen until Spring, but I was there that cold Winter evening checking out the location in advance. My timing was great. The sun had just set and the lights had come on, illuminating the ice-coated parking lot covered with a fresh layer of snow. You can clearly see tire tracks, revealing a shine from the lights on the exposed slick surface. Under one large light, there's a large pile of snow made by a plow. Under another, there's my Classic Prius. Further off in the distance is the capital building for Minnesota, well illuminated behind a sea of tree and ground lights. How could I have allowed such a moment to go unshared for so long? Check it out... photo album 147

6-05-2010 **Poor Prius.** Remember the percentage greenwashing a few days ago? The totals for the year through May here are now available. 15,626 Jetta TDI were purchased. Without any perspective, that could be thought of as a lot. But when compared to the sales of Prius, which are supposedly disappointing, you are confronted with the reality of those who wish to mislead. During that same time period, there were 55,041 Prius purchased. That's more than triple in quantity, yet they attempt to spin it as bad anyway. They also continue to post only statistics for the United States... because mentioning sales Japan makes the situation much worse. 27,208 Prius in just May alone were purchased there. Of course, I'll be the first to point out how much monthly inventory fluctuates. Fusion hybrid supporters didn't this month though. That gives the impression of a huge spike in interest for Ford, even though there isn't a massive difference in the year-to-date totals: 7,998 for Fusion and 6,537 for Camry hybrid. Always step back to consider the big picture.

6-05-2010 **New Situation.** What does a greenwasher do when confronted with confusing facts? Believe it or not, he confessed to getting mixed up! The situation started when attempting to exploit an assumed weakness. I pointed out that was misleading, at best. It was the "concern" about the plug-in Prius not being able to recharge a section that wasn't the active one. As any Prius owner will point out, there isn't enough electricity captured from regenerative braking anyway. It's easy for them to see that's a non-issue. But those who don't have access to a Prius or understand the system could easily interpret that as a lost efficiency opportunity. Even Volt supporters know how little electricity is gained from regenerative braking and how wasteful it is to force recharging. So oddly, they become an ally... exactly what I've wanted from the very beginning! Even stranger, that discussion was taking place on the big GM forum and was about Nissan's Leaf. How about that! With so many different plug-in prototypes over the years and now unique pre-production configurations emerging to serve a variety of very different market segments, it's no surprise that a greenwasher would become confused.

6-08-2010 **Understanding What?** The talk of FULL hybrids from Ford also getting a plug really works up the Volt enthusiasts. For example: "*I find it almost inconceivable that the huge advantages of EREV technology escapes the understanding of Ford's advanced drive train engineering people!* " What exactly is the difference? If it's that profound, how come detail explaining why isn't ever mentioned? The big motor in Prius can operate independently of the rest of the hybrid system. That's because it is the outer most component. Changing its size and gearing ratio, you'd have something which acts very much like a Volt... but with the added benefit of direct-drive too. Of course, it's not all about engineering anyway. That's the lesson to be learned from Two-Mode. That's the reason for the success of Prius. How come they don't understand that?

6-08-2010 **Status Symbol.** Reading this is quite frustrating: "*Hybrid buyers are buying the Prius as a green status symbol. If you see a Prius, you can accurately assume much about the driver.*" That simply isn't true. I really didn't want to deal with it though, but didn't want to just let it go either. So, this is what I went with: Funny how only those supporting a different technology claim that. The typical person on the street doesn't even notice them or even care. So, who exactly are these supposed Prius owners trying to impress? The true story is that Prius is just another family car that delivers unusually high efficiency and clean emissions… in other words, the new standard, a baseline upon which new technologies will build upon, including the plug-in model of Prius. Go ahead, spin it in some other way… painted an interesting picture for those who purchase Volt.

6-08-2010 **1.37 Million Recalled.** This is an interesting situation. The washer-fluid-heater in that many GM vehicles could overheat and cause a fire. The supplier which supplied the part already had a recall for the same component. The fix obviously didn't work. Unfortunately, another recall isn't possible anymore. The first cost too much, causing them to go out of business. So rather than a recall in the form of a fix, owners will be given $100 as compensation for GM deactivating the feature. It's a strange thing to have in a vehicle anyway. I certainly haven't ever needed one. Anywho, the thought doesn't often come to mind that a recall could cripple a business so bad financially that they end up going out of business. Simply plugging the plug on a device isn't something you'd ever expect either.

6-10-2010 **Forewarned.** The trolls seem to have appeared out of no where, attacking the Volt daily blog in a surprising way. I wonder why. hmm? Perhaps after hearing how little progress GM actually made 1 year after filing bankruptcy, they decided to take matters into their own hands. I nagged quite a bit about studying hybrid history. It's not like seeing this coming was rocket science. The rollout of a new hybrid becomes quite volatile shortly before actual production begins. All that advice to prepare for this obviously feel on deaf ears. Since the very same thing happened in the past several time, it would have been wise to do something... anything... to prevent it from happening again. Those wanting to undermine will exploit weaknesses, like the absence of clear goals. No data. No scenarios. No goals. No quick-reference webpages. No downloadable education material. No place to get questions answered. Nothing but a daily blog obviously isn't enough. They were forewarned. Trolling is far more of a problem to deal with than my nagging... a fact they are well aware of now.

6-10-2010 **Up North, Last Fall.** I had a blast with the 2010 Prius. It wasn't new territory, but my desire to seek out new scenery with the new hybrid and my new camera was intense. The weather hadn't been cooperating either. It was unusually cold and overcast. So, this warm & sunny morning was a welcome opportunity I didn't let slip by. The trees were mostly green still. That venture up north missed the color changing. Leaves wouldn't expose their beauty until after I left for home. None of that deterred though. It made me more determined than ever to park the Prius on the narrow dirt roads and venture into the trees to include foregrounding in the photos. Lots of trees and overhanging branches made that easy. Of course, it helps to have hiking boots on for the climbing involved. It was totally worth the effort. See... photo album 148 photo album 149

6-11-2010 **Stating Goals.** Again, the absence of them has come to the forefront. Those stubborn enthusiasts supposedly supporting Volt refuse to state what they actually want from GM. Can't they see how absurd it is to just hope for the best. Such assumptions are doomed to fail. You need to speak up! To make matters worse, consumers only vaguely know what the intentions of Volt currently are. GM has been sending so many different messages, they are getting all mixed up. Those here have yet to decide upon what's most important too. So, expect those decisions about Gen 2 to be just as chaotic. Until there are clear business intentions stated about Volt, the engineering effort will suffer. Remember, that's a primary reason for the success of Prius. We knew even before rollout began precisely what Toyota wanted to accomplish.

6-11-2010 **Branding Madness!** Does it surprise you that GM is back its old problems again? Prior to the bankruptcy, there was a lot of struggling for resources from within. Remember how Chevrolet, Pontiac, Saturn, Buick, etc. all offered similar vehicles? The redundancy was a drain. Rather than compete with the actual competition (other automakers), they'd compete with themselves (GM brands). Combating each other is time & money poorly spent. That was waste they finally ended... or so we thought. Now there's an effort underway to get those who identify Chevrolet vehicles as "*Chevy*" to stop. Why? It's the same brand! Yet, now they are investing in a large campaign to get everyone to just call them "*Chevrolet*". Instead of focusing on competing, they are once again fighting amongst themselves. There are some pretty strong opinions about the loss of "*Chevy*" too. So much effort for just a name.

6-11-2010 **145 MPG.** I just started watching my aftermarket gauge to see what the highest efficiency is at the lightest engine load. Today, after a walk around the lake, I started up the Prius and drove home. The engine was almost warm enough to shut off right away, but instead in stayed on for the sake of emissions cleansing. Since it was a windless day and the road was totally flat, that 30 MPH drive obviously didn't need any level of engine assist. The electric motor is plenty powerful for sustaining that drive. So when I observed the 145 MPG displayed on the gauge, I felt pretty comfortable thinking that was representative of a maximum for this particular configuration. After all, I do seem to recall seeing that same number from time to time in the past. It sure will be interesting when observations from the plug-in model begin to trickle in. I'm sure we'll be pleasantly delighted with how frequent situations like that occur. Of course, without the gauge, all you'll see is just 99.9 MPG.

6-12-2010 **EV Factors.** A very interesting article was published today. It was based upon observations of Nissan's upcoming Leaf. That EV relies totally upon a battery-pack. There isn't an engine to confuse the understanding of how factors like Speed & Temperature affect driving range. The benefit of a hybrid is taking advantage of efficiency opportunities, the best of both worlds. The upcoming plug-in Prius will really emphasize that balance. Volt on the other hand, remains a mystery. We still have nothing to work with. As for Leaf, the variation will definitely raise awareness. Ideal driving conditions can squeeze out 138 miles from the estimated 100-mile range. Unfortunately, the worst of conditions can drop that all way down to 47 miles. Interesting, eh?

6-12-2010 **40-Mile Vengeance.** Awareness of the factors which affect EV efficiency hasn't been a priority. Heck, for that matter, it hasn't been for gasoline engines either. Many consumers are still oblivious to the influence use of their A/C has on MPG or how the many factors of Winter have an affect either. We were in an age of abundance, where waste wasn't given consideration since fuel was so cheap. That's changing. Unfortunately, marketing still prevails. Here's what I posted as the debate about approach really heated up today on the daily Volt blog: All along, it should have been an effort to promote available "*kWh capacity*" and educate what that meant instead. The "*40 mile*" range promotion could really come back to bite GM. Advertising an ideal or maximum hasn't ever been a good idea. They set up expectations that don't represent what owners will actually observe real-world.

6-12-2010 **Pushing Goals.** Over 3 years after the reveal of Volt, there's still no clear goals stated. Lack of focus is still very much a problem. It will inevitably lead to expectation let down. Yet, none seem to see that. How come studying history makes it so easy to observe when it is repeating itself? Why do they just assume a new effort will result in new outcome? Whatever. I'm pushing goals more than ever. But now, I list them. No more focusing on each individually. They are going to get really tired of me doing that... hopefully to the point where they'll state their own. I simply don't care, since it's the same thing that's needed for the plug-in Prius anyway. Until the market emerges, we need to speak out. After all, that is definitely something EV1 taught us. Anywho, here's suggestions for Volt. PRICE: nicely under $30,000. EFFICIENCY: 35-miles EV real-world & 40 mpg CS real-world. EMISSIONS: a SULEV rating. POWER: 0-60 in around 10 seconds. SIZE: 4-seat compact with average cargo area. AVAILABILITY: dealer lot (preferred), within a month order (acceptable).

6-12-2010 **Efficiency Goal.** That one specifically can vary, since there's a balance involved and driving need will be dramatically differ from person to person. The other goals are more universal due to satisfying the bulk of the market so well, as traditional sales clearly confirm. Anywho, when it comes to efficiency, I prefer a smaller battery-pack with higher hybrid-operation efficiency. That reduces EV-only range, but a design like the plug-in Prius will use the electricity when most appropriate anyway. Being able to squeeze out 50 MPG on the highway is the key. It provides a solid base for boosting MPG from without heavy dependence on lots of kWh. That's a benefit, not a necessity. It works out fantastic from a high-volume production perspective too... great for both consumer & business. Efficiency will be increased for a much larger number of drivers. The plug is optional, not required. Always consider the big picture.

6-12-2010 **Spring Bike Trip.** I had an opportunity to sneak up north with the Prius again. 2 bikes on back and a 3-wheeler inside, plus lots of stuff for the trip, sure made that chance to escape from work exciting. The trees were in bloom and the weather was perfect. Where we stopped for a rest on the drive up, there was great scenery in the background. I took a few moments to capture my travel adventure. Looking closely, you can see looks of cargo packed into the interior. It's hard to believe such a large back fits inside too. Having a hatchback sure is handy. Thankfully, the bikes on the rack don't equate to a huge efficiency impact. Of course, it wouldn't really matter. After all, how often does a person get to do that anyway? Can you tell how happy I was then, enjoying every bit Spring now had to offer? It's the rejoice those of us annually experience when the extremes of Minnesota Winter finally melt away... photo album 147

6-12-2010 **Worst Case?** Sometimes you just plain don't have a clue what a person's post actually means. Was he serious? Was it just a friendly way of stimulating discussion? Was he clueless? I had no idea how to interpret this: "*I would imagine the worst case driving scenario for battery depletion would be night-time highway driving (60 mph) on a cold rainy night in December (35 degrees F).*" It didn't seem like intent was sincere, considering how much colder Winter actually gets and how much faster people actually drive. I asked: That's a joke, right? December 25, 2000 the temperature climbed up to -13°F, from a -26° F low the evening before. I have lots of photos documenting that. January 2009 my commute to work was a balmy -20°F. Again, I took lots of photos. In the north (Twin Cities, Minnesota), we routinely see temperatures much lower than your worst case scenario. In fact, we can go an entire week where the day-time high never climbs above 0°F.

6-13-2010 **Sightings.** This morning's coffee shop run certainly was one to write home about. I saw only 1 older generation Prius. On a cold & glooming day, maybe people just went getting out much. Wrong. The 2010 Prius were abundant. I spotted 4 of them! That's 1 every 2 miles. Sweet! It sure feels good to see the count of the newest generation grow so quickly. Just think what another year of sales will bring. With so much attention being placed on efficiency and the penetration of technology into the market, interest should remain strong. Sightings of Prius in the top-20 seller list should be frequent. Gotta like that.

6-13-2010 **Believe It or Not.** I actually have 21 new photos of the 2004 to share still. I had a feeling that particular photo shoot would be the last ever for me with it. The end of Winter, almost Spring, brought a lot of heavy & wet snow our way. It was melting fast too, even as fresh stuff continued to fall. I really struggled to keep the camera dry. The effort consumed quite a few sheets of lens tissue too. Droplets of water wrecked quite a few photos, causing the exposure to have a large blurring spot on it. That's not good when you are trying to capture detail of snow covering countless tree branches in the background. Tracks in the snow on the road itself made for good effect as well. Talking about Iconic images. What I like the most is the colorless nature of it all. The Prius is silver. The trees are black. The snow is white. It's an absence of color that really makes it all so memorable... photo album 150 photo album 151

6-13-2010 **Competition?** Remember all the complexity debates? They never reached beyond just the realm of enthusiasts. It was only an argument point in forums. Consumers simply didn't care. They never understood how an automatic transmission worked anyway, so differences among efficiency technologies really made no difference to them. In the end, the purchase criteria that mattered were very much the same as always... Price, Efficiency, Comfort, Size, Power, Reliability, a variety of small features. In the case of hybrids, you can add Emissions as an influencing factor too. Lack of so-called competition is a factor Volt enthusiasts are attempting to really emphasize now. If production volume remains niche, what difference would that actually make?

6-14-2010 **Double Standard?** Caught a Volt enthusiast saying this today: "*Leaf will fail in the marketplace because it will be judged by what it can't do.*" Isn't that a double standard? You may even want to go as far as calling it hypocritical. The hope for 50 MPG is quite intense still. Information supporting that hope has vanished though. Only the goal remains. The original factors involved have changed. They don't want to discuss the merits of efficiency in CS mode. Isn't having that mode what sets it apart from Leaf? It's become a topic of much distress. Why? Consumers make success judgments. Some enthusiasts have yet to discover that disconnect. It's just like the complexity debates. Consumers couldn't care less. Only those passionate about supporting a particular design would even understand the nuances, not to mention being willing to pay for them.

6-15-2010 **Oil Risk.** The high-grade oil would be consumed first. That doesn't cost as much to refine as the "crude" from other sources. The easy to access wells would be tapped first. Reasons for that should have been obvious. The kind that can simply be pumped was first too. Having to extract it from material like sand presents challenges. Issues of that nature were the concern over the decades. Risk really didn't draw much attention. After all, how many people realized that oil from deep below the ocean would squirt out all by itself rather than needed to be sucked out manually as we often see on the surface? The well itself presents problems too. A spill in the traditional sense is over almost immediately, since there is a finite quantity. An oil reservoir is magnitudes larger and can continue destructive activity for months or even years. Risk is dramatically higher. Yet, why wasn't that fact taken seriously? This is a very ugly wake-up call that will have ramifications for decades, perhaps even centuries, to come.

6-15-2010 **Sales Measure.** How many times must I deal with the trophy mentality? Sales is the perspective of business. You measure based upon overall profit. Losing money in the short-term for long-term gain can be effective. It's what ends up bringing in steady, sustaining money that counts. Mature technology is what does it. That's what dominates the market. That's what consumers purchase on a massive scale. That's what people don't given a second thought to. That's what was proven robust & reliable years ago. Hype around groundbreaking technology doesn't pay the bills. Needless to say, I have to repeat that routinely. It is often forgotten or dismissed. Excitement about engineering will do that. Accounting isn't commonly known for being a stimulating discussion topic. It's easy to measure though. Sales give a clear indication of progress.

6-17-2010 **Silver Reflections.** The sun was setting. Color from that was growing. I was up north and raced to be by the edge of a lake at that very moment, an opportunity I wasn't willing to let slip by. The reflection of the sun is reflected by the paint of the Prius. That gave it a soft yellow glow against a background of a large lake, just opened up on that unusual early Spring week. Winter was gone and I was now out playing with the hybrid and digital camera. I had looked forward to the chance to do that for months. It's the same location I've been to with the other two Prius. At this point, you may even wonder where the heck I was. It's where I escape to from time to time. So, keep on guessing... photo album 149

6-17-2010 **Ford Plug-In.** It was revealed today. We got almost nothing for detail. Though, the big bit that was provided was intriguing. Being more affordable was set as a priority, quite unlike Volt. The intent is to deliver a 10 kWh capacity, which translates to roughly a "30 mile" range. Another smaller bit of information was what you could have predicted anyway. During hard acceleration (heavy draw from the battery-pack), the engine will join in to assist. Highest speed travel was implied as having the engine assist too. In other words, the design is very much like what Toyota intends to bring to market. It like that a lot. It's a platform that can easily be sold with or without a plug and with a variety of different battery capacities.

6-17-2010 **Mississippi Plant.** It looks like construction may resume on it now. Toyota had halted all work there to maintain their cash reserves, back when the automotive industry first realized that production volume would need to be reduced significantly due to the falling economy. Back then, it was intended to primarily be used for local Prius production. That's not the case anymore. Corolla demand is strong and has the potential to grow, so more will be produced there. I find this all very interesting. It is yet another chapter in the repeating history we are witnessing. Decades ago, it was Detroit being caught totally off guard by market change and automakers from Japan being able to take advantage of that opportunity. This time, it is the big growth is coming from Korea instead. Japan's benefit now is being able to reduce cost. Whatever the case, Ford found itself struggling and GM went bankrupt. It happened. The plant in Mississippi is the next step forward. Think they'll better prepare for change now?

6-18-2010 **No News.** Have you noticed that there is nothing being said about Volt anymore? Nissan has snatched up most of the "efficiency" media interest now. They actually have something of substance to offer. We have got two reports from journalists already and details continue to be released. Heck, they even have a deposit-required waiting-list, which is rapidly growing. Toyota continues to rollout their data-collection fleet too. The "Silicon Valley Leadership Group" will get a total of 30 this summer, with 3 of them directly helping test ChargePoint stations at the same time. Meanwhile, nothing but about Volt. No date. No price. No information about CS mpg. It's all very much a mystery from an automaker who claimed unprecedented transparency. Sure hope that changes in a hurry. No news very much follows the pattern we saw with Two-Mode. Ugh.

6-19-2010 **Pushing GM.** The worry that they will deliver only the minimum is not mine alone. They are others who also don't want to see yet another in a string of expectations coming up short. EV1 was the vehicle I yearned for... all those many years ago. Finding out my region would never get the opportunity to vote with our wallets sure was a let down. The program was cancelled without us ever giving us a chance. In recent history, we have the ludicrousness of Two-Mode. It really did seem like a farce from the very beginning, but it took until now to be able to prove there was no market for such a monster. That brings us back to pushing GM. They must actually deliver something consumers will purchase in large quantity. Waiting isn't an option either. Recovery from bankruptcy and also remaining competitive is vital. Anywho, this was the reminder of that today: TOO LITTLE, TOO SLOWLY was the problem in the past and exactly what the task-force said needed to be changed. For Volt, measure of that progress is simple. The initial few thousand in only 3 select markets falls directly into the pit of doom if it continues for too long. Increased production & reach is absolutely required. It's exactly one year from now we must see advancement.

6-19-2010 **Survey Misleading.** Selective data has always been a problem, especially with marketing that is simply believed as credible. Today provided the perfect example. An enthusiast of Volt just blindly quoted, "*78% of Americans drive less than 40 miles a day*." A supporter would have sighted a source. It's that extra effort that makes the difference. One verifies. The other accepts without question. Anywho, I gladly pointed out the reality of the situation with: That's not actually the case. The survey repeatedly stated here only had a sampling of 1,000 drivers... and it was from an uncertain source. The survey conducted by Argonne is an entirely different matter. They collected information from 84,000 drivers. Turns out, the "40 mile" quantity is really only 62%. Knowing that, factor in the reality that winter driving reduces range quite a bit due to the need to run the heater for warmth and the compressor for defrosting. What percentage does that cover?

6-20-2010 **Unprepared.** The motto of "*If you build it, they will come.*" has created a sense of complacency. Earning merit requires the collection of real-world data. Not having a basis of comparison established prior to rollout is a great example of impeding problems. Generalized estimates and clever marketing aren't enough. Yet, some still think the "best" will be obvious and will be purchased in droves regardless of price. Any criticism of any sort is immediately dismissed as not being constructive. Why it is so hard for some to not see how naive that is? It's like not studying for a test, but expecting to ace it anyway. Being so unprepared like that is such a big unnecessary risk. Must yet another failure occur before the lesson will finally be learned?

6-21-2010 **Arbitrary Metrics.** Asking for anything to measure the progress of Volt is an act of heresy. *MPG*, *Sales*, and *Profit* were my suggestions. Those 3 words caused quite a stir. Even though it was left open for them to assign quantities themselves, the mere suggestion that any type of milestone being established makes you an enemy... a traitor... a devil. What kind of nonsense is that? Being vague is the very root of many problems. Ambiguous statements lead to confusion. Assumptions are easily made as a result. Ultimately, it ends in disappointment. Without detail, expectations cannot be met. After all, how can you know what's wanted in the first place? What is the goal? In other words, the only thing enthusiasts really had their heart set on was delivery starting in October and wrapping up by Independence Day. Today, they found out it's back to a November release again and rollout will take an extra 6 months. At that point, both Leaf and the plug-in Prius will likely be available too. There is no spirit of cooperation. The trophy mentality continues to persist.

6-22-2010 **Equinox.** The crossover nonsense is getting absurd. Hearing that GM wants to increase production to 1,200 per day really makes you wonder where priorities are... especially when only 8,000 Volt will be built in a total of 14 months. After all, Equinox is really just a SUV with a new name. The most efficient model only offers a combined EPA estimate of 26 MPG. That's the front-wheel drive with a 2.4 liter engine. The 4-wheel drive model drops to 23 MPG. And both of the drive options with the 3.0 liter engine only deliver 20 MPG. Which is the most produced model? What is there about 26 MPG to be proud of? Aren't they just being used as commute vehicles?

6-24-2010 **Plug-In Full Test.** Another report has been published. This was of their initial impressions. We'll get another after a month of data is collected. Acceleration of this Prius is nearly identical. Handling & Braking are reduced a little bit, basically putting it back to what we had seen in the past. Fortunately, for those wanting more, the solution is the same as then too. Just upgrade the tires. An interesting fact is the capacity of the gas tank reduced to 10.6 gallons. Of course, how much of a difference does that actually make when you have a plug available and refills take place at 9 gallons anyway? As for efficiency, the worst test reported was 53 MPG. The best was 72 MPG. Their average for 500 miles came to 62 MPG. It will be interesting to get their "just drive it" report later as opposed to this testing. I suspect hitting that target of 75 MPG will be pretty easy then, especially with routine trips being short enough to take full advantage of the 14 miles worth of electric-only capacity. But what really caught my attention was this comment: "*We even managed to engage the cruise-control in EV mode at 72 mph over a flat stretch of freeway*."

6-24-2010 **More Leaking.** The cap is no longer on the broken well. More oil than ever is squirting out into the Gulf of Mexico. This is by far the greatest manmade (preventable) disaster in history. It's sickening to think that the previous administration encouraged deep-water drilling with nothing by a token counter-balance effort just prior to re-election. Remember that history? The half-hearted tax-credit didn't stimulate production. Their was no spirit of competition. Each automaker had their own money allocated. What incentive was there for rapid development? Perhaps this mess will do the trick. What a terrible way to usher in responsibility... reacting, rather than the proactive approach some of us had been begging for over a decade now. Peak oil occurred in 2010. The circumstances are grim. Arguing the magnitude of the situation is pointless. Denying we didn't see this coming is impossible. It was inevitable that something in such a volatile market would fail. How? What? Who? When? Those were the questions, not if.

6-25-2010 **Antagonists.** As hybrids become so common that the addition of a plug is simply thought of as the next logical step, it's interesting to look back upon those who fought against that progress. We all know what a troll is, since they are outsiders. Their activity & motive is obvious. The problem is that an antagonist is an insider, someone who has actively participated on that forum for years and now feels threatened by change. They go to great efforts to maintain the status quo. Since they are so well known, few actually question their intent. Their undermining effort largely goes unnoticed. Many just assume they know what's best. In the end though, real-world data ultimately reveals shortcomings of what had been claimed... and they mysteriously vanished. Gotta love a happy ending!

6-26-2010 **Privileged Few.** It's certainly not just me trying to point out how merit is earned. The pressure on Volt enthusiasts from Nissan Leaf and Honda CR-Z is starting to show. Many simply didn't want to deal with the plug-in Prius and were able to effectively keep focus elsewhere. But with the threat of those two new efficiency options (both with dedicated body styles) combined with more options coming later from Ford and Hyundai is simply too much. Others are now asking the very same questions I had. Remember the concerns about price and production volume? Nissan & Honda certainly do. GM, on the other hand, will only be offering Volt to a privileged few. Supposedly a 20-mile range configuration will be available in about 2015, but that totally validates the "*too little, too slowly*" problem... and others are starting to notice it too. A trophy doesn't amount to much.

6-26-2010 **No EV Button.** It's intriguing to read the reactions of newbies when they discover the plug-in model of Prius doesn't have an EV button. Coming from my background with the 1997 Original, seeing the improvements in the 2000 Classic, even more in the 2003 Iconic, then again with the 2010 model, intent is clear. The design withholds as much interaction from the driver as possible. Toyota has always wanted to deliver a hybrid experience just like what has proven overwhelming successful with traditional automatics. I responded to today's discovery post with this: Having a button would actually disqualify it from certain certifications. Think of the PHEV as an Iconic Prius that's highly caffeinated. Stealth is a whole lot faster and more powerful, but there is no option choose that mode. If you drive within the tolerances, it automatically engages. If you exceed those tolerances, you get to drive with an engine that's assisted by the motor much more than it normally would. So, there's a boost to efficiency regardless of how & where you drive.

6-26-2010 **Anticipation.** I've learned patience and know that the plug-in Prius will be a good fit for my needs, so the wait isn't a big deal. My 17-mile commute is roughly half on a 70 MPH highway. The slower part of that drive is 55, then 50, then 45. I'll get to experience a variety of design benefits from having a plug, that extra capacity, and the higher tolerances. What I anticipate is it representing the next natural step forward. It won't take much to get consumers to consider it as a result. They'll purchase an easy to understand MPG improvement. The efficiency boost is as simple as just knowing the electric motor gets used more. There is no paradigm shift like with Leaf. As for Volt, that full test the other day placed PHEV into the same category. How do you think enthusiasts will react to that? Rather than just welcome another plug-in to the effort of replacing vehicles, it seems more likely they will still argue semantics. Why? I really look forward to the market expanding. In fact, it's long overdue as far as many of the Prius owners are concerned.

6-27-2010 **Need Coffee, the shocker.** Study of the design and careful reading of quotes over the years hinted at late-to-come surprises about Volt. The most obvious to me was the lack of a smaller battery model. If engine efficiency was so great, why not offer that choice? The fact that future generations suddenly started, despite not getting any detail, was a big clue. This statement from a privileged reviewer today was the shocker: "*General Motors is working on the problem and this autumn plans to unveil a mechanical direct-drive from the engine to the front wheels through the existing twin-clutch planetary gearbox. This would reduce the energy losses of turning petrol power into electricity to drive the car at high speeds, and would also give the Ampera more spritely overtaking performance.*" Interesting wake-up call. Time for coffee!

6-27-2010 **Need Coffee, the problem.** Turns out, those energy conversion losses are precisely what some of us have been concerned about all along. Things simply didn't add up. The complete absence of data heavily contributed to it. If GM had somehow miraculously overcome that century old problem, why weren't they touting it? Being absolutely silent is totally out of character. It also contradicts the promise to be transparent. Of course, so does not revealing this until now. In other words, that original hope for 50 MPG was not achieved. Could it be? Sure. But how? Cost has always been the other concern. Using direct-drive is the very thing Volt enthusiasts had been strongly against. Now it looks like that is exactly what GM will be doing... hence one outspoken enthusiast stating his need for a coffee!

6-27-2010 **Need Coffee, the power.** In that same review article, we also got this: "*Accelerating up the motorway slip road, the Ampera charges hard and deceptively quickly up to 50 mph, but by then the single-speed electric motor's flat torque curve has begun a nose dive and acceleration at high speeds is poor.*" Observation like this of power-fade ends your wonder of why GM hadn't been allowing test-drives faster than about 40 MPH and always on closed-off courses. Interesting, eh? Adopting a direct-drive approach would address this. In fact, the double benefit of both improved power & efficiency makes it quite compelling. However, it destroys the purity of it being a SERIES hybrid. It would be transformed to a hybrid-hybrid design like Prius, which is a SERIES-PARALLEL type. I think the Volt enthusiasts are going to need a lot more coffee!

6-27-2010 **Need Coffee, the anger.** It's surfacing in droves. Apparently, the coffee is kicking in! Reading constructive posts on the Volt blog for a change is great!! This news is only a few hours old though. Makes you wonder what the comments will be when discussions start on the big Prius forum. Hmm? Anger is the theme at the moment on the blog. A year ago, just as GM was ramping up bankruptcy recovery efforts, they had the chance to change. Instead, we got that horrible "*230 MPG*" campaign... which they've been struggling to repair image damage from ever since. Anywho, I posted this with the hopes of calming the rapid increase of emotion on the blog: The task-force assessment of "*too little, too slowly*" clearly stated the need to accelerate efforts. Guess what happened to those who tried to push GM to do exactly that, seeing this coming? Hopefully, this wake-up call puts GM back on track. Being able to look back at that past as just an ugly memory no longer relevant would be great. Goodbye semantics! It pretty much boils down to acceptance and taking that next step quickly now.

6-27-2010 **Need Coffee, the denial.** As the day unfolds, I've seen the denial emerge again. It's hard to believe they don't want to welcome other technologies helping to push the idea of plugging in and Li-Ion batteries into the mainstream. Volt is superior, period. Why must some always they support the best, yet refuse to discuss detail. The article revealed the recent EU estimate. It came to 175 MPG. For perspective, the regular no-plug version of Prius gets 72.4 MPG based on the same testing. Think about what the plug-in Prius will get. They certainly didn't want to. In fact, they did everything they could to change to draw the discussion elsewhere... nothing of substance either, just the same old arguing of semantics. Whatever. Merit isn't earned that way. Talking points are nothing without data & sales to back them.

6-27-2010 **Need Coffee, the market.** Fortunately, the market doesn't bicker over petty differences. Minor nuances & semantics mean little to most consumers, quite unlike the enthusiasts. Unfortunately, they do drink a lot of coffee. Those aspects of merit mean a great deal to them. Those goals of MPG and Price are selling points. They couldn't care less about the superiority of the technology. We've had several examples of this divergence with hybrids already. How can the enthusiasts think the same purchase priorities won't matter when a plug is included? Mainstream consumers buy vehicles like Camry & Corolla in large numbers due to a nice balance of criteria. Prius was designed with that in mind. The ever-changing story with Volt really makes a person wonder. What market will it appeal to?

6-28-2010 **Need Coffee, the competition.** Looks like a whole lot more than coffee is needed. A fascinating observation to have come out of that wake-up call yesterday was that the plug-in Prius is pretty much ignored entirely. At best, vague reference to it is made. I hadn't noticed that pattern until now. I wonder how long ago that started. Hmm? The Volt enthusiasts freaked when Leaf captured the heart of the media. Perhaps then, they just stopped making plug-in Prius comparisons anymore. That would be fine if they had stopped discussions about Prius entirely. But they didn't; instead, it's now just a generic reference to 50 MPG. All calculations posted pretend as if the plug-in model will never be available and never be discussed by consumers. You can't simply wish away competition. Won't the enthusiasts realize how superficial they appear to not include it as a purchase choice?

6-29-2010 **2.5 Million Sold.** Looking back at the previous decade sure makes a person think. 10 years ago, I was waiting for delivery of my first Prius. 10 years later, I've upgraded along with the generations and intend to purchase a plug-in as soon as it becomes available. The market has proven itself. The technology has drawn the production & sales of 2.5 million worldwide. There are many models now available from Toyota with plans to continue expanding. The competition has also made hybrid plans of their own. To think that I previously had to argue about this happening. Some honestly believed it wouldn't. Some saw it as a step in the wrong direction. Some saw it as totally unnecessary. Fortunately, not all thought that way. In fact, quite a few didn't!

6-30-2010 **2010 Delivery.** It sure is exciting when someone you know from work calls you out of the blue for a quick Prius education session. He ordered a 2010 without ever taking a test-drive. Who would have thought simple casual mention of mine over the years would contribute to such a purchase decision? It never ceases to amaze the type of influence you can have... even without trying! Anywho, his delivery was in the afternoon and he wanted to take mine for a spin along with getting detail about what to look for. Needless to say, I took advantage of the opportunity. We got stuck at the first intersection waiting for a funeral procession to drive by. After they did, traffic had built up pretty heavy behind us. I pushed the PWR button and told him to be generous with the pedal. To his delight, the car provided more punch than he had anticipated. You could tell he hadn't ever experienced the torque an electric motor provides when accelerating from a stop. I totally enjoyed seeing that expression on his face!

7-01-2010 **Peak Oil.** It seems pretty easy to declare now, without the need for history to make judgment looking back later. My comment to that discussion today was: Right on schedule, what those of us who bought the first Prius in the US predicted. We figured it would be a decade later, just in time to see the end-of-service for those purchases. In other words, we knew it would take a bunch of owner all driving for 10 years and at least 150,000 miles to prove the technology was worthy of ending the production of traditional vehicles. Of course, we weren't alone. 2010 was targeted as the year of the fuel-cell. The availability of hydrogen was supposed to be cheap & abundant then. We saw that as naive & reckless. Whatever the case, this massive stain in the book of history will most definitely be looked upon as a turning point in the age of oil.

7-01-2010 **Production Plans.** Remember all the "*60,000 in the second year of production*" arguments? GM was promising to meet demand with that capacity. Enthusiasts absolutely insisted availability wasn't going to be a problem. Today, we were informed the plans for Volt in 2012 are only 30,000 units despite anticipated long waiting lists. What part of the auto task-force "too little, too slowly" assessment needs to be pointed out again? Being a computer programmer for 2 decades, I'm well aware of how unwise it is to make schedule end-dates for a project so big so far in advanced. It was basically doomed from the start. Set milestones instead. Upon reaching the next, you determine scope of the following one based upon what you learned up to that point. Estimates are quite inaccurate beyond that reach. There are simply too many unknown factors of influence. Don't promise what isn't realistic!

7-01-2010 **Production Spin.** Right away, both the daily blog for Volt and the big GM forum starting posting spin in defense of GM's announcement. They want a perspective from a decade ago, as if nothing has happened in the meantime. I'm wasn't about to let history be rewound like that, hoping to get something constructive for feedback: 10 years later, despite lots of experience gain from EV1, Two-Mode, and several Fuel-Cell ventures, GM is now saying only 30,000 will be available for the second year of production. Is this when I point out that certain members here absolutely insisted this wouldn't happen? They made it absolutely clear the plan of 60,000 for 2012 was nothing to worry about. Turns out, my reason for concern has indeed been validated. Are you going to shot the messenger now or can we somehow find a constructive way to push GM to deliver more? After all, Nissan already has over 15,000 pre-orders for Leaf from just the US alone.

7-01-2010 **Free Gas.** When you see a gigantic sign stating that in a dealership lot, you know efficiency has become a consumer priority. The message can't get much clearer. I wonder what it took for the dealer to finally realize doing that would lure in customers. How much gas do they get with a purchase anyway? It's not really free either. Nonetheless, seeing that is a welcome change. Dinosaur are going extinct. The days of advertisements demonstrating great acts of guzzling are gone. There was even once a time when MPG wasn't necessary to mention. Heck, even the window-stickers on the largest vehicles had blank spots where EPA estimates would be displayed. There was no requirement to include them bad then, believe it or not. Now MPG has become a purchase concern. It's about time!

7-01-2010 **10,998 Purchased.** Prius is maintaining steady sales. This purchase quantity for the month of June here puts it as position number 19 for the first half of the year. Seeing that makes me happy. It represents being well prepared for the long-term. Some automakers are concerned about nothing but the short-term though. That's troubling. What's worse is discussions about quantity without reference to profit. High numbers achieved by generous incentives can result in the loss of money. Automakers can afford that. Makes you think what will happen when the economy finally recovers. Will efficiency technologies be embraced or will we be back to wasteful decisions?

7-01-2010 **Auris-Hybrid.** Production of Toyota's newest hybrid began today. Auris is a traditional vehicle native to the European market, built in the UK. It's kind of like a hatchback Corolla. This hybrid will use the same HSD system in Prius. So it will be a little bit more efficient, since the vehicle itself is smaller. The fact that it shares the same body as an existing vehicle should make things interesting. Many here have claimed the unique look of Prius was the primary selling point, not the efficiency or the convenience of it being a hatchback. That's been eliminated from the equation now. Prius is available there still too. Sales there should be interesting. Of course, some of the popularity could come from it being produced locally. Ultimately, does it matter? Being offered choice is an obvious plus.

7-01-2010 **Freedom Drive, announced.** During a press conference today, GM announced a rather blatant publicity stunt. To coincide with the our celebration of Independence Day, they will be driving a Volt from Austin, Texas to New York City. That just happens to be 1,776 miles. What real-world data from that drive do you think they'll actually share? Remember a certain VW dealer that did a cross-country drive? That turned out to be extremely bias, very misleading, and data was intentionally withheld. An automaker shouldn't be anywhere near as bad. In fact, they'll probably be straight forward about the experience. My guess, though, is that it will be so vague you won't be able to apply that information to any other situation... for example, detail like what CS mode efficiency at a particular speed. Stay tuned.

7-02-2010 **Freedom Drive, pointless.** That was the sound off about CS mode, as a result of some Volt enthusiasts actually trying to be constructive. One even posted some calculations, showing how overall efficiency of that trip would roughly equal that of what Prius delivers. Like usual, the plug-in model was excluded. It's amazing how they make sure to never mention it. Of course, I did... pointing out how overall MPG would actually be better than Volt. After all, long-distance travel is not deemed as a strength as it is with the regular Prius or the plug-in. Think about the 3.56 kWh of electricity available. Whether or not the engine runs during a trip longer than 40 miles doesn't matter... so... I guess it really is pointless. But that wasn't the point they were trying to make. It's always an effort to make Volt look better rather than it being an ally in the crusade against guzzling.

7-03-2010 **Freedom Drive, overall.** Those obsessed with the engineering of Volt often does see the business realities. The fact that is will cost far more than the targeted $4,000 premium for the plug-in model of Prius is usually the reason they try to avoid ever discussing it. Those wanting far fewer traditional vehicle being produced see the situation entirely different. They consider the big picture. For example: 30,000 Volts + 970,000 guzzlers is still a problem due to overall consumption. With respect to the impact those 1 million vehicles will have, it's easier to see why price is a really important factor. Take this other example: 180,000 Prius + 20,000 plug-in + 800,000 guzzlers results in a greater reduction. That's why I've been pushing so hard for GM to offer more... higher Volt production volume along with a second model that's more affordable.

7-03-2010 **Freedom Drive, efficiency.** This part of the announcement caught my attention: "*When the Volt's battery runs low, a sophisticated engine-generator seamlessly engages to extend the driving range to about 300 miles on a full tank of gas.*" We've also heard and seen the following many times now: "*total driving range of 340 miles*". Knowing that the tank capacity is 9 gallons, the math is pretty easy to do. CS mode efficiency won't be anywhere near the 50 MPG enthusiasts have been wanting. I posted this in response to the event unfolding at this very moment... Volt's strength is remaining within the usable kWh capacity of the battery-pack to take advantage of electricity as much as possible. The "Freedom Drive" will clearly point out the benefit when exceeding it. Question is, how forthcoming will GM be about the efficiency in CS mode? This is a fantastic opportunity to upfront about the design, something we still haven't seen yet. It would be great for this to be a turning point for GM, a big chance for them to break away from practices of the past. What detail do you think will be shared about the drive?

7-03-2010 **Freedom Drive, promise.** The reputation of the past comes to mind: "*over promise, under deliver*". This is why I repeatedly bring up Two-Mode. That's recent history which offers a remarkably similar parallel. Concern about price was abandoned. Talk about cost-reduction was simply pushed to a future generation issue. Volt have already done both. So... it's boasting about superior efficiency that's the topic at hand now. Remember how MPG was supposed to be compared to the competition? That didn't work out. The improvement was negligible. What does that mean for Volt? Dreams of 50 MPG will likely be crushed. Prior to rollout could be a good thing though. Setting of realistic expectations was not part of the Two-Mode drama. It could be for Volt though. But will the enthusiasts actually embrace the reality of a 40 MPG average in CS mode? Hopefully, we'll find out soon.

7-03-2010 **Like Toyota Did.** The build up to Volt rollout making you crazy yet? It's just like what GM did with Two-Mode. I don't recognize it to Prius like Toyota did no matter how many times the enthusiasts claim that. They say it's new technology and pretend GM doesn't have any electric-propulsion or battery-pack experience already. It's clearly not 1997 anymore. We've had EV1, a number of Fuel-Cell prototypes, and Two-Mode all since then from GM. So, claims of new are quite disingenuous... especially when you take into account all the electric-propulsion misconceptions of the past. The point they cannot argue and get rather angry about when I rebuttal with it is the fact that what Toyota did was price Prius at target-market value right way. The hope was they'd later be able to make a profit at that price. That's obviously not what GM is doing. They are heavily dependent upon taxpayer assistance (the federal credit) and even then it won't achieve the original goal of "*nicely under $30,000*". The price will be well out of the reach of the mainstream consumer's budget.

7-03-2010 **Price Priority.** For many years now, throughout the development & rollout of aftermarket enhancements for Prius, the desired plug-in price premium was always in the $3,000 to $5,000 range. Surveys & Posts pointed that out time and time again. Of course, that takes into account factory savings, something an aftermarket offering simply cannot take advantage of... like not having to purchase an original battery first. They don't have the ability to alter software or operating voltage either. That means what comes from Toyota will be more refined and more affordable. That also means Toyota has the ability to make price a priority and engineer a system to fit the requirement... which is precisely what they did. They set a target premium of $4,000... exactly in the middle of what consumers had said all along they'd be willing to pay. After all, that's pretty much what really nice upgrade packages cost anyway. It's too bad GM abandoned their target, allowing Volt to become so expensive.

7-03-2010 **$2.59 Per Gallon.** That average price for gas has been slowly creeping up over the past month. A barrel of oil is still priced around $75 though. But it makes sense with the oil spill disaster getting worse and worse that the futures market for oil is looking pretty grim. Summer travel is a guarantee that price won't go down. I can't imagine what will happen if later a hurricane causes long drilling platform shutdowns. Remember in the past when that happened... prior to us learning about the risk & neglect contributing to the spill, of course. We are becoming accustom to paying more. It's the "boil a frog" scenario playing out, exactly as predicted. Concern about liability will add to the mess. Damage claims are only now trickling in. Expect a flood of them later to really stir the industry. Predicting higher gas prices in the future is very easy to do. Uncertainty is gone. We know change is here.

7-03-2010 **Winter Recharging.** I purchased a handheld rechargeable tool last week. Looking at the instruction booklet today, I was intrigued to see Li-Ion recharging temperature listed so prominently. 3 times it clearly pointed out the battery must be at least 32°F (0°C) for the charger to operate. Makes you wonder about the requirements for automotive recharging, eh? I'm quite curious how the automakers will deal with that. For Volt, how long will it take to warm the battery prior to the 10 hours (from fully-depleted using a 120-volt plug) of recharging itself? With a single battery-pack and wanting to take advantage of off-peak charging, that necessity of warming the entire thing prior to starting adds an interesting twist to the equation. For Prius, the battery-pack is divided into small sections. The warming & recharging each individually is something which the design could take advantage of.

7-04-2010 **Independence Day.** The day sure started out on an impressive note. Too bad I wasn't able to film what I saw. There it was, a massive brown bird with a white head sitting on top of a power pole. It jumped off, spread its majestic wings, and swooped down right in front of the Prius. What are the odds that I'd experience a rare bald eagle sighting like that on the 4th of July? The most amazing part was when it landed across the street. To see those large talons reach out to grab a large tree limb was quite a sight. That's when I caught the best view of the wingspan too. The bird sure was big. The timing was remarkable. I so easily could have missed seeing that, being too far away or dealing with traffic at that moment.

7-04-2010 **PHEV Classification.** It's intriguing to witness GM fight the system. That absolutely insist "Crossover" vehicles are different from SUVs. Do they think any consumer actually believes that? The EPA certainly doesn't. They still place them in the SUV category. Now we hear that the SAE J1711 (Society of Automotive Engineers' Standard Testing Procedure) just got approved. That dismissed GM's attempt to classify Volt as a EREV. Their official classification is PHEV. In other words, it's looked upon the same as a plug-in Prius. Both will be PHEV, because both utilize combustion engines. The difference will be one testing in the "full performance" category and the other using the standard UDDS (Urban Dynamometer Drive Cycle). In other words, technical design triumphed over marketing spin. Yeah!

7-04-2010 **Think Different.** Remember that marketing motto? Apple used it for years, hoping to convince consumers to break away from the ubiquitous PC and give MAC a try instead. Ultimately, it was self-defeating though. If too many people began to "think different", the computer from Apple would become mainstream. Their motto would then end up encouraging them to try PC after awhile. So, they had to drop it. That's what I say happening with EREV. Of course, we all knew avoidance of the word "*hybrid*" was part of GM's history they were desperately trying to make people forget. All the anti-hybrid marketing they had done years ago was now coming back to haunt them... another case of self-defeating short-sightedness. Anywho, the official decision by SAE to classify Volt as a PHEV is wonderful vindication. I sure hope the enthusiasts see it as an opportunity for reconciliation. Isn't the point of a PHEV (Plug-In Hybrid Electric Vehicle) to reduce emissions & consumption more than a non-plug hybrid can? Isn't that the goal GM had for Volt anyway?

7-04-2010 **Freedom Drive, detail.** The anxiety of getting detail from GM about this road trip is building. There's genuine fear that it could become just another publicity stunt. There's also fear that it will reveal a weakness for the competition to exploit. Fortunately, not everyone is fearful. There are some with anticipation that this will represent change. We'll find out soon enough. Here's my contribution to the developing situation: Seeing today as a turning point is everyone's hope. Revealing trip detail is a great opportunity for them to break free from the past. Being straight-forward about results of this particular drive would go a long way to establish credibility. Information prior to this has been so vague, it was easy to simply dismiss as hype. Something real-world is a necessary next step.

7-05-2010 **Freedom Drive, squandered.** Road trip complete. Volt operated well. Of course, no one ever doubted any of the engineering. There was nothing remaining to prove. We already knew that. What we didn't know was CS-mode efficiency. Guess what, we still don't. GM didn't share any MPG data at all. In fact, the only information shared was just a repeat that it would deliver "best in class" efficiency, which currently is 26/35 from Corolla. It was an opportunity squandered. They had the chance to show some real-world data that could be applied to educational materials. Instead, we got nothing. This exactly the behavior predicted. GM would keep us hanging with vague references as long as they possibly could. Consumers are allowed to assume and antagonists are allowed to mislead. Why in the world won't they share anything?

7-05-2010 **Freedom Drive, predictions.** Using an efficiency estimate of 40 MPG is looking more and more on the generous side. GM itself stated direct-drive is more efficient than converting mechanical motion to electricity then back to mechanical again. Hearing nothing about CS-mode, despite continuous requests for it from a variety of sources, paints a picture of disappointment. Sadly, that disappointment could have easily be avoided by being up-front about the design in the first place. Some still hope for that original goal of 50 MPG being met with this upcoming first generation. How? And if so, why not promote that? The facts make it far easier to predict 35 MPG. After all, that makes Volt very much like a traditional vehicle that offers a "40-mile" capacity for EV. Isn't that a good thing? Predicting that answer to now be "no" looks like a good bet. How about predicting an increase in frustration leading to further division of the enthusiasts?

7-05-2010 **Freedom Drive, competition.** Seeing real-world annual results revealing a solid 50 MPG from Prius is likely at the heart of the frustration. That, combined with the upcoming plug-in model, makes competing a major challenge. A more aggressive approach could compensate for that. But none of the enthusiasts wanted acknowledge the "*too little, too slowly*" assessment by the auto task-force over a year ago. Now, some are realizing how accurately that applied to the nature of the competition about to unfold. GM couldn't deal with that much change that quickly, even though it was necessary. It means a struggle to catch up is coming again. Will management choose a stance requiring tough choices? What is the long-term strategy for Volt? We have no clue what the target-price, overall-efficiency, or production-volume goals are. Meanwhile, there are 600 plug-in Prius being delivered to industry & education centers throughout the world gathering valuable data to help ensure a very competitive design.

7-05-2010 **Freedom Drive, support.** The reason I enjoy documenting rare opportunities like this is to capture the abrupt nature of change. Support suddenly shifts focus when something goes bad. They try to pretend it never happened or downplay as much as possible. But it's too late. That was definitely the case with this publicity stunt. There was high hopes some numbers would finally be shared to shut the naysayers up. Good old real-world data to the rescue! Many of the enthusiasts looked forward to seeing the results of this trip. It was symbolic of their effort and the timing, they could legitimately declare independence. Instead, just the opposite happened. Now they have to come up with excuses justifying why nothing was shared. Funny how none of them were mentioned a few days ago. More interesting is how that never applied to Toyota last year with the 2010 Prius. Remember the "Beat The Chief" challenge back in March 2009? The results from that were shared prior to rollout and finalized EPA estimates. Why can we get numbers from that but not from this?

7-06-2010 **Freedom Drive, fallout.** It was obvious that the choice of not revealing any performance information whatsoever wasn't a good one. The fallout has grown pretty intense. They didn't like this attempt to focus discussions back on constructive thought either: There was ample time to prepare. Plenty of warning was provided that this was coming. Fallout happen anyway. Lots of damage control is now needed to deal with all the spin. Ready for the next? Choosing to be proactive makes it a whole lot easier. Publicity can take an ugly turn quick if expectations aren't met. Here's what should be done to prepare: Ask yourself what are you going to do when the EPA estimates are released. How are you going to react to seeing a particular MPG value? Will you have scenarios to illustrate what the MPG represents? What will you say to those concerned about the overall cost?

7-06-2010 **31,876 in Japan.** What do you say to seeing a monthly sales total that large? It keeps Prius at the top for the 14th month in a row. Being the most popular vehicle in Japan for over a year now sure is vindicating. I always wondered how long it would take for a hybrid to be considered a mainstream vehicle well beyond any doubt. No more arguing anymore. No more convincing. Nothing left to prove. The technology is clearly the next step in automotive standards. How long it will take to spread and what degree of modifications will be needed to accomplish a reach deep into a variety of classes & markets is the question now. That goal of achieving one-million-per-year hybrid production by the original date of 2012, despite the down economy, isn't actually too far off. Momentum is building.

7-06-2010 **61.3 MPG.** Seeing that routinely is great. It was the end result of today's commute. Between the warm weather and the slower traffic due to congestion from construction detours, the formula is wonderful for efficiency. I certainly enjoy the drives like that. It nicely balances out the other extreme 6 months from now. I cannot imagine what the situation will be like later, when word-of-mouth reports spread. There's typically a delay when dealing with mainstream consumers. They wait at least a year before considering a purchase. The real-world data they end up hearing about is what seals the deal. In other words, they don't trust automaker hype. It's what owners have to say that really makes the impression. And from this owner, I can provide a one-word assessment that says it all: *Sweet!*

7-06-2010 **July Numbers.** Looking at them, you get kind of a deflated feeling. All sales but Fusion, Escape, and Prius are really low. The market overall is really struggling now. Makes you really what will happen with Two-Mode, especially with both Volt and Cruze complicating matters later this year. When the economy finally recovers, there is no doubt hybrid sales will be strong then... especially since consumers no longer look upon them as a niche... you can thank the upcoming plug-ins for that. People take a look at the 2010, see all the refinements and think nothing of the misconceptions anymore. It's what a car of the 21st Century was always supposed to look like. Fortunately, even with sales low, there are so many hybrids already on the road that the thought of buying one doesn't bring up any type of stereotype. People from all walks of life now own them.

7-07-2010 **Not Happy.** The Volt enthusiasts weren't happy anyway. They didn't like this either... There was ample time to prepare. Plenty of warning was provided that this was coming. Fallout happened anyway. Lots of damage control is now needed to deal with all the spin. Ready for the next? Choosing to be proactive makes it a whole lot easier. Publicity can take an ugly turn if expectations aren't met. Here's what should be done to prepare: Ask yourself what are you going to do when the EPA estimates are released. How are you going to react to seeing a particular MPG value? Will you have scenarios to illustrate what the MPG represents? What will you say to those more concerned about sticker price?

7-07-2010 **Newbie Misconceptions.** What's being done to prepare for newbies? The bickering between Leaf, Prius, and Volt supporters isn't all that helpful, though clever ideas do pop out from time to time. Supposedly an all-electric Ford Focus will join the chaos too. How are those new consumers going to choose with so many mixed messages? The information being presented is quite random, nothing representing what they'll need to make a purchase decision. This is why some of us are pushing hard for detail now. We want facts to work with, not marketing hype. Unfortunately, that hype is all we'll likely get for quite some time still. What a pain. Rather than preventing misconceptions, newbies will be exposed to a dump of misleading claims. It's very frustrating. Not much can be done to stop it though. Real-World data simply isn't being shared from particular sources yet.

7-07-2010 **Better?** Things have been wild lately. The rollout plans for Volt recently announced sure have stirred emotion. Attitudes about my posts have shifted from extremely negative to surprisingly positive, even though my stance hasn't changed. That makes wondering about what tomorrow will bring as predictable as the weather. Anywho, I posted this without any backlash, perhaps a sign that things are getting better... maybe even a little bit of constructive discussion: Strange. On one hand, I never liked having posted so much for those here to push for more. On the other hand, there is some regret for not having strived for an even harder push. Having been through this supply/demand game before, it was easy to see what was to come and that the tone of that stance would not be liked. Yet, the outcome is unfolding as foreseen. Had to try. What happens now? What are the next steps? Any ideas?

7-07-2010 **Production Plans.** This is the latest from GM... which hasn't exactly proceeded as many had hoped: 10,000 through the end of 2011. 30,000 produced in 2012. This is what I posted on the big Prius forum to summarize my observations: It's getting interesting. Some of enthusiasts on the Volt blog are beginning to show frustration... and actually agreeing with me! I pushed them to recognize why the task-force gave the "too little, too slowly" assessment. They're obviously starting to see it. On the big GM forum, they have grown silent. That's a drastic change from the past, where they had mastered spin and being smug. I'm curious as heck what comes next. It would be fascinating to finally have constructive discussion. But with Prius approaching 500,000 sales per year, even before the plug-in, that's probably not likely. Here's what I posted there: Remember the intent to ramp up production very quickly to meet demand? Remember the production capacity of 60,000 planned for the second year? Is this where I point out the "*over-promise, under-deliver*" concern and ask where all those who absolutely insisted this would never happen went?

7-07-2010 **Tax Credit Detail.** Tired of so many different references to credits, some of which I questioned the accuracy of, I looked up today. After all, information easily becomes outdated when dealing with hybrids. On the IRS website, I found "IRC 30" detail. Sure enough, capacities & values were being quoted incorrectly. Here's precisely what was stated in the document: *For vehicles acquired after December 31, 2009, the credit is equal to $2,500 plus, for a vehicle which draws propulsion energy from a battery with at least 5 kilowatt hours of capacity, $417, plus an additional $417 for each kilowatt hour of battery capacity in excess of 5 kilowatt hours. The total amount of the credit allowed for a vehicle is limited to $7,500. The credit begins to phase out for a manufacturer's vehicles when at least 200,000 qualifying vehicles have been sold for use in the United States (determined on a cumulative basis for sales after December 31, 2009).*

7-07-2010 **HOV Privileges.** Certain media sources are making it seem as though the HOV privileges expiring at the end of the year are a major loss for hybrids like Prius, will harm upcoming sales of new hybrids, and resale values will plummet. The situation is being spun in such a way, it's really disgusting. The reality is that the state of California only offered 85,000 permits in the first place. Those were all used up over 2 years ago. So, purchases since then had absolutely nothing to do with HOV. Resale values were actually grossly inflated for the 85,000 which got them too. So, their value will just return back to normal, not far below as they've implied. They don't mention that most states never offered HOV privileges anyway or how sales weren't really affected when permits ran out for those that did. In fact, they make it sound as though hybrids privileges are getting revoked, rather than just expiring.

7-08-2010 **39 MPG.** One Chevrolet dealer has begun advertising Volt. In big print it says "39 MPG" in a box titled "Range Extended Mode". Everyone's been scratching their heads wondering what that means. It certainly looks like an official estimate, the combined value. The enthusiasts don't want to remark about the value itself though; their only interested in its origins. The response resembles panic... something else they hadn't prepared for. What I'm most curious about is what the dealer hopes to accomplish. Will that 39 MPG draw people in and hold their patience long enough for what is easily expected to be a 9-month delivery wait? Or is the hope that they'll become impatient and just buy something else instead?

7-08-2010 **Misconceptions, 10 years ago.** They were quite abundant back when Prius first hit the US market. Yet, misconceptions are never sighted as a contributing factor to the slow pace of the rollout then. People wanting to undermine the success of hybrids exploited them repeatedly. People simply fearing change believed them without question. People wanting to promote hybrids were continuously having to explain them. They had a powerful influence. Seeing misconceptions excluded as reasons for that slow pace of Prius to justify the slow rollout of Volt have to make you wonder. Could their omission be based upon assumptions? How could something that big missed when researching hybrid history? It does make you suspicious.

7-08-2010 **Misconceptions, speed.** This was the one that made me absolutely crazy. I was constantly getting asked about driving my Prius on the highway. Since electric cars of previous decades had always been homemade conversions, they were very heavy. The battery & motor technology of the time resulted in slow vehicles limited to just city travel. Driving at highway speed with one was totally unheard of. So, it did make a lot of sense that I was asked "*how fast can it go*" back then. It was frustrating though. Did people actually think I would purchase a vehicle that couldn't go fast? It really made we wonder. This in fact was a reason that influence taking lots of photos up north. Seeing my vacation travel with a Prius made it overwhelming clear it could handle highway driving just fine.

7-08-2010 **Misconceptions, plugging.** Back in 2000, people didn't have a clue what the word "*hybrid*" even meant. I was amazed by how many times I had to explain that the engine was used to generate electricity. The assumption that you always had to plug the car in at night was so deeply engrained into their subconscious, you'd sometimes end up arguing to prove there really wasn't any way to actually plug a Prius in. They had a hard time grasping that concept, despite the fact you could point out how portable generators used a combustion engine as a source of power. The "*how far can it go*" question was actually fun to answer. My response was 500 miles. You to would have been delighted by the confused look on their faces, seeing them try to figure out how that could be possible. To further inject humor into that often frustrating situation, I would add "*of course, it depends on the length of the cord*".

7-08-2010 **Misconceptions, greenhouse.** Remember "global warming" a decade ago? It rarely ever got mentioned. When it was, they portrayal of the speaker was as some kind of a treehugging hippie. Greenhouse gases were not a topic of science. Heck, it wasn't even considered much of a business & political tool back then either. The thought of "climate change" was far from the consumers mind. They had absolutely no clue that warming could contribute to cooling elsewhere, more frequent storms, more violent storms, and a prolonged influence on multi-year weather systems. It was simply too difficult to notice a pattern, especially with the technology of the time. That's changing. Showing concern & responsibility for the environment is becoming a way of life now. We are finding practical ways to achieve carbon-neutral lifestyle for our children.

7-08-2010 **Misconceptions, guzzling.** Popularity of the monster-size SUV became truly disgusting, exactly as the first of the Prius owners in the US were celebrating their first anniversary. Remember the "*good for the economy*" nonsense. The administration of the time encouraged the purchase of guzzlers with large tax incentives. Stigma of excess had vanished. Neighbors competed with each other to possess the largest vehicle. It was an embarrassing chapter in our history... which few admit to still and even fewer want to discuss, hence the misconception twist. To pretend none of that ever happened or had any influence on the growth of hybrid acceptance is a topic of shame. Yet, that's what we are dealing with now. They disregard the resistance toward hybrids that caused, which is no longer a factor. It certainly was back then though.

7-08-2010 **Misconceptions, oil.** With the monumental scale of the oil disaster in the Gulf Of Mexico now, this topic has become an interesting one. Prius owners had to endure the endless arguments over the years of there being so much of a oil supply still, we'd have nothing to worry about for many decades to come. The thought of a well gashing out millions upon millions of barrels uncontrollably was something totally unrealistic... an exaggeration so extreme, no one would ever take an argument like that seriously. Needless to say, they were dead wrong. It makes the debate points of oil quality and the ease of extraction pointless now. Risk far outweighs benefit. Oil was not thought of a problem then, but most certainly is now... even without ever mentioning politic strife.

7-08-2010 **Misconceptions, fear.** The very thought of change made some quiver with fear. Who's going to force me to give up what? It was a very real problem to contend with. How do you convince consumers that hybrids are the next natural step in the evolution of automotive history. It's that bridge to electrification... relying on clean sources of energy, which are also renewable. The thought that Prius could lead to a practical & affordable plug-in ability was absurd, yet consumers eventually saw that. The ASSIST hybrid supporters actually feared this even more. They saw that FULL hybrids offered the ability to support a plug. Some fear was unwarranted. Other fear was legit. That misconception influence of what could happen is now a complete non-issue. It is well known & understood now.

7-09-2010 **Product Failure.** Billion dollar failures happen. New products failing shortly after rollout isn't anything we haven't seen before. In fact, the device industry (computers & handheld electronic products) sees that regularly. The automotive industry sees failures too, but not as often. They attempt to salvage reputation quickly though, by changing focus to something totally different quickly afterward. The device industry tends to make another attempt. Anywho, if you've been following Two-Mode, you've noticed that nothing has happened still. They produced enough in early production to supply the weak demand for a long time to come. They're stuck with inventory few actually want. That makes the decision about what to do next extremely difficult. Although investment cost is the same whether it is a vehicle or device, it's a whole lot harder to sell a second-generation vehicle if the first failed. You can't just dump the unwanted old supply either. The terribly low sales of Two-Mode could foreshadow what's to come for Volt. Rather than promoting multiple configurations to avoid the same mess, they risked it all again. What's so wrong with a smaller battery-pack to offer a choice of a model which costs a lot less? Heck, they could even make it more efficient too by altering the engine.

7-10-2010 **History Misleading Continues.** It's the same as before. Important parts of history aren't mentioned. Why? What is their intent, especially after being told about their rather glaring omissions? Here was my summary this time: Think about it. That was a world before 9/11. It was poorly informed, quite naive. It was a time when few had access to that young internet and speed was so slow even sharing photos was a challenge. Things were quite unlike what they are now. Even the automotive industry itself was very different. MISCONCEPTIONS were abundant back then. Let's not forget how clueless people were about what a hybrid was and how slow & weak electric vehicles were perceived. EXPERIENCE was almost non-existent back then. Look at GM with EV1, all the Fuel-Cell concepts, and Two-Mode. The background is quite extensive, very different now. CLIMATE CHANGE was a treehuggers joke back then. It was far from ever taken seriously. People heard "global warming" and simply dismissed it without a second thought. OIL DEPENDENCY was far from a concern back then. Remember less than $1 for gas? Remember the invasion of monster-size guzzlers? Remember when that happened? FEAR was very real back then. You'd be amazed by the level of resistance to change there was. People intensely argued about being forced to give up their guzzler for a hybrid.

7-10-2010 **Not Enough Info.** Keeping people guessing, leaving them without anything of substance to draw any type of conclusion with has been the theme for well over a year now. The start of this year came with a personal log entry from me stating "questions & speculation" would continue, stringing us along for as long as they possibly can. We'll get virtually nothing until rollout. In the meantime, they'll kind raising doubt about the future of hybrids. Yes, I'm speaking of GM and the Volt enthusiasts. It has become tiresome. They are just stalling for time. And with the big blog being nothing but a thread of off-topic posts which activity ceases the following day, all is lost anyway... making it very easy to repeat the same non-constructive discussions over and over and over again. The forum, a far more productive online information exchange tool, remains a feature rarely ever used... quite the opposite from the big GM forum or the big Prius forum. Heck, even the small hybrid forums see far more activity. They sure are unprepared for rollout. I'm very curious how they'll deal with what happens once ownership begins. Information becomes absolutely vital then.

7-11-2010 **Power Fade.** Remember that issue with Volt just 2 weeks ago? The enthusiasts have done their best to keep attention diverted from it. Everyone else is still scratching their heads wondering what the exposure really is. Acceleration from highway cruising speed to highway passing speed still hasn't been addressed. It shouldn't be a big deal. In fact, you'd think there would have been a mention of it from last week's highway trip. Wasn't the purpose of that to show Volt behaves just like any other vehicle? If nothing else, that would have been a good distraction to quiet down the MPG backlash. Just point out a detail about battery buffering or motor RPM at top speed. Instead, that too has become a taboo topic. When will we find out? Independent big names like Edmunds got to do a performance review the 2010 Prius over 2 months prior to rollout. What can we expect for Volt?

7-11-2010 **BMW ActiveHybrid7.** It combines a 15kW 20hp motor with a 4.4-liter 8-cylinder 455hp engine. What's the point? With such a massive combustion engine, how much gas less gas will be used by a teeny-tiny electric motor? For perspective, the motor in Prius is 60kW 80hp and the engine output just 98hp. That's a much larger motor working with a much smaller engine. Looking closer at the article published about this newest hybrid, it shouldn't be much of a surprise that the MPG itself was never mentioned... only the $102,300 price. Again, what's the point? The non-hybrid model, the 750i, sells for $82,000. So, the market for either is quite small anyway. It's another sad example of automaker saying "we have hybrids too", even though they don't actually accomplish much.

7-11-2010 **Slow Rollout Tactic.** Step back and look at the big picture. Consider the chain of events which happened with Two-Mode. Sales have been far below expectations (only 3,256 total purchased from all 5 models for the first half of 2010). But since rollout was so slow and so drawn out, realities like that go pretty much unnoticed by most consumers. They just assume... since GM is still selling them, Two-Mode must be doing ok. Today I heard a Volt enthusiast in an early rollout state (Michigan) won't take delivery until March next year, despite the fact that initial deliveries are supposed to begin in November. GM has already stated it will take 12 to 18 months before Volt will be available in all 50 states. Under the guise of being cautious, they are also covering their butts from fallout. Those enthusiasts still on the delivery waiting list will fiercely defend any negative feedback in the meantime. The automaker can just remain silent and deliver vehicles at a snail's pace. The assessment of "*too little, too slowly*" is becoming all too real.

7-11-2010 **Implementation.** Hearing about the superior nature of SERIES hybrids without any data whatsoever gets really old. The efficiency from freight trains is in part due to volume, a concept which simply doesn't exist when you commute alone in a car. Your journey to and from work is far from non-stop like a train as well. So, there is a legitimate reason for wanting something in reference to the driving experience. Frustrated, I pointed out this: Implementation is still a big unknown for consumer vehicles. The operational criteria is quite different than for industrial machines, especially when cost is factored in. We want to know specifics about GM's design, how problems like emission requirements were dealt with. Just because a series hybrid can do something well in general, does not mean it does the same for personal transportation.

7-13-2010 **Futile?** At what point do you get tired of the superiority claims? I see the plug-in Prius as a major player in the upcoming next stage of efficiency battles. Many of the Volt enthusiasts see it as an obstruction instead, a step in the wrong direction rather than an ally. I disagree. I see the shortcomings of Volt, but rather than disregard that as they do with the plug-in Prius, it means an aggressive reconsideration of purpose & design. Is that futile? Anywho, this was my provoke toward to that effort today: Tomorrow a friend of mine will be picking up a plug-in Prius for use over the next week. He's a consumer like me, doesn't work for Toyota, just has an extensive background in supporting the electrification effort. He has already driven the PHV, accelerating hard up an interstate onramp without the engine kicking in. Got it all the way up to 65 MPH, in fact. Real world experiences are changing the game… Will the plug-in model of Prius become an ally in this fight against traditional vehicle production or will Volt be going it alone?

7-14-2010 **Warranties & Emissions.** There was a live chat online today. GM's marketing director for Volt made a comment today which only I picked up on and posted a response about. It's something Prius supporters have long been aware of, a big problem with emissions. I wonder how long it will take for the Volt enthusiasts to realize what was said. Hmm? Anywho, this was my post following that chat: 10 years/150,000 miles warranty is required in the 17 CARB states for vehicles certified with a PZEV emission rating. Since emission rating is based upon distance traveled using standard drive-cycle measurements, the electricity supplied by a plug is taken into account. There is a minimum criteria to be eligible for selling, which is based upon emission rating. If Volt only comes with 8 years/100,000 miles coverage nationwide, that all but confirms it isn't PZEV rated. What do you think it will be... or for that matter, should be?

7-14-2010 **What Now?** A popular newspaper published an article about how GM delivered a big miss with Two-Mode. Sales have been so bad, the writing is now on the wall. Something significant must now be done to save it. On the big GM forum, I responded to that article with this: So what happens now? I joined in 2006 worried that GM's decision to finally produce a hybrid would lead to a high-cost design few would be interested in, even with a tax credit. 3.5 years later, the outcome is exactly what had been worried about. To make matters worse, Volt is following that same pattern. The engineering is top-notch, that's never been a worry. It's the business decisions. Why was so little emphasis being made toward cost control? Too much focus has been placed on performance. Those choices have proven to be detrimental. How can the system become a mainstream, high-volume product when the price is so far out of reach?

7-15-2010 **Trolling?** Speaking of the big GM forum, I was fascinated to discover they rules-of-conduct have changed. They have admitted to their own popular posters being responsible for dropping bait and not disciplining that behavior. A blind eye had been turned whenever someone of such stature would do such a thing. That contributed heavily to making particular threads popular. That's why it was allowed. But now, that is looked upon as harmful to the forum's reputation... and will no longer be tolerated. They apologized for letting it happen for so long and vowed to end it. Hooray! To make matters even better, people like me are no longer lumped into the definition of "troll" simply because I am an outsider... now that insiders have been identified as trolls. In other words, if you post something to intentionally stir trouble or to harm the reputation of another, you are a troll regardless of your background. Since my message is quite concise and I'm always polite, I fall into that "other" category instead. Too bad there isn't a term coined for that yet. Oh well. At least the moderators are finally stepping up and doing what should have been done a long time ago.

7-16-2010 **No Complaint.** They make it quite personal sometimes. That's not always a bad thing. Here's what one of the Volt enthusiasts specifically had to say: "*If the post advances the discussion in a positive direction, I have no complaint with them. I believe that even though john1701a has a definite agenda, he has at times caused us to rebut his posts and thereby advanced the topics presented.*" After a few weeks of counter-productive, rude, and insulting posts from actual trolls (those whose purpose is nothing but to stir trouble), it was actually nice to get singled out like that. Hopefully my choice of reply to that was positive & advancing: And I will continue to, since advancement is the agenda! Real-World data will be the focus. It's the best way to get beyond the MPG estimate mess. For example, here's real-world data from a highway drive with A/C using a plug-in Prius earlier today... Distance driven: 105 miles. Displayed ratio: 11% EV and 89% Hybrid. Displayed average: 63.7 MPG

7-17-2010 **PZEV Upset.** The news from the other day is starting to sink in. The enthusiasts didn't realize the ramification of that comment from GM's marketing director for Volt said, until now. That smaller warranty indicated the PZEV emission rating (actually, AT-PZEV for hybrids) eligibility criteria wasn't met. Those genuinely trying to be constructive didn't even think of the situation as a whole. They understood starting a cold engine isn't good. But studying the design of Prius to determine how Toyota was able to overcome that challenge was unacceptable. That would be considered an effort to undermine by the competition. Now though, a change of attitude may be coming. That "*too little, too slowly*" is extremely difficult to deny when among their first responses was the need to wait for the second generation to achieve PZEV. To make matters worse, I pointed out the problem coming from gas sitting unused in the fuel tank for extended periods of time. That contributes to another type of pollution source rarely ever discussed: EVAPORATIVE emissions. Needless to say, the enthusiasts are pretty upset this morning. The green of Volt has faded even more. Makes you wonder when they'll finally start thinking of the plug-in Prius as an ally, rather than an obstruction.

7-17-2010 **Shot The Messenger.** I've developed a thick skin for criticism, so I find what's unfolding today very interesting. When the Volt enthusiasts don't like the message, they vote negative to the post which delivered it. That's what happened right away today with that PZEV revelation. They aren't happy, not in the slightest. The 2010 Prius was heavily optimized to capture and make the best use of engine heat. Did you know that coolant is routed down to the exhaust system? Transfer of heat that way isn't something any other vehicle would bother doing. But when you're building a platform which will end up keeping the engine off as long as possible, you want to prevent the need to start the engine back up just for the sake of keeping the catalytic-converter hot. It's a big requirement Toyota has worked hard to optimize. We haven't heard a peep about this from GM until now. Two-Mode hybrids actually deliver a worse emission-rating than their traditional counterparts. This is a part of history I repeatedly tried to point out... only for it to fall on deaf ears. Shooting the messenger is a clear indication of change. They definitely hear it now!

7-17-2010 **Did He Know?** It gets even more interesting. I hadn't expected this discussion turn. Someone asked if Lutz knew the emission-rating was going to become a problem. That's actually constructive! It indicates thinking through the situation and not being afraid to ask about what it would imply. I'm impressed! Make you wonder how my response to that will be looked upon... Two-Mode history clearly indicated this was going to become an issue. GM allowed the development of a hybrid dirtier than a non-hybrid. Not hearing a peep about this with Volt meant not being any worse than a traditional vehicle was the best we could hope for. It's an unfortunate reality pointing out that history was suppose to prevent. Instead, any mention was looked upon as an effort to undermine. What now? The response of saying "*wait for the second generation*" totally validates the assessment and on-going concern of "too little, too slowly".

7-18-2010 **200,000 in Europe.** That's the official total for Prius now. It sure is nice seeing that particular market buying them. Gas is much more expensive than diesel there. Vehicles are typically much smaller. And manual transmissions were favored due to lower cost and greater efficiency. The situation is changing though. Prius and all the talk of plug-in choices is stimulating change. Concern for both types of emissions (carbon & smog) is growing too. Every last vehicle helps to make a difference. I wonder how popular the 2010 model will become there. It wasn't rolled out until later there, so they don't even have year-long owners yet. An automaker from Japan has different challenge from those local automakers there than we have here. So, seeing that the platform can become popular in that market too is pleasing.

7-19-2010 **Sonata-Hybrid Detail.** Today, there was news of hybrid progress. 2011 will bring a hybrid from Hyundai. The system is claimed to be the FULL type, even though there isn't a power-split device. Instead, partial independent motor operation will be achieved through the use of a clutch. It's still just an ASSIST in the sense that engine & motor RPM will coincidence due to the direct integration with a traditional 6-speed automatic transmission. But there is a second motor which acts as a generator and doubles as a starter. In other words, it is "full" in the sense that it is a traditional vehicle with hybrid components added. Makes you wonder how much it will cost. Hmm? The traction motor will offer 30 kW of power. That's half the size of Prius, but supposedly enough power to match the 100 km/h ability. The hybrid model will offer a big boost to city efficiency, from 22 to 37 compared to the traditional model. For highway driving, efficiency gain is smaller, from 35 to 39. The battery-pack will be a 1.4 kWh LiPo (Lithium Polymer). The engine will be a 2.4-liter 4-cylinder. It will weigh 3,457 pounds.

7-20-2010 **Hypocritical.** For 3.5 years I've had to deal with the Volt enthusiasts lumping all non-plug hybrids into a single category. Regardless of configuration, it was always given a "*parallel*" label. No matter what was posted to point out differences, they didn't change. It was always the same thing, clearly with the intent to mislead & undermine. Volt would make everything else obsolete, so it didn't matter anyway... never taking into account the wide range of efficiency, emissions, and power each offered. With such variety, it's hard to believe they'd continue to do that. Now, they're angry. SAE officially categorized all vehicles offering both a plug and an engine as PHEV. It's looking very likely EPA will do the same. Both place extremely high priority on identifying outcome, so the label really doesn't much. The enthusiasts continue to argue that Volt is superior, yet cannot explain why. They offer nothing in terms of performance criteria to support that. It's just a passionate outburst with no regard to what they did in the past. Isn't that hypocritical?

7-20-2010 **Honda Upset.** The Volt enthusiasts are upset that yet another plug-in design will be entering the market. The diesel enthusiasts are upset that Honda's choice to embrace diesel rather than hybrids has now experienced a full reversal. The fuel-cell enthusiasts are upset that prototype efforts now seem to be lost. The Prius supporters are thrilled. It's about dang time their system finally got a complete overhaul. To offer advantage from their current ASSIST platform, a much larger electric motor is needed and a clutch to disconnect it from the engine. Having a PSD allows the opportunity to avoid that need. But when the vehicle utilizes a traditional transmission (Manual, Automatic, or Cone & Belt CVT), it's required. You need some method of stopping engine motion without affecting the operation of the motor. Anywho, Honda's rather vague announcement today mentioned 2012 introduction to the US market for midsize & larger vehicles.

7-20-2010 **Playing Catch-Up.** That's quickly become the spin now, by Volt enthusiasts of course. This quote got me excited: "*It took Toyota a while to realize that GM was onto something big with an EREV. Now everyone is headed in the same direction.*" It provided the opportunity I would normally get to point out history. So, I did: Offering a plug has always been in the plans. The redesign of the PSD back in 2003 bumped the EV only (engine motionless) speed up to 100 km/h... but sadly couldn't be taken advantage of for quite some time due to battery technology constraints. Now with the 2010, they have an even more efficient direct-drive system that offers the same 100 km/h with even more power. What is the realization? By the way, the initial builds of the first model of Prius (back in 1998) actually included a plug. But back then using just D-cell format batteries, it proved to offer little benefit.

7-20-2010 **Rushing Perspective.** Here's more spin: "*I am guessing Honda & Toyota are rushing to get into the market.*" I enjoy reading comments like that. It serves as vindication, giving a great feeling of support for a platform we've been supporting for a decade... from Toyota, anyway. That's been the argument against ASSIST hybrids in favor of FULL all along. The one offers a simple upgrade to a plug, the other a cost & logistics challenge. Nonetheless, the joyous nature of this point-of-view emerging now is that this is where the industry is headed. Thoughts of diesel engines or hydrogen fuel-cells have been abandoned for the preference of plug-provided electricity instead. This was my response: That's an interesting perspective, but easy to see it as a "waiting for the opportunity" situation instead... since the only thing needed to make the current Prius into a plug-in is a better battery-pack. The PHV model uses the same traction motor, generator motor, combustion engine, and PSD. Using those same components already being produced & sold in high-volume supports the "battery need" quite well.

7-20-2010 **Recover Act Investments.** So far, $2.5 Billion has been awarded by the Department of Energy toward manufacturing and continued development of automotive batteries and electric vehicles. Ultimately, the investment will grow to $12 Billion. Imagine if that effort had emerged sooner, rather than the those in power years ago choosing to fight this by just drilling for more oil instead. Can you believe all the nonsense we had to deal with? Oil was considered cheap, plentiful, and harmless. Wow, were they ever wrong! Anywho, reading through the DOE document, it's fascinating to see all that's happening this year domestically. Cost & Range is expected to drop dramatically as a result over the next 5 years. Remember the insincere effort to make fuel-cell vehicles realistic 10 years in the future? This is half the time with a much, much deeper market penetration. It's too bad things were allowed to get so bad before action was finally taken. Isn't it amazing how change can occur?

7-20-2010 **Improvement Benchmarks.** The quote I found most interesting from that DOE document was this: "*The cost of a 40-mile range battery is falling from more than $13,000 in 2009, to roughly $6,700 in 2013, to $4,000 in 2015.*" For that same duration, they expect weight to drop by 33 percent and battery-life to increase 3.5 times. Those are numbers we really need for plugging in to become practical & affordable for the mainstream. Not surprisingly, that puts Prius at the forefront. It's the design which can reach a very wide range of consumers... since battery improvements are a benefit to all models, even those without a plug. Market penetration is a very big deal. If production doesn't take advantage of a battery-pack in some way, where will profit come from? A few token sales aren't the goal. The goal is to replace tradition vehicle production. This DOE effort places clear benchmarks on the technology. Achieving it requires high-volume demand, within just 5 few years.

7-21-2010 **PZEV & Profit.** It's nice knowing that the Volt enthusiasts now understand the factors involved with the PZEV rating. The topic of emissions had been almost totally ignored. Of course, dealing with that simply got postponed when it was realized that GM wouldn't be addressing the issue until the second generation design. At least they cannot argue about Toyota anymore, being aware that PZEV is given a much higher priority. It's actually a primary reason why aftermarket augmentation hasn't gained as much attention. Those players involved were already aware that overriding the system would compromise exhaust cleansing. To maintain necessary control over engine use and heat, that could only come from the factory itself. Anywho, this emphasizes the difference in automaker approach. The other obvious priority difference is profit. Toyota doesn't want to begin plug-in rollout until production costs can be brought down to a profitable level, since it already has a rapidly expanding hybrid inventory anyway. GM is willing to keep production low and just wait... which means funding for continued development must come from some other source in the meantime. That's a big difference. The one approach is far less risky. Hopefully, it will all work out for both. We'll see...

7-22-2010 **More Futile?** If that term makes any sense, you're really going to enjoy this. Prior to the hybrid event in Wisconsin last weekend, a friend attending it received delivery of a plug-in Prius he could bring to it and driven around with for a week. Getting reports of his experiences was fascinating. The system will display the EV to Hybrid ratio based on each drive. The shorter the drive, the more EV will be taken advantage of. What I got the biggest kick out of was his drive home from the event. It was 102.6 miles, without any opportunity to plug prior to leaving, so the drive was 100% hybrid (no A/C). Despite the non-EV highway trip, the efficiency data displayed was a mind-boggling 71.5 MPG. Whoa! Talking about an impressive improvement from a lithium battery-pack upgrade with a higher-speed tolerance. That almost puts my 50 MPG to shame. In fact, that's so impressive I'm left scratching my head wondering what other experience reports will stir. I won't have to wait long either. Another friend will be getting an opportunity for a week-long test-drive opportunity. Isn't this exciting!

7-22-2010 **To Sum It Up.** After a week of driving the plug-in Prius, that first of those lucky friends had much to say. He went into detail about the engineering. It's so seamless and there's so much to appreciate, it gives you a sense of "*child-like giddiness*" driving it. There's much to enjoy about the experience. The EV difference itself left him "*absolutely underwhelmed*", which it terms of appealing to the mainstream is quite a compliment. Concealing the technology has been a key to Prius success so far, why not with a plug-in model too? You don't need to worry or be concerned about anything, you just drive it then plug when you get home. The final paragraph of his write-up really got me to smile. The appeal to my mother is the ultimate test of acceptance. If she'd like it, everyone would. Turns out, that's his measure of worth too: "*This is truly an advanced technology vehicle that outshines even the Prius that came before it. But it is also a vehicle the mass market can grasp with no leap of faith or learning spin-up. In short, this is a car I would buy my mother. And she would love it.*"

7-22-2010 **40-Mile Capacity.** Technically, GM didn't achieve the title of first to deliver a 40-mile capacity plug-in vehicle, an aftermarket provider did. PICC in California upgraded a 2010 Prius with a 12.5 kWh lithium battery-pack. On the 24-mile course at the hybrid event in Wisconsin last weekend, that car delivered 245 MPG. Doesn't that level the playing field? If Volt is supposedly so superior, what is the advantage enthusiasts continue to claim? If an aftermarket effort can deliver that, just imagine what Toyota itself could do. We could end up with multiple models of plug-in Prius, along with the non-plug. Just think of how many consumers that technology could reach we offered in a variety of body sizes & styles. Do I need to continue mentioning the problem with Volt's one-size-fits-all approach or the "too little, too slowly" problem?

7-22-2010 **Leaf.** We got a long write-up about Nissan's upcoming EV today. There were lots of display images included. One feature was a navigation map that illustrated driving range, based on the current charge-level of the vehicle. Another showed how much of an impact using climate-control would have. In that particular example, the 98-mile range available would be reduced by 22 miles. You could even see the kW draw A/C & Heater and other systems were having. Talking about being clear about informing drivers of the effect non-propulsion components have on the distance you can travel. That's nice. No surprises. Remember the Classic Prius? The display it provided played a major role in simplifying the understanding of the hybrid system. Looks like the same will be true for plug-in vehicles too.

7-23-2010 **Cruze & Fiesta.** There has been much written about the highly anticipated small 40 MPG traditional vehicles coming from GM & Ford. Today, I actually had my first sighting of one on the road. It was a brand new Fiesta... being tailgated by a large Ford SUV. How about that for an image? I'm sure the driver of that Fiesta (so new, it didn't even have plates yet) wasn't thrilled about the situation. It sure gave perspective on the size difference. How much are people will to change for the sake of economy? I could easily see young drivers gladly driving them (in fact, I did at that age). But for those who enjoyed driving large & powerful guzzlers for many years, I just can't picture it. That raises the question, what will appeal to them? What will $3 gas cause them to drive?

7-24-2010 **$78.98 Per Barrel.** The price of gas is $2.75 per gallon. $3 has already become the standard expectation for fuel-economy analysis. It's pretty much what was expected from peak oil becoming a reality. You simply cannot dismiss the expense anymore. Those memories of carefree guzzling and competing with your neighbors to have the biggest vehicle is over. That's now thought of as irresponsible, a terrible legacy to leave for your children. Unfortunately, the ramp up of hybrid availability is going to be a slow journey. Taking production on that scale seriously wasn't a wise business risk. Now, it's becoming a necessity. Isn't it amazing how things are changing? Too bad this was all predicted long ago. Just imagine if the price of gas had went up a decade ago... back when I was impatiently awaiting delivery of my first Prius.

7-24-2010 **Solar Ventilation.** I noticed the behavior was different today. With the sun directly above, glaring down brightly without any cloud interference made the fan more aggressive and longer running than I had expected. In the Spring, I hadn't observed that. The temperature inside and the energy available sure made a difference. Of course, it's too easy to take that for granted. You get into a car that's warm... rather than blazing hot. If it wasn't for the fan, you might overlook the effectiveness entirely. It's a nice perk having that solar panel on top. It's not necessary, but the moonroof that came along with that particular package sure is sweet. I like when the sun comes in from that, especially in the Winter when opening a window is something you avoid an all costs. So now, at the peak of Summer, I'm enjoying it all. The look of the dark glass roof sure is nice too.

7-25-2010 **58.3 MPG.** What can you say to that? I went on a bike trip today. There's about 50 miles of highway cruising at 65 MPH, each way. There's around 15 miles of non-highway driving each way too. Seeing that displayed average stay well above 50 MPG the entire time and ultimately ending with 58.3 is incredible. It totally makes those rare opportunities to drive out to a trail quite worthwhile. Having a hybrid that already performs so well at high speeds makes the thought of not using the engine at all when slower even more exciting. Yes, I know all EV all the time would be great, but the point is to offer an affordable solution for the masses. After all, not everyone has access to a plug even if they could pay a hefty premium. The balance of configuration is the essence of being a hybrid anyway. It makes the most of each opportunity it is presented with.

7-26-2010 **Useful Information.** A truly constructive question was asked about Volt today on the daily blog. That's what I like providing answers for and stimulating more on-topic discussion with. I responded with detail about the Energy-Info screen Leaf offers and mentioned live meters like that could be offered with Volt too. That resulted in this: "*Not sure why you're getting negative votes for posting useful information.*" The reason for that is simple. Tomorrow is when the price announcement occurs. Enthusiasts are quite on the edge right now, very nervous about what the future holds if the price is too far out of reach for mainstream consumers. Anything that makes the competition look better is not welcome at the moment. Choosing superiority over being an ally has placed them in a very awkward position... which is pretty obvious when even useful information gets a negative response.

7-27-2010 **Sticker Shock, $41,000.** There's not much more to be said. That's what it is. The price of Volt is waaaaaaay more than was hoped. How would 16 kWh along with a combustion engine not be? Of course, that is the "base" model. Though nicely loaded, the premium package with leather seats, higher grade paint, etc. brings the price up to $44,600. Imagine adding state sales tax and financing to that. Even with the federal credit, that places it well out of range of most consumers. Even many of the enthusiasts are backing down, not expecting to actually purchase one until the second generation. See the kind of mess created by not making price a priority. It was the secret of success for Prius. We pointed out the importance. The advice fell on deaf ears. Now they have a mess unfolding. Sure makes you wonder what the fallout will be, eh?

7-27-2010 **Sticker Shock, purpose.** This had always summed up the situation quite well... my purpose... my agenda, if you will: "*To significantly reduce emissions & consumption in a reliable & cost-effective manner.*" The following is what I posted on the big Prius forum, curious as heck how they'll respond to the news: That has been the purpose stated on my website since way back when I owned a Classic model. It's what I pushed when the Iconic model became available, a solution for mainstream consumers. And of course, the 2010 model is sweet... opening the door for a plug option... something realistically priced. As for Volt, we knew it wouldn't be "*nicely under $30,000*" as originally hoped. That simply wasn't realistic with such a large battery-pack. But with all the bells & whistled added and so much emphasis on performance, the writing was on the wall. Price wasn't a priority. Now what? The daily blog for Volt is already flooded with disappointment posts. This wasn't exactly what they had hoped for.

7-27-2010 **Sticker Shock, trolls.** Send in the trolls is the battle cry now, for both sides. Too bad their had to be sides in the first place. But it was their choosing. Sadly, this stated the perspective on the daily blog well: "*Turns out what you thought were trolls were just contributors with an above-average grasp of reality.*" When you aren't open to any constructive input, for that matter any comments not in a cheerleading fashion, you're pretty much doomed to this outcome. Some of us had been pushing hard for a lower cost model. That was looked upon as an effort to undermine. Now, they have figured out the hard way it wasn't. The $41,000 price will be far more of a sales deterrent than a model with less power and a shorter range. Do you think those contributing ideas now will still be considered foes? Or will some type of ally effort finally emerge?

7-27-2010 **Sticker Shock, lease.** The operating terms of the 36-month lease available are a mystery, but the $350 monthly payments with $2,500 down are known & reasonable. Leasing makes sense for a vehicle like Volt. The mileage limitation will pretty much force the leaser to remain within the charge-capacity range. Driving to the point of triggering CS-mode would exceed the distance allowed if you do it more than on a rare occasion. That would make the ownership perspective a pleasant one though, since you'd take full advantage of being able to plug-in. It makes you wonder what the value of Volt will be after the lease expires. Hmm? The end of that term would be around 4 years from now based on the planned market rollout. At that point, the next generation design would be all the rage.

7-27-2010 **Sticker Shock, disappointment.** That's been the theme, so far. No argument about the current disposition. What comes next is anyone's guess... though it's pretty easy to sells sales will be so limited at first, we won't hear much from the enthusiasts who were planning to buy a Volt. In fact, several have backed down and want to be taken off the waiting list now. It's too bad that "*40-mile range*" was made a centerpiece of all the promoting. We knew that wasn't realistic for Winter use anyway. But so emphasis on that made range important, rather than overall efficiency. It soured the appeal of less intentionally, preventing much attention to smaller capacity offerings from competitors. In other words, GM shot itself in the foot... painted itself into a corner... went up the creek without a paddle. You get the idea. Disappointment was predictable. Price concern wasn't taken seriously.

7-27-2010 **Sticker Shock, sugarcoating.** The video featuring the price reveal was long and offered almost no detail. In fact, I joked by saying that's what they meant by transparency... we could see right through the lack of substance. The Volt enthusiasts didn't find that amusing. I wasn't in a good mode from having had to listen to all the sugarcoating. The executives speaking just glossed over the premium fuel issue. Attention was diverted to extras instead, unnecessary features like applications to connect your iPhone and control plug-in operations remotely. Think of how much things like that added to the price. The theme was image. Amazing new opportunities awaited. That sounds great until you realize there's a business to run and most profit comes from the vehicles which draw little notice. Mainstream vehicles are mainstream because they are abundant & affordable... not what they were promoting. I injected: The ultimate measure of progress has been sales, since that indicates actual change from traditional to new technology. A vehicles with a $41,000 price is not going to achieve that change. Mainstream volume requires a mainstream price... nicely under $30,000.

7-28-2010 **Sticker Shock, next?** The enthusiasts have had their world turned inside out. The reality of $41,000 has stopped them cold. I attempted to ask what was next though: Looks like I'll be the one to point out the differences between Volt now and that which we were told about 3.5 years ago are so great the original "vaporware" claims have indeed been validated. So, what happens next? To improve emissions & efficiency, we can easily see the engine size shrinking and switching to the more efficient Atkinson pumping cycle. To reduce cost, we can easily see the size of the battery-pack getting smaller. The added benefit to that would be increased seating space and less overall weight. The driver interface is far more elaborate (expensive) than it needs to be. That's an obvious target for lowering price too. What else?

7-28-2010 **Sticker Shock, capacity.** The likelihood of good news about CS-mode is causing trepidation. Too bad the Volt enthusiasts were always so insistent upon the "40 mile" range being an absolute minimum. Nothing less was acceptable, regardless of price. Is that still the case now? I asked: The plug-in model Prius offers hard battery-only acceleration using just a 5 kWh battery. Why in the world did Volt absolutely have to use a 16 kWh battery? Why not just 8 instead? If the MPG in CS really is 50, it simply makes no sense not to have offered a more affordable initial configuration. Of course, that doesn't matter anymore. This Volt simply isn't competitive (potential to be a mainstream vehicle) at such a high price. It's the next choice that we want to know about now. So... do we discuss that next generation configuration or just go on cheering for what limited markets will have access to over the next few years? What is the next move for enthusiasts, especially those who have now chosen to delay their purchase?

7-28-2010 **Sticker Shock, proof.** The excuse most commonly being posted now is about getting proof. Frustrated by the pattern of denial, I posted: "Prove the technology first" is the spin I've been hearing since the price reveal. That supposedly was GM's goal all along, with cost-reduction a priority later. Since when? That doesn't make sense anyway. Consumers naturally expect next models to offer increased performance at a similar same price. The size of the battery-pack could easily have been reduced to lower price quite a bit without affecting the proof. In fact, use of the engine more frequently would do a better job demonstrating the integration of multiple electricity sources. Seeing capacity increase over time without much of a price change is a well-proven approach in the computer industry. Why not with a plug-in vehicle too?

7-28-2010 **Sticker Shock, promoted.** My patience only lasts so long. I get tired of the lack of constructive discussion. All we are getting now is excuses. One after another. Over and over. Too bad I document what was actually promoted. That tells a very different story from what they are spinning now, as I happily pointed out on the big GM forum: But that's not what GM had promoted. We were clearly told (and many here echoed the sentiment very abrasively) that capacity for YEAR #2 would be for delivering 60,000 and that demand could be met when needed. Then just a few weeks ago, that message changed and production for YEAR #2 was capped at 30,000. Those mainstream intentions changed... hence the task-force assessment of "*too little, too slowly*" being confirmed. Now, we wait for gen 2 with no target price reduction set, no volume expectation, or even a timeline. Sound familiar? Can you say: Two-Mode?

7-28-2010 **Still Avoiding It.** You gotta love when you catch discussions dancing around a topic. That most definitely was the case today. Both the big GM forum and that daily blog avoided any mention of the plug-in Prius. They don't even want to acknowledge it exists. What kind of constructive approach is that? This has been going on for quite some time. I can't wait until I get my opportunity to drive the figment of their imagination. An affordable solution that offers a MPG boost rather than emphasizing an EV-only range must be too difficult to deal with. After all, it would require acknowledging that Volt is a hybrid... since it can use an engine as a power source. You'd think that would be considered a benefit. Instead, they dismiss it as an emergency device which will rarely be needed. Anywho, I just plain couldn't resist pointing out my observation: Notice the many references there are to Prius? Notice how none of them mention the plug-in model? Why is such an obvious comparison consumers will make avoided here?

7-29-2010 **No Estimate?** It's hard to tell if this is simply just the "raising doubt" undermining technique being used or if there's something actually to it. Regardless, the outcome is keeping speculation going. Of course, nothing about Volt had ever been definitive until recently. Then we learned about the size of the gas tank, the fact that premium gas was needed, and the price. That's pretty much it. The beauty of it all though is the possibility that nothing about CS-mode would be officially revealed. Remember the mess reporters created from just quick observations of Prius? Imagine that combined with enthusiasts reporting only best-case scenario data. Milking vague claims and feeding misconceptions will really become a problem. This is a very good reason why Toyota has chosen to deliver 600 plug-in Prius worldwide over the next year for real-world data collection. No estimate is needed then. They'll have actual consumer-based numbers. They'll know exactly what they're selling... without allowing a mess like Volt may create for itself.

7-29-2010 **Lease Thoughts.** The annual driving distance GM will be allowing for a Volt lease is 12,000 miles. Do the math. That's only 33 miles per day. Think about how differently a person drives on the weekend. Think about their commute. Think about the few long drives they'll do on holidays or vacation. If you're not the type who has ever considered a lease, that's a lot to think about. Now think about the demand on the battery-pack if you live in the north and will be running the heater routinely, which reduces range. Think about residual value when the lease expires. Of course, if you're a person who doesn't drive much anyway, you'll less likely to be concerned about saving gas or wanting to spend a lot on a vehicle. What about the tax credit? You probably cannot claim it for a lease. Lots to think about, eh?

7-30-2010 **Breaking.** My attention is often caught by that misspelling of "braking". It's a sign that you're reading the post of a newbie... or someone who had never taken the time to think about how a hybrid actually works. Today, it was the latter. To my surprise, he was under the impression the only way anyone could achieve 50 MPG with a Prius was in slow driving with a lot of braking. Like many, he believed regen provided a vast amount of electricity. In reality, it's just the recapture of a very small amount. Think of it as just part of the momentum you'd still have if you wouldn't have stepped on the brake. Very little. But at least it's something... not a 13 MPG gain though. His impression was Prius only delivered 35 MPG on the highway, since there's no brake use while you cruise. That doesn't explain the EPA estimate of 48 MPG though... or the topic being discussed on that daily blog, the EPA estimate for Volt. Frustrated by such poor understanding, I paid close attention to my highway drive home today. Upon reaching the top of the climb out of the river valley, the display stated 55.4 MPG. 10 miles later, just prior to getting off that 65 MPH highway, the value had climbed to 56.9 MPG. How do you think he'd explain that observation? No wind. Constant speed. Basically flat terrain. How could the MPG have been so darn good without ever having touched the brake?

7-30-2010 **Not PZEV.** If Volt is supposedly a premiere example of being environmentally conscious, how come the plug-in Prius qualifies for CARB endorsed benefits but Volt doesn't? Think I'm picking on Volt? Check out what the media has been saying & publishing about Volt not being PZEV rated. I'm far from alone on emission-ratings this time. Back when Honda fell short, few cared. Yet, Honda cleaned up their hybrids anyway. Kudos to them! Ford hybrids were always clean right from the start, despite being many years ago too. GM was quite opposite, showing little concern for the sake of emissions in favor of high-efficiency instead. That was true for Two-Mode at rollout, BAS at rollout, and now Volt at rollout. What's their excuse? You measure how much pollutants come out of the tailpipe from combustion and the fuel tank from evaporation over a 15,000 mile duration. If it falls below specific criteria and can be maintained for 150,000 miles, then mission accomplished. For SULEV, it's a 120,000 mile guarantee. For ULEV, just 100,000 miles. This is common knowledge. Why wasn't that included as a design goal? I could imagine the clean sacrifice for the sake of efficiency, since that what diesel does and why it only gets a "50-state" rating. Is that what GM did too? With the MPG of CS-mode expected to be under 40, that doesn't seem likely. Maybe the engine runs too cold to cleanse enough emissions. Think we'll find out anytime soon?

7-30-2010 **45,000 Now.** How many times did the plans for BAS and Two-Mode change prior to rollout beginning? It certainly kept me busy documenting the ever-changing story. I knew years later I'll look back and want to review what happened. Who knew so many mixed messages and disagreements among executives would contribute to a bankruptcy? No wonder Toyota is considered boring. Same old story from them. Set a goal. Stick to it. Not GM though. It was a 60,000 capacity with 60,000 intention for the second year of production for Volt. Then it changed to 30,000. Now, it's set at 45,000. Ahhh! Stop the madness!! This is the same chaos we saw before. Why not just keep quiet and deliver what you can? Think it will change again prior to rollout beginning? Complaints about inventory shortages for the first year could easily cause multiple announcements, especially with the state-by-state rollout not be disclosed. Stay tuned.

7-31-2010 **Research Complete.** Remember what my purpose for participating on the big GM forum had been? It was to study as much about Two-Mode as I could prior to rollout. They kept asking why... and never believed I could be concerned about the well-being of that technology. Turns out GM abandoned development of a smaller system (4-cylinder engine) for midsize cars... exactly what I had worried about. There was nothing for middle-market. Being well aware of this and seeing Volt heading in the very same direction, I studied as much as I could there too... all while trying to keep misconceptions from getting out of hand as well. The research is complete now. What they were willing to share has been already. What they are choosing to withhold... hide... conceal... obscure... downplay... keep secret... will be delayed as long as possible. Whatever. Participating in that daily blog for it now doesn't serve much of a purpose anymore. Rollout is just a few months away and it sure looks like there will be nothing for middle-market from Volt either. I really didn't want to learn that particular fact. Bummer.

8-01-2010 **EREV Difference.** Notice how the Volt enthusiasts still haven't come up with anything to easily describe to consumers the differences between a plug-in FULL hybrids and their so-called EREV. The SAE organization places it into the same category as the PHV model Prius, called PHEV. They like to exclaim "*all-electric at all speeds*", but refuse to acknowledge that a hybrid like Prius could be configured to deliver that too. Toyota & Ford haven't seen it as necessary though... since the whole reason for being a hybrid is having an engine you can take advantage of when it's more efficient to use than electricity from a battery-pack. In other words, a configuration like Volt avoids that. You could even go as far as calling it a shortcoming, but why bother? The point is to reduce gas consumption. That means you'll still use some regardless of method. In other words, explain to consumers what they'll be paying for. They still haven't provided anything compelling. Consumers will look at plug-in choices and place price as a much higher priority than aspects of performance... since anything offering a plug will greatly exceed non-plug MPG choices anyway.

8-01-2010 **Ford Plans.** They are quieting aspiring to new heights, planning both plug-in hybrids and full-electric vehicles. Growth plans are somewhat vague. But at least they will be offering choices to consumers... unlike a certain other domestic automaker. It's the flexibility of FULL hybrids (more commonly referred to as the "*power-split*" type now) which allows for the easy adding of a plug and support on a variety of different size platforms. They'll be able to take advantage of battery technology as it progresses too. Not shooting themselves in the foot with "*range anxiety*" scare tactics is a benefit too. It's hard to believe such self-deprecating business practices would be acceptable. Will that other automaker would cut off opportunity like that, especially after supposedly learned their lesson from bankruptcy. Ford's actions narrowly avoided financial disaster. Diversification (not disregarding any particular market) has played a big role in that and will continue to as consumers embrace electricity use.

8-02-2010 **10-Year Anniversary.** It's hard to believe an entire decade has passed already since driving my first Prius. That makes for an amazing coincidence about me getting notification today that I'll be able to participate in Toyota's official "Prius Plug-In Hybrid Demo Program". This where were they loan out that model to select businesses & individuals for real-world data collection. I can imagine how quick the experience will be over. I'll have a blast doing nothing out of the ordinary. I plan to drive the plug-in exactly the same way I do on my daily commute. It will be fascinating to witness firsthand how much of a MPG boost that enhanced system provides. I'll also drive one of my weekend biking trips, to see how the long-distance high-speed efficiency plays out. Even with that extra weight, I'd still expect to see MPG around 50. Of course, what I won't get to experience is the Winter comfort. The system will use the electric heat-pump to pre-warm the cabin prior to your departure. That's a good way to start the morning. Maybe we'll get a really hot day and I'll be able to take advantage of that same ability with the A/C. Whatever the outcome, I'm really excited about getting this opportunity.

8-02-2010 **Demand Twist.** The Volt bump from 30,000 in the second year to 45,000 is more and more looking like a marketing strategy, highly suspicious that it wasn't planned that way all along. Most consumers don't follow announcements close enough. Not realizing that 60,000 was the capacity they had prepared for from the start is an important bit of information conveniently missing from recent reports. All that's seen is a reaction of 30,000 being too few and GM's quick response to provide more. There isn't even a demand to base that response to. Why was the intended production reduced in the first place? To make matters worse, dealers will capitalize on the presumed interest by price gouging. That twist in demand puts the consumer at a disadvantage. There is now an excuse for markups.

8-03-2010 **57.5 MPG.** It really pleases me to see such a high result. My recent trip up to Northern Minnesota delivered that for the calculated tank average. I filled up immediately upon returning. That tank tallied 401 miles. The first 75 miles of travel were part of the previous tank, which calculated to 55. 5 MPG. So, no matter how you want to measure the entire journey, efficiency was outstanding. This is from cruising on the highway in a now well broken-in 2010 Prius. The efficiency is well into the "*will never happen*" category according to GM. They absolutely insisted the previous generation of Prius revealed a shortcoming Toyota wouldn't ever be able to overcome with their approach to motor & engine blending. MPG from continuous high-speed driving would always be disappointing, such efficiency wouldn't be possible. Their design for Two-Mode would be superior. The hype didn't play out the way they hoped... and I'm delighted to point out this real-world driving experience that proves it.

8-04-2010 **Best-Selling Vehicles.** Looking at the top-20 seller list for the United States, I see Prius came in 18th place for both July and the year so far through July. That makes me wonder how antagonists will spin the numbers this time. They try really hard to avoid looking at the big picture by comparing sales of Prius to other vehicles on the market. They attempt to keep focus solely on Prius itself... which makes the 14,102 Prius look rather low compared to the 27,345 Corolla or the 35,058 Camry. Those other sales are high because they are among the most popular for the entire market... hence the list. Many, many vehicles don't sell anywhere near that well. In fact, niche vehicles aren't expected to. For that matter, sales of Volt the first year are only planned for 10,000 and the second year 45,000. The sales for Prius are sustained business to. With the vehicle on the market for an entire decade now, it has become part of the mainstream. Steady profit is the point from sales, so being identified as a best-seller is great. Should I point out the total already for Prius this year is 80,141?

8-05-2010 **Disenchanted.** Exactly as pointed out years ago, the same "jumping ship" scenario is playing out again. We've seen this several times now in hybrid history. A new design is hyped for years. When details are finally revealed prior to and shortly after rollout, enthusiasts simply disappear rather than become supporters. Remember some of those vehicles that never even made it to market? There were many. Of the few that did, both BAS and Two-Mode were major disappoints with active forum posts providing examples of how smug attitudes really can get. Oddly, that wasn't the case for the new model of Insight. Apparently, consumers interesting in Honda are quite different than those for GM. They were quiet all along. That most definitely is not the situation playing out for Volt now. Certain individuals have vanished from existence. Their level of disenchantment is hard to believe. For such prominent opposition in the past to simply be gone is quite a wake-up call. The other enthusiasts hadn't anticipated change to be so dramatic... despite being told over and over again to study history... since the situation with Volt now is a great example of it repeating.

8-06-2010 **Double Sightings.** It doesn't seem like too many years ago when I'd play the sighting game with a friend. While walking through the skyway downtown, eyes were scanning for Prius on the road below. Seeing one was exciting. Then as time progressed, we'd spot several... one at a time though. Now, seeing two at a once is being common. We actually did that three separate times today! That even surprised me. Prius is becoming a regular part of the traffic now... so much so, I couldn't imagine anyone arguing that it isn't. The goal long dreamed about is finally becoming a reality... not standing out anymore. It's something enthusiasts of Volt just don't understand. Mainstream vehicles are boring as far as they're concerned. Too bad they haven't figured out that's what changes the game. They really don't what a vehicle which is abundant, since that's not considered special from their perspective. That's a paradox. I see it as ironic... twice!

8-06-2010 **34,456 Buyers.** Sales in Japan continue to keep Prius on top. This makes 15 months in a row at the #1 position. Just think what that's doing to the mindset there. Sales on that scale easily qualify it as a "game changer". Here, the impact has been softer. Slower sales don't get noticed as much. Fortunately, the overall volume does. You can't drive more than a mile or two without seeing another. That engrains the "mainstream" aspect of Prius deep into the thoughts of potential buyers. Purchasing a hybrid is no big deal anymore. The misconceptions have vanished. Of course, certain competitors keep trying to create new ones. Fortunately, patience is all that's needed to overcome that. Only enthusiasts argue engineering specs. Consumers observe was others actually do.

8-06-2010 **Like Toyota did with Prius.** Posted this today, to the dislike of the Volt enthusiasts: Do you have any idea how much I've had to endure that claim... knowing GM wouldn't actually follow that same approach? Sure, it was a good excuse for the 10,000 production limitation. But it did absolutely nothing to address distribution or price. What Toyota did for the first 1.5 years was force the dealers to serve as a delivery provider rather than a regular sales broker. Toyota provided an online order system which you used to request your Prius. It guaranteed a specific vehicle would be delivered specifically for you with a price of MSRP. Markups were not allowed, period. It turned out to be an excellent way of handling demand that grossly exceeded supply. Consumers were left confident that delivery of their vehicle would occur as promised at the price agreed upon, making the 6-month wait much easier. The chaos unfolding with Volt already makes you wonder how this is all going to play out.

8-06-2010 **Purchase Decision.** It will be based upon price, emission rating, and the expected consumption of gas & electricity. Pointing that out does not make any enthusiast happy, especially those for Volt who are pushing the "sport" image really now. The idea of marketing to the mainstream buyer doesn't have much appeal. That's where steady profit comes from. There isn't a whole lot to get excited about a Camry or Malibu though. Those are the affordable & reliable family movers, so common they don't stand out. You seem them everywhere. Prius is starting to adopt the same reputation. Basics, like how much a person will have to pay monthly toward their vehicle loan and gas, isn't all at sexy. That's why it gets so little attention from enthusiasts. Why can't they see how different their point-of-view is then the mainstream consumer trying to make a purchase decision?

8-07-2010 **Daily-Driving Relook.** The advertisements for Volt from GM continue to refer back to that same old survey. So, I thought I dig into the few details actually available. The report itself was published in October 2003. First thing that comes to mind about that is how good the job market was back then. With a thriving economy, the choice of where you work was plentiful. Nowadays, that's far from the case. How much further are people willing to commute now? I bet it's quite a bit further now than back in 2003. Second thing I immediately seek from that data is how much was actually collected. It states: "*Results are based on completed bi-monthly samples of 1000+ households that are randomly selected...*" Reading that really makes me wonder what subsequent reports reveal. Why is only that specific report the only one ever referred to, especially if on-going samples are available? Whatever the case, that statistic we repeatedly have to endure is based upon commute distance only. Interesting, eh? How was the non-commute data obtained? How does GM really know that "40 miles" is a realistic reflection of overall driving? How far do you live from retail & grocery shopping? How often do you drive somewhere other than work?

8-07-2010 **Thailand Production.** The reach of Prius continues to spread. It's a platform that makes sense for business & consumers on several levels. The practical size & nature of the vehicle itself combined with the ability to offer a plug spans a wide market. The potential is great. So, it makes sense that Toyota continues to push it as the premiere new-technology vehicle, allowing it to grow & diversify. Makes you wonder what the one-size-fits all automaker will do, eh? Lacking the ability to scale to other vehicles or to offer a configuration without a plug leaves them in a much less comfortable position. How will they compete? Anywho, the announcement today was that production in Thailand is being planned now.

8-07-2010 **Judging Success.** It's starting already. Remember what happened with Two-Mode? Rollout was chaotic. Progress was uncertain. Who was going to get what and when was a mystery. The same thing is happening with Volt. Too bad GM didn't follow the approach Nissan is doing with Leaf. That's a present-day example of keeping demand in-check... as well as providing an undebatable method to judge success. The quantity is clear. The timeline is clear. The intention is clear. Just think of what expectations will be from a vehicle someone paid $41,000 for. What a mess. No wonder they make fun of Prius. There's no drama with it in comparison.

8-09-2010 **Finale Published.** There are certain writers in the business that are looked upon as hybrid experts simply because they have published countless articles over several decades covering the automotive market. One particular writer never had anything nice to say about Prius. He simply did not like it. Just yesterday he called Prius boring. He also asked: "*What would real men do for excitement?*" In other words, he's from that same era we got executives like Lutz from... who crave speed & horsepower and only mention Prius to mock it. At 79 years of age, the hope was he'd retire soon. Instead, he died. Ugh! You really don't want to wish that upon anyone. But he did leave us happy. His final publication highlighted 10 vehicles, with the greenest (for lack of a better word) only delivering 485 horsepower.

8-10-2010 **Who?** None of the enthusiasts want to address this question: *Who is the market for Volt?* They'll joke about it. But those wanting the success of Volt will dance around without ever providing an answer. For that matter, they don't want to explain what "success" actually means either. Supposedly, Volt was designed to leap-frog Prius. That implies sales of Prius will drop dramatically upon rollout. With a $41,000 price, nothing about Volt's configuration confirms those intentions. I point out all the direct comparisons to Leaf and references to Camaro-like performance. That always falls on deaf ears... even when I go out of my way to make it clear that Prius buyers are those who traditionally would purchase vehicles like Camry & Corolla. In other words, they are so blinded by the engineering that the basics of business will end up being a big setback. My guess is that middle-market will feel totally overlooked and it won't be until years later that a more affordable & practical configuration will finally be offered.

8-11-2010 **Smug.** How would you respond to a comment like this from a die-hard Volt enthusiast: "*Prius is yesterday's technology. Time to get over it and move on. Embrace the future. Maybe Toyota will even come up with something competitive.*" That's a fantastic example of smug. I felt both frustrated & amused. There's a disbelief that someone would actually go that far, especially knowing how aware of market need is for affordable high-efficiency solutions for the mainstream. Anywho, I responded with this: Notice how that competition word keeps popping up, yet no one ever answered the market question? Buyers of vehicles like CAMRY and COROLLA are the market, those consumers who will hopefully purchase a Prius next. They want well-proven technology for an affordable price. More and more, it sounds like that is not the market for Volt. Since that's where a bulk of the business-sustaining profit comes from for automakers, what future are you talking about?

8-11-2010 **Wonder.** This posted supposedly by a GM technician today pretty much says it all about the Volt rollout: "*I have some real reservations about this vehicle, it is the first hybrid of it's kind to use a series system, and although it has been through some serious testing I know from first hand experience that once a real world customer gets their hands on the vehicle all of the testing in the world cannot anticipate what and how the vehicle will perform in the hands of the public.*" And my reply: Some here wonder why Toyota is taking an extra year to do real-world consumer testing prior to rollout of their plug-in. This is "drive it whatever way you normally would" data they are collecting that no in-house effort could ever achieve. In fact, I'll get an opportunity next week to play with one. Getting 600 of them out on the road and in the hands of random drivers is priceless... none of that coned-lot, low-speed, no-CS-mode nonsense. This is the real thing. They hand over a FOB and cord, wishing me a good time with the vehicle. Just think of the exposure to actual road conditions it gets. Even if they don't find a single problem, it provides the opportunity to refine algorithms in the meantime to squeeze out even greater efficiency. They'll probably be able to whittle down cost a little bit too. GM's focus on November 2010 set a stage for the great unknown, with the whole world watching and paying consumers wondering what to actually expect.

8-12-2010 **CEO, IPO, EPA.** Wow! It's turning into an even bigger mess. The current CEO of GM suddenly announced he'd be stepping down at the end of the month. That's a shock to everyone, especially those hoping to purchase stock from the upcoming IPO. That will make 4 chief executives within the last 18 months. Talking about mixed messages! Now it really looks like we won't get EPA rating information for Cruze or Volt. Withholding that until after IPO had been a disclosure concern. Instead, now it's looking to just be part of the chaos. Uncertainty is part of the game with the automaker. Do you think this CEO will give clear direction for Volt? The enthusiasts just laugh when I point out how setting goals was the norm for Prius, yet claim GM is doing the same as Toyota did. Whatever. Focus on the immediate situation was always a shortcoming anyway.

8-12-2010 **Plug or Non-Plug?** It continues. In fact, pretending the plug-in model of Prius doesn't exist is becoming more prevalent. Some Volt enthusiasts even are implying "Prius" won't ever be possible of certain things. That type of greenwashing reveals growing desperation. With so much business pressure lately and such a lack of data, they are left in a very uncomfortable position. (Of course, that's still no reason for personal insults coming from a few long-time bloggers.) Leaf makes the situation difficult enough. Knowing that a Prius offering a plug will led to a variety of opinions about "degree of electrification", making their efforts to convince consumers that Volt is an EV even though it has an engine a big challenge. It's not as simple as plug or non-plug... or at least for them, especially since there won't be a non-plug model of Volt offered.

8-13-2010 **Leaf & Volt.** I listened to a surprisingly long feature on NPR today. It had one representative from GM and one from Nissan. The Volt references were all vague, nothing new there. We got the typical promotion of how hard they worked to offer stuff we didn't actually need, like the ability to start & monitor recharging from your mobile phone. The Leaf references did all that was possible to avoid addressing duration of recharge. The guy made it sound as though 240-volt connections were no big deal, as easy as just running a cord into your laundry room to plug in the car. He also pointed out the speed of 480-volt recharging repeatedly and brushed off the moderator's mention that such a connection was only for commercial environments, not households. The roundabout way of discussing range & capacity was fascinating. Both dodged detail, skillfully only using canned responses to just about everything. Heck, even business purpose left much to be desired. This is why Toyota has quietly doing real-world testing. It's simply not worth getting involved in hype.

8-14-2010 **NHTSA Investigation.** 58 event-recorders from supposed "unintended acceleration" vehicles have been studied. 35 revealed that no brake was applied. That's evidence of driver error. Hysteria often contributes to situations like this. People panic. Wrong pedal. Of the remaining, 14 suggested partial braking, 5 didn't record anything, 1 a jammed accelerator pedal, 1 both brake & accelerator, 1 an unrelated incident, and 1 had inconclusive data. Prius owners knew there wasn't a massive automaker conspiracy all along. With such heightened awareness of Toyota vehicles, how come we never heard of such incidents until the abrupt start a few months ago? What about the 10 previous years? How could the problem suddenly disappear as quickly too? No electrical malfunction or design defective was found. Of course, the media doesn't report that. In fact, they've been mysteriously silent about the findings... a dramatic difference from the extreme state of fear they conveyed just a few months ago.

8-14-2010 **Haunt Later.** The denial is growing. Volt enthusiasts are clearly not dealing with pressure well, since the best they can do is misrepresent the plug-in Prius. Ironically, tomorrow night is when my collection of daily-driving data will be complete... first whole year anyway. It also could be when Toyota drops off a plug-in Prius for me to play with. Hopefully. If not, the next morning. Then I'll be able to chime in with observations of my own. That's even better than quoting what my friends have reported! What a great opportunity!! It's detail coming from experiences like that which really levels the playing field. This is what I posted in the meantime, frustrated by such greenwashing attempts: Interesting claim. I've known people who got behind the wheel, observed that distance, hard acceleration, and faster speeds, yet those reports are simply dismissed. Raise doubt to the contrary, eh? Whatever. Those words can come back to haunt later. For me, it's the same old measure of merit. Progress is indicated by actual sales. 5,000 per month is mainstream volume. 15,000 per month makes the top-20 list. 30,000 per month is a best-seller. How much for a game-changer?

8-15-2010 **Honda Trouble.** Timing is never good. But in this case, it is especially intriguing... just prior to sales of plug-in vehicles. There's a long thread rapidly growing on a big automotive forum and there was an article just published by a very popular newspaper. It's specifically about battery-pack deterioration and in a few causes actual failure. IMA is quite different from HSD. It is the type of hybrid with only a single small electric motor. There's no independent operation. It's integrated directly to the engine. Consequently abilities are limited in comparison. Unfortunately, that lack of flexibility seems to be causing more of an impact than anticipated. In other words, the operation is hard on the battery-pack. In response to this, Honda has issued a fix. That changes the system to rely less on electricity... which reduces both power & efficiency. That makes its design even less competitive. However, some of us are beginning to wonder if consumers will understand that. What if they instead see that as a problem with hybrids in general? Also, what does this mean for warranty coverage and emission rating. Neither ever anticipated a "fix" of this nature.

8-15-2010 **PHV - First Plug.** It's a surreal moment when 2 guys driving 2 Prius stop in your driveway to leave you 1, especially when there already is 1 in your driveway. All 3 there were quite a sight! They handed me the FOB, showed me the cord for plugging in, then wished me a good time. Wow! I couldn't believe that had just happened. And of all day's, it was my late father's birthday! He was the one who taught me all about cars. That was the dream he and I shared... which had just become a reality. Hooray!! Needless to say, I was ready to plug-in for the first time. I pulled that Prius into the garage, shut off the power, then grabbed the cord. After securing the end to the wall (and testing the connection via a button on the controller), I opened the recharging door, and connected the socket. A little light on the dashboard illuminated. That indicated recharging had begun. (I suspected it would shut off later when complete.) There was a sound. Hmm? I knew exactly where to look, since I had already read the manual. Sure enough, under the passenger seat there was a fan on the charging unit spinning away to keep it cool. Interesting. It's another way of knowing for certain recharging is taking place. I hadn't considered of that. Cool!

8-15-2010 **PHV - First Drive.** My first drive with a PHV model Prius started with 3.7 miles of EV available. That's all the time I had to recharge. After all, how long could you wait? They delivered it with both EV sub-packs drained and the sun was already starting to descend. So, that's at least some electricity to play with. Of course, my destination decision would put the plug-in to the test immediately. The voyage to mom's required a climb out of the valley. That starts with a 30 MPH section, a short gap before the stoplight, then gunning it up the 45 MPH hill. It's pretty steep. The 2010 loves showing off there with the PWR button, especially when a slowpoke turns right before you. I often zip by them. No need today. I had the road to myself... and zipped right along. Until that moment, the entire climb had been with electricity. That dropping of the pedal fired up the engine. It shut off as soon as I hit the summit. Down the other side was fun. MPG was amazing. Then the EV ran out. The system reverted back to hybrid mode. MPG was still amazing. In the end, the round-trip was 15.5 miles of suburb driving. That usually results in MPG of low 50's. With the plug boosting efficiency, I ended up seeing a value of 66.6 MPG. That's great, though a bit disturbing if you are superstitious.

8-15-2010 **PHV - Exploration.** That opportunity earlier in the day was a rush out the door. There was little time with the sun quickly disappearing and not even enough charge to make it to my destination using only electricity. Oh well. That's what this next trip was for. It was late in the evening and the Energy Monitor showed there was 14.0 miles of EV available. That was my time to explore. What an amazing opportunity! There was little traffic and the darkness would make photo taking easier. My decision was to take a drive that included a long suburb climb up, a long stretch of flat suburb, a long suburb decent down, then a jump onto a 65 MPH highway. That was good variety to give me the chance to quickly familiarize myself with the finer points of this enhanced hybrid system. I hadn't reset the trip-meter. So only 3 miles into the drive, the average consumption showed 78.5 MPG even though the engine hadn't started since leaving my garage. Seeing that actually frustrated me. I ended up resetting a few miles later. That worked out well. I got a great shot of the Consumption screen showing lots of 100 MPG segments with two dipping just below 50 MPG for the acceleration on the the highway. It was my first chance to see the RPM still at 0 even though the Prius has exceeded 46 MPH. Eventually, the EV sub-packs both became depleted. To my delight, each following minute segment confirmed efficiency was pretty much identical to the 2010 at that point. Statistics from the ScanGauge revealed the 33.8 mile trip averaged 84.6 MPG. That really makes me wonder what the overall average will be in the few days when I have to return the PHV.

8-15-2010 **PHV - Battery.** My desire to explore the new technology I had just acquired was usurped by the reality of darkness quickly arriving. Preparation with cameras and planning a drive-strategy to capture as much as possible, as quickly as possible, while learning as much as I could, delayed the close look I had yearned for. Now, I had a chance. The false floor in back is now a real one. Rather than a storage area underneath and a spare-tire below that, it was all battery. In fact, it was about 2 inches higher. Laying the seats down to expose the entire hatch area brought a nice sight into view. It basically works out to an overall flat surface, since the hinge of the seats is lower than the folded down part anyway. Interestingly, there are 2 new vents I hadn't expected... at the base of the seats by both back doors. There's a bottle of sealant and plug-in compressor in compartment shared by the 12-volt battery, should you have a small puncture type flat. There's also a long, then storage area for items like an umbrella. Anywho, it appears well thought out. There's no hint of extra weight being supported in back either. I like it. The 3-wheel recumbent bike will fit inside just fine... along with all the other cargo I routinely take up north. Fitting that bigger battery isn't a big deal.

8-16-2010 **PHV - Superiority.** Before getting too deep into my plug-in adventures, a comment needs to be made about the Volt enthusiasts. Their reach doesn't extend much beyond just that daily blog; nonetheless, they've still been a royal pain in the backside. Rather than just accepting Prius (or Leaf, for that matter) as a fellow plug-in vehicle, it's been nothing but a superiority yelling match. If you post anything they don't like, even if it is related directly to Volt, you get a bunch of negative votes. All many want is just a place for cheerleading, leaving the constructive part to just a few who post in the form of one-way information dumps. Discussions simply aren't welcome. They've set the stage. Rather than risk the burning of a bridge later, they didn't allow any to be constructed in the first place. Well, I did want a clear stance from them prior to rollout beginning. They feel Volt is the only valid choice and a vehicle such as the PHV is like... as they so eloquently put it: "*spitting into the wind*".

8-16-2010 **PHV - Fast Commute.** It was a beautiful Summer morning. I couldn't believe I was about to embark on a historic voyage. It was the usual time I leave for work, taking the usual route, but not the usual Prius. This time, I was behind the wheel of a plug-in. The PHV model has promised great potential. In a few moments, I would witness it firsthand. Yippee! 14 miles of EV capacity were available. I was about to jump onto a 70 MPH highway (after a 3 block suburb drive) and travel at roughly that speed for about 9 miles. 2.5 miles into the drive, the display revealed 72.7 MPG. Not bad for a fast acceleration & merge uphill. By 4.0 miles, the Prius had a chance to glide down the hill... pushing efficiency above the maximum display value of 99.9 MPG. Reaching the end of the 70 MPH portion of the commute, the engine shut off. I managed to snap a photo of the ScanGauge reading 58 MPH with 0 RPM. Sweet! Just prior to reaching the parking lot at work, the final electron available from the EV sub-packs was consumed. The system reverted back to HV mode. I parked, snapped a few more photos, then took a closer look at the aftermarket gauge again. It revealed 160 MPG so far. Time to return back home. At 25.3 miles of my 33.4 mile round-trip, MPG dropped below 99.9 for the first time. I watched with much anticipation, wondering what that final value would be. Upon pulling into my garage at home, it stated exact 80 MPG. Looking at the gauge for a second opinion, it said 76 MPG. Maximum travel speed was 72 MPH. Maximum engine speed was 3,917 RPM. Overall distance I've traveled so far 83.6 miles displaying and overall average of 79.3 MPG. That's fantastic!

8-16-2010 **PHV - Slow Commute.** This morning was the commute to & from work on the 70 MPH highway. This afternoon was suppose to be the commute on 55 MPH highway. That turned out to be pointless. 10 minutes into the journey, driving up & down hills, accelerating from a dead stop, you name it... none of that caused the engine to start. Seeing 99.9 MPG throughout the drive makes for a rather uneventful experience. So, I decided to cut through a neighborhood and take the 70 MPH highway back home while I still had some EV left. That got things interesting. Brisk acceleration (specifically 3,746 RPM maximum) merging on fired up the engine. I knew that was going to happen. What I didn't know was what would happen when settling down to a cruise at 63 MPH, just above the EV threshold. To my surprise, the display showed only electricity feeding the tires. Huh? Looking at the ScanGauge confirmed it. The engine was only running at 1088 RPM. So basically, all it was doing was just idling... at an amazing 315 MPG. I had no idea spinning with so little load could be so efficient. Sweet! Overall, the 13.2 mile drive was 70% EV and 30% HV with 0.9 mile of EV remaining. On the gauge, that came to 191 MPG for the drive overall. Gotta love that.

8-16-2010 **PHV - Design Intentions.** It didn't even take 100 miles of driving the PHV model for me to come to the conclusion that it was the intention of the new design all along. I had always suspected that with the oddity of the EV-button and remarkably "convenient" eco-meter. Claims of the 2010 being retrofit after release to support a plug fall flat after sitting behind the wheel. The previous generation demonstrated the ability rather well, but not an actual goal to deliver it. This one does... the effort to generate & retain heat... the ability to briefly fire up the engine for peak power... the simplicity of efficiency reporting... the easily concealed EV sub-packs... the powerful electric motor... and of course, the price. All the pieces fit into place. Though, much of the guess work is gone when there's already one recharging in your garage. It's clear that Toyota has a well thought out system that the masses will purchase won't much consideration. The intent makes sense.

8-16-2010 **PHV - Dealer Visit.** I gave my salesperson a heads up that I was going to stop by with the PHV. Upon arrival, those from the dealer quickly approached. There was much curiosity. Answering questions from them was great... except of course, the "how did you get this" ones... since the more I pointed out subtle design differences, the more they wanted to know how I could get such an opportunity to drive one before them. I do feel quite privileged by the opportunity. The feedback I get from showing others I casually encounter is priceless. That's the real thing, not a "what if" scenario. One person actually had to take a photo in disbelief, after me not saying a word and simply pointing out the factory plug connection. You can see the profound reality sinking in. Each of their eyes told the same story. No more "someday in the future" anymore. The question has changed to "when can you buy one". That visit to the dealer certain was memorable.

8-16-2010 **PHV - Remote A/C.** I found this particularly amusing. Seeing daytime temperatures only at 72 F degrees and the night low down to 59, it wasn't exactly the ideal time to test the remote A/C. I wouldn't know the effectiveness. But with the opportunity so limited, you try it anyway. The PHV was plugged in. That meant the request to start the A/C would be acknowledged by drawing electricity through the cord, rather than using the battery-pack. I reached in my pocket, pulled out a FOB, then pressed the A/C button. Nothing. What the heck? Being in the garage, I certainly should have noticed any activity. Hmm? Then suddenly my own Prius parked at the end of the driveway came to life. Oops! Wrong FOB!! Since I have the solar/moonroof package, that Prius also has an A/C button. Ugh. Now I had to walk down there and open the door to shut off the system. The air blowing out of the vents was already cool. That was impressive, but not what I wanted to test. Alright, try other FOB. This time the correct Prius came to life and responded equally as quick. I can't wait to try that in the Winter, when heat comes out instead (by running the A/C backward as a heat-pump).

8-16-2010 **PHV - MPG Boost.** More than anything else, this is what I wanted to witness firsthand with the PHV... since that's what I've been promoting all along... especially when engaged in impassioned debates with the Volt enthusiasts. Using EV itself obviously contributes heavily to efficiency overall. The question was how much of a gain could be acquired from traveling at speeds above the engine-off threshold. Hmm? I had no idea the evidence of boosting then would be so blatant. Driving at a constant 63 MPH on flat highway, the result was undeniable... and way higher than I had anticipated. Seeing 315 MPG was quite a surprise. Whoa! The engine was turning at just 1088 RPM. It was quite clear that the light load on the engine was caused by a strong electric contribution from the traction motor. In other words, the purity of EV at speeds above 62 MPH isn't a big deal like some would lead you to believe. Slow clearly isn't necessary for efficiency well above what the non-plug Prius delivers.

8-16-2010 **PHV - Evening Cruise.** With the EV sub-packs fully replenished, I was looking for a longer distance destination. My brother welcomed the opportunity to see the PHV model. Perfect! He lives out in the country. That meant a cruise at 55 MPH in ECO mode half of the way there and the entire way back. It was a bit chilly, only 63 F degrees heading out and 59 at times on the way back. That was less than the ideal 70's experienced so far, which added to the curiosity. 25.2 miles was the drive there. Top speed was briefly at 62 MPH. The fastest RPM was 3,392. The efficiency measured on my aftermarket gauge stated 127 MPG. Sweet! The return trip brought total distance to 50.5 miles. Engine maximum was 3,405 RPM. The average displayed on the eco-meter came to 78.5 MPG. The EV to HV ratio was 23 to 77. Overall distance traveled to that point: 162.1 miles. Overall average from that: 82.7 MPG. I'm obviously enjoying every minute behind the wheel... and then some!

8-17-2010 **PHV - Acceleration.** One of the most misunderstand (consequently, most greenwashed) aspects of the plug-in design is how much power it can deliver. Since many of the antagonists have only had brief exposure (sometimes none) to Prius, it's very easy to make assumptions and even easier to simply claim something that isn't true. So, as you could imagine, having a PHV model to play finally brings a large dose of reality. Li-Ion batteries alone offer greater discharge opportunities. The same is true for recharging as well. That means even without a plug, you'll experience a performance improvement. It's quite a surprise to see how effortlessly you can accelerate when EV is available without the engine starting. My initial jump onto the highway repeated itself again today. I'd get up to about 55 MPH climbing the uphill ramp then notice the engine join as I continued to accelerate. Needing to get up to 70 MPH for the merge, it's pointless wasting electricity anyway. You actually want to push the eco-meter into the PWR range. Just like the others who have driven a PHV, you prefer to use the engine during times of high-demand. That turned out to be the case for me too. What I found most interesting though was the reality that performance isn't degraded at all after reverting to ECO mode after the EV sub-packs are discharged. In fact, at that point it seemed just like my 2010 on the highway. There wasn't even any indication of additional weight in back.

8-17-2010 **PHV - Back Commute.** This was the fun one, probably the most realistic of my driving so far since it included more than just going to work and back. I'd take the suburb route, on roads I take in the depths of Winter when snow & ice traffic is horrible. It's the slowest, but by far the most scenic & enjoyable. That makes for a nice casual ride to unwind from a long day at work... or when you're about to face one. I knew that would take the most advantage of EV. My stops to document the journey with photos took me a little out of the way. But that's fairly realistic when stopping for food or something on the drive anyway. There I got a nice photo of the Consumption screen showing 18.5 miles with an average of 99.9 MPG, despite the obvious indication of the engine having been used twice. For my return trip, I took the back way. This adds about 10 miles to the drive but brings me by my mom's, the lake (we often walk the dog there), the grocery store, the bank, and several retail stores. So, it ends up saving me both driving distance and time on the way home. At 29 miles, that's when the average finally dipped below 99.9 MPG. At 37 miles, I arrived at the exit to get off the 65 MPH highway and get on to the 55 MPH. At that point, it said 83.8 MPG. 2 miles down the road is where I stopped to take photos (at the military ruins). It was a gorgeous day, absolutely perfect for that. When I finally arrived at home, the drive came to a total of 54.3 miles and displayed an overall efficiency of 73.0 MPG. Gotta like that. Maximum RPM was 3,636. Maximum MPH was 65. The temperature was an amazing 72 F degrees, so obviously I didn't use the A/C.

8-17-2010 **PHV - Winter.** Questions about performance in Winter is the common interest I'm seeing already. Sure, it works now in the Summer, but what about in January? Minnesota can be cruel in the cold. How will that affect the batteries? What about heat? Will distance be shorter? Is acceleration hampered? The theme is obvious, since that's the same thing I remember 10 years ago. That first Winter with the 2001 Prius just happened to be a really bad one too. Seeing photos and reading stories of my travel in those conditions drew a lot of attention. It was overwhelming proof that the system could handle extremes just fine. I'd certainly like to do the same again, this time for the PHV model. I'll suggestion it. I suspect the demand for them is already scheduled out for quite some time. Being available nearby will likely be a challenge as well. But it never hurts to ask. Another endorsement from me would be a lot of fun. I'd love to observe the heat-pump in action! Even getting stuck in the inevitable stop & slow traffic from heavy snow would be enjoyable. Wish me luck.

8-17-2010 **PHV - Price.** Think about the goal for Toyota. It's to keep price of the plug-in model affordable, configuring it as option you select when choosing a package rather than it being an entirely different vehicle or class. They don't have to include the NiMH battery-pack, giving them roughly $2,000 more to work with. To keep the overall price in the affordable range, they said this Prius would be somewhere in the middle when it comes to features. Figuring the cost of the battery-pack, charger, wiring, socket, and cord comes to around $6,000 or so, that magic "*nicely under $30,000*" could indeed be realistic. That's the target GM had set for Volt so it would appeal to a large number of consumers. Obviously, that didn't work out. But for Toyota it certainly seems within reach. With capacity at 5.2 instead of 16 kWh, the design of PHV certainly does seem to keep low price as a priority. Achieving high-volume sales and becoming part of the mainstream requires that.

8-17-2010 **PHV - Long Drive.** I didn't have enough time to fully recharge. The final night of PHV opportunity had already arrived and the sun was quickly setting. Missing that excellent lighting wasn't worth the extra electricity. Time to start my long drive. The journey began with a jump onto the 70 MPH highway, allowing me to witness the ultra-high efficiency gained from the sub-packs despite the speed. I snapped off as many photos as possible than and later when the highway slowed to 60 MPH. That was close. Very little EV capacity remained and I really wanted to capture the 0 RPM experience on the my gauge. Got it! I first drove to my sister's place. Visited awhile. Then jumped in the Prius again to visit my best friend. 32.3 miles at that point. Only 4% EV and 96% HV. The drive home changed it to 2% EV and 98% HV for a total of 64.7 miles. Take a moment to think about the efficiency. With so much non-EV travel and distance well beyond the "*14 mile*" range, I bet there are many who won't believe the 69.4 MPG average was actually achieved. Delivering such high numbers is certainly not what certain people are hoping for from a so much smaller capacity battery-pack. That should make the automotive industry stand up and take notice! That entire long drive worked out really well. Data for the drive back (well after the sub-packs had been totally depleted): maximum speed 71 MPH, maximum engine 4,474 RPM, maximum temperature 198 F degrees, and 61.2 MPG on the gauge. Overall distance traveled since I got the PHV at that point was 298.2 mile displaying an average of 79.4 MPG. Sweet, eh?

8-18-2010 **PHV - Less Engine.** What an amazing opportunity. My jump onto the 70 MPH highway with 11 miles of EV still available came at a perfect time. The sun was on the way down, traffic was very light, and I had taken most all of the photos I wanted already. So, I perched the camera in a position to snap a photo of the ScanGauge when I encountered something exciting while cruising. Seeing 233 MPG while at 70 MPH on a flat section of highway was amazing. RPM was at 992. That's the lightest load for engine running, consequently the most efficient. And you got it, I captured nice photo of that moment. I also reached the highway section where the speed limit drops. There, I got a great photo of 9999 MPG. Speed was 60 MPH. Engine was at 0 RPM. Gotta love that! Reducing frequency of engine use a natural progression for Prius. Witnessing it firsthand in 2010 is fantastic. Who would have thought precisely 10 years after deliveries began I'd be on the highway using far more electricity than the Classic model offered.

8-18-2010 **PHV - System Data.** We have long desired simple, yet informative, values indicating what the engine does while traveling at high speeds in a PHV model Prius. Unfortunately, to capture those numbers on my aftermarket gauge would be a challenge. Lighting couldn't be too bright or too dark. That meant taking photos could only occur precisely at dusk. To complicate matters, I needed a stretch of highway which was flat, everyone would be traveling at the desired speed (for safety), and it was close enough to reach using the battery-pack power currently available. With only 11.4 miles of charge at the time and that stretch of highway was almost 10 miles away, it was going to be tight. Fortunately, getting there required travel at 70 MPH, which provided lots of photography practice opportunity prior to arriving. I wedged the camera (HD video with the button set to continuous photo capture) between the seat and the center console aimed directly at the gauge. All I had to do was hold it perfectly still and drive at a steady pace. Easier said than done. It worked! I got a great shot at 70 MPH with the engine at just 992 RPM and the efficiency indicating 233 MPG, a clear indication of the boost you get when driving fast. Sweet! The speed limit dropped. I arrived. Now was my one & only chance. 60 MPH at 0 RPM. That's practically perfect. 62 is the maximum. But since that's a first or its kind photo, I'm pretty darn happy. Phew!

8-18-2010 **PHV - Charge Level.** Routinely seeing the charge-level indicator full is quite a sight. That's incredibly rare with the non-plug model. What also happens quite infrequently without a plug is the low end. Since the battery-pack is so much larger in the PHV, only 2 bars when in ECO mode makes sense. That represents a decent amount of capacity available still. So, you will only see 3 bars from time to time. I anticipated that a number of times, surprised not to. But I hadn't thought of the situation prior to actually getting behind the wheel of one. It's basically just a programming choice on what to display how much the interface should vary from the other model. I didn't see 4 bars in ECO, nor expected to. In my 2010, it's 6 bars that are displayed most of time. Dropping to 2 is quite predictable. That happens when trapped in heavy traffic like construction delays or an accident slowdown. The engine fires up when you move then, in the 2010. In the PHV, that's not the case for 2 bars. Electricity propulsion is still readily available. In short, charge-level differs.

8-18-2010 **PHV - Hill Climbing.** With most of my research complete, it was time to seriously play with the EV. Not just anything timid either. I really wanted to push it. Living near the bottom of a steep valley (great for sunsets, terrible for biking), my location was ideal for this. Well after midnight, I'd have the roads to myself. I unplugged the PHV and headed off into the night. Starting from a dead stop, I squashed the pedal well into what's consider the "white" zone on the regular 2010. That's when the engine runs but is still within the efficiency range rather than power (the second half of the eco-meter). On the PHV, that's a greater range of EV available for you. And it certainly was! Wow!! I was shocked. The Prius shot up the 1/3 mile stretch hitting the 40 MPH limit at a brisk acceleration rate. That was amazing! It was the discovery of the magic demonstration to perform for someone "on the fence" about whether or not to purchase the PHV. I can't wait to show others that. In fact, I couldn't wait myself. So, I went around the neighborhood and did it 3 more times! The experience instantly became a memory I'll cherish for many years to come. That amount of EV power will really antagonize the antagonists. They've been claiming hard-acceleration below the 100 km/h (62.1 MPH) threshold isn't possible. Clearly, they're wrong.

8-18-2010 **PHV - Temperature.** Seeing only 93 F degrees as the coolant temperature while driving is something totally new. With the non-plug Prius, that never happens. Heat is needed for the emission's system (catalytic convertor) to cleanse exhaust; otherwise, the required chemical reaction cannot take place. That warmth comes both from the coolant which is heated by the engine and the exhaust itself. If the coolant is on the cold side (it needs to be 100 degrees warmer), that heat obviously isn't available. This is why the first few minutes of the non-plug Prius is always lower efficiency than afterward. An energy exchange from gas to heat takes place then. The temperature increase doesn't take long, but you certainly notice the MPG impact it makes... with the Prius you don't plug in. However, the one with the plug is different. It is well aware of the need. When there is ample supply of electricity for EV still available, allowing the engine to cool in the meantime is no big deal though. Firing it up when getting close to both EV sub-packs being depleted would be an indication of effort being made to retain the PZEV emission rating. Sacrificing gas for the sake of being cleaner overall is nothing new for Prius. In fact, emissions it has always taken a priority over efficiency.

8-18-2010 **PHV - Final Drive.** With the clock clicking down to the last 2 hours before Toyota would come to pickup the PHV, my desire was to go on a final drive using nothing but EV. It would be a practical trip too, since I needed something quick but filling to eat to hold me over in the meantime anyway. Running around trying to capture last-minute photos takes lots of energy, right? Good enough excuse for a mini road-trip! That 6.2 mile journey took over 15 minutes, including the wait in line at the drive-thru. So naturally, the entire Consumption screen was filled with 100 MPG segments. I really enjoyed that particular image. It was a wonderful experience. Too bad I didn't have more time. But then again, the urgency of the situation probably pushed me to document more than I would have under normal circumstances... and all those photos will help me to remember detail I may have otherwise forgotten. But not this final drive. That will easily be remembered.

8-18-2010 **PHV - Goodbye.** It was as surreal of a moment handing the FOB to someone then as it was when handed to me a few days earlier. I knew that moment in my history would be deeply embedded in my mind and remembered over & over again. I was saying goodbye to what had been a dream come true... getting to explore the newest model long before it would be rolled out to consumers. It was an opportunity to play with the advanced technology my own way. I could choose where to drive, how fast to drive, how far to drive, and how often to plug in. That's quite an expression of trust for all parties. I was finally involved on a deep level, gathering real-world data I could share in my contribution to the reduction of emissions & consumption. Promoting a vehicle you actually get to explore to that depth is easy. It makes the purchase decision a no-brainer too. Still, watching it leave your driveway knowing you won't get the chance to play again for quite some time is difficult. It was totally worth any emotional trauma! I'm very thankful for the opportunity.

8-18-2010 **PHV - Range.** Much emphasis has been placed on "range" expectations for plug-in vehicles. With the observations from Leaf so far spanning from 47 to 138 miles, I can't imagine how knowing an estimated value makes much difference. We now know that Volt efficiency is greatest at 50 MPH. Was that particular speed how the "40" was derived? What does it mean for faster and slower speeds then? And of course, what happens to range when using the heater? There are many questions like that. At least, Prius makes looking at the situation easier. The electricity isn't always used when a more efficient method of propulsion or heating is available... which is often and the PHV model takes advantage of those opportunities. Instead, it's more a matter of kWh capacity. How close or how far you are from empty or full is the gauge. But specifying quantity in those units is somewhat arbitrary. Even Toyota has decided to indicate the value in terms of "miles" to keep things simple. Consumers will look at that as "range". Is that informative enough? Since results are stated in terms of MPG, my thought is that will work out fine. We'll see.

8-19-2010 **PHV - Engine Power.** The impression I got from the others who have already driven a PHV was that once the EV sub-pack charge-level dropped down to about 1.5 miles the engine trigger would become very sensitive. I hadn't put that into proper context. The behavior makes perfect sense. The system is attempting to preserve EV availability as long as possible... kind of like it does with the current stealth. Only thing is, I hadn't considered what those others currently drive... not a 2010 like me. Not being accustom to having an eco-meter available would skew perspective. It didn't take long with me back in my 2010 to recognize the sensitivity. EV is far more forgiving than the engine. That's the purpose of it being a hybrid... to have power available from the most efficient source as quickly as possible. Readily available is good. Quick response means more efficiency opportunities taken advantage of.

8-19-2010 **PHV - Outlook.** The anticipation has changed. Since driving the PHV model, waiting for it to become available has become easier. Confirming what will actually be delivered helped a lot. I've witnessed so many Volt enthusiasts end their online participation in grave disappointment, I knew my research needed to be exhaustive. I didn't want to make assumptions like that. The problem most often comes from getting so caught up in the engineering that the business side is disregarded. The biggest contributor of past problems was price. Since high-volume production commonly leads to much lower prices, it was easy for them to not take the initial cost seriously. And sure enough, that's a big problem now. In other words, Toyota engineers were given a budget to stay within and GM engineers were allowed to spare no expense. One will be affordable right away. The other will remain very expensive for years to come. I wanted to know how the affordable would perform. How much of a MPG boost did the sub-packs actually provide. Turns out, quite a bit is gained from being able to plug in... even with that smaller capacity. Performance aspects (like handling & acceleration) were not sacrificed either. That sure make the outlook for 2012 very promising.

8-19-2010 **PHV - Photos & Video.** There certainly was a lot of camera activity when I had possession of the PHV. The video I took was crude and mostly just for reference later, when I need to verify behavior. Bouncing around and concentrating on the driving, that footage will just serve as a second set of eyes. It may prove helpful for the timing of events too, since I often just left the camera recording non-stop in the passenger seat... readily available should I need to document something. The photos are what I'll be concentrating on. That camera got quite the workout... 2,806 moments captured to be precise. Digital sure makes it easy. With so much storage-space available, batteries lasting so long, and quality so high, the digital camera is a miracle. 10 years ago it was too, but documenting experiences with the 2001 Prius presented challenges back then. Then technology certainly has come a long way since then. Using it to share information about what the future will offer is wonderful. Thinking about how many times I'll refer back to what I did the previous few days over the next year boggles the mind. Having actual real-world data available is fantastic!

8-20-2010 **PHV - Looking Back.** It's a bit early for that. I'm in awe still. To have had the opportunity to plug & drive as I desired, getting to test out various aspects of the design I have long been curious about, was incredible. Study of the engineering only takes you so far. Elements of reality sink in quick when you pull out into the daily commute. Those on-paper scribbles many often try to pass as an expectation often fall way short by the exclusion of factors to complicated to take into account... like the influences of traffic, weather, hills, wind, time, etc. Seeing how often the flow of energy changes in the non-plug models of Prius, I really wanted to know how much the plug-provided electricity would contribute to MPG. That boost should be significant, but by how much. We already knew that the liquid-cooled traction motor could be used continuously. Owners who descend mountains already see this routinely. This was my chance to do it from my own garage, driving on roads I have to deal with everyday... with a whole lot more electricity than usual and a hybrid configured to take advantage of that. It was pretty sweet!

8-20-2010 **PHV - Memories Already.** The first of the photos are now available. Knowing it would take forever for me to sort through and make selections, I pulled out the first five that really jumped out at me to share right away. This particular location has served as a wonderful backdrop in quite a few of my Prius photos over the year. When I take the back way home, I drive right by it. So catching clouds & lighting at just the right time isn't quite so difficult. Still on this particular day, I really lucked out. The clouds were spectacular. I needed somewhere with shade to pull over and take display photos anyway. Pulling out from the trees after and diving right into the scenery with the camera afterward worked out great. Of course, during the height of growing season out there in the depth of green country, I had to sweep off the grasshoppers. For some reason, they enjoyed jumping up onto the Prius at each stop. Oh shiny! It was an amazing Summer day and spending it with a PHV made it even better... photo album 152

8-21-2010 **Tires Rotated.** Actually, it happened 3 days ago. But I didn't want to mess up the flow of the PHV entries. So, you get the information here instead. It was back to the reality of the 2010... only getting MPG in the low 50's. That takes a bit of time to readjust to, right? 25,073 miles on them at this rotation. It will be the last. The previous rotation lasted 15,000 miles and brought the fronts up to the final stage. Now in back and the deeper tread in front, the Prius should be sitting good all the way until replacement. I expect both to be fairly even by the depths of Winter and enough rubber left overall to make it all the way through. Wear itself is even. Checking tire-pressure weekly ensures I'd notice one out of balance or alignment before the tire got damaged too bad. Fortunately, all is well. There's very few potholes around here and I'm lucky enough to not smack into curbs. All is routine. No excitement is a good thing. $21.28 was the cost for this rotation.

8-21-2010 **Fourth Oil-Change.** All seemed to be going perfectly. Getting the Prius up on the ramps has actually become fun. With it still new, thoughts of using the jack had crossed my mind last time. After all, that would provide more height to work. But the torque of the electric-motor makes climbing up no big deal, even at a snail's pace. So this time, the choice was the ramps. The work itself is somewhat of a treat regardless of whether or not there's extra room underneath, since everything's so clean. Having the engine compartment sealed off by plastic is definitely something I wish automakers had introduced ages ago. Oh well. I've got it now. I've got a filter canister instead too. Only having a paper insert as waster rather than a metal casing is nice in several respects. Though, getting it off is a different matter. I was always a bit apprehensive about putting the wrench on too tight. What if it got stuck? The canister housing rotates so nice, but that first crank to loosen it isn't easy. Fortunately, this time it wasn't a chore at all. Oh! Oh! Too easy. Sure enough, I wasn't as timid as I had hoped. It was stuck, really stuck. The thought crossed my mind to tap it with a hammer, figuring the act of straightening it would cause it to just pop off. Instead, just the opposite happened. It appeared to slip into a permanent bond position. Bad? Good? I couldn't tell. With such a perfect fit, it would never be a problem ever again. The plastic now had a snug metal harness over it, the complete socket attachment. Well... I'm thinking that's ok. How bizarre of a "mistake" is that? 10,000 miles later, I may actually be suggesting others try the same thing. Good thing too. Turns out, the Prius wasn't actually due for a change yet. Ugh! That switch to 10,000-mile intervals, those recent adventures with the PHV, the tire rotation, along with the illuminated indicator were enough of a distraction to cause me to think being at 25,252 miles meant it was time. Oh well. Cost was only $33.84 and the unintended wrench "discovery" could turn out to be priceless.

8-21-2010 **Still Frustrated.** Watching RPM on the aftermarket gauge, my frustration is still quite potent. Slow RPM like that (idle rate) is the lightest load from the spinning engine, consequently the most efficient state. With the 2010, observations of 145 MPG then are common, though brief due to it being an "in between" phase. When that happens, the engine warm-up will be complete soon. That means it will either take over as primary power source then or shut off. That's not the case with the PHV model. If you're traveling at speeds above the EV threshold, the engine will stay that way as long as it can... until you either need more power (for a hill or passing), slow down, or the sub-packs become depleted. The 233 MPG witnessed at 70 MPH was fantastic. The 315 MPG at 63 MPH was truly remarkable. That contribution to efficiency through the use of electricity to reduce load on the engine is obvious. It now changes those comments from the Volt enthusiasts to acts of antagonism, if they chose to continue to make those claims. So, I really should relax at this point. There are even photos to support the reality that more than a single technology can answer our calls for reduced emissions & consumption. Of course, whether or not each is affordable is an entirely different matter.

8-22-2010 **6 More PHV.** Today it was the city of Syracuse, New York getting attention for taking delivery of 6 plug-in models from Toyota. 3 different organizations will be using them for 12 to 24 months. It's the longest duration I've heard of for collecting PHV data. Getting a variety of driving from a variety of sources over such a time-span is great. Data will be uploaded to a website Toyota will be providing. People will be able to lookup up usage information and the kind of real-world efficiency they're getting. This should help to paint a clear picture of what consumers will actually encounter in the real-world. It's the next step to take beyond estimates & testing. After all, just because it works well doesn't mean expectations will be met. What are consumers willing to pay for? What do they want in return for plugging in? What stands out as strengths & weaknesses?

8-22-2010 **Still Amazed.** That hill climbing in EV was quite an experience. I tried the same thing this evening with the 2010. I couldn't keep it from entering the PWR zone on the eco-meter. With the PHV model, it was no big deal. There was plenty of power without even needing to push the pedal that hard. Acceleration where lots of torque is needed, like climbing a steep incline like that, is something the large motor feed by just electricity handles surprisingly well. It's so exciting knowing there's a landmark nearby that I can refer to. Too bad I didn't catch that particular situation on video. Of course, really late at night like that there wouldn't have been anything other than the screen to see anyway. Nonetheless, I know I did that same climb 4 times. Each was a pure delight. The plug-in advantage was quite obvious. I was amazed then... and still am now. You always hope the design is that well thought out. But to witness that it is firsthand, there's a feeling of vindication.

8-23-2010 **Peugeot 3008 Hybrid.** Remember the proposal from Dodge in response to Prius almost a decade ago? They were making plans to offer a "thru-the-road" type hybrid. That design would take a traditional front-wheel drive vehicle, then be enhanced by adding an electric motor to the rear axle. The idea faded into history... or so we all thought. Peugeot apparently thinks they can deliver the idea Dodge had abandoned. Two entirely independent systems like that presents a challenge. Literally, there only connection is via the wheels touching the road. As you could imagine, not much power can be provided that way without compromising vehicle stability. That means only assist is practical, hence a 37-horsepower electric motor assisting a 163 horsepower 2.0 liter diesel engine. It certainly sounds like an expensive way to save a small amount of fuel. But the desperation the meet efficiency standards is forcing automakers to finally deliver something.

8-24-2010 **Aging Technology.** Don't you love when those supporting new technology in the "early adopter" phase attempt to dismiss that in the "mature" phase as outdated? That's what Prius is facing now. Attempts to accelerate aging aren't seeing too much success, thankfully. Just becoming established in the minds of consumers takes a long time. So the idea of obsolescence is rather absurd. Just look how long small electronic devices intended for replacement after just a few years take to cycle through enough generations before the technology is deemed uncompetitive. It takes considerably longer when dealing with vehicles. In other words, this is the latest spin intended to undermine Prius. Whatever. Sales are the ultimate gauge of status, not proclamations from supporters. Anywho, here's what I posted today in response to the latest attempt: Every other technology in automotive history has struggled to reach the stage of mainstream acceptance. It takes time for it to become well proven, affordable, and profitable. Once there, they enjoy ubiquitous status and high-volume sales for decades.

8-25-2010 **The Switch.** Did you notice how the Volt distance statistic have switched from the original "*78% drive less than 40 miles per day*" to the new statistic of "*75% commute less than 40 miles*". That's an interesting change in promotion. Perhaps GM shouldn't have committed so heavily in the per-day expectation. You think? I knew that old survey with so small of a sampling was trouble. Proper demographic representation is a challenge. You want lots of input prior to such heavy investment. Oh well. At least their moving of the goal posts after the game has begun is documented. Now, it is just per-commute. The same thing has happened with charge time too. It originally was 8 hours for 110-volt and 3 hours for 220-volt. Now, it is "*10 to 12*" and "*like 4*". Again, perhaps they should have waited until later rather than make such bold claims right away. Of course, this is how they got their "over promise, under deliver" reputation. So, it's not like they don't bring it on themselves. Other automakers intentionally refrain (don't hype) to avoid this very predicament. Makes you wonder what consumers think when they discover the switch.

8-26-2010 **Creating Misconceptions.** A select few of the Volt enthusiasts certainly are trying hard. Originally, I posted on that daily blog to clarify genuine misunderstandings about Prius. Many hadn't paid attention to the hybrid market at all prior to joining there. So, it made sense that incorrect assumptions would be made. But all these years later, there's no excuse. The purpose for Toyota sharing the PHV model Prius with supporters is crystal clear. They were well aware of the possibility that undermining attempts would occur. And sure enough, we are indeed seeing it now. The veterans hope newbies will just accept their false claims at face value, without question. Now, my posting is to keep that effort (often referred to as "*greenwashing*") from getting out of hand. Having real-world experience behind the wheel of a PHV (completely uninhibited, with the freedom to drive & plug as I desired) provides strong purpose to squash any misconception creation attempt. Today, it was the same old claim that acceleration when merging and on hills "*Only if driven gingerly*." was available in EV. I know that just plain is not true. Frustrated, I posted: No, the EV hill climbing is surprisingly powerful. That ability to accelerate up a steep suburb escape out of the valley where I live (1/3 mile at 40 MPH from a dead stop) turned out to be no big deal. The electric motor offers quite a bit more punch from that configuration than the one without a plug.

8-27-2010 **Clear As Mud.** The uncertainty from Volt continues. Much of it has to do with the significant unknowns still associated with CS-mode. What it will actually deliver and how it will go about achieving that is still a complete mystery. Since there is so much attention being put on its efficiency, both to stress and to downplay its importance, the topic is really showing emotional attachment with regard to how people understand the system. It's as clear as mud, resulting in rather expressive & terse posts lately. I even responded with a "BS" mode comment at one point. Comparisons to the PHV model Prius just plain don't work. The enthusiasts don't want a level playing field either, another plug-in to help the progress of electricity use. They proclaim "better" constantly, yet have virtually nothing to support that. Isn't the point to quantify the amount of "fuel" likely to be consumed over an entire year? The kWh of electricity could be determined without too much effort. But for the gallons of gasoline, that's an entirely different matter. The purists want Volt to be an EV. That means no direct-drive; however, there have been many hints to the contrary. The existence of a feature allowing the engine to power the wheels directly would indeed help to deliver the high MPG eluded to... but at the penalty of high cost. That would also redeem GM's broken promise of adapting Two-Mode for small cars... but would reveal Volt to be a hybrid instead. Whatever the case, it sure would be nice to see an end to all the marketing hype and support spin. The wait until rollout for needed detail is pretty much inevitable. Clarity doesn't seem to be achievable until then.

8-28-2010 **PHV - Display Photos.** It's hard to know where to begin. There's such a variety of photos to share. I started by showing the shots of the Consumption screen revealing the results of my longest trip 69.4 MPG from 64.7 miles and the overall average 84.0 MPG from 316.5 miles. Then I tossed in a bunch of photos including Energy Monitor, Eco-Motor, and of course the new EV Ratio. The ultimate, though, was the couple of special moments I captured on the ScanGauge. Seeing 0 RPM while driving at 60 MPH was incredible. I certainly waited a long time to finally get an opportunity to see that... and it was totally worth it! Seeing 992 RPM while at 70 MPH was a vindication for me. Until then, I didn't know how much the electric motor would be able to contribute at that speed. Turns out, it's quite a bit. The best though was my first discovery of just how high that efficiency boost could be. It left me scrambling for the camera. 315 MPG while going 63 MPH was amazing. Anywho, this is what I saw... photo album 153 photo album 154

8-28-2010 **That Past.** It was absurd how bad things got with Hummer. Remember all that nonsense, where the lifetime of a Prius was claimed to be only 100,000 miles and that monster-size beast 300,000? That so grossly skewed calculations in favor of the guzzler that it was hard to believe consumers actually accepted such blatant greenwashing. Antagonists treated the well-informed like idiots, hoping mass delusion would actually keep wasteful vehicle appeal from turning sour. It didn't work. Consumers aren't that stupid. The solution called "Two-Mode" fell apart too. Cost was a major factor. Pressure from monthly expenses (vehicle payments and fuel) simply could not be just argued away with clever reasoning. And as technology improves, it's obvious how such reasoning just becomes a pile of excuses. That past puts a heavy burden on the upcoming plug-in vehicles. It's why Toyota is working so hard to come up with an affordable configuration. It's also what puts Volt in a very awkward position. The future depends on mainstream purchases. Cost still is a major factor.

8-29-2010 **All-Electric.** At first, pushing the belief of electric-only propulsion at all speeds as a necessity makes sense. Fortunately for those doing it, that's all the longer consumers typically have paid attention in the past. Quick judgment was all most sales required. In other words, impulsive & reactionary responses were enough. Nothing else was needed. In a world of few choices, you could get away with shallow & vague arguments. It was simple. Not anymore. That "full power" debate stance falls apart when price and overall efficiency are taken into account. With a wide variety of designs about to hit the market, how much does all-electric matter? How much are people will pay for it? Will they actually care? Since the PHV model Prius delivers well over 100 MPG even at 70 MPH and avoids the short-trip efficiency penalty, I think it's going to be a very appealing choice for middle-market.

8-29-2010 **Happy?** Supposedly: "*We will all be happy if the CS mileage [for Volt] is around that 48 mpg mark.*" You can imagine what my feeling after reading that was. It's the failure to take the big-picture into account that makes me crazy. You can't just pick certain aspects of engineering or business to focus on. Success of a vehicle is all inclusive. It's the same old story. Here's what I posted in response: Not if it was achieved through expensive means. The addition of direct-drive using a system derived from Two-Mode is an approach that would accomplish that. Gain efficiency by sacrificing affordability. It works in the short-term. But for mainstream acceptance (high-volume production & sales) that design decision could prove to be quite a barrier to overcome. Some would not be happy.

8-29-2010 **PHV - More Photos.** I went nuts with the digital cameras, snapping off as many as I realistically could when the opportunity presented itself. Knowing I'd have a hard time remembering exactly what happened and when, it was important to snap a few from time to time. So, even if they weren't ever been seen by anyone but me, a record of the exact sequence of events would be preserved. After all, I figured my only chance to relive driving a plug-in Prius for awhile would be through the photos. Turns out, many shots of the display ended up in focus and not washed out by bright light. Sweet! The wild button pushing really paid off. There's a nice variety from this batch, which shows what I saw on my first commute with the PHV, including 2 wide ones featuring both the Eco-Meter and Speedometer... photo album 155

8-30-2010 **Dual-Fuel Vehicle.** The EPA proposed several new window-sticker label designs today. The benefit is intended to make the variety of upcoming choices easier to understand for comparison of efficiency, cost, and both types of emissions (carbon & smog). The plug-in vehicles with engines were placed into the "*Dual Fuel*" category but are broken up into "*series*" and "*blended*" types. Charge time in hours and range in "*miles before switching to Gas Mode*" were common values displayed for both. MPG-equivalent were common too, but the "*series*" included a secondary value for "KW-hrs per 100 miles" and the "*blended*" a secondary value for "*gallon gas equivalent per 100 miles*". The "*blended*" also included an "Electric only" value to indicate the EV distance available if the engine wasn't used. Obviously, both had a "Gas Only" value, which interestingly was displayed only as a combined value. (Yeah! That eliminates the City & Highway greenwashing we've been plagued by.) In short, I liked them. As for comments from the Volt daily blog, they were all over the place. There was far from any agreement. You'd think after all this time there would be some type of common desire from them. Makes you wonder what the Volt Well, marketing will be like. At least the EPA will be providing a standard to follow.

8-31-2010 **Marketing & Data.** Remember many years back when some didn't know (or didn't acknowledge) the difference between want & need. The same seems to be happening with marketing & data. I find it hard to believe, but online comments support that. You can't find much better evidence of being greenwashed than that. It's a sad commentary on our situation. The spin is that because the PHV model Prius uses gas on the highway, it is so inferior to Volt that no one will want to buy it. Telling them... the point has always been to quickly electrify the mainstream ending traditional vehicle production but not necessarily delivering the purity of an absolute... falls on deaf ears... so does the fact that using a modest amount of combustible fuel is just fine. Mainstream consumers will see well over 100 MPG on the highway from plugging in available at an affordable price. That's what will draw in buyers. The typical Camry or Corolla purchase is to fulfill the purpose of reliable family transportation. They could spend more for higher performance, but don't. What would compel them to do that? Marketing? Sounds like the "*Live Green, Go Yellow*" nonsense of the past. Remember that pathetic excuse to sell more guzzlers?

8-31-2010 **Gotta Love This.** The quote says it all: "*Performance, handling, economy, comfort, technology, made in USA, etc. etc. Volt has Prius beat on all. Welcome to the second decade of the 21st century, Toyota fanboys... the Prius is yesterday's news.*" Naturally, the enthusiast who posted it got very angry by my one-word reply: PRICE. He claimed all, but left out something very important. And of course, others sounded off to that too. EMISSIONS was another big one. CS mode efficiency remains a mystery, so that's more of a matter of denial we will patiently delay comment about directly but will point out that it is a requirement of consumers. Seeing a MPG too low limits the market even further. Remember, Volt depends upon a plug. That lack of choice is a source of concern. With Prius, the plug will simply be a model to select from. Consumers who don't have an outlet available or will do lots of daily driving will still have an option available. Driving an Volt not plugged in often that only delivers around 35 MPG and the emissions-rating is only ULEV for $41,000 isn't exactly a winner.

8-31-2010 **It Gets Better.** This was the response to the previous quote: "*The Volt is 5X better than the Prius at reducing pollution and at least 3X at reducing gasoline consumption.*" Talking about digging yourself into an even deeper hole. Without any data available, he's making claims that don't even sound reasonable. Of course, it ultimately boils down to overall production anyway. Even if those wild claims were true, the fact that Prius will be selling at least 5X the rate of Volt offsets everything entirely. Remember, if the consumer doesn't buy a Volt, they are probably just going to get an ordinary 30 MPG car. It's the entire fleet that needs to change, not just a few token vehicles. Then there's the matter of distance driven between plugging it. And what about other unknowns, like Winter warm-up using the engine? And since when is comparing Volt to the non-plug model of Prius constructive anyway?

8-31-2010 **Selling Fear.** Supposedly, that's how Prius was sold in the early years. I couldn't help but to be amused by reading that. Gas was dirt cheap and our reliance on oil wasn't even a concern until $4 gas. Even then, the solution was to "*Drill, Baby, Drill*" rather than use less. Anywho, this idea of fear helping to sell Volt is now becoming a hot topic. Enthusiasts justify it by claiming it was used for Volt. They even found an old advertisement showing Prius next to big oil pumps... equating that to fear rather than the "taking responsibility" message that was actually being conveyed. I responded with: It's easy to spin history by looking back many years later. Back then, things were very different. Americans were encouraged to guzzle. Remember the rise of Hummer and all the "good for the economy" promoting of giant SUVs when that ad was printed. It wasn't fear. It was the growing interest environmental concern, hence the SULEV emission rating from Prius as well as high MPG. Getting both from one vehicle was very rare in that time.

8-31-2010 **Cruze Estimates.** There still is no official word, but GM announced anticipated efficiency estimates today. The 1.4 liter 6-speed automatic is expected to deliver 36 Highway, 24 City. That's really disappointing MPG, no matter how they spin it. Remember all the boasting about numbers above 40? The combined value will likely be just 28. Makes you wonder what that same engine will deliver for efficiency when used in Volt. 50 seems highly unlikely when the direct-drive version doesn't come even remotely close. The discussions online don't exactly reflect a positive outlook either. Rather than it being a revolutionary vehicle leading the way to profit for GM, it looks to be just another offering to match the competition. That puts even more pressure on Volt... which is already struggling with previous promises.

9-01-2010 **Early Adopter.** With so many uncertainties about Volt still and no other engine, motor, battery configuration expected within the next few years, some are now exchanging that "leap frog" idea with a "building for the future" approach instead. They're the ones calling this phase of rollout as "early adopter" saying the next generation is intended for mainstream consumers. That's an obvious backpedal, but I'll give credit for their acceptance of "over promise, under deliver" with the hopes that they'll see the "competition" as helpful now. Unfortunately, there are others being far less constructive... smug as ever, in fact. The situation is getting out of hand. Of course, you have to ask yourself if those with attitude are actually planning to buy one. Becoming an early adopter says much more than simply putting the competition down and continuing to drive a guzzler.

9-01-2010 **Trademark Spin.** It's somewhat bizarre commenting on problems GM creates for itself. Today, they announced their intent to trademark the "*range anxiety*" phrase. Why? Creating an identifier unique to Volt to emphasize a trait specific to its design, you place Volt into a category of its own. That pushes away from the mainstream, what many would call a niche. Mainstream equates to becoming ubiquitous, which is not the direction we're seeing from Volt at this phase... a reality which really upsets the enthusiasts, hence the growing attitude problem lately. They've basically given up on the first-generation model. Most replies to missed goals simply get diverted to the second-generation instead. How does this trademark help? It appears to be nothing but an attempt to spread FUD (Fear, Uncertainty, Doubt) about plug-in vehicles without engines. When the battery becomes depleted, you're screwed. Really? Do people with a 40-mile commute and a 100-mile capacity really worry that much? If so, how come CS-mode efficiency isn't ever promoted? Looks like retaliation is inevitable. Focus on the engine could easily backfire. Stay tuned.

9-01-2010 **'Range Anxiety' Campaign.** Much discussion erupted all over the internet about the trademark announcement. The word "*fear*" came up over and over again. That was definitely the theme emerging already. This makes it overwhelming clear why Toyota was in no rush to release the PHV. Fallout of some sort from the initial rollout of Volt was inevitable. Seeing it emerge already could be a sign that the market will be turned upside-down by introduction of plug-in vehicles this way. It certainly will get consumers talking about the issues involving battery power. Sadly, without out much real-world data available, many misconceptions could emerge as a result. See how Toyota's effort to collect real-world data from actual consumers prior to rollout could really pay off? Observations of consumer driving, as well as consumer feedback, will indicate what to promote. They'll point out what interests them in a purchase. Propaganda is often attributed to things like fear. No catch-phrase necessary when you have facts to support claims. Offering a solution to a problem that may not actually exist doesn't inspire confidence. It looks more like an effort to undermine competition.

9-01-2010 **11,799 Sold.** Want to know what the competition actually thinks? Look no further than the reporting of monthly sales numbers. The spin for August is truly amazing. Remember last year this time? It was the madness of "Cash For Clunkers" pushing the purchase of more efficient vehicles. But they don't take that into account. The weak economy now is affecting the entire industry, keeping sales of everything down. But they don't take that into account either. The big surge of sales from the initial release of the newest generation of Prius was totally disregarded too. It's very frustrating to see how narrow their view is and how easily they exclude certain information. 12,000 per month has represented the "solid" sales. It's been the indicator steady market penetration. Less is a bit disappointing, but not the end of the world. Numbers differ from month to month anyway. More is great, sometimes enough to push Prius into the top-seller list. Overall for the year has showed it to be a dependable business product. Yet this time, the count is being spun to look bad. Can't they see how Prius is helping to replace traditional production? Don't they notice more and more of them on the road now?

9-02-2010 **Beyond 145 MPG.** Seeing the boost the plug-in provides is so satisfying. That 145 MPG from lowest-load engine contribution with the 2010 is quite a difference in comparison... and that was only possible on a flat 30 MPH road. Today, I plunged down a big hill at 60 MPH watching what the MPG would indicate with fuel cut and the engine spinning at only 992 RPM. It struggling to hit 225 MPG, even with the help of gravity. The PHV model can easily exceed that on a flat highway with the engine running the same speed at 70 MPH, through the use of extra electricity. Knowing how simple progression toward the plug will be with this next model of Prius is so exciting. Mass adoption will be no big deal. All you need is a normal household outlet in your garage. No paradigm shift is required as with Volt. In fact, the regular model of Prius will continue to be sold to consumers with different requirements. It's easy to understand what you're paying for too. The plug pushes MPG beyond 145 at its most efficient with the engine still spinning and gives a significant boost overall.

9-02-2010 **What a Mess!** With the purpose & market of Prius so clear, how could Volt have become such a mess? This was posted today, stirring much interest from me: "*Exactly how is it GM feels this is aimed at the AVERAGE consumer?*" My hope of something sensible in response obviously had a disappointing outcome. Those enthusiasts simply don't care anymore. The canned response is that the second generation design will address current issues. Dismissal of actual shortcomings is not big deal for Volt, but they are pretty fine making up stuff about Prius. The hypocritical nature of their attitude is very easy for consumers to see. Enthusiasts are proud of what makes their vehicle stand out. The typical middle-market purchaser. who's desire is for affordable, reliable, efficient, clean transportation for their family, will see Volt as niche... a vehicle worth it's price, but not what their interested in. What part of $41,000 is so hard to understand?

9-02-2010 **Ally Hope.** It's almost entirely gone now. When Volt was new, there was the possibility of it becoming a partner in the effort to rollout plug-in vehicles to the masses. Now, it's just become a game to enthusiasts, claiming superiority over the PHV model Prius. They have absolutely no interest in an ally. The only hope is that consumers in general may see things differently. Though, that's rather remote at this point. Final efforts to save what the smug don't want aren't promising: Well engineered technology that's powerful & reliable, but it's expensive, inefficient, and not cleaner. That was the story for Two-Mode a few years ago. Upon discovery of that unfulfilled criteria, focus shifted to the next generation. Optimistically waiting. Hoping the pattern will break. No such luck. History is unfolding the very same way for Volt. Even the comments from enthusiasts match those of the past. So, what happens now?

9-03-2010 **Blatant Greenwashing.** It's getting pretty bad now. Certain Volt enthusiasts are simply just making up stuff about Prius now. It's still a bit hard to accept that they'd attempt claims like this: "*PHV Prius…, which can't operate at freeway speeds and is negligibly better than a regular Prius under those conditions will get in...*" No wonder Toyota shared a plug-in with me. I responded with 2 photos and the following descriptions, which obviously ended up making them angry: Negligible? Absolutely not! See this: (photo of consumption screen, 14.2 miles, 99.9 MPG). It's the first half of my commute to work. By the 4th segment, I was already driving at 70 MPH and continued at that speed for 9 miles. Notice the MPG is dramatically higher than a regular Prius. And this: (photo of consumption screen, 33.4 miles, 80.0 MPG). It's the final result of that commute. The round-trip drive, only recharging the night before, produced an outcome with MPG better by a wide margin.

9-03-2010 **Who's the Fool?** When you share a photo from your plug-in driving experience and get this as a response, "*Who do you think you are fooling?*", how would you react? I posted this: Do you know how great it is to read that? If a Volt enthusiast doesn't believe it actually happened, a consumer curious about buying a PHV will find it unbelievable! Toyota tossed me a FOB and said "*have fun*", knowing I'd drive it a bunch and take a tons of photos. Each trip started with MPG well over 100 no matter what speed I drove. Then when both EV sub-packs became depleted, efficiency reverted to regular hybrid MPG. The end result was a big boost at an affordable price. That's the point. Mainstream sales require balance, a concept some apparently cannot see nor desire… because they question why I post on the site… yet another similarity to Two-Mode history… further confirmation that the first generation won't be a draw beyond enthusiasts. Appealing to the masses is the goal, to replace traditional vehicle production quickly.

9-04-2010 **At An Impasse.** That "trophy mentality" from years ago transformed into a "superiority complex". The long hoped for ally is looking highly unlikely at this point. Volt is "better" than Prius, so Prius will die. It's an attitude exceeding smug. How does one deal with that? Some of those enthusiasts believe the PHV model is wasted effort. Sound familiar? It's the same old "stop gap" nonsense we heard years ago. And seeing this so closely resemble the history of Two-Mode is amazing. But now, the leader of this community is reaching out with hope a bold final effort just prior to rollout could get things back on track. It boils down to not having clear goals; simply wanting more is unrealistic. How will they even identify success with such vague requirements? I grow tired of the lack of constructive posts (propaganda), uncompetitive comments (greenwashing), and intentional spreading of misconceptions. It seems unlikely anything can alter the path they've chosen at this point. Fallout after rollout begins could be an opportunity though. Look at how quickly the second-generation Insight fell apart. The difference between the attitude of consumers verses those of enthusiasts was quite a priority wake-up call.

9-04-2010 **PHV - Reports.** I'm thinking there's going to be a study flow of reports. Providing automotive publications with the opportunity for long-term testing has been common practice for ages. Heck, I remember reading them for the Original Prius from a year before rollout here. So, with Toyota's 600 of the PHV now in the wild, it's a realistic expectation. This one came from a magazine... one rarely associated with vehicles intended for middle-market. But the word "performance" is now beginning to be associated with efficiency... so, new interest is stirring. Anywho, they had the PHV model for 32 days and drove it 1,880 miles. Unfortunately, there was no mention of how often it got plugged in or how far the typical trip was. What we do know is that it used 26.2 gallons of gas. Doing the math, the average calculates to 71.8 MPG. Oddly though, they reported 70.4 MPG. Not sure why there's a discrepancy. Gotta watch the details. What kind of reports do you think we'll get for Volt?

9-04-2010 **Affordable?** That had been a big topic in the past. It still comes up for the PHV model Prius. Estimates place it well in excess of Volt. Why? That doesn't make any sense. The battery-pack is only 5.2 kWh and it is divided into sub-packs. The smaller capacity in itself helps to keep the price lower. The division allows less expensive thermal management (air rather than liquid). The intent is to offer it with a mid-grade package, rather than high-end. They took GM's own recommendation of "*nicely under $30,000*" seriously. They also have a high-volume production benefit to help lower price, since the non-plug model uses most of the same parts. And of course, Prius is designed to appeal to mainstream buyers, not striving to push the limits of acceleration & handling. Appealing to middle-market means aiming for the middle. That balance of price & performance should be obvious. Some still don't see that though.

9-04-2010 **PHV - Photo Discoveries.** My effort was to document my experiences with as many photos as possible. Turns out, I'm noticing things now that I wasn't aware of then. That's a normal part of the new owner experience with each next-generation Prius. You make discoveries for months afterward. Heck, sometimes it takes an entire year to witness all the clever features the system has to offer. This is especially true for seasonal differences. Unfortunately, all I had was a few days. But in that time, I gave my digital cameras quite a workout. Looking back, I'm making discoveries. An example is the "14 mile" capacity for EV. A photo from my first commute with the PHV model revealed 0.3 miles left after 16.2 miles of driving. The system clearly seeks out recharging opportunities. I saw that on long hills, where the EV distance available would go up on long suburb hills. What I hadn't expected was how well the HV use of those sub-packs would boost MPG at high-speeds, yet still leave you with some EV later. This point was lost in the scramble to write about my experiences at the moment. The photos brought it to my attention afterward. What other discoveries await?

9-05-2010 **Past Blogs.** I wasn't even aware of the term "blog" back when I first started my "personal logs". They were just my own effort to document my thoughts, a mechanism that would force me to think through events as they were unfolding. Opinions differ greatly when you look back afterward. Uncertainty of the moment is gives a very different perspective. The fact that it was a public diary or that it would later serve as a historical archive were just nice extras. But now, that's become rather important. The hype of Volt is very much following the disastrous history of Two-Mode. We've seen several examples of "*over promise, under deliver*" already. So many, in fact, the vaporware claim has been validated. What's left is a deliver intended for early November that has now shifted to early December. Sound familiar? My blogs document 10/30/2007 as when Two-Mode production began. The production begin date for Volt (which has changed frequently) is now expected to begin on 11/11/2010. It wasn't until 2/08/2008 that the very first report of a sighting was made, 3 on a truck, which were only believed to be demo models being delivered to dealers. 3/02/2008, there were still no reports of Two-Mode purchases. It wasn't until 3/16/2008, that reports of the first delivery to consumers surfaced. Actual performance is already being downplayed. The second-generation model is supposed to fulfilled consumers expectations, not the first. How often do I need to point out the "*too little, too slowly*" concern? What will the next few months bring? When should real-world data from owners emerge? Should I be afraid of the propaganda & greenwashing in the meantime? What about vague reports? Then there's the problem with limited market rollout, where the entire country won't have the option to purchase until well over a year from now. Expect many more blog entries. Things about to get very interesting.

9-06-2010 **Ignoring PHV.** Pretending a plug-in model of Prius doesn't exist was the theme prior to a bunch of Prius supporters sounding off on the daily blog for Volt. Guess what? Now that many have left from the attempts to get discussions to be constructive failing, the same old attitude is back. They totally disregard the PHV. It's that same old nonsense we had seen for years. The enthusiasts of Volt simply don't want to deal with a market which offers a more affordable plug option. They still don't want anything to do with a lower capacity battery-pack for Volt either. So, it's definitely not the "EV at all speeds" excuse as they claim. Choice is limited to "Hybrids", "BEVs", and "EREVs" only. The plans Toyota, Ford, and Hyundai have for plug-in models are avoided at all cost. They simply won't acknowledge them. Talking about making everyone else feel unwelcome. Rather than being part of a team in the effort to electrify, they see the others as counter-productive with no opportunity of succeeding in the market.

9-06-2010 **Auris-Hybrid.** The first report was published today. It's the first Toyota hybrid built in Europe for their own market using a traditional vehicle already available there. The same system in the 2010 Prius was used, even though it is a smaller car. Oddly, that brought about a direct comparison to Civic-Hybrid rather than Insight. There wasn't much to compare though. The 55 MPG from Auris out-performs the 40 MPG from Civic by quite a margin. Nothing to debate about that. The system offers more power too. It will be quite interesting to find out how well it sells... there in the land where diesel was king until smog-related emission concerns became a priority. Concern about carbon emissions are a bigger deal there too. So, there's much potential for a hybrid light this. Stay tuned.

9-06-2010 **PHV - Plugging In.** Photos of the cord, door, socket, and indicator light are all available now. I took quite a few in different locations under different lighting conditions. You can see it all. This is what I especially wanted to document, features unique to the PHV. Of course, the equipment itself follows the SAE S1772 specifications & receptacle... a new industry standard. The charging-system & coupler requirements were officially approved, which means most of the automakers will all be plugging in their battery vehicles exactly same way. It's exciting to share photos like this. What's part of a discovery process for us now will become common place in years to come. Seeing the sight of a plug attached to a car sure would have thrilled my father. Many decades ago, he introduced me to the automotive world and inspired my interest in it. I sure wish he could have lived to see what I saw... photo album 156

9-07-2010 **Second Generation.** It's truly amazing watching the "*over promise, under deliver*" actually play out... again! The first generation of Volt didn't achieve price, emissions, or efficiency goals. So, now they are diverting attention to its successor instead. Makes you wonder if the Osborne effect could occur, where boasting about the upcoming product ends up harming sales of the current. Of course, Volt isn't even available yet and won't be in all states until over a year still. GM isn't planning to be as forthcoming about expectations next time either... or should I say even less than this time. My pointing out that this could be a positive sign was frowned upon. Even saying "*lesson learned*" and moving on wasn't acceptable. The enthusiasts simply don't like criticism of any kind. Mention of parallels to Two-Mode are dismissed. And don't try to say anything about continued investment in BAS. It's quite a mess. Too bad there wasn't an effort to prevent history from repeating... again!

9-08-2010 **Too Little, Too Slowly.** Evidence of this is becoming undeniable. It was the concern originally brought up by the automotive task-force, when doing their assessment of GM for the bailout... then bankruptcy. It was the forward-looking view of the "over promise, under deliver" problem of the past. Even if the new GM could deliver, a small quantity at a pace not meeting market-demand would still be a problem. In other words, even if Volt actually did meet design goals, waiting a long time for rollout to the entire country and only a few delivered to each would be unacceptable. 12 to 18 months for just 10,000 fits that profile well. 45,000 the following year does too. But the real concern is what comes after that. Will production be limited until the second generation? How many will be produced then? What kind of profit (if any) will it deliver? Remember, this isn't just new technology rollout, this was supposedly a design to become a major portion of their product line-up. When will that happen?

9-08-2010 **Progressively More.** Do you think consumers will look upon the plug-in option for Prius as the next natural step for the technology? That PHV model resembles the non-plug models remarkable well. EV becomes automatic and used far more often. MPG shots off the scale, literally. In fact, keeping the display maximum at 99.9 helps maintain the perspective within the scope owners are currently accustom to. Going forward it could too. Toyota may add another 7 miles of capacity (another sub-pack) later. They may simply lower the floor back down to the flush level as energy density increases. Both may happen. We don't know. But what we can count on is the easy adoption of small steps. I don't see the transition as that big of a deal. Heck, it's easy to envision many plugging in their car at night. Plugging in mobile devices has become routine. Expecting progressively more as the years go on is common now. Notice how well that has worked for the computer industry. The trick was getting consumers to think about the potential in the first place. Prius has done that well.

9-09-2010 **Data Dismissal.** It has become blatant. I got this today from one of the more stubborn Volt enthusiasts: "*Please don't refer to your real-world data. Your personal info is only valid for you, not the rest of the world.*" Doesn't that establish a wonderful precedent? Imagine when Volt driving reports start to come in. You can just arbitrarily ignore facts. When you only present certain information, it's called "cherry picking". I'm not sure if this behavior has a term. Being selective and doing things to intentionally mislead is called "greenwashing". So, we'll stick with that. Here's my response to that sad attempt: Dismissal of real-world data like that is hardly constructive. Anyone could do the same thing. You unplug the car. Drive to a destination. Drive to another destination. Drive home… A good mix of speeds and a large chunk of the miles after depleted will yield results well above the non-plug model. It's not rocket-science. Overall efficiency benefits from the extra electricity.

9-09-2010 **Preparing For The Future.** 10 years today, it's my anniversary. For an entire decade, I've been driving Prius. 4 different models: Classic (2000), Iconic (2004), the 2010, and for a few days the PHV (2012 plug-in). It was amazing to see the technology evolve just as we had hoped. Each model delivered greater efficiency and cleaner emissions. Yet, some still attempt to claim the only reason to purchase was just "to make a statement" rather than actually being green. Some still sight gas saving "payback" impossibilities too. After all this time, it's quite clear some have become desperate, seeing how much Prius has become a common sight on the road. The convenience of it being a midsize hatchback should be enough to make the practical argument obvious. But some are still in denial though... hoping to somehow hold back progress. Reality is, that current 3 percent marketshare here represents a solid foundation to easily expand upon. Prius has proven the FULL hybrid is an affordable & reliable choice that delivers worthwhile MPG improvement. Spend more to get the plug option, you'll see a significant efficiency boost. Those are what consumers will flock if gas should suddenly rise again; otherwise, it will be the slow replacement cycle as traditional vehicles age. Whatever the case, purchases continue. There are more owners each day. Just think what it will be like 10 years from now.

9-09-2010 **$2.85 Per Gallon.** Totally unexpected, the price of gas suddenly shot up. That was odd. Maybe it had something to do with supply from the holiday weekend a few days ago. It could have had an affect. The price of oil has been stable, staying in the mid-70's for months now. Whatever the cause, it was quite a surprise to see $2.85 at the pump this evening. That caught me off guard. Think it phased anyone else? How much do others care? It's common to not want to know. Many uncontrollable expenses are simply paid upon demand then quickly forgotten. That has always been a problem for the promotion of Prius. People had no idea how much the cost of gas influenced the overall money they had available. However, observation of the past suggests $3 per gallon is a tipping point. Awareness is triggered then. (Panic comes at $4.) Hopefully, that won't happen again. But seeing $2.85 here means $3 appearances elsewhere in the country. Will this further sour the appeal for guzzlers? SUV size is considerably smaller nowadays.

9-09-2010 **3,450 Miles = 83 MPG.** Reading this report was wonderful. Great timing too! California Center for Sustainable Energy (CCSE) selected 13 employees to each drive a PHV for 7 to 10 days. Their results almost perfectly matched my 84 MPG average from 316.5 miles of driving. Of course, one averaged 97.9 MPG over 379 miles... which does help to show I wasn't doing anything special or represented any type of extreme. I used the PHV exactly as I do my 2010. There was quite a variety of distances & speeds. I wanted the full experience, nothing optimized for any specific condition. The person in-charge of selecting employees sought that variety too. He stated it as a "*fantastic cross-section*" of drivers. Of course, certain Volt enthusiasts immediately dismissed that real-world data as bias. Figures. Anything revealing the PHV model to be a significant improvement to the current Prius is thought of as a threat... since apparently in their world, there's no place for more than one type of plug-in hybrid. Don't you love how some have become so close-minded?

9-10-2010 **Softening The Blow.** There wasn't a "project driveway", as GM had down with another premiere vehicle intended to revolutionize. There wasn't even a demonstration program of any kind. Heck, all we've seen for real test-drives of Volt were slow-speed coned-off tracks and carefully monitored high-speed introductions. No detail came from any of that. We only got vague mention of behavior. Absolutely nothing beyond speculation for CS-mode efficiency has been revealed yet. Last year's hint vanished. As soon as GM discovered how much attention it would draw, focus was shifted elsewhere. Then came that publicity in July. The extreme effort to suppress discussion of MPG while the engine ran was obvious. Each step since then has made it more and more evident that the number is far from the goal of 50. As more people mention 40, especially in the light of Cruze not making its goal either, the resistance is less. The delay of revealing actual values is helping to soften the blow. The more the realities of getting 40'ish are mentioned, the more enthusiasts become use to it. That idea of sticking within the EV range will be vital. The most staunch have already begun claims of rarely ever needing the engine. Who is the market for this vehicle?

9-11-2010 **Underwhelming MPG.** All the hype about efficiency improvements for traditional vehicles should serve as a warning. The move to make SUVs with 4-cylinder engines appealing hasn't been going well. The 32 MPG celebrated heavily for the GMC Terrain falls way short in reality. Over the course of 13,000 miles of driving by Edmunds, the best tank reported was only 28.7 MPG. The reality of city driving should be obvious by that. If not, think about what the overall average came to. It's much lower than you'd think. Only 20.5 MPG for those 13,000 miles. That's absolutely terrible... no matter how you spin it. Just imagine how much worse MPG would have been from a 4-wheel drive model. Of course, the aerodynamic shape of a SUV is an efficiency penalty. Combine that will the overkill height, suspension, and tires for paved roads shared by cars and you've got a recipe for disappoint. Underwhelming isn't much of a surprise, since even the typical "economy" vehicle only achieves MPG in the mid-30's.

9-11-2010 **Instant Engineers.** Remember how we overcame the poorly informed of the past? When they lock on to a specific (narrow scope) fact, there's not a whole lot you can do to convince them otherwise... except this... provide Lifetime MPG. The power of that real-world data got the uninterested, the disbelievers, the antagonists to all take notice. It's really hard to dismiss arguments when actual experience proves arguments false. Once a new technology rolls out, the situation changes. Instant engineers guess with little thought and no real background. They are the masses who listen to marketing and take those claims at face value. Real-World data drowns out hype and squashes initial beliefs. I'm really looking forward to that. Reports of actual MPG combined with purchase price really changes the landscape. The hopes for Two-Mode got turned upside-down with that information. What will happen to Volt? We already know price is far more than middle-market currently pays for vehicles.

9-11-2010 **Unanswered Questions.** Hoping for anything constructive in nature for Volt discussion is futile. The enthusiasts simply mock the plug-in Prius for having less EV capacity. Nothing else is addressed. So, I put them to the test by asking something totally different. I attempted to start a discussion about heat. What happens in the Winter? All they did was cast negative votes. If you aren't cheering for Volt, you're trying to undermine. There's no middle ground. There's no place for asking questions. Anything not answered up to this point will have to remain a mystery. They already declared Volt superior. Don't you love that kind of attitude? Anywho, here's what I posted: EV has the shortcoming of getting heat exclusively from a heat-pump. That means you sacrifice range for the need to keep warm. With a plug-in like Prius, electricity is used for propulsion power as much as possible. Since the engine runs anyway at speeds above 62, using the coolant heated heater-core for warmth instead is a best-of-both-worlds blend. Question is, will Volt do something similar? At what point was the design configured to run the engine for the sake of preserving electricity for propulsion? Does Volt even have dual source for heat?

9-12-2010 **7 Weeks Ago.** Back then, things were different. The Volt enthusiasts were basically just focused on getting to the finish line, not interested in what others had to say about the rest of the automotive world. They even brushed aside the controversy of that "Freedom Drive". It all seemed to be going as hoped, despite so many unknowns & setbacks. Then the price was announced. A few who were destined to become strong supporters vanished. $41,000 for a vehicle that's supposedly intended to appeal to middle-market consumers simply doesn't make sense. Why such a huge compromise? The theory still holds that Volt isn't really a pure EV system, that it actually possesses some components and operational behaviors of Two-Mode. If true, it's a mixed blessing. CS-mode efficiency could indeed be competitive then; however, it would come with a cost penalty. Getting the price of down to a profitable level would be quite a challenge... a step unnecessary for Toyota. The simplicity of HSD and the fact that it is already in high-volume production gives it a clear advantage... which is why they just plain don't like anything I have to say anymore. Attitudes have become hostile. They make outsiders feel very unwelcome now. So even when you ask constructive questions, you get nothing but defiance. Makes you wonder what the next 7 weeks will bring.

9-13-2010 **Plus 6 New Hybrids.** A spokesperson for Toyota today stated the goal to sell 20,000 plug-in Prius the first year, at a price of "*$3,000 to $5,000*" more than a regular Prius. Since we already knew the PHV model wasn't going to be based upon a high-end package, it still looks likely that the hope to see a price under $30,000 is realistic. Yeah! It's differences like that which make an automaker stand out. Following through on price intentions is good business. Base design within reach of what consumers can afford. How else could profitable high-volume production & sales be achieved quickly otherwise? The other news today was the fact that Toyota intends to deliver 6 new hybrids within the next 2 years, not including upgrades to existing models. Wow! That sure will help with the establishment of FULL hybrids into the mainstream. Diversification is important. Consumers need choices. Business needs to spread risk. Sounds like a great plan to me.

9-13-2010 **Lexus CT 200h.** I wasn't expecting information about any new Toyota hybrids so soon. This upcoming Lexus hybrid will be a hatchback variant of Corolla, with luxury amenities, of course. The combined estimate is expected to be 42 MPG. Pretty sweet, eh? Hitting that 40 MPG minimum has become an expectation, now that Ford achieved 39 so nicely for Fusion. It was a great debut for their first FULL hybrid sedan. In fact, it put pressure on Toyota to make sure the next generation of hybrid for Camry does at least as well... hence the expectation of 40. We think Hyundai may be able to deliver similar efficiency as well. Of course, those are mainstream cars. Lexus isn't. What does that mean for the other automakers with more upscale offerings? Remember how BMW was going to deliver a Two-Mode sedan? It never happened. Will it now? This certainly stirs the pot. Efficiency standards have to be meet somehow.

9-14-2010 **Concern & Denial.** It's getting bad. I posted a message voicing concern about harm to Volt's reputation from incredibly smug statements like this: "*But in any case the plug-in Prius is such a complete loser on just about any front...*" In short order, the negative votes piled up for me and the original message with the statement itself was simply ignored. Between Toyota's news yesterday and the discovery of a new GM website designed specifically for Volt owners, it's easy to see how the enthusiasts don't grasp the whole situation. What they do next sets the stage for rollout. The trophy mentality doesn't actually accomplish much. How is Volt alone going to be competitive with such a large variety of new hybrid choices on the way? To make matters worse, not seeing how that website further pushes Volt into a niche shows the effort to draw mainstream interest being an even greater challenge than thought. Add to that the uncertainty of delivery. Then consider the terrible attitude in certain posts, the lack of discipline from that behavior, the negative voting, the price fallout, and the lack of information about CS-mode. There's reason to be concerned. Why aren't they taking it serious? Is it still denial that the some of the comments from supposed trolls were actually helpful advice not heeded?

9-14-2010 **Purpose, boost.** Wow! So many assumptions and so much incorrect information, I'm not sure where to begin. The PHV model is intended to be available as a mid-grade build. The one I drove had a mix of features from packages 2 & 3. The purpose is to BOOST MPG. The point is to make best use of the extra electricity, allowing the engine to join in during times of high demand for an overall efficiency benefit. EV speed & power will increase, but driver interaction won't really be any different than it is currently. Keeping price low and ramping up Li-Ion production via non-plug models in the meantime is priority. The ultimate goal is to phase out traditional vehicles of many types & sizes. They're approaching it by offering a variety of choices based upon a well-established (profitable & reliable) platform. The flexibility of adding sub-packs to augment a hybrid is cost-effective, demand-flexible, and a straight-forward option consumers to understand & choose. How GM will respond to the actions of other automakers will be very interesting. How consumers will react to the new choices available will make fascinating history for us to look back upon later.

9-14-2010 **Purpose, who.** The previous entry was my response, after waiting 5 hours for others to sound off first. The topic on the daily blog for Volt was Toyota's plans revealed yesterday. Much attention was placed on the PHV model Prius. It was important to remain silent to find out how well they understood the purpose. Over time, range would increase anyway. We all expect energy-density to increase and price to decrease as the years progress. So, just like battery-capacity with portable electronic devices, the same will happen with plug-in hybrids too. Why is that so hard to accept? They've got the "40 miles" propaganda so deeply embedded in their thinking, it apparently is difficult to acknowledge anything else as beneficial. Remember who the consumers are. People who purchase Camry & Corolla aren't enthusiasts like they are. The purpose they seek is a vehicle that's reliable, comfortable, practical, and affordable.

9-14-2010 **Purpose, priority.** For Volt enthusiasts, it's range above all else. They are happy to compromise on price & emission-rating for the sake of that one particular bragging point. That priority is quite different from the mainstream. It's a niche desire... which there's nothing wrong with. But some absolutely refuse to acknowledge the difference. Thankfully, a few actually do by focusing on the second-generation instead. This particularly smug comment "*13 MPC is a bit anemic*" today really got me fired up. Changing from AER (All Electric Range) to MPC (Miles Per Charge) doesn't change the fact that it's still intended as a superiority insult. I replied with: Middle-Market has voiced price as their highest purchase priority. In fact, that requirement is so well established we've seen the "*$3,000 to $5,000*" premium noted in a variety of different studies from different sources. The desired benefit is a significant efficiency BOOST at an affordable price. Consumers will be paying for an increase from 1.3 to 5.2 kWh. The result will be a reduction in engine use. The EPA has proposed the "*blended*" category for plug-in vehicles like that, keeping it separate from the "*series*" type. Those attempting to force an EV perspective on a hybrid are missing the point and causing confusion.

9-14-2010 **Purpose, comparisons.** Stepping back from the direct comparisons to look at the big picture rarely happens. Heck, getting Volt enthusiasts to consider business need rather than focusing entirely on the engineering is a challenge. Even consequences of things like disregarding the impact of CS-mode efficiency don't phase them. That's why I keep asking the question of purpose. What are the goals? Sadly, it's always back to direct comparisons. Still, I try: Volt is a vehicle, not a technology. It depends upon a plug for efficiency, doesn't appear to be a design practical for upscaling, and doesn't fit well for routine long-distance travel. On the other hand, you've got HSD which has been implemented in everything from a compact car to a 4-wheel drive truck offering 3,500 pounds of towing capacity. It doesn't require a plug, but can be enhanced with the addition of one. Issues like price and winter performance continue to be avoided for Volt too. Whether or not it is a good technology dodges the real issue of sustainable business in this changing market.

9-14-2010 **Purpose, when.** This particular point really angered the Volt enthusiasts. Why must a Prius supporter be the voice of reality? Arrgh! Waiting until the next generation has become an excuse for much of the behavior now. So, I mentioned the purpose of the federal money being provided for the sales of each automakers new efficiency technology. Delay could end up being an opportunity lost. Why can't they see that? Penetration of that new into this market is quite a bit more of a challenge than they realize. Be proactive, not reactive. Don't take consumer acceptance for granted. Oh well. Again, I try: Purpose of the credit is to establish a high-volume mainstream product that will continue strong sales AFTER IT EXPIRES. That means proving the technology in the meantime. Leveraging off of an existing green vehicle by simply offering a plug-in package overcomes quite a number of barriers immediately... allowing for lots of sales... leading to owner endorsements... which contribute to new sales. The step up from 1.3 to 5.2 kWh is significant enough to draw interest without being too expensive. Price will be well within the usual package choices. Range will naturally increase over time anyway, perhaps just as the credit expires... due to such high-volume production in the meantime.

9-15-2010 **Purpose, bragging.** Certain enthusiasts simply came out and declared "*bragging rights*" as the purpose. One even went as far as saying the "*Prius driver will bow his head in shame*" once they see Volt. The fact that there's a profound difference in price and that one requires a plug is totally disregarded. Those select few are pushing reputation deep into smug territory, yet the rest are showing no resistance to that idea anymore. Prior to the price announcement, there was balance. Not anymore. Things certainly have changed. They group obviously wasn't paying attention either... or the greenwashing is truly getting out of hand... because some of the claims about how the PHV model Prius works are way off... despite being repeatedly corrected. I figured such blatant disregard for market need would lead to this mess.

9-16-2010 **Purpose, up to.** It's not like there wasn't an effort to prevent this mess. Some just plain aren't trying. They'll complain about Toyota not being transparent about how their EV works, despite the examples of how it currently works in the 2010 or the press releases which clearly state an "*up to*" speed for the PHV model. Then when you point out how GM does the very same with their "*up to*" distance for Volt, it falls on deaf ears. That's so hypocritical, it's terrible. With such loss of constructive discussion, it's no surprise why some have left. My posts have dwindled down to almost nothing on that daily blog. At this point, the finish line is in sight. That second generation model will be the one configured for the mainstream. This one clearly doesn't meet the needs of middle-market. The next will actually strive to achieve the purpose of being clean, efficient, and affordable.

9-16-2010 **Purpose, blended.** Heavy promotion of "*all electric range*" from Volt enthusiasts makes any comparison to a Prius with a plug pointless. Yet, they are constantly doing it. No matter how much you try to make it clear that purpose of Prius is different, their desire to claim superiority cancels out any logic you present. Market need clearly isn't being addressed. That balance of physical & performance features consumers seek from a purchase works well with a "*blended*" vehicle. Purpose takes all aspects into account, not focusing on one extreme at the penalty of others. They make the blending appear to be a weakness, an issue which must be addressed. I kept trying to point out the reality of the situation with responses like this: It's a hybrid. Using the engine at times is part of the design. EPA identifies it as the BLENDED type of plug-in. The plug/battery option will simply be a package available, enhancing the electric-only ability that's been present for the past 10 years. The real-world data collection taking place now will establish a baseline for expectations. What is the issue?

9-17-2010 **CS-mode.** The efficiency of Charge-Sustaining mode (driving after EV capacity has been depleted) is a hot topic for both Volt and the PHV model Prius. For the latter, Volt enthusiasts like to keep doubt alive, even though we already have real-world data collected showing the MPG to be within the margin-of-error for the Prius without a plug. The debate for Volt though, it quite strong still. There are some stubborn minds insisting MPG will be superior to Prius. If that were the case, why in the world wouldn't GM offer a non-plug model of Volt? Of course, today's reveal of a new Volt screen may put that question to rest. In big numbers, it showed "250+" for the MPG average. In smaller numbers, it showed "190" for the Lifetime value. You needed to break out your calculator for the smallest. 40 miles for EV. 6.8 miles for gas. 46.8 miles total. 0.18 gallons used. Doing the math, you get 37.8 MPG. Were those numbers genuine? If not, why were those particular ones chosen? Whatever the case, it is yet another example of CS-mode efficiency just under 40 MPG... exactly what some of us have been predicting all along.

9-17-2010 **Awareness Greenwashing.** All you have to do is make something up, then follow the statement with a qualifier of "*to my knowledge*" or "*I believe*". A post today actually had both in it. He claimed the ideal efficiency for Prius was speeds up to 35 MPH. Where the heck did that come from? How could an ideal be a range anyway? Reading further, the reason supposedly was because he thought the engine started up at that point. How many times must the maximum for Stealth and EV be posted? Over and over and over, the Prius owners mention that information. Yet, somehow, that regular poster missed every single one of them. It was obvious that was a sad attempt to greenwash. That maximum speed was just a random value intended to appear innocent. Anywho, it was part of their on-going effort to make it look like Toyota is promoting an EV similar to Volt but with less capacity at a lower price. Their hope is to discredit. I responded with this: Fuel-Cut occurs at speeds faster than 100 km/h (62.1 mph), but it's not constant. There is a power/recharge benefit from firing up the engine from time to time... hence the "*blended*" label. When you drop below the speed threshold, the engine will physically come to a stop and stay that way until a particular kW demand is exceeded. For most driving below 62, it pretty much stays at 0 RPM.

9-17-2010 **Cruze Importance.** We're hearing more and more about how important Cruze will be for GM's return from bankruptcy. So much so, the attention to Volt is fading. That de-emphasis on the first-generation design has become obvious, surprisingly quick. Prior to the "Freedom Drive" publicity stunt and the price announcement just 3 months ago, the attitude was quite positive. Volt would change the world in November. Already, the excitement as faded and Volt is becoming thought of as the premiere of great things to come... later, when the second-generation is rolled out. Cruze won't be an industry leader for efficiency as hoped. But the design is supposedly worthy of competing directly with popular compacts like Civic, Corolla, and Focus. That's actually good for an automaker looking for a steady-selling base product... especially with an IPO in the not-too-distant future.

9-17-2010 **Leg & Head Room.** I stumbled across something worthwhile from my online searches today. Who would have expected that! A variety of dimension information was provided about Volt. Actual detail about common comparisons! I was delighted... and quite pleased by the numbers themselves too. It was somewhat bold that Volt had been claimed to be as big as Prius, on several occasions from several sources. But without any detail, doing that could simply be dismissed as a mistake or an innocent error if caught later. Getting tired of the greenwashing yet? Even GM itself didn't go that far. Yet, certain supporters did. Of course, they argument about the not having seating for 5 as no big deal either. Anywho, front/rear leg room was listed as 42.05/33.94 inches. Compare that to the Prius 42.5/36.0 measurements. The same? Most definitely not! I bet the extra 2 inches in back are easy to notice too. That's a common difference between compact & midsize. Measurement of front/rear head room was certainly not the same either. 37.80/36.02 for Volt and 38.6/37.6 for Prius. It's another undisputable difference... well now anyway. No more speculation or vague hearsay anymore.

9-18-2010 **AER.** That's the term coined by the Volt enthusiasts to stand for "All Electric Range", so they'd have something to easily brag about. Even though Prius is a hybrid and its purpose is to deliver improved emissions & efficiency, they keep trying to force it into comparisons of absolutes. "Gas Free" is what it had been originally, but that feel apart when the reality of maintenance-mode and Winter warm-up became impossible to disregard... though they still try. So, now we get AER references on a very regular basis, comparing the 40 from Volt to the 14 of Prius. All they care about is that their battery capacity is bigger and their EV is the fastest. Rather children, eh? The huge difference in price is no concern. In other words, reaching mainstream consumers isn't a concern. Ego is really getting in the way now. Constructive discussion is gone. The outlook is a picture with Volt painted into a niche.

9-18-2010 **Start-Stop.** Remember 10 years ago when this was promoted as the low-cost solution to Prius? Ford even went as far as bragging how much quicker their system would be. Nothing ever became of it though. GM did actually rollout BAS, which provided some assist too. But that was a huge flop. Perhaps it was antagonist "golf cart" insults intended for Prius that backfired. Regardless, real-world problems like Heater & A/C use make the idea of stopping the engine when the vehicle isn't in motion a problem. How long to wait before stopping complicates matters. There's no benefit whatsoever for those who avoid stopping at lights, from slow traffic, and highway cruising. Sad part is, the stir now is that this will somehow provide a 15 percent efficiency gain... so compelling, this will be available soon. What about the past 10 years? Didn't we learn anything?

9-18-2010 **Cruze EV.** Recognizable traits of the old GM are emerging with the new GM. We're seeing the same mixing of messages as before. This time, it's their change of stance for EV. Remember with Volt, there was absolutely nothing realistic about offering a model without an engine. In fact, they even went as far as stating intentions to trademark the phrase "*range anxiety*" to stress that point. The EV has shortcomings and Volt is supposedly the solution. Of course, that was over 2 weeks ago. Today, we got a press release from GM stating their plans to begin testing a Cruze equipped with a 31 kWh battery-pack next month. It will be capable of up to 100 miles of travel per charge. What the heck! Can't they make up their mind? Is "*range anxiety*" a problem or isn't it? And what about all that electric-only testing they already did with Volt?

9-19-2010 **Selling Hybrids.** This was the statement from Ford's global marketing VP: "*You can't sell a hybrid in today's market.*" A comment about that which particularly caught my interest was: "*10 years ago I wouldn't have touched a Hybrid with a 10 foot pole...*" from a new Prius owner, who expressed concern about the emphasis on today rather than what's to come. I chimed in with: 10 years plus 10 days ago, I did. It proved to be a remarkably wise decision, well ahead of the emission & consumption problems to come. We're in a state of change now, where one hybrid has become part of the mainstream and others are struggling to achieve the same success. Misconceptions from 10 years ago are just a faded memory now. Automakers know the days of traditional guzzlers are numbered. As the economy recovers, the draw to easy profit will make the challenge of delivery a competitive even less appealing... especially if gas prices don't go up. They'll attempt to squeeze out every last opportunity as long as they possibly can before committing to significant production changes. Resistance is futile. Yet, they make excuses not to anyway.

9-19-2010 **More PHV.** Reading new reports of PHV testing rollout is exciting. The other day, it was 2 going to a university in the Washington D.C. area. Faculty members will drive them at 3-month intervals. Initial reaction was that 13 miles sounds inefficient. They sure are in for a surprise after finding out how much that boosts efficiency. I'm looking forward to the follow-up reports. Today, we got a report stating 18 would be going to the University of Colorado's Renewable and Sustainable Energy Institute (RASEI). They'll be paying particular close attention to cold-weather and high-altitude performance. They're hoping to stir interest through discussions on a community blog setup to share details of the study as it progresses. With so many different organizations getting the opportunity to drive the PHV prior to high-volume production and consumer availability, I can't image what things will be like when sales begin. Realistic expectations will already be established. People will know what their purchasing. Talking about lowering business risk. Good plan!

9-20-2010 **Omitting Emissions.** Same old story. A seemingly comprehensive new study focusing on the long-term value of hybrids totally ignored emissions. It mentioned new sales, including the bump from Cash-For-Clunkers. It pointed out the contribution higher gas prices made. It talked about annual savings, in detail. It listed upfront & recoup costs, as well as selling later, even used purchases. That all appeared to be quite thorough. Yet, no value whatsoever was placed on emissions. In fact, if it hadn't been for the introduction, they would have been omitted entirely. That's the rub. The initial attention gave the impression emissions had been a consideration in the analysis, but reading the report itself revealed that they weren't actually included in any way. It's quite frustrating to find so many examples like this of greenwashing. You get the impression of importance, but the facts don't demonstrate any support.

9-20-2010 **Detecting The End.** I found this particular comment from a constructive discussion about high-efficiency vehicles interesting: "*Before I can get onboard with the idea that automakers realize gas guzzlers days are numbered, they'll have to show me a greater commitment and more tangible products.*" Have you ever asked yourself what the signs of change would be? Having witnessed many technology transitions in the past through the eyes of early-adopter participation, I had some information to share: You've got it backwards. Because automakers know the days are numbered, they're going to do exactly the opposite in the meantime. They'll milk the final opportunity for all it's worth first. Remember all the "1010", "321", "888" long-distance phone numbers? That was the phone industry's final fling, well aware of the reality that all domestic calls would soon be considered local. Their gravy-train was about to vanish, and they knew it. With vehicles, it's a matter of taking responsibility for emissions & efficiency. That can only be delayed for so long. Getting onboard is inevitable. Consumers already know that boat is sinking. They've witnessed $4 gas already. They've witnessed the effects of smog. They've witnessed lots about the problems with getting oil. And of course, Prius has demonstrated that hybrids are realistic.

9-21-2010 **Nothing 50.** Do I really need to keep pointing out the obvious? Each automaker must provide the choice of a high-efficiency vehicle. It has to be something affordable, so they can sell enough to achieve CAFE requirements. Nothing to offset their traditional production spells trouble. Why is that so hard to acknowledge? Small improvements of just a few MPG simply won't be sufficient. Something in the 50 MPG range not requiring a plug seems the only reasonable way. Do they really expect a few really expensive ultra-high MPG vehicles with a plug to compensate for the rest of the fleet? Perhaps the solution will come from profit. As more high-efficiency vehicles are offered, the appeal of guzzlers will drop... making them less profitable. Since 50 MPG without a plug has proven so realistic for Toyota, it stands to reason that may become the benchmark for other automakers. Nothing comparable offered could mean abandoning that market. That's not good for business.

9-22-2010 **At This Point.** It about to get messy. Official EPA Estimates for Cruze are now available. Think of the spin soon to emerge. 28 Combined from the 6-speed turbo automatic with the 1.4 liter engine isn't exactly what the Volt enthusiasts wanted to hear. 36 Highway is disappointing. What had once been hyped to be as much as 45 MPG, dropped to 40 as time went on. Having it end up even lower officially puts Cruze in the same category as other vehicles in the subcompact class, rather than being a new industry leader as hoped. But what really stings is the 24 City. That's just plain nasty. There's no way to sugarcoat that. So what in the world does this mean for Volt? Since it uses the same engine, what should the efficiency expectation be? MPG should be better for direct-drive, rather than converting energy from mechanical to electrical than back to mechanical again. What would make Volt different? You'd expect there to be optimization not possible from a traditional vehicle, but that could just cancel out the conversion losses. It sure looks like that expectation of 38 MPG looks pretty darn realistic at this point.

9-22-2010 **Plug-In Analysis.** Frustrated with wild claims being made up about how much gas Volt will actually consume, I started collecting daily-driving data. Estimates about how much a person would drive each day were far too generic. It was clear even constructive attempts weren't taking the variety of situations people routinely encounter into account. That's why I started logging odometer readings each night. I wanted something genuine to work with. Rather than guessing, I'd end up with 365 days to run calculations against. I could even apply a standardization factor to reveal values based on 15,000 miles per year. All variations would reflect actual deviation. I could even highlight those months where cold weather would negatively influence efficiency. I expect the resulting new document to become more and more accurate over time, as more data becomes available. For now, it's something very effective to work with in anticipation of growing interest... plug-in analysis

9-23-2010 **Greatly Superior Regen.** How can a Volt enthusiast claim that in comparison to Prius without any data? To make matters even less sensible, that trait was the argument factor why it would achieve better efficiency on the highway. Talking about greenwashing! While cruising on the highway, you don't ever touch the brakes. So, how could there be regen... especially enough to significantly boost efficiency? Yet, somehow Volt will sustain over 50 MPG that very way. Just making up stuff based on abilities the typical consumer doesn't know much about, like regenerative braking, is a bad sign. What's to come? Will desperation cause a collapse like it did with Two-Mode. In other words, the real-world data wasn't able to draw enough attention for growth and the enthusiast posts dwindled. The next month should be very interesting. Actual observation should help to squash the wild claims.

9-23-2010 **25 to 50 Miles.** That was an interesting & unexpected bit of information about Volt provided by GM today. 50 miles is for the hypermilers, who travel in absolutely ideal conditions at the ideal speed. Supposedly, the 25-mile low is the worst-case scenario... aggressive drivers going uphill in the cold. Apparently, he's never been stuck in -15°F traffic. Ice from vehicle exhaust instantly freezes and drops to the road. Friction from tires add a nice gloss finish to that already slippery surface. It happens many times every single year here. We call it "black ice", since you can't see it while driving. Traffic obviously slows to a crawl then. And since it's so absurdly cold, you've got the heater working very hard trying to keep you warm. Combine that with the much longer commute time, you'll see far less than 40 miles for electric-only range. This is what I posted in response to reading that... which, of course, wasn't responded to favorably by the enthusiasts: 32 miles for the threshold during a typical Minnesota winter commute appears to be pretty realistic based upon several sources now, including Nissan's estimate.

9-24-2010 **Disregarding Business.** The engineering arguments are getting annoying. They haven't been constructive for ages. There simply isn't the data for that. Yet, they continue anyway. Regardless of points made, the line is already draw. Some side on electricity flow. Others side on transmission, aerodynamics, regenerating, and software. The latter is the problem. They are the ones still claiming MPG above 50. If GM did actually achieve that for Volt, why won't a smaller battery or no-plug model be offered? It's like talking to a wall at this point. But what the heck, one more post anyway: What about the BUSINESS perspective rather than ENGINEERING only? 50 MPG from the engine equates to missed opportunity. Why would they choose not to also compete in the no-plug market? So... they're intentionally choosing not to compete in the 50 MPG no-plug market?

9-24-2010 **More Nonsense.** Believe it or not, I actually did get a response. It wasn't the slightest bit constructive, but at least it was acknowledgement. Asking why there won't be a no-plug model resulted in this: "*Because they don't have to. They have a plug.*" That's enough to make a person crazy. Not wanting to pay as much and/or not having an outlet available, you have no choice available. How does that make any sense at all? Lack of diversification was a problem prior to bankruptcy. Now, they've got that same problem to deal with combined with the reality that efficiency standards are being raised. How can a one-size-fits-all approach be a viable solution? Anywho, I responded with this: There's a sizeable chunk of market who doesn't want to spend that much and/or simply doesn't have an outlet available. Why would GM give that business to competitors? And of course, how is GM going to achieve CAFE requirements without?

9-24-2010 **Ford's Perspective.** This one really got me thinking. Their claim in a report today was that consumer purchase trends had progressively migrated away from cars and increasingly embraced trucks instead. Of course, I recognize how they discontinued the once extremely popular Taurus sedan and pushed the SUV instead. They even later brought back Taurus as a Crossover vehicle (really a SUV in disguise). Not offering choice is the problem. Don't think so? Look at the other automakers. They sold lots of cars as Ford shifted to trucks instead. So, from Ford's perspective, they saws trucks as the desired product. But looking at the industry as a whole, many consumers still wanted cars and ended up purchasing them from someone else instead. During the SUV craze, there was indeed a temporary surge. That didn't last though. It was a phenomenon only present within reach of cheap gas. In other words, it was just here and only within the years following 9/11 and prior to $4 gas. The situation is very different depending upon the who's perspective is considered.

9-25-2010 **Fascinating Mess.** It's been a plummet to the bottom for some Volt enthusiasts. Comments with respect to business had been disregarded. Now, they are being treated as attacks. Too bad we're seeing history repeat itself like this. Remember Two-Mode? Stuff like this sounds so familiar: "*Such delusion and clear disconnect from reality is pathetic.*" It gets worse from there. The insults & name-calling aren't the slightest bit constructive. Yet, that's on the increase. Remember the smug? It's hard to believe they'd simply ignore all that's needed now for the sake of an uncertain future. Observing the reality of the situation unfold has been fascinating. Blinded by the future, all in the present is sacrificed. With such a large cost and only a single choice, how could it work? What are consumers going to by in the meantime? How will those without an outlet available going to benefit? It's quite a mess.

9-25-2010 **28 MPG.** That's what the new Highlander-Hybrid will offer, for both city & highway. Makes you wonder how a vehicle with a 3.5 liter engine, 280 horsepower, 3,500 pound towing, seating for 7, and power to all 4 wheels looks in comparison to a vehicle like Cruze. The only thing they have in common is the 28 MPG combined efficiency estimate. But if an automaker like GM disregards price as they have with Volt, the obvious choice of what to buy would be the Highlander. After all, they promoted Tahoe-Hybrid to death with that "*better than Camry in the city*" nonsense. Omitting the highway values was extremely misleading. At least with this, combined values are the same. With the Tahoe, it was lower. Too bad advertising focuses on just select bits of information rather than telling you the whole story. The devil is in the details.

9-26-2010 **Obsolete.** It's amazing how thick the smug is getting. But then again, that isn't necessarily a bad thing. Volt will serve the niche it has attracted quite well. They're willing to pay the premium and greatly desire power & speed in the performance class. Vehicles like Camry & Corolla aren't of any interest to them. That's why the attempts to discuss aspects of business degrade to childish mocking so quickly. They simply don't want anything to do with the sales that come from middle-market, those who provide the sustaining profit automakers require to survive. That's why claims of Prius soon to become obsolete are so prevalent from them now. It's that same old "trophy mentality" I expressed concern about 3 years ago. Those in middle-market will be stuck buying traditional guzzlers for many years to come still. The low priority on price and heavy emphasis on sport traits have resulted in a plug-in that will please the sport's enthusiast... not the mainstream consumer.

9-26-2010 **Concern.** What it has all boiled down to is lack of choice... same problem as before the bankruptcy. I still can't believe history was able to repeat again. The lesson clearly wasn't learned. The best example was the massive effort to deliver Two-Mode. It turned out to be far more expensive than they expected, wasn't as efficient, and couldn't be scaled as promised. Isn't that the same situation for Volt? The price is well beyond what had been planned and the continued mystery of CS-mode all but confirms MPG not meeting objectives. Those dealing with Winter extremes or driving further than the "typical" distance are in for a surprise. Those who have a very short commute are likely disappointed already. How is so much effort placed on a single configuration going to help with the recovery? For that matter, how is further development going to be funded? Needless to say, I'm frustrated and not looking forward to the fallout.

9-26-2010 **My Understanding Is.** All you have to do is qualify a greenwashing statement with that, right? Some seem to think so. No matter how many times you point out the correct information, some conveniently miss ever seeing it. You know that's a crock. But pretending that detail was never available is easy when there's a daily blog where posting ends the next day. On a forum, threads remain active for years or get stirred back up from the past from a newbie search. That's not possible with a daily blog though. A new entry can easily go unnoticed due to the consecutive nature of each thread. There's nothing to draw attention to it after the day has past... quite unlike a forum. This is why so much hype has been able to thrive. This is why comments with "*my understanding is*" continue to emerge from daily posters. Challenging them doesn't do any good either. The response is usually either spin to distract or some other topic to bury. They just make something up, then repeat it from time to time, hoping others will believe that as truth. Watch for it, especially with the qualifier. Noticing a pattern means you've discovered a greenwashing attempt.

9-26-2010 **Retrofit.** The obsolete argument primarily stems from not being aware of the past. Many in support of Volt clearly didn't study history. Evidence of that is overwhelming with all the parallels to Two-Mode surprising them. Disbelief that cost would be neglected to such a degree is the best example. What good is a highly efficient vehicle that's too expensive to appeal to the mainstream? They look down upon the PHV model Prius as a retrofit, that somehow engineers struggled to figure out how to add a plug after the fact. They have no idea that the very first ever produced actually came with a plug. That idea was abandoned due to cost and minimal benefit, but it clearly shows that the idea had been considered in the original design. Further proof is all the posts during early rollout here mentioning the "*sweet spot*". Owners had observed efficiency optimization for the speed of 100 km/h. And sure enough, when the Iconic model was rolled out in 2003, we could see that the PSD was capable of keeping the engine motionless at speeds all the way up to 100 km/h. Poor battery-density of the time combined with excessive cost kept that ability from being utilized though. There were concerns of reliability too. Using a PSD for the anticipated 180,000 mile lifetime that way had never been attempted. So, the wait for the next generation was required. In 2010, the ability to support a plug became obvious. There was a bigger traction motor and the RPM tolerances had been increased, providing a nice durability buffer. An affordable type of battery providing enough density had emerged by then too. Why couldn't an even bigger traction motor and even greater tolerances (in the form different gear ratios) be available in the next generation? How can they claim superiority when the competition continues to deliver improvements... especially when the priority of cost is taken so seriously?

9-27-2010 **Excuses.** Looks like getting away from the Volt hype is becoming a greater challenge than expected. Upon reveal of the price, any remaining trace of logic vanished. More and more, the enthusiasts focus on aspects of performance... old school appeal... acceleration... handling. Concerns of emissions aren't just pushed aside with some demeaning comment. Talk of efficiency, the only remaining unknown, are responded to with excuses. It's pretty bad. They'd tend to make sense if the rest of the automotive community didn't exist. Waiting for the EPA estimates to avoid another "230 MPG" backlash would seem reasonable, if there weren't so many EV range estimates already. But consumers researching a purchase only use estimates as basic starter information anyway. They seek real-world data for decision making. Waiting until after rollout begins seems like pointless delay... unless there's an IPO involved in the meantime. Hmm? Needless to say, attempts to be reasonable end up with excuse responses... despite the continuous flow of PHV deliveries for long-term testing and public reporting of results. To today's excuse (remembering the "Freedom Drive" publicity stunt), I simply chimed in with this: There's nothing stopping GM from sighting real-world driving results. In fact, it's common for pre-rollout test-drives to sight efficiency observations.

9-28-2010 **Battery-Pack Recall.** With all the negative sentiment already, I can only imagine how this news is going to stir emotion even more. Subdued reaction is the best we can hope for, I guess. Needless to say, this is really bad timing for GM. All 25,813 BAS hybrids ever produced will be having their battery-pack recalled due to the potential of a chemical leak. But rather than adding a simple preventative sealant like Toyota did with the Classic model Prius, this requires replacement. The difference is Toyota's was external, only affecting the outside of the cell, the connector. GM's is internal, where a leak would damage the cell itself. Since there's no way to add a preventative sealant and damage would impact the EPA efficiency & emissions measurement, the only course of action is to replace. Problem is, batteries are in extremely short supply. That's been an industry problem for years. But with BAS, it's not even in production anymore. How do you replace that many packs for a discontinued product?

9-28-2010 **New Prius.** Photos of a new Prius with a raised cargo area (one black and one silver, indicating two separate vehicles) from two different sources circulated the internet today. Some articles label them as a minivan. Why? The distinguishing characteristic, something unique to vans, wasn't present. How could it be a van of any size without sliding doors? If all that differed was a flat roof rather than tapered, it's a wagon. Perhaps the Crossover verses SUV nonsense has consumers confused now. After all, calling a SUV a "*car*" never made any sense. Yet, the industry's marketing push to get them to be recognized as something other than being a truck was successful. Anywho, it was a wagon option... just like we've with both Corolla & Camry in the past. This wasn't the new hybrid coming next Spring either. Why would people think that when Toyota specifically said it would be bigger and come with a larger engine? I guess it confirms interest in Prius is strong still, seeing how new photos stir so much interest.

9-28-2010 **Advisory Board.** Hype thrives on uncertainty. GM milked it for all they could with Volt, leaving fundamental questions unanswered for very long times. The final remaining is, by no surprise, the most important... how efficient is the engine when running to generate electricity? There's nothing new about the SERIES hybrid. Many have researched them. No automaker ever found it efficient enough to compete though, even with the aid of a battery. GM itself, during Two-Mode development, repeatedly pointed out how direct-drive would result in higher MPG than first generating that energy from the engine to electricity. Since then, we've been waiting to find out what their stance is? Turns out, they've chosen 15 independent voices to do the speaking instead. Just like Toyota's feedback program, GM will be loaning out cars for outsiders to drive and report about. But rather than 600 worldwide over a span of 1.5 years, they'll apparently just offer 15 for 3 months. However, these particular individuals are well known EV enthusiasts. So, what they have to say should be very interesting. Of course, they don't represent the typical consumer. But at least we'll get some real-world data from this and well informed commentary.

9-29-2010 **Delivery & Hype.** Pointing out how long it took from production begin to first delivery of Two-Mode resulted in hostile responses. They reality of 2 to 3 extras months for Volt was more than some could stand to hear. So, they shot the messenger. This new advisory board could help to ease that pain, giving enthusiasts something to discuss in the meantime. Does that mean the hype will finally simmer down? A few still honestly believe 60 MPG is realistic, embracing the idea of a very expensive transmission to achieve that. Not being competitive and still requiring a plug make Prius supporters wonder what the goal actually is. Mainstream consumers don't chase trophies; their purchases come from affordable choices that offer a nice balance of vehicle aspects... not heavy emphasis on a few particular traits. Delivery of demo models will surely result in very favorable test-drive experiences. But what about the price? What about those who don't have a 220-volt connection or even a 110 available? What about those who drive more than 12,000 miles per year? What about the affects of Heater and A/C use? What about those not interesting in or intimidated by the display-screen driving interface? What about interior size? What about reliability & resale? What about service? The transition from hype to reality begins with that first delivery. Are the enthusiasts well prepared to deal with the feedback?

9-30-2010 **9.3 Gallons.** Final pieces of the Volt puzzle are now emerging. Confirming the size of the gas tank was something that especially peaked interest. Why so much capacity for a vehicle that will rarely use it and is supposedly extremely efficient, especially if there's concern about old gas? But if the feared 32 MPG really were true, there's a tolerable minimum between refills on a busy day of travel and the original 6-gallon tank simply wouldn't be enough. 9.3 gallons would offer about 250 miles between refills, a reasonable distance. Is that why the size was chosen? How will consumers react to MPG like that? Will the EV-range exclusively be the draw, based on enthusiast claims that CS-mode efficiency is a non-issue? What about the newest apparent discovery that "*Sport*" mode gets extra power by running the engine? And of course, how much gas will be used for cold-start warming and the heater? In other words, each new bit of information raises more questions than it answers. Ugh.

9-30-2010 **Gallons Per Year.** Ultimately, that's what it boils down to from the efficiency perspective. Electricity can come from clean & renewable sources. Gas is primarily oil based. Oil dependency is a problem. The measure of how much you use has been a problem. MPG is very misleading. Over a year ago, I started collecting daily-driving data. Knowing each day varied far more than estimates people had presented, I wanted to find out if there was any pattern. None emerged. The variety of driving... to the store... to friends... to entertainment... simply wasn't routine by any measure. So, what I ended up doing was taking all 365 days and applying the same formula to each individually. The results were captivating. Using the same standard 15,000-mile annual scale as the EPA, it suggests the configuration of Volt will consume 89 gallons per year. That's far more gas than devote enthusiasts ever promote... whom I can see becoming antagonists once real-world data finally becomes available. The quantity falls significantly if you drive less. It doesn't take a rocket-scientist to see that they'll want to quote less than the EPA standard for that very reason. That's why measurement like this will be so important to know.

9-30-2010 **Volt Test-Drives.** Remember what Toyota did back in 2003? Supposedly, GM will be doing the same thing... offering the opportunity to drive their newest high-efficiency vehicle prior to rollout to ordinary consumers. Toyota selected 15 cities across the United States. GM only 12. That in itself stirred negative response. The topic of speed never came up though. That really intrigued me. The problem all along has been that people have not had the opportunity to simply take Volt out on the open road. All test-drive experiences were within a small, closed tracks. That appears to be the situation with these events too. What's the point if you barely get above 30 MPH? Heck, at the Toyota events, we got to drive along in regular traffic. For me, it was a journey through downtown St. Paul, then out onto the highway. We didn't get to go that far. But it was extremely realistic, since there were no cones or barriers.

10-01-2010 **11,394 Sold.** That was the total for last month here. It's lower than hoped, but still fairly realistic. Prius is outselling each top-10 large SUV by a wide margin. Compared to the top-10 midsize SUVs, the quantity of Prius ends up in almost at the very top. For compact, it's the middle. That's quite a contrast from the past, when the SUV was king in sales counts. Of course, all the disingenuous claims of the past didn't earn any merit anyway... especially the size nonsense. Where the rest of the world referred to size with respect to seating room, they considered it a matter of height. How is that constructive? In the end, the designed proved a safety compromise. Add that to the emission & efficiency penalty, they'd be lucky to hope for the solid sales Prius sees now. Just think what will happen when the economy recovers... Don't expect gas to be any cheaper. Instead, there will be even more hybrids to choose from and real-world data proving some are a very a good buy.

10-01-2010 **$81.58 Per Barrel.** I hadn't checked the price of oil in awhile. With gas prices so stable, it was quite a surprise to discover a barrel was now selling for over $80. I wonder why. Hmm? We know insurance premiums for drilling will be going up next year. Perhaps policies are renewing now and the entire industry is already taking a hit from it. Whatever the case, the days of cheap gas are long gone. As the guzzlers age, it's hard to imagine people wanting to replace them with another vehicle delivering such poor MPG. The dinosaurs are finally dying. To think that we so recently lived through the ending of an era. Of course, now we have to deal with the consequences of that past. Good thing Prius revealed other choices were available.

10-02-2010 **Comparison Chart.** The blatant greenwashing has begun. How else would you judge the claim that only 15 gallons of gas will be used per year from driving 15,000 miles with a Volt? In response to seeing such nonsense, published clearly on a chart comparing Volt to Prius and Leaf, I posted this: What reason would justify the use of an ideal, especially when the "*under normal conditions & design parameters*" qualifier is clearly not representative of actual driving? For 40 AER (miles of All Electric Range) to be possible, the Heater, Defroster, and A/C could never been used. How realistic is that? Here in Minnesota, we require heat all throughout the Winter. Down in states like Arizona, they require cooling all throughout the Summer. And anytime of the year anywhere, you're going to need the defrost to remove condensation from the inside of windows. All that requires electricity. Somewhere between 20 to 25 percent of your range will be used for those comfort/safety needs instead. Implying you'll always get 40 AER is totally unrealistic.

10-02-2010 **Vague Statements.** You know trouble is brewing for Volt when statements like this are made: "*Unusually cool or hot climates will require 8 1/2 to recharge at 120V. It will be common to return to your garage with battery range remaining.*" Nothing good can come from something so horribly vague. What does cool or hot mean? Those are relative measures. Many in the south considers 32°F (0°C) cold. Many in the north (like myself) consider that a balmy Spring day, when we look for an excuse to do something outside. The freezing-point affects Li-Ion chemistry, altering its behavior... hence the need for warming. We see temperatures below that for weeks at a time. That's not unusual. In fact, it's normal for any states with snow-cover each year. And what does "*common*" actually mean? That gives no indication of frequency. It doesn't tell you how much either. Don't you love when enthusiasts attempt to present information lacking in essential detail?

10-03-2010 **Understanding Technology.** How many will simply make assumptions and not discover their error for years? How long did it take for a decent understanding of Prius take? Those vague statements will likely go on for years. Since most people discussing vehicles aren't shopping for a new one at the time anyway, it's really easy for lead them astray. You see that in great abundance at auto shows. They get excited about something they wouldn't have any interest in actually purchasing. Price has been the biggest deterrent in the past. With gas still "relatively" cheap and little concern for our dependence or the environment, selling any type of high-efficiency vehicle poses a challenge. There's a variety of competition now too, quite unlike the past. So... what does that mean for understanding the technology itself? Will an explanation of abilities distract from the realities? Most people don't think about how much energy it takes to keep the heater running when stuck in heavy traffic caused by a fresh snowfall... nor do they want to. Many simply tolerate, since choice was never available. Since MPG estimates were always misleading, how do you add electricity to the equation?

10-03-2010 **Fans.** That label was included as part of an insult to Volt enthusiasts. After reading it, I looked upon it inquisitively. All along, they've acted like the crowd... cheering on GM efforts with Volt development. Even though some of that was for unrealistic goals, the positive attitude did serve as an encouraging force. However, that's about to change as production begins. Rollout will confirm that some have no intention to actually buy one. They'll simply remain part of the crowd who continues to cheer. That makes them fans, not participants. A profound insight, eh? Voting with your wallet sends a powerful message. Exclaiming support but not actually doing anything is quite different. Looks like calling someone a "*fan*" is an appropriate term after all.

10-03-2010 **PZEV Emission Rating.** The final 1.5 miles of driving a PHV model Prius using the EV sub-pack closely resembles HV driving after depletion. The reason for this is to pre-warm the emission-system. Heat is needed for exhaust cleansing. It's one of the ways of delivering the PZEV emission rating. The other is an engine that runs cleaner than usual. Toyota achieves this by using the Atkinson-Miller pumping cycle rather than Otto. It's a tradeoff that sacrifices power for the sake of efficiency. The emission benefit comes from a more thorough combustion opportunity. For Volt, GM apparently just waits until depletion before firing up the engine. The cold usage combined with Otto shows a difference of priorities. Makes you wonder what, if any, design was specific to heat retention. This is a big deal for Prius. It allows the heater to continue pumping out heat and keep the emission-system from cooling even while stuck in heavy Winter traffic with the engine off. What did GM do for Volt to deal with that same situation?

10-04-2010 **PNGV Achieved.** None of us had realized the situation until today. The same proud Prius support who coined the "Iconic" label gets credit for being first to notice this achievement... the goals set out by PNGV (Partnership for a New Generation of Vehicles). Remember it from way back in 1993? Automakers were challenged to deliver a clean & affordable family-sized car that would deliver 80 MPG. Turns out, that's exactly what I averaged from my time with the PHV model Prius. Mission Accomplished! Though it's not actually available yet, the platform is already being produced in high-volume. We're just waiting for those darn better batteries. But the way things like, Toyota will likely be the official first anyway. Ford's not too far behind either. This is the kind of change they envisioned all those years ago. Of course, none probably realized how much longer it would take to achieved those goals. I'm sure they all hoped for much sooner. Oh well. At least it's happening now. Phew!

10-04-2010 **Mainstream.** I stopped by the parts department at my Toyota dealer today. This particular location has that as a separate building, in back across the street. That's where they store all the extra inventory. The made it overwhelming clear... Prius has undeniably become mainstream. There were about 30 of them lined up. It was a sight just like the Corollas and Camry. You get a decent selection to choose from now. As great as the rapid turnover in the past had been, that choice is better. It never hurts when there's a peak in gas prices either. There can be much to gain when being well prepared. And the pinch of a wallet can often provide that added incentive needed to finally take a test-drive. Anywho, that sight was a long time in the making. I still clearly remember a decade earlier, where delivery of a single Prius was a huge event. They were quite rare for a long time. Even seeing another on the road was unusual. Now they are so common, you spot quite a few every time you go for a drive. Hooray!

10-05-2010 **Balance.** Impression verses reality can be a rude awakening. In fact, the bad feeling you are left with is what has been fueling the fire for "troll" callouts. In other words, shot the messenger if you don't like the message. Needless to say, the Volt enthusiasts were particularly pleased with my response to this innocent question: "*I would expect the engine to remain off in all weather until the battery drops to 30% state-of-charge. GM is claiming the Volt is an EV with a range-extender. Not an EV with a gas heater!*" Here's how I responded to it, trying to point out the important of engineering balance: Think about battery-pack longevity. Think about how Li-Ion chemistry responds differently when its temperature is below freezing. Think about the wait for the heater to warm you. After sitting outside in a parking lot all day while at work with the temperature well below freezing, a routine situation in the northern states, not having a plug available means warmth for the battery to fully operate and for your comfort will come from the engine... regardless of state-of-charge. Practical balance takes precedence over an absolute, like avoiding gas consumption regardless of the situation.

10-06-2010 **75 MPG.** The trend seems to be that Toyota is attempting to validate the thought of the PHV model Prius delivering a 25 MPG efficiency boost. After all, how do you market a vehicle where the efficiency can potentially vary far more than traditional vehicles... which still have an efficiency understanding problem of their own? A friend who had one recently for 6 days ended up driving 551.5 miles with it. The resulting average was an amazing 74.8 MPG. The reported driving-ratio was 33% in EV and 67% in HV. That appears to fit the hope of 75 being the median expectation. They've been looking for some type of realistic generalization. The only way to achieve that is to allow a wide variety of people to drive it. And in this case, his experience included a 350-mile trip. Taking that into account, knowing there wasn't an opportunity to plug in during that trip, the efficiency looks especially good. A solid 75 for the typical owner would be fantastic. Of course, I'm still thinking the 80 MPG that I observed will be realistic for those who are able to favor the EV more... some even higher. It all depends upon how frequent you are able to plug-in. That's where having the driving-ratio displayed comes in handy. It should prove to be quite informative.

10-07-2010 **Diesel Sales.** Supposedly, they've skyrocketed lately. That's what the headlines lead you to believe anyway. In reality, it's the same old use of percentage statistics rather than actual quantity. We've seen this type of greenwashing many times in the past. Knowing the numbers tells an entirely different story... Jetta Diesel: Sept = 4,841 and YTD = 32,338; Prius: Sept = 11,394 and YTD = 103,334. Sales of the one are clearly well above that of the other, not the impression they attempted to convey. Can you believe such nonsense? Sadly, spin like that is common. When profit & reputation are at stake, don't be surprised by statistical misleading like that. The problem most often encountered is cherry-picking, watch for it. They select very specific data to compare rather than looking at the big picture. Think about how inventory fluctuates. It's easy to misrepresent, making you think a trend is permanent. Check the YTD (Year To Date) quantity is an easy way to avoid that. Don't rely on percentages. Diesel is struggling against the continually improving hybrid technology.

10-08-2010 **Posting Facts.** Today was truly amazing. It marked the effective collapse of the daily blog for Volt. That pretty much puts in right on schedule. We saw the very same thing with Two-Mode during that transition from enthusiast to supporter just prior to production beginning. Reaction was negative to posts stating nothing but a fact. It happened over and over again. Seeing such close-mindedness to opinion-less information marks that strikingly undeniable sign of change. For history to repeat like this, I'm shocked. You wouldn't expect the same mistakes to be allowed again, especially after a bankruptcy. But there it is. Unfolding at this very, we're seeing an awakening. The reactions from those wanting to support the new technology are the same as what we saw before... they don't like the facts and respond with emotion rather than constructively. Whether or not they'll continue down that path is anyone's guess.

10-09-2010 **Beneficial Reaction.** There's much uncertainty for Volt. Quite a bit of disappoint has arisen from price and dealer allocation. Enthusiast opinions are split about CS-mode efficiency. In fact, that's becoming a polarizing issue. Reaction, so far, has been far from beneficial. Lots of arguing hurts everyone. All the effort to work these issues out before now wasn't enough. Niche desire doesn't equate to mainstream appeal. So in a way, it was doomed from the start. Though, there was hope that some would cause a change of priorities. No such luck. Even the outcome of replacing executives wasn't enough influence. Oh well. Here's what I posted on the blog today... So after years of hearing "no need to worry" since GM will supposedly doing the very same thing that Toyota did, turns out they actually won't. Too make matters worse, we're seeing a remarkable parallel to the troubled rollout of Two-Mode from both automaker & supporters. Knowing many plans are already laid out and unable to be changed, what do you suggest? Thoughts about being far more clear about consumer expectations seems to be the best course of action, at this point. Of course, that means a consensus here about specific goals. Sending anything but a unified message will be counterproductive.

10-09-2010 **Good Business.** Sometimes, you just want to shout out words that serve no purpose other than to vent. Fortunately, I don't have to. Rather than express emotion on the heated blogs, I save it up for here where it far easier to just calmly think through the situation logically. After all, logic doesn't make too many appearances when it comes to Volt. Especially on the daily topics, there's a lot of passion... and it's all with respect to engineering. In other words, we're seeing the transition from horsepower to kilowatts. The same obsession with speed & power from guzzlers is now emerging from electric drive. Put another way, the enthusiasts can't tell the difference (or just refuse to) between need & want. Today though, there was an effort to distract from engineering entirely in the favor of flag-waving instead. Supposedly, the position GM is in now was the result of politics. Hmm? I remember a particular campaign scare tactic claiming hybrids would cause the loss of jobs in Detroit. Turns out, quite the opposite is happening. New efficiency technologies are creating them. No wonder they call it a game, with lots of excuses. Regardless, the point is to run a profitable business and apparently need to keep reminding them: Political claims often don't hold up to engineering. For example, the PHV capacity can be be augmented simply by plugging in additional sub-packs. That design flexibility offers a unique way to compete. Product diversity is good business.

10-10-2010 **From Hyundai.** The Sonata-Hybrid is getting closer. Today started out with more discussion about it, but no new information. Like the PHV model Prius, it has a top electric-only speed of 100 km/h (62.1 MPH). That probably makes more sense elsewhere in the world. But heck, there are quite a few roads around here that have a speed limit of 60 MPH or less. I can easily get to work and back on those roads, several choices of route too. Anywho, this is what I contributed to what actually seem to be a discussion with potential to be constructive. As you could have guessed, it wasn't on a GM forum or blog... 30 kW (40.2 hp) electric motor to propel a 3,457 pound vehicle? For sustaining speed, it should be realistic. There would be plenty of opportunities during a typical drive to take advantage of that. It's not powerful enough for suburb acceleration like the PHV model Prius easily delivers with its 60 kW electric motor though. It also begs the question of liquid cooling being available. Since without that, it would likely overheat from continuous use.

10-10-2010 **Real-World Observations.** It hit the fan this morning, just a few seconds after the strike of midnight. The date... 10-10-10 ...just happens to be when Toyota is celebrating the sale of 2,000,000 Prius around the world and when GM allowed real-world observations of CS-mode efficiency for Volt to be published. Needless to say, it's been a crazy morning. Spin is abundant. Goal posts are being moved. Targets are being denied. The other shoe dropped. It's quite the mess. The article from Popular Mechanics states their measure at 32 City and 36 Highway. MPG that low for CS-mode (after the battery has been depleted) is what many enthusiasts have regretted, hoping somehow the much boasted target of 50 would somehow be delivered. To add more pain to the suffering, their observation of EV range was only 33 miles. So... what happens now? Is stating 35 MPG and 40 Miles realistic for consumption calculations? It will be very interesting to see how this all plays out over the next few days.

10-10-2010 **Amazing Denial.** I'm blown away how some still deny the data. It's truly amazing, not surprising though. They have much to lose, after all. Here's the charge-sustaining detail that's become the source of ensuing battles: "*We computed the fuel economy after the battery was depleted, both on our city loop and the highway trip. In the city, we recorded 31.67 mpg and achieved 36.0 mpg on the highway. If we factor in the distance traveled on the battery's energy the fuel economy jumps to 37.5 mpg city and 38.15 mpg highway.*" How it was measured is the biggest argument to emerge, so far. That seems silly. It's not rocket-science. In fact, capturing that data is no big deal. This is what I posted in response to this nonsense on the big GM forum: You connect a gauge to the ODB-II port after depletion, reset it, do some city driving, note the MPG, reset it again, do some highway driving, note the MPG.

10-10-2010 **Wake-Up Call.** One can hope what's happening at this very moment with Volt is enough. It likely isn't. Odds are, they'll twist the situation so bad that effort of the past will be lost in the confusion... ultimately resulting in a step backward without any idea how to proceed. After all, dismissing observations by others typically divides supporters. Then you have to start asking questions of purpose. Since that was never clear in the first place, it can only be worse later from a design too expensive and not efficient enough. Looking back at this time 2 years from now, it should be clear. Right now, it is anything but. Anywho, I contributed this to the pretty much chaotic situation, which no one will likely respond to: There has been significant resistance to becoming an ally, in the past. The effort to replace traditional production quickly was pushed aside in favor of bragging rights. Is the reality of CS-mode efficiency enough to change those attitudes? Or is something else still needed, like much higher gas prices or the expiration of the tax credits?

10-10-2010 **The Surprise.** We certainly didn't have to wait long for things to get interesting. Remember the mocking from Volt enthusiasts, exclaiming superiority due to the ability to drive "at all speeds" in EV, unlike Prius? Remember the "power fade" concern at high speeds? Remember the efficiency from having "direct-drive" instead of multiple conversions? Well, it looks they just got one heck of a surprise. The big unknown seems to be the reality that Volt is far more like a Prius than any of them cared to admit. An image of a PSD was published by Motor Trend. Just a quick glance at it is all that's needed to see the similarity. The Ring, Sun, and Planets carry power differently. Connections don't go to the same components. In fact, there's a clutch. Details aren't clear yet, with so many messages frantically being posted. But one thing that is certain is that the design is intended to deal with power & efficiency during highway travel. This knowledge destroys the purity argument. Superiority arguments of the past have fallen apart. Cooperation appears to be next on the agenda. Phew!

10-11-2010 **Fresh Start.** The day began with the daily Volt blog featuring a new topic to discuss the freshly discovered, but not yet understood, powertrain. That enthusiast fear of it having direct-drive had become a reality... making some of the most staunch hypocritical no matter what they say. Now, we know for certain that the SERIES hybrid definition doesn't fit. Sharing of physical momentum to power the wheels makes it a PARALLEL hybrid, the same grouping as Prius. Of course, they'll still be in different categories. But the point is, as GM puts it, the "*participation of motive force*" makes it a hybrid. Call it whatever you want, just not an EV like they had always hoped. Phew! Glad that nonsense came to such an abrupt end. This is what I had to say about it, which coincidently just happened to be the very first post and received a surprising amount of positive votes: Sure is nice to have an answer to the direct-drive question now. Gaining efficiency through participation is a good thing, despite the "purity" it tarnishes. We finally have something "hybrid" in common. Let the new age of plug-in hybrids begin.

10-11-2010 **Direct-Drive.** We got confirmation that there was indeed a power-fade issue at high speeds for Volt. The electric motor running at a fast RPM wasn't able to deliver much torque. It's not an efficient use of electricity by simply spinning it faster anyway. The solution was to provide Volt with the ability to use thrust from the engine directly rather than converting the energy. That makes sense, but the details leave you scratching your head. Supposedly, a clutch will alter the behavior of the PSD when driving above 70 MPH. The utilization of a clutch indicates a mode. Switching modes that isn't the same as altering RPM or the flow of electricity. That's an important difference... especially if the speed limit just happens to be 70 MPH, as it is here. If there really is a 10 to 15 percent efficiency increase in that mode, as GM stated, what would it mean for driver's obeying the law? No one knows yet. Perhaps it was a wise choice, since the few areas where you can drive faster you really wouldn't want a clutch engaging & disengaging frequently. That should only be for sustained high-speed cruising. It makes you smile thinking about Toyota's choice. Cutting fuel and just leaving the engine spinning at a low RPM would allow for immediate power when the electric motor is operating at power-fade tolerance. Elegantly simple translates to lower cost and greater reliability. Gotta like that.

10-11-2010 **Recovery.** Some are in complete denial. They're providing congratulations, "*GM has done a very good job with Gen-1 Volt design.*", with the expectation of new models and increased range on the way. What the heck? Haven't they learned anything from the past? The automotive industry moves at a snail's pace. Each move forward ends up being the smallest possible step. What seems revolutionary never ends up being easy to take hold, especially once rollout begins. To make matters worse, this particular automaker is in no position to advance slowly. They still have major debt problems to deal with. Staying ahead of the competition means exploiting an advantage the others don't have. Producing a low volume of a really expensive vehicle isn't that. Who do they think the market is for Volt? The enthusiasts are quite content with niche status. Does that mean Cruze will become the profit source? Where will business-sustaining money come from, not to mention funding for those new models? Frustrated, I posted this: The concern has been for the mainstream... having something very good, available at an affordable prices, in high volume, returning a modest profit. Remember the "too little, too slowly" statement from the auto task-force about bankruptcy recovery?

10-11-2010 **Rare Claims.** The insults are abundant, but we can deal with that. Though, you do have to wonder if they understand the impression they're making. Some are amazingly harsh... quite explicit too. Emotion is running so high that pretty much any opinion questioning Volt design is considered an act of support for anyone other than GM. It's a tough situation. The best response is to simple stick to facts. So when you read something like this, "*Given that CS-mode is rare, and reliance on the engine rare-on-top-of-rare, your trollish objections have little to do with the price of tea in China.*", you try to keep comments brief and focus on the data instead. Fortunately, I have that readily available seeing this coming: Since when is it given? For that matter, what does "rare" mean? Using the 365 days of odometer readings I collected, it shows CS is far from rare... even with AER always 40 miles. 253 days at the full measured distance of 19,497 miles the 40 was exceeded. 157 days scaling each individually (by 0.76935) to get 15,000 miles annual. 77 days scaling each individually (by 0.6155) to get 12,000 miles annual. Taking into account Heater, Defroster, and A/C use increases the count.

10-11-2010 **Arbitrary Claims.** The nightmare continues to unfold for the Volt enthusiasts. One attempted a constructive response to my post with numbers. But they're not fact if it isn't actually data. He just arbitrarily counted each day of the year equally. From daily driving data I collected, the real-world values showed you absolutely cannot do that. No pattern emerged. The distances were all over the place. The variety from day to day driving simply could not be predicted or planned. That was very clear. But since most people never take the time to do that, they just assume some type of average is possible. Ever keep track of how many times you have to run to the store, do something last-minute for a child, get the urge for a coffee or food? Anywho, his entire response was this: "*For 15,000 miles divided by 365 days... Volt = just under 16 gallons.*" That's a great example of gross oversimplification. My response had some actual fact, sprinkled with a bit of emotion: You can't just generically average like that. Geez! Again, using the 365 days of odometer readings I collected, you get this for a daily breakdown count... revealing there is no pattern available that an average could accurately reflect: 12 = miles 0-9; 14 = miles 10-19; 16 = miles 20-29; 65 = miles 30-39; 76 = miles 40-49; 87 = miles 50-59; 34 = miles 60-69; 21 = miles 70-79; 40 = miles 80-999; In other words, for 15,000 miles (without Heater, Defroster, or A/C use) it breaks down to: EV = 12,156 miles; CS = 2,844 miles; At 35 MPG (without any cold starts), annual gas consumption would be 81 gallons.

10-11-2010 **Betrayed.** Within hours, the internet was flooded with scandalous type reports... and those were the polite ones. The attitude eventually turned toward anger. Some felt what they had been told before were lies. Some even accused GM of a bait & switch. You look back at what had been promised, then compare it to what will be delivered, the claims of vaporware are easy to understand. The "*nicely under $30,000*" target ended up being $41,000. That goal of 50 MPG fell way short, somewhere in the low to mid-30's. Green emission rating, forget it. And of course, it looks absolutely nothing like what we were shown 3.5 years ago. What a mess. This is the very thing some of us were concerned about. There is a definite sense of being betrayed. Since this is history repeating itself, it's realistic to expect the same outcome. Though, consumer expectations are changing. Other factors are at play now. The upcoming months certainly will be fascinating.

10-12-2010 **Floor It.** Apparently, that's the only advantage Volt has over Prius anymore. Nothing else seems to be sighted as a different. Frustrated by the enlightenment news confirming Volt is indeed a hybrid, they see the advantages shrinking. In fact, some feel consumers will dismiss differences as just automaker vehicle variations as they do now. There's simply not much significant to make Volt stand out anymore. The PHV model Prius is close enough. It's obviously not the same, but the price, capacity, and efficiency are enough to sway interest away from Volt. They don't like that at all. Too bad they didn't want a plug-in ally. Oh well, I jumped in with this: So, the biggest difference is a feature most consumers won't use anyway. How often do you actually drop the pedal all the way to the floor? And so what if the engine comes on briefly? It's a hybrid. Of all the things to surface as the biggest advantage for Volt, that's not encouraging... especially knowing the PHV model Prius provides much more electric power than the no-plug model. Heck, I climbed up a step residential hill (1/3 mile long, 40 MPH, from a dead stop) in the PHV repeatedly without ever triggering the engine. It was only with electricity. Accept the way things have worked out, there will be a selection of plug-in vehicles to choose from. Mainstream consumers aren't interested in extreme performance. They simply want a decent improvement at an affordable price. Their purchase habits over the past few decades clearly confirm that. It's a balance of priorities for them.

10-12-2010 **Charging At Work.** How many times must I endure the claim that plug-in owners will just be able to charge at work? It's just plain not realistic here. Yet, some insist they can include that in their gas usage estimates. Oh well. I guess I'll have to say my piece each time someone does: How will the snow removal problem be dealt with? That poses a significant barrier to providing public electric outlets... not to mention cost. And in the parking ramps, how would all the wiring be dealt with? Where would you put an outlet in spaces that are already cramped? In other words, the infrastructure is a mess and will take a very long time to deal with. That's why automakers are pursuing a variety ways to deliver emission & efficiency solutions.

10-12-2010 **Wait For Improvements.** We're already hearing quite a bit about Volt only being the first generation. That focus on the second is growing. Supporters of Volt want you to forgive the shortcomings of this one. We must wait for improvements. That sure is going to be one heck of an upgrade. GM must scramble to drop the cost by $7,500 just to maintain pricing. Since by then, the tax credit would have expired. On top of all that, somehow they'll squeeze in all the other promises too. That's going to be pretty amazing from an automaker that already has a reputation for disappointment. I have no doubt the next will be much better, but no automaker could achieve that much in just the next few years. This is the dose of reality I injected into the discussion: Gas is now $3 and the way we get it has become an increasing concern & liability. Emissions (both types: smog & carbon) continue to get worse too. Automakers also have financial obligations. They cannot continue to fund research & development while selling a low-volume vehicle which may not even provide any profit.

10-12-2010 **Random Thoughts.** With the controversy now in full swing, it's anyone's guess what happens next. There hasn't been a press release. That easily could have prevented all this. It's all what can clear it all up. The confusion about Volt is everywhere. Oddly, we know the tax credit isn't affected, since that was always based off of kWh capacity rather than any particular technology. Of course, what still doesn't get discussed is the cost of the charger and the installation of it. The requirement of premium gas is overlooked too. Needless to say, emotion is running very high right now. The situation is a mess. It will be interesting to find out what consumers think after the dust settles. Subtle differences enthusiasts argue won't be realized... so, what will? The impression I get is that the typical person won't consider much more than EV range and price when it comes to any plug-in beyond the usual vehicle aspects.

10-12-2010 **NOT A "HYBRID"**. That was exactly as it looked in the press release finally issued by GM. The all caps, bold, and quotes sure made the automaker's stance clear. Reading between the lines, what they attempted to convey is a message that Volt is a revolutionary new designed rather than an evolutionary hybrid. Of course, it implies that a hybrid like Prius was never intended to support a plug, that somehow the feature is an after-thought... even though we knew about the ability way back in 2003 and recognized cost as a major priority. In other words, it's the spin we expected. Here's the exact text from the release: *In practice, hybrid vehicles typically require both sources - engine and battery - to provide full vehicle performance capability. In a hybrid vehicle, the combustion engine is typically the larger of the two propulsion sources, and provides most of the power during high power vehicle maneuvers like off-line starts and freeway cruising. A plug-in hybrid operates the same way, but can be recharged by plugging in. Even with useful energy in the battery, the engine will often be operating to achieve vehicle peak loads. The Chevrolet Volt is unique from a hybrid or plug-in hybrid in that the vehicle's wheels are always driven electrically by an electric drive unit.*

10-12-2010 **Niche Vehicle.** At first, the overall message conveyed from the masses seemed to be that Volt was an expensive version of Prius. That infuriated the Volt enthusiasts. They have always wanted Volt to be thought of as entirely different... yet have never been able to explain why. After 3.5 years of trying, this desperate final effort just prior to rollout isn't going to help. All they have available for argument points are just faster acceleration and greater battery-capacity... neither of which couldn't be improved by an upgrade for Prius. The problem is, that would push it away from the mainstream. You get greatly improved emissions & efficiency as the benefit by having price & performance similar to other mainstream vehicles. That has been a strength. They portray it as a weakness. Who's going to accept that though? Automakers were able to convince consumers they needed far more power and off-road abilities... but that SUV craze was fueled by high-profit returns and a false sense of greater safety. Would the incentive of extreme efficiency persuade purchases? Since it seems highly unlikely that a lower capacity model will be offered, we're stuck with one that isn't affordable. Annual sales of 60,000 has been the measure of mainstream in this market. Less keeps it a niche. Arguing won't change that... and the recent flurry of insults only make the situation worse.

10-12-2010 **Purpose.** Injecting a little into discussion already falling hopelessly into a pit of despair challenges sanity. Enthusiasts basically just want to vent at this point. So much is unraveling so quickly, they have no idea what to expect anymore. The purpose of reducing oil consumption should ultimately make them feel better. But that idea of sharing success with other automakers is quite distasteful still. I've enjoyed the advances Ford had delivered. They've co-existed well with Toyota. Why couldn't that work with GM too? Is pride really that much of a barrier to overcome? Anywho, I followed up the sensible "purpose" post another had contributed on the daily blog for Volt with this: Now that some of the so-called "trolls" have been vindicated, the superiority bragging is likely to get somewhat worse... then abruptly die. Everything is playing out exactly the way it did with Two-Mode. The parallel is remarkable. They know it ultimately boils down to SALES. That brings a drastic change in attitude & behavior. There's nothing to argue about then. Whatever replaces traditional production is the winner. Each automaker will favor a particular technology. But if it only remains a niche, the goal is not accomplished. It must replace. SALES determine that progress.

10-13-2010 **New From Toyota.** Looks like there are 3 new vehicles on the way. You certainly can't accuse Toyota of putting all their eggs in one basket. Sure makes you wonder what the heck GM is going to do. They are heavy pushing "*range anxiety*" to help promote Volt. Meanwhile, Toyota is planning to join the mix with Ford and a slew of others who have EVs in the works. GM can't, since their campaign leverages on the fear of not having an engine available. Anywho, looks like we'll be hearing about Toyota's upcoming EV next month. Following that will be a larger model Prius, to debut in January. It's that hybrid with a larger engine & interior we've been anticipating. Then we may be hearing about the smaller Prius on the way. Supposedly, it will be Yaris size. Offering choice is great. One size does not fit all, no matter how much we hear "*game changer*". One vehicle can only prove a technology is viable. It takes a variety for consumers to actually abandon the old in favor of the new.

10-14-2010 **Vastly Superior, called.** I was called out. On the big GM forum, they began to wonder where the Prius guy was. So, I finally broke the silence with this: I was patiently waiting for an invitation... It's been fascinating reading all the spin. Does Volt provide a nice ride experience? Duh! Of course, that's the expectation of any car with a base price of $41,000. One "*nicely under $30,000*", not so much. That's a mainstream vehicle. Clearly, GM abandoned that original goal aiming the first generation design into a niche market instead. Is it vastly superior to Prius? The efficiency in CS-mode clearly doesn't support that long-boasted claim. Heck, the much lower than originally promised MPG doesn't even help to achieve a PZEV emission-rating. So, the answer is no. Criteria like the whether or not Volt had direct-drive really didn't ever mean much either. Though, I did find some satisfaction from the purists abruptly screeching their banter to a halt. Arguing semantics never was constructive anyway. What I always wanted from GM with Volt was something in the Malibu/Cruze zone, not something vastly superior. Why not let capacity increase as it becomes more affordable? Or why not just offer a second model instead? The lack of choice is the problem, which is exactly what the "*too little, too slowly*" assessment addressed. SALES are the ultimate measure of merit. Lots of people ooh & aah at autoshows. Voting with their wallet is an entirely different matter. What will be the reaction of typical consumers?

10-14-2010 **Vastly Superior, regret.** It was immediately clear that they regretted having provided me with an opportunity to post my feelings on recent Volt revelations. Their frustration with the situation was obvious. I only made it worse, rather than providing the scapegoat they had been hoping for, I recited exactly what they didn't want to hear. So, I raised the ante to give them at least something to help move past the unfolding disaster... a dose of reality: Talk is cheap. Volt will still use gas. Consumption will be significantly reduced, but the effects of Winter will be hard to escape. Range will be shorter. The occasional (routine for those of use here in MN) warm-up via the engine will be needed. All of it will be with premium gas... yet another not-mainstream design aspect. Again, sales are what matter. Remember all the promises of 60,000 in the second year?

10-15-2010 **Ever Changing Story.** With the typical lack of detail comes confusion, speculation, and misunderstanding. That's putting it mildly for Volt, which you can add a sense of frustration to as well. Needless to say, we discovered more to feed the "hybrid" controversy today. Too bad GM wasn't just straight with us about the design in the first place. Anywho, it turns out that the direct-drive is available at speeds slower than 70 MPH in CS-mode, all the way down to 30 MPH in fact. Some had begun to suspect a efficiency/power benefit then, especially with hard-acceleration and when climbing hills. It makes sense. That type of discussion was extremely challenging to hold though. Thankfully, recent events are changing that. They have more of a Prius and less of an EV than hoped. It's humbling, but constructive.

10-16-2010 **Credibility.** I got an invitation to participate in Volt discussions on the big GM forum. Little did they know how well prepared I was. In the past, I had repeatedly asked what the goals of Volt were... Who was the market? How many would be produced in the second year? What is the price target? Questions like that over and over again were making them crazy. Now, it was opportunity to recite back to them their very own responses. Immediately it turned into a slew of personal attacks, digging all the way back to the first posts in January 2007. They desperately needed to shut me up quickly, distort my credibility so no one would listen. Needless to say, I had studied the situation well. Preparing for what's unfolding at this very moment really paid off. All those years of blogging, an act that required me to review what had just happened and clearly document it, turned out to be an excellent use of time. The effort was far from the "trolling" they claimed. I studied the situation. They dismissed it as undermining. Turns out, it wasn't... and they are having an extremely difficult time denying it.

10-16-2010 **Diluted Purpose.** Remember on the daily blog for Volt, where enthusiasts were constantly in fear of Volt being thought of as having anything in common with Prius? That's exactly what they're dealing with now. GM did it's best to avoid focusing attention on those particular aspects of Volt operation. But now that those details are available, the inevitable happened. Volt is clearly not an EV, it's a hybrid... a "parallel" type similar to Prius. This is the very reason why none of the "50 MPG" arguments went anywhere. If Volt really did offer that level of efficiency in CS-mode, why not reduce the battery size by 250 pounds to offer a more affordable and even more efficient model which doesn't require a plug? That was the ultimate in product diversity. Yet, none of the enthusiasts ever wanted to discuss that option. It was an indication of something being wrong. Why wouldn't GM do that? It would be a great opportunity to capitalize on the design to benefit both technologically & financially. The only real response ever was that the suggestion was really only an attempt by Prius supporters to dilute the purpose of Volt, then simply dismiss the person asking as a troll.

10-16-2010 **Stating Goals.** All that effort in the past to get them to state goals was well worth it. Then, they absolutely refused to. Now, they deny having stated any goals would have made a difference anyway. It's just more of the same twisting we saw with Two-Mode... dancing around detail for the sake of making a good impression. You can't be held accountable if all you ever say is vague & ambiguous. Image plays a major role in the decision making, rather than actual progress. That's sad. It does give you that feeling of comfort though, especially after reading nonsense like this: "*The goals: Provide the bridge until EVs have significant range in all vehicle classes. Prove that performance and energy efficiency do not have to be inversely proportional. Decrease gas usage by an order of magnitude for many drivers. In short, define the future of automobile propulsion.*" I was amazed to read such dribble. That could mean anything. In fact, that could apply to a wide variety of technologies. Anywho, I replied with this: Avoiding numeric measure is a dead giveaway of a problem. Goals don't state relative factors like that. They define specific quantities, providing indicators of success. For example: 40-mile EV range; nicely under $30,000; 50 MPG during CS-mode; 60,000 sales in year 2; AT-PZEV emission rating.

10-16-2010 **Typical Driver.** I see reports on a regular basis from new owners not doing anything special getting over 50 MPG from their Prius. It confirms that my average is representative of others, since I don't do anything special either. I've always followed the JUST DRIVE IT motto. True, I do try to keep my short trips to a minimum, check tire-pressure on a regular basis, and have recently begun blocking the grille. But none have anything to do with the driving itself and they'd all show some degree of efficiency influence regardless of what you drive. The point is, those who favor Volt insist 50 MPG is impossible unless you use some hypermiling techniques. I don't. That's why I can so strongly endorse the efficiency claims. Heck, those routine trips carrying the bikes on back up north and the hostile season we call "Winter" here in Minnesota provide quite the firsthand experiences to demonstrate how effective the hybrid system in Prius really is. The same could end up being true for Volt, but the refusal to accept real-world data for Prius makes it very difficult to accept anything hyped about Volt. Show me the data... and lots of it.

10-16-2010 **Lowering Standards.** It was pretty amazing watching the guzzler advertisements switch from 40 to 30 MPG. That was what the industry decided to portray as "impressive" efficiency. It was a terrible reflection on our priorities. But since so many still wanted to guzzle without guilt, it was accepted. Seeing how effective that was, it came as no surprise when GM changed their second-year production intent from 60,000 to 30,000. So, later increasing it to 45,000 would give you an impression of a 50% increase. Forgetting that it was higher in the first place is a problem for both the media & consumers. Neither makes much of an effort to research either. So, the standard is lowered. People like me are considered troublemakers, since we point out the deception by keeping good notes about what actually happened and when. Too bad our society in general is so accepting. They inherently trust what they read and are told. So, now we're stuck waiting for the next generation Volt rather than this one delivering what had originally been promised. Arrgh!

10-16-2010 **Complete Reversal.** Some of us are enjoying the 180-degree turn the Volt enthusiasts are now taking, a complete reversal of their previous stance. At the end of June this year, just 3.5 months ago, they freaked out in response to a remark in an article made about connecting the gas engine directly to the drivetrain. It was the first time "direct-drive" had been taken seriously. Until then, they just dismissed any claims of losses from energy conversion. They simply recited the "optimal RPM" theory over and over again. All of a sudden, there was reason to doubt. Efficiency may not be as good as they had hoped after all. But due to circumstantial timing, that "Freedom Drive" abruptly drew attention away. Was that really a coincidence or an intentional diversion? Whatever the case, controversy exploded from that too... since CS-mode efficiency from the 1776-mile trip was never shared, the very thing we thought was purpose of that publicity event. Needless to say, the enthusiasts did their best to sweep all the comments contrary to their prior beliefs under the carpet. Out of sight, out of mind. They considered the matter closed... until a few days ago... when they were proven incorrect. Volt really does use direct-drive. Now, they're scrambling to give the impression that this was an option all along, something they never opposed... claiming it's just a matter of semantics anyway. That's quite insincere... but it is progress.

10-17-2010 **Twisting Intent.** Not all are reversing their stance. Some prefer to shot the messenger instead. That's sad, but all too true now. By twisting the intent of those clearly stating goals, they can confuse matters enough to make it seem as though there's an agenda to harm rather than to help. We've this this all before. It's nothing new. In fact, it's the indicator to look for as confirmation that they've noticed how much water their boat has taken on. Anywho, I don't want to poke them with a stick anymore, having seen the indicator. I just moved on with these words: So... you're saying wanting Volt to become a mainstream vehicle is perverting it? I can accept that. Reducing power & capacity to make an affordable model of Volt for the masses would indeed upset the people here. After all, common everyday vehicles rarely get the kind of attention they thrive on. Notice how detail is avoided by simply dismissing credibility. Also notice how the business aspect is never discussed beyond just reputation. It's always a focus on engineering alone for bragging rights. Whatever. There's a market for Volt anyway. In fact, it will likely do well as a niche vehicle. But the point is to replace traditional production. Gas is no longer cheap. Time has run out. One size does not fit all.

10-17-2010 **How Often?** Sometimes even the antagonists make you think. In this case, it's the importance they place on the ability to drive exclusively using electricity at speeds faster than 100 km/h (62.1 MPH). How often do you actually do that? I have multiple routes available to work. The only one which exceeds that speed is congested pretty heavy if I drive during regular commute hours, so travel is slower anyway. Most of the time, I don't bother. I leave later to avoid that mess. But on days I need to be to work earlier or simply when weather is bad, I take one of the other routes instead. They allow me to get all the way to work without ever exceeding that speed. When home, those trips to the store, to see family, to get food or coffee, for entertainment or recreation are mostly on roads that don't exceed that limit either. So on a regular basis, it won't matter. For those times that it will, the heavy electric assist provides a significant boost anyway. In other words, I can't see how the real-world data we'll see will support the "vastly superior" claims.

10-17-2010 **How Many?** A few days ago, a report was published stating that particular Volt delivered 127 MPG after driving a total of 299 miles. The measured fuel consumption was 2.36 gallons... which they made a big deal out of. Ok. So... How many times was the vehicle plugged in? Comments were posted. A few asked the same question... waiting for what never appeared, an answer. It's nice knowing what potential the system has to offer. But without any context, it cannot be portrayed as an expectation. Lack of any response makes you wonder what the intent was. Everyone is yearning to read about more CS-mode efficiency observations. This particular report intentionally avoided that. I guess that's what separates reporting from journalism.

10-17-2010 **Forcing Success.** Looks like GM is already getting pressure about the original "*60,000 in the second year*" capacity claims. That's great! Getting more Volt on the road makes it harder to disavow consumer demand and their genuine needs. Only leasing EV1 allowed for denial. Actually selling the vehicle is better. Selling at a mainstream volume is how change occurs. Remaining niche quantity would allow it to wander aimlessly in the market, just like Two-Mode is doing now. Make purpose clear. The 50 MPG target is already being twisted so much, I can't even tell the source of the spin anymore. In other words, pressure can easily subside or be led astray. We shouldn't allow that. Settling for less than promised is unacceptable too. Particular supporters (who are now transforming into antagonists) are trying really hard to make it appear as though any effort to make Volt better is actually an undermining scheme to make it fail. Don't you love how paranoia makes some see conspiracy where there is none? Forcing success is the goal. In other words, they need to swallow their pride and just do what must be done... even if that perverts the original hope they had for Volt. After all, mainstream vehicles are that because they don't stand out... they become common.

10-17-2010 **Game Changer.** Remind yourself that the hype has been going on for over 3.5 years now. Volt was supposed to absolutely crush Prius. It was to be superior in every way. Being told that, the condescending attitude started way back then. So, you can imagine how much tension has built up in the meantime. Unfortunately, much of that original history is often forgotten by those involved and not known by newbies. Awareness is key. In fact, it's required to have a constructive discussion. Remember GM's original plan to use a custom 1.0 liter 3-cylinder engine for Volt? However, due to the above-standard power requirements and an effort to keep cost from getting even further out of reach, they chose an off-the-shelf high-volume traditional engine to use instead. It's dirty, inefficient, and still uses a belt. This is why talk of the second generation design began so soon. Game changer it was not, just from the engine shortcomings alone.

10-18-2010 **Fallout Update.** It certainly has been compelling. Unfortunately, that's about it. Constructive discussion about Volt from enthusiasts has almost entirely vanished. There are mentions here and there about the various modes. But without the opportunity to actually test & observe them, not much comes out of that. Sadly, the big GM forum has taken to denial. Promises of the past they don't like, they just pretend never happened. After all, much of that was from the mouths of executives who no longer work there anyway. So, that target of 50 MPG is just something someone to see Volt fail made up. Worse though, is on the daily blog. There a few have decided the plug-in Prius is a complete waste of time which no consumer could ever benefit from. It's belittling behavior. Certain individuals there haven't taken recent news well, in other words. Others have grown surprisingly silent. Rather than the smug we had seen before, nothing. Oddly, one particular individual has even become somewhat outspoken of a truce, very much different from his previous stance. Needless to say, the fallout is causing change. Who knows where we'll end up. This most definitely isn't the outcome the enthusiasts were hoping for. Of course, bragging rights don't get the job done anyway. Hopefully, careful consideration of how this mess came about and what actually needs to be accomplished will occur... but don't bet the farm on it. Time may heal some of the wounds. Interestingly, some of the mindless cheerleading may actually be helpful now... if nothing else, just to lift spirits.

10-19-2010 **Market Attention.** Rollout of a much anticipated vehicle that gets into the driveways of owners shortly after launch captivates the market for awhile. All the attention makes you wonder if it represents an actual shift in priorities or just a fade. Typically within 6 months, you have an answer to that. Waiting lists are a dead give away. A drop off of sales to below average for the class is reason for concern. A continued steady rate should begin to establish if its intended to become mainstream. Hype from the media & advertising can distort results. Production delays make you wonder. And of course, there's always an exception to the rule. The point is, a fizzle shortly after launch is a sign to watch for. Cruze seems to be in that position now. Supply appears to be on schedule, but the lack market attention gives the impression of it not being a runaway success as hoped. Not being an industry changer would be disappointing for that particular vehicle, as with Volt, but there's nothing wrong with a business-sustaining product. Give them both at least 6 months. Speculation prior to that doesn't mean much. We could tell with Two-Mode at that point. The same was true for the new Insight as well. In other words, next year's Earth Day should be quite interesting.

10-19-2010 **More Waiting.** $3 Gas is here and doesn't appear to be temporary. An affordable high-efficiency vehicle for middle-market from GM is still years away. We saw this coming. We were told to be patient. We are still being told that. We don't have confidence the situation isn't being taken seriously. What now? The gamble is that consumers will purchase enough Volt to offset the upcoming fleet-efficiency requirements. The lack of a no-plug choice is still a concern, especially with the price of Volt being so high. Supposedly BAS will fill in that gap, even though it was a yanked off the market from poor sales the first attempt. That still leaves nothing in the +40 MPG category, despite pressure about oil dependency. Oh well. It's not like the opportunity to compete wasn't available.... with all the waiting.

10-20-2010 **Emission Rating: ULEV.** Expectations of green have vanished. Even more disappointment for Volt has given a select few enthusiasts a really bad attitude... hence the antagonism emerging. They accuse anyone saying anything negative about Volt of being a "troll". This latest news of only being certified with a ULEV emission-rating seems to especially hurt. Somehow, they took it for granted that the exhaust would be clean... even though it used an off-the-shelf engine shared by a regular traditional vehicle. To add to the situation at hand, this one particular individual has been mocking the PHV model Prius for starting up the engine unnecessarily... or so it seemed. Now it turns out Volt should really be doing the same thing. Ironic, eh? The regret hasn't surfaced yet. He appears to be in complete denial still, as this indicates: "*The Volt is a zero emission vehicle for 40 miles. What part of *zero* don't you get?*" Since I hadn't been part of that discussion thread, I couldn't resist jumping in with this: Regardless of charge-level, in extreme cold the engine will run briefly for warmth. What part of "zero" degrees don't you get? Also, we know that 40 miles isn't a given. Use of the heater, defroster, or A/C will reduce range. Misrepresenting Volt by portraying absolutes doesn't helping anyone. Can we try to be realistic... or do I need to point out the emissions from the electricity source too?

10-21-2010 **Ideology.** It's amazing how people focus on a goal yet conform to the status quo anyway. Volt will indeed deliver ultra-high efficiency, but the price-penalty is so high selling a lot (think top-10 volume) of this particular configuration simply isn't realistic. People don't spend that much of their income on transportation. The automaker push to stir interest based on ideology can have unfortunate consequences. That's why we ask questions. What are the priorities? What goals have been established? What market is being targeted? Anyone already sucked into an ideology... like "*gas free*" driving... doesn't want to engage in constructive discussion. So... why do I still bother? You can ponder that. Here's what I sounded off with on the big Prius forum: When I asked what criteria would be used to determine success or failure, the response was calling me out as a troll. Talking about an over reaction! All I did was ask an open-ended question. They have many choices of how to respond. Unfortunately, if they don't like the message, they shoot the messenger. The topics of engine-efficiency, emission-rating, and price really anger the enthusiasts. They know GM didn't achieve those goals yet and are really starting to worry that consumers won't be able to see beyond that.

10-21-2010 **Still Needed.** This question was asked today: "*The Volt is a flop?*" It was in response to all the articles recently published stating negative opinions about what GM delivered. Based on what was originally promised, that conclusion is easy to make. How consumers will respond is a different matter. That's what ultimately counts too, since vehicles must be sold to sustain business. Remember how Hummer was wildly popular for a brief moment in time? The design never made any sense. It was clearly problematic, just like Volt is now. The reason is simple. It focuses on what people want rather than what they actually need. That disconnect raises warning flags for some. Appealing to emotion is difficult overcome though. But some of us keep trying: Actually, Volt will be a highly desired vehicle. Unfortunately, its appeal isn't a good match for mainstream consumers... who have been looking forward to a traditional replacement... and now feel let down. In other words, the often discussed $30K and 50 MPG targets were not met. For the green crowd, the ULEV emission-rating further soured interest. So, the concern now is that GM doesn't have anything competitive for middle-market, the bread & butter sales. A niche vehicle won't provide business sustaining profit. An affordable, high-efficiency, high-volume vehicle is still needed.

10-22-2010 **Remembering Purpose.** Looking back, the impression of cause & effect is quite often way different than the original thought & intent. People assume all kinds of things about history, rarely getting it right. That certainly is the case with the purpose of monetary support for hybrids. Good thing we have blogs & forums documenting what happened as it happened. Anywho, this was my contribution (as someone who experienced those events firsthand) to the "looking back" discussion today: There was no tax credit available back then. It was only a deduction, which was significantly less. It wasn't until 2006, after Toyota had already turned Prius profitable. The tax credit purpose was to push volume from mainstream minimum (60,000 per year) to a quantity high enough to displace traditional vehicles. In other words, it was to end any possibility that Prius was just a "halo" vehicle. By offering that incentive money, it would draw interest from middle-market buyers... those who simply use their vehicle as transportation and have no interest in the technology beyond just reducing emissions & consumption.

10-22-2010 **No Accountability.** With pretty much all the executives and upper-management from the start of the Volt project now gone, there's no accountability for any of the promises they made. So... needless to say... antagonists are denying there were ever any in the first place... knowing they can just dismiss anything found later anyway. We also get the "AFAIK" excuse, claiming they simply aren't aware of the situation either way. Those of us paying attention know very well they actually do know, but denying that is easy too. To make matters worse, any data they can't elude is being labeled as "hypermiling"... which doesn't actually mean anything specific anymore. It's just an endless stream of vague & ambiguous statements mixed in with cries of superiority. What a mess! It sure is going to be enlightening as the sales numbers begin to get reported.

10-22-2010 **Newbie Logic.** Care when reading posts is absolutely essential now. It's especially important to note how recently a poster joined the forum. Newbies who express a genuine interest to understand how Prius achieves efficiency are a really big challenge, much more difficult than in the past. Ages ago, the hybrid systems available were different enough to allow clear explanation of advantage & disadvantage. Now, the variety obscures that... making the short attention span of newbies difficult to overcome. They love to engage in discussions and feel empowered by the information the stumble across. Unfortunately, distinguishing fact from greenwash attempt is nearly impossible for someone new to the topic. So, you'll often discover the source of an illogical argument was based upon something intended to mislead. New consumer interest is great. Expanding the market is vital. Helping out newbies requires less attention to technology and more to the old-school purchase criteria... reliable ...affordable ...comfortable ...practical. The emissions & efficiency are a benefit, not the only priority.

10-22-2010 **Tax Credit.** The reality that the Volt enthusiasts had hoped for is still a number of years away has stirred some to push for more time. That expiration date already has them worried. Since many of them disregard the CAFE standards (the increase in MPG average for the entire fleet), it's easier to dismiss the timeline. How much longer do we really want guzzlers to be produced? Think about how long they remain in service after purchase and how much value will plummet when new vehicles all become high-efficiency choices. Anywho, this was my response to a post proposing the tax credits get extended all the way to 2020: The concern has been "*too little, too slowly*", clearly expressed by the auto task-force. The tax credit is encouragement to get automakers to produce as many as possible as quickly as possible. Once the quantity threshold is reached, the tax credit does not end. It shrinks, I believe using the same process as in the past... by 25% every 6 months until the deadline. Allowing that flow of money to continue beyond the regular generation upgrade cycle would be counter-productive. What would the incentive be to reduce cost if a subsidy continues for that long? What would stimulate competition? Why invest in production capacity? The point is to make the new technology the norm as quickly as possible.

10-22-2010 **To Make It Better.** Saying anything at all they don't like about Volt makes you a troll. The big GM forum (which now has quite a bit fewer members than the big Prius forum: 51,942 verses 69,232) and the daily blog have both reverted to just cheerleading venues. Hope of constructive discussion has evaporated. Gone. They generically label all who question the status quo as trolls now, thinking the effort is to make Prius better. In reality, some of the effort has been to make Volt better. Acceptance without question has been a problem for years. Bringing attention the concerns is how things get better. Some of us tried really hard to stress the importance of aspects like price & efficiency while still in the design phase. That advice fell on deaf ears. Now years later, on the eve of rollout, consumers are already complaining... transforming those very concerns into shortcomings. It's too bad about the close-mindedness. At this point, the powers of the status quo make influencing change for the better quite a challenge.

10-22-2010 **Not Worth It.** It was nearly 2 years ago that the $40,000 price first emerged as a possibility, resulting in much dismay. The bashing of Prius was already bad at the point. That made it worse. Gas prices climbed as news of poor Two-Mode sales was reported. Considering the circumstances, the enthusiasts believed it would all work out in favor of Volt... despite very strong Prius sales. From there, they spun the end of the Iconic generation and the introduction of the 2010 to give the impression that was the final chapter for Prius. The rest is just a blur. Thank goodness it's so well documented. That sure will make for a thought provoking read later... something to look forward to. With the insults have continuing to get worse, the message is clear that anything other than cheerleading is not welcome. And to be perfectly honest, it's not worth it anyway. Since several goals were missed, what is the expectation in the near future anyway?

10-22-2010 **It Didn't Take Long.** Recently, there had been a lot of defensiveness. The enthusiasts did whatever they could to make those specifically not supporting the Volt consumers will begin to purchase about a month from now feel unwelcome. There were many insults and far to much belittling (smug). Some would attempt to twist what you say to make the same shortcoming apply to Prius, even though the issue itself was misleading by omission. Distracting from the concerns is becoming a big problem. Some are so upset by the price fallout they've become hostile. It's getting, really ugly. The identical thing happened with Two-Mode. We saw the very same idealism play out. To see that nothing had been learned and the very same tragic history is repeating itself boggles the mind. Reading through my blogs, I'm amazed to see the same concerns and same excuses again! How much more proof is needed that the expectation of a rose outcome is terribly unrealistic? Without balance, it was doomed from the start. Anywho, it didn't take long. In fact, I'm shocked how quickly all this has happen... even before sales begin, there's already a backlash.

10-23-2010 **Careful What You Wish For.** Early on, the emphasis on driving experience eclipsed engine-efficiency, emission-rating, and price... the very things people are now expressing disappointment about. Rather than strive for a balance, too much emphasis was set on priorities outside of the mainstream. There's no doubt the niche crowd will gobble up the limited inventory. It's what happens when more are produced that's in question. The typical consumer vote from their wallet is far harder to get than praise from a test-drive. The clock is ticking too. How will cost be brought down to a competitive level and those shortcomings be dealt with before the tax credit expires? What about those who want a high-efficiency vehicle but don't have a plug available? What about the competition? GM got exactly what they wanted. Now they have to deal with it.

10-24-2010 **Fascinating, Still.** Looking back to the start of this year, I see that GM was struggling with the "*230 MPG*" fallout and doing their best to lower Volt expectations. Even capitalizing on the negative Toyota attention, they still weren't able to avoid this outcome. It was inevitable. Cars like Camry & Corolla aren't known as exciting. They're simply a major source of business-sustaining profit. Those cars couldn't stand out even if Toyota wanted them to; the sales quantity makes them too common. GM never wanted that for Volt. It was destined to be a niche, following the excitement normally associated with Camaro & Corvette... both highly desirable vehicles with low-volume production. Avoiding goals was a dead giveaway that problems were brewing. Not wanting to set any was denial of the situation at hand... easily avoided by changing the topic of discussion... which enthusiasts became extraordinarily good at. But they could only delay for so long. Now, it's time to face judgment. What do consumers really need? How much are they willing to pay? Do expectations of the technology really match reality?

10-25-2010 **No News.** It appears as though enthusiasts didn't realize just how big the backlash upon Volt would be. Even those once outspoken troublemakers have settled down. The issue of "*not a true EV*" is the biggest let down. You could tell by the brief explosion of attention that design mention (accidental slip?) caused a few months ago. Other unknowns of the past, like CS-mode efficiency, never made a sense anyway. How could 50 MPG be achieved but no interest in a non-plug model be realistic? From a business point-of-view, that would be a deliberate opportunity missed. Other issues like the emission-rating simply take away from the green claim. Price was never really an unknown. Aftermarket suppliers for Prius provided us with data clearly showing the battery cost was going to be a major expense. But now that all of this is in the open, there's nothing really to discuss anymore. What fed the hype of the past was the speculation. Now, all that's left is the uncertainty of deliver wait. Of course, some of us already have predicted not until the end of Winter. Remember how long Two-Mode took?

10-26-2010 **Diverted Attention.** Posted this thought, wondering if it would make any difference: I've noticed that due to the "*Cash For Clunkers*" and the "*Toyotas of Death*" events. Much attention to detail about the newest generation of Prius has been overlooked. Many are not aware of design improvements... especially the outspoken who weren't well versed about the previous generation. There are a number of assumptions, some of which are just plain wrong. Recent deeper looks into how Volt operates has revealed misunderstandings about Prius... especially when it comes to how people actually drive verses marketing with respect to the PHV. It's an interesting wake-up call for those who took the detail for granted. I look forward to the real-world data.

10-26-2010 **Ignoring The Problem.** I couldn't believe this was actually suggested: "*Maybe they'll move on if they're ignored.*" Though, it has been preceded by an insult to Prius owners. So, there was more emotion at play than constructive thought. It did make me wonder if he ever noticed the true source of the problem or if he was simply dismissing the patrons of that daily Volt blog. After all, the big GM forum had the very same problem to deal with. The moderators there had unknowingly turned a blind eye to those who were responsible and focused on the outcome instead. Needless to say, resulted in trouble. Not addressing the source of the problem will do that. Of course, with the blog, you can actually encourage bad behavior by voting for the troublemaker... the real troll... the one dropping the bait... not those who reply to it. Anywho, I'm sure this won't be welcome, but will try regardless: Ignore the actual problem? It's the bait, not the responses! Voting negative to the responses won't accomplish anything. The source is the proclamations of "*better*" along with false & misleading information about Prius. How about just sticking to real-world data instead? How about focusing on what needs to be done next? How about not voting positive for those encouraging the discourse?

10-26-2010 **Better.** Talking about to the point: "*Volt is better than Prius. End of story.*" Unfortunately, that's it. No opportunity for discussion anymore. Many enthusiasts have simply shutdown at this point. They've lost so much of the we-don't-know-yet arguments that it's not worth risking anymore. My guess is they're thinking... might as well just wait for real-world data now. The hope is sales will crush doubt. They know the performance (physical response characteristics) will appeal to the emotional consideration enough to overcome the price penalty. In other words, they really don't know their audience Purchases like that are extremely difficult to justify by a middle-market consumer. Mainstream buyers have not expressed those aspects as a priority. They need a balance, not an extreme. Their definition of "*better*" is very, very different from that of an enthusiast.

10-26-2010 **Tesla.** I was walking with a friend to get a coffee. There was a Tesla Roadster parked right by where we were about to walk. Whoa! I was beside myself. It was that very same block I had seen my first EV all those years ago... 17 to be precise. It was a prototype though. This was the real thing. A production model produced for and purchased by a consumer. Sweet! I pointed it out to my friend. It looked at me weird... knowing what a Tesla car was but confused by the sight of a fuel door. "*Isn't that where gas goes?*", he asked. I happily pointed out how the outlet is concealed there, making it seem as though that was a traditional sports car. Too bad it was raining at the time. I would have loved to look underneath... look ma, no tailpipe! Exciting as that was, I'd still rather have a PHV model Prius. Of course for that price, I could have 3. Tesla isn't exactly what you'd call affordable. But it is a genuine EV during in traffic with the rest of us.

10-27-2010 **Insight Improvement.** Yesterday brought news from Honda about an improvement to Insight. The auto-stop had been configured for worst-case scenarios, where having the air-conditioning stopped for too long would make comfort levels unacceptable. Honda decided 30 seconds would be the maximum. Seeing how much gas could be saved by extending the duration, they did. The time will now be 90 seconds instead. That's obviously going to be a huge improvement. But do you think people will actually choose that "eco" mode? It's not like Prius where the A/C simply runs on electricity instead or the Heater draws from the coolant until 114°F rather than being limited to a timer. Having a choice is great, but IMA still leaves much to be desired.

10-27-2010 **IMA Improvement.** Today brought news from Honda about an improvement to IMA itself. The impression is that today's pre-announcement of an announcement coming in 3 weeks at the LA autoshow will be the long-awaited introduction of a clutch. In other words, the ability to separate the motor from the engine in order to enable electric-only drive... just like what Hyundai will soon be rolling out. The ASSIST hybrid design is a PASSIVE system. It simply cannot efficiency produce the amount of electricity required for "stealth" mode like Prius has always delivered, a major contributor to higher efficiency. The reason for this is the FULL hybrid design is a PERSISTENT system, allowing it to have an ample supply of electricity always readily available. The introduction of a clutch changes the equation. Dependence on the engine can be eliminated entirely in favor of plugging in instead. The system will still be limited by the size of the motor itself, but that would exploit an opportunity currently not available.

10-27-2010 **Mixed Messages.** Trying to work with those disenfranchised Volt enthusiasts who have converted from fanatic to impartial has been somewhat effective, but the mixed messages from GM has been undermining the effort. The new television commercial which will debut during the World Series this evening focused on how the engine will allow owners to travel beyond the charge-range without any worry. Didn't they just finish telling us how 75% of the population won't need that feature? You hear how the MPG isn't a big deal, since the engine will rarely ever run. Next you here that it's no big deal to be using it when the demands of life keep you away from a plug for too long. How often will it actually be used? I can imagine consumers wondering that and getting quite a variety of different answers. This latest advertisement prompted my to reply with this: It's interesting to hear the commercial mention "*last-minute detours*" and "*spontaneous acts of freedom*" since that's how I've been describing the situation all along. Of course, I've been using that to point out how frequently you will enter CS-mode… something most of the estimates don't take into account. This is why it was inappropriate to just dismiss the MPG when using the engine… since it will happen more so than people have been led to believe. Looks like gallons per year needs to get a lot more attention.

10-27-2010 **Gallons Per Year.** It's is the growing effort to greenwash... already not working out as I had hoped. The misleading from this is especially troubling too, since it reveals how disingenuous a few wanting to support Volt can be. Fortunately, this type of thing is quite rare. But nonetheless, one particular individual is drawing attention. He's claiming 15 gallons of gas is all Volt will use over the course of a year. No disclaimers of any sort. No mention of miles driven annually. No mention of season conditions. Not even a YMMV. It's just a number portrayed as if it was an expected average. Remember how the EPA had to deal with all the trouble resulting from the previous estimate system leading people to believe their values... which didn't take into account the speed or aggressiveness people drive nor the negative effects of using the A/C or heater? Needless to say, he tried to dismiss concern as just politics & spin. I rebutted with this: Posting nothing but a best-case scenario without any type of YMMV disclaimer will come back to haunt. History offers great examples of unintended consequences. Passing along that "15 gallon" claim then waiting for the backlash is a pretty simple way to bring the misleading to an abrupt end and give sincere competition a boost. Real-World data will speak for itself. No spin necessary.

10-27-2010 **Wind & Snow.** That sure was a short Fall season. Last night included a storm with winds gusting up to 55 MPH. So besides all the leaves being long gone now, I had the surprise of opening my garage door this morning to the sight of a broken span of vinyl siding laying in the driveway. To make matters worse, we were getting a bit of snow flurry action. Great! That couldn't have been much quicker of a transition to Winter. But then again, the reality of nearly 3 feet of snowing falling this time 19 years ago is always a good reality check. Heck, last year this time it had already snowed with accumulation. I guess that means I can't complain. This Prius is especially enjoyable to drive when the temperatures drop too. It's designed to deal with the cold and the mess that creates on the roads quite well. Toyota really paid attention to the feedback they got from owners of previous generations of Prius. So... that means the 2010 is ready for the snow... even if I'm not yet.

10-28-2010 **Certain Kinks.** Some of us are still wondering what the heck that comment made the other day really implied. It was in reference to why the battery-pack warranty for the 2011 model Volt was only 8-years 100,000 miles. When a GM executive says "*certain kinks*" still need to be looked into before they'd offer a 10-year 150,000 miles warranty, you'd think more people would take notice. Imagine what the current shorter duration will do to resale value if it does get longer in 2012. And with so few being produced initially, why wouldn't they accept the initial liability anyway? Won't the cost be much lower years from now? Of course, if you've been paying close attention, you'd be well aware of the grim reality that the entire production of BAS hybrid battery-packs is being replaced. All of them. That unexpected expense is painful for any automaker, not just one struggling to pay back loans. But then again, they did brag about delivering something superior to Prius.

10-29-2010 **Unknowns.** They're getting tired of me asking questions. I'm more than happy to point out that declaring victory is far too premature... since we still don't know what the victory would be. What is the point of Volt? We're well aware that Prius is intended to replace traditional mainstream vehicles, since that's exactly what it's been doing. It's taking longer than desired, but sales are steady. New purchases continue. Anywho, I asked the same old questions again: The ever-changing messages from GM is what keeps me coming back. What Volt is for and who Volt is for differs depending upon who you ask. The topics of price, efficiency, and emissions get you a wide variety of responses. The fact that so much attention is now being paid to the next-generation model contributes to the confusion. As for the competition, there's nothing stopping Toyota from adding more sub-packs to their plug-in; increasing motor size again is realistic too. But what does the market actually want? What about the convenience (and saved expense) of sticking with a 110-volt connection? What about those who don't have any plug available? What should the priority be for production volume? What about profit once the tax credit expires? There are many unknowns still.

10-29-2010 **Why?** When the spin is abundant, it's hard for some to remember who stated what. That's why I document so much here. Having a written record, even informal like this, keeps track of when something was said and whether or not I was the one saying it. In this case, someone genuinely inquisitive asked: "*So why do you think that there MUST be 60,000 sales in the first year for the Volt?*" That was an intriguing question to respond to. And I did, with this: I don't. It's the others who absolutely insisted Volt would immediately render all other technologies obsolete and their sales would immediately grind to a halt. Now that reality is setting in that Volt will follow the usual evolutionary improvement process, they're spinning it to make the situation look as though that was never the case. What's amusing is that I wasn't the one who started with the 60,000 claims. It was the supporters of Volt, absolutely insisting year #2 would fulfill that production & sales quantity. Long story short, Volt is a player in the plug-in market, not the game-changer as hyped… and an ally is what I wanted from the very beginning. Check the history. Now, we can finally address the problems at hand. Speculation about what the first generation would bring really set the effort back.

10-29-2010 **Finally.** The price-justification arguments for Volt are really getting to be a problem. They treat luxury purchases as everyday occurrences. In a way, that makes sense, since consumers rarely pay attention to the ordinary... common... familiar... typical... abundant. But in reality, those vehicles are low-volume. In fact, sales are so low they'd be considered a niche if it wasn't for the fact that automakers desire the exclusivity, keeping production that way intentionally. Anywho, I finally got one of the biggest troublemakers to admit that Volt isn't intended for those who purchase a car like Hyundai. It's too bad GM supporters haven't been paying closer attention to Sonata, a middle-market vehicle which has become quite popular. I happily responded with: Who is the market for Volt? Some of us knew all along the first offering would be a niche, not a vehicle for the mainstream despite all the hype to the contrary. Replacing traditional vehicle purchases like Malibu is still quite a few years away. After asking that question over and over and over again, it sure is nice to finally get an answer.

10-30-2010 **Misconceptions Still.** This was a fun one. An antagonist was mocking hybrid owners, telling us how he laughs each time he sees one "*gun it off the line at traffic lights*" then either brag about being green or complain about the poor fuel economy. It happens often. He was quite amused by it all. Getting to inform him of his error was a true delight. Makes you wonder how many others are under the false impression you must drive a Prius slowly & carefully to achieve the high MPG. It's the essence of being naive. They write off the technology upon first encounter and never give it a second thought, assuming all who embrace it are making extreme sacrifices from that choice. The consequences of being poorly informed make like interesting. I wonder if I'll even get a response to this wake-up call: Didn't realize that doesn't hurt efficiency in some hybrids, eh? Brisk acceleration for me when the light turns green and the path is clear. The 60kW electric motor takes full advantage of the opportunity and the gas engine revs only briefly up to 3,500 RPM. It's quite remarkable to see how the system is actually designed to handle rapid power demand requests like that.

10-30-2010 **In Dealer's Lots.** Here's an interesting tidbit for you to ponder, something that no one has ever brought up yet. It popped in my head from someone else asking a related question, based upon this statement from chapter 9 of the Volt owner's manual, specifically page 44. It says: "*Do not allow the vehicle to remain in temperature extremes for long periods without being driven or plugged in. It is recommended that the vehicle be plugged in when temperatures are below 0 degrees C (32 degrees F) and above 32 degrees C (90 degrees F) to maximize high voltage battery life.*" He asked how long that actually meant. It's a great thing to ask. We routinely see temperatures much colder than that, here in Minnesota. In fact, we sometimes go an entire month below that threshold. During Winter's peak, we can go a full week with the daily high under 0°F (-18°C). So, the thought of just leaving your car parked in an exposed employer's lot for 9 hours is a concern. But what about those sitting unsold in a dealer's lot? What does it mean for them? It's easy to imagine them sitting there for a few weeks. Wouldn't that affect battery life?

10-31-2010 **Change Of Habit.** Justifying the initial expense is becoming quite a challenge. The high sticker-price for Volt makes Prius look even more desirable now... the opposite extreme of what enthusiasts had wanted as an outcome. So, they are spinning this situation as a paradigm-shift, claiming consumers will see it as a change of habit. Like with the new requirement to plug in, paying more up front will supposedly become the norm. It's as if they learned nothing from the high prices of the monster-size SUVs. Whatever. Here's the comment that caught my attention today: "*The Volt is a more premium piece with much smoother and swifter performance and far better handling.*" Needless to say, I'm more than happy to point out what mainstream consumers have actually needed and sought. Knowing they couldn't care less, I posted this anyway: Volt drives well. But distracting from actual market need only goes so far. The "change of habit" would be middle-market consumers paying far more than they usually do for a vehicle. Their priorities in the past didn't include better performance & handling. Their purchases were a balance of a variety of factors. Also, let's not forget the type of MPG owners who experience CS-mode on a regular basis will see, especially those who live in the north.

10-31-2010 **Questions, fanboy.** Remember in the past with Two-Mode when no matter what I said all they heard was Toyota & Prius? The same thing is happening again with Volt... only their attempts to dismiss are much harder now that it's so much easier to refer back to your original quotes. They can't deny you said that anymore; nonetheless, they still try. Knowing they would, I asked many questions in addition to pointing out design detail. In this case, it was "*Who is the market for Volt?*" which came up as relevant yet again. This time, it was in a discussion on the big GM forum about consumers changing their driving habits with Volt. I wondered who. Their response was that I'm just a Toyota fanboy and my questions "*...would be more relevant if you weren't so pro-Toyota*". It must still burn that I support Ford's efforts with FULL hybrids too. Oh well. I just posted this after asking that same question yet again: I asked that countless times. There's no excuse for avoiding it. And now we see how relevant of a question it really was. After finding out details that proved those most concerned about middle-market were correct, you cannot just dismiss them as "Toyota" supporters... especially knowing that's who GM is seeking with the second generation design.

10-31-2010 **Questions, competing.** The second part of the credibility attack was why I didn't "*...question Toyota why it can't compete with the next generation of electrics, the Volt?*" It's the same old engineering-only problem again. They just plain won't acknowledge the business aspect. Apparently, all consumers care about is superior performance to traditional vehicles and that will justify the huge extra expense. I questioned: Describe what "*compete*" actually means. For someone like me, it means being affordable. Without a price premium small enough to easily justify, deep market penetration fast simply isn't possible. That's why my focus has been on the $3k to $5k designs. Switching to a larger motor and adding capacity as cost drops is totally realistic and has proven a very effective business approach for the computer industry. Also, keep in mind how cost will drop faster by producing a no-plug model too. Hybrids like Prius can take advantage of the high MPG they offer without a plug to help increase volume. That goes a long way toward shifting production away from traditional components and shifts the mindset of the market knowing that the plug is just a package upgrade.

10-31-2010 **Questions, niche.** Details uncovered recently reveal that Volt doesn't match mainstream purchase priorities. So, focus has been shifted to emotional appeal instead. Questions about performance were abundant prior to that. Most of them asked why. Why is so much emphasis being placed on the driving experience? That raised warning flags. Not being concerned about engine efficiency either meant it was absolutely outstanding or it was so bad they needed something else to focus on instead. I kept asking why a no-plug model wasn't being considered. It made no business sense whatsoever not offering one if the MPG without ever plugging in was 50 anyway. That would be a fantastic way to quickly reduce production cost. By increasing volume of the shared components, everyone wins. So, why not? Needless to say, the MPG turned out to be much lower... so low it couldn't even compete with traditional vehicles. Sales as a niche vehicle prevail over all that, since rationalizing the shortcomings isn't necessary for those buyers.

10-31-2010 **Questions, delay.** It's fascinating to see how Volt enthusiasts simply say to wait for the next-generation model but dismiss the reality that Prius could ever be improved. That's worse than a double-standard. It's bad enough that they won't admit this delay was never part of the plan in the first place. Doing that isn't constructive. Of course, I didn't ask a direct question about timing either. It was always in the form of concern, leaving it open-ended for maximum feedback. I kept pointing out the "*too little, too slowly*" concern from the auto task-force over and over again. The need to deliver a profitable high-volume vehicle prior to the tax-credit running out all while trying to pay back the bankruptcy loans should have been obvious. That's why I kept pushing for responses to the promises of 60,000 being produced the second year. A slow down after rollout, exactly like what happened with Two-Mode, would be unacceptable. Yet, delay of that nature is exactly what we seem to be facing now.

10-31-2010 **Questions, bashing.** What's really been intriguing are comments from a new Prius owner who drove Volt twice before his purchase. He clearly understands where the bashing comes from, as he openly stated on the big Prius forum. There we can actually have constructive discussions... but cannot resist the opportunity to bash from time to time. After all, the friendly jabs are much better than those superiority claims we still have to deal with elsewhere. The market will offer a variety of choices. Volt will be among them, not the overwhelming champion. This was my contribution to that: Since Volt was portrayed as a "*game changer*" all along, it's hard for many to accept that this generation is really only a niche. GM continues to push mainstream appeal, but we know the EV drive... as appealing as it is... cannot be justified for that steep of a price. It's really too bad they didn't scale back the motor & battery size to better match consumer price expectations. That's why some of us like the sub-pack approach Toyota is taking with the PHV. Since each works independently, adding or subtracting them is no big deal. It's how Toyota could eventually sell the PHV side-by-side with the no-plug model. They'd take advantage of high-volume cost-savings by just offering the plug as a package choice.

10-31-2010 **Questions, efficiency.** Asking what's to expect is valid. How will this generation of Volt compare to the upcoming competition in terms of actual results, not generalized estimates? A recent 101-mile trip with a Volt by a popular online green publication revealed interesting real-world numbers. They did their best to drive it normally, not doing anything special at all during that experience. Driving it hard to report about the performance extremes would come later. For this, it was a variety of driving conditions with several stops and no recharging in between. The end results was a displayed average of 81.5 MPG. That's very similar to the 84 MPG after 316 miles of driving I observed with my time behind the wheel of a PHV model Prius. I too drove it normally, exposing it to a variety of conditions just like they did... though mine included a few 0-60 acceleration timings and two 0-85. The catch is, I plugged in several times. But then again, the MPG after depletion was 50 still. They documented 33.9 MPG from Volt. Engine efficiency differs quite a bit. Questions about what owners could see will be abundant. I can foresee the next year filled with efficiency reports... all of which you'll have to look for detail. Vague makes it easy to be misled. Ask many questions.

10-31-2010 **Questions, data.** One of the biggest frustrations when dealing with Volt is how much the loudest voices will spin real-world data. Certain particular individuals have been clinging intensely to the uncertainty not having official estimates from the EPA yet. They're milking that delay opportunity for all it's worth, and then some. Nothing counts until those numbers are provided. But you know darn well they'll be dismissed immediately after they become available. After all, they simply dismiss anything else they don't like. It would be hypocritical not to anyway, since that's the very excuse they use to downplay Prius efficiency. The claim is the EPA values are exaggerated, that MPG is really much lower. So... won't we be able say the same about Volt too? No, of course not. They'll sight real-world data to disprove that... even though we do the same for Prius and that isn't acceptable. See, the latest is to reject all that claiming it is "*anecdotal*" evidence... that only careful scientific measurement is acceptable... which comes from the EPA. Feel like you're in a spin cycle? No matter what you present, they spin it to appear inappropriate.

10-31-2010 **Genuine Question Here.** I was intrigued to actually see that, especially on the big GM forum where they downplay MPG routinely. Anywho, this was what he asked: "*Do hybrids get better fuel economy than cars of the same size with conventional internal combustion engines?*" To think how little some things have changed over the past 10 years. Others have changed quite a bit... like the answer: That's rather vague, since there are many types of hybrids. But I can sight the real-world data of Prius as a rock-solid: Yes. 27 MPG combined (22city/35hwy) is estimate for the 1.8 liter Cruze. 50 MPG combined (51city/48hwy) is estimate for the 1.8 liter Prius. Add to that the cleaner smog-related emissions, there's not much left to debate anymore. Replacing a traditional 6-speed automatic transmission with a power-split device, motors, and battery clearly improves efficiency quite a bit.

11-01-2010 **Recharge Times.** There's much about journalism which makes you wonder about intent. This morning, an article was published that stated the original recharge times for Volt. Was it just a mistake or an attempt to downplay? There's a big difference between the original 8 hours and the revised "*10 to 12*". For the faster connection, it was originally 3 then changed to "*like 4*". Not being aware of revisions is common, but the next there wasn't much of an excuse for. The writer mentioned level-3 connections (440 volts) and how it could reduce time down to just 30 minutes for 80-percent capacity. That sounds exciting until you discover from another source (like this) about it not being available to consumers, that it's for commercial use only. To make matters worse, that's the only level he mentioned an extra cost. The level-2 connection (220 volts) is portrayed as if it was the same as level-1 (110 volts), which in reality there's almost a $2,000 difference. And considering how much the article went into cost detail, that's quite an omission. Consumers are in for quite a surprise later when they finally learn what they haven't been told.

11-01-2010 **EV Button Discovery.** Already having over 8.5 years and 178,000 miles of Prius driving experience by the time I got my 2010 model, the perspective I saw the technology was obviously quite different from most. I also follow the "*just drive it*" motto, so there's little effort made to squeeze out extra MPG. I basically just stay attentive. However, I do remember the discoveries of the past. We'd be surprised to undercover something clever about the design over a year after the debut of that generation. And sure enough, there's one for the 2010 too. The EV button is something many had just written off as impractical, often not being available due to temperature or speed. I stumbled across an unexpected situation where it works surprisingly well. It was accidental... I had just went through the drive-thru for breakfast and ended up following someone more concerned about eating his than going fast. We got around the corner and down to the light, which just turned green. I proceeded along with traffic. It wasn't until I got to the other side that I suddenly got the impression I was behind the wheel of the PHV model again. No plug in this Prius, yet the engine hadn't started and the Eco-Meter was in the white zone. Huh? Speed was 23 MPH and the ScanGauge still said 0 RPM. Holy crap! It then hit me that cutoff isn't the end of the green zone when in EV-mode. Whoa! That got me thinking. Right before arriving home in the evening, where that final stoplight requires a hard left turn and climb up a short hill, I can barely get up it in stealth. So, most of the time, I don't bother trying. Sometimes the engine starts. Other times it doesn't. Well, while waiting for the light to turn green, I pushed the EV button. Sure enough. That extra boost of electric power I always needed was suddenly there, readily available. I shot up the hill! It was so sweet, I drove around the block 2 more times to try it again. Wow! Talking about giving you a taste of what the PHV model has to offer. The 2010 has a EV-mode threshold of 24 MPH. So, you're limited to neighborhood exploits like that. But with a plug, it magically transforms the threshold to 62 MPH. Now I yearn for the opportunity to drive the PHV again. To think that Toyota was able to deliver so much for such a competitive price. That 60 kW motor is under-utilized. The EV button clearly demonstrates potential for more.

11-02-2010 **Grille Blocked.** This morning, it was the ritual of accepting Winter's approach. With the remaining birds singing to the sun rise, I opened the garage door to enjoy all that while I squeezed 1/2" foam pipe-insulation between each of the lower grille openings. It took about 20 minutes for all 4, including the notches for each vertical support I cut in the foam. Using a marker, I simply push the foam into it to indicate where to slice with a razor blade. That trick makes what could be a cosmetic challenge pretty easy. It allows the foam to lay flat and ensures it won't move in any direction the entire cold season. In fact, that works so well I end up having to tear out pieces in the Spring. The benefit of heat retention the blocking provides sure is certainly worth the time and $2 it requires. Efficiency definitely gets a boost from not having to run the engine as much. But there's no good way to quantify the improvement.

11-02-2010 **EV Button Observations.** I took full advantage of the EV button this morning... pushing it then dropping the pedal harder than usual in the parking ramp. That makes climbing up in stealth easy for anyone, not just those with a careful foot. It's pretty exciting to discover this ability so late after rollout began. I had a feeling there was more to the new Eco-Meter than the initial impression led us to believe. The interesting thing is how some newbies had been using it all along and never noticed the difference between EV and Stealth. Never having an indicator of power draw in the past left those with older Prius only knowing when the engine started. Now we can all easily see the tolerances. Green for Stealth, that's speeds up to 46 MPH. Typically, it equates to a maintaining steady cruise on a suburb street. White for EV, that's only for speeds up to 24 MPH. But you can actually press the accelerator quite a bit. I suspect someone will have the ability to measure the actual draw from the battery-pack. The threshold in the past was 10 kW for Stealth. The lower speed makes you wonder for EV. It's especially fascinating when you drive the PHV... since the threshold for EV goes all the way to 62 MPH and you can be surprisingly generous with the pedal. But then again, that's only when drawing from the sub-packs. The regular battery-pack, despite also being Li-Ion instead of NiMH, behaves just like the 2010 does... or does it? Since I didn't notice the subtle engine-off differences with these two modes, perhaps I missed something on the PHV as well. That's something to wonder about. Actually observing that there's more is very exciting.

11-03-2010 **Meets or Exceeds.** The absolute refusal of the Volt enthusiasts to set goals was the beginning of the end. Not stating their own expectations was a major clue hinting at what was to come. Today ended up being the day of reckoning... rather than a discussion of the next generation, it was next year's model. Nothing constructive emerged. It all fell apart. They were back to petty bickering again. The situation was as if nothing had been learned. What a mess. I don't even bother participating anymore. Those opportunities weren't taken seriously. Now what? The solution the moderator took was to lockdown the thread. Not allowing any new posts is only a temporary solution. If you were one who had observed the history from the beginning, you'd be well aware of how many twists & turns there have been along the way already. To an outsider, the goals should have been to that Volt meets or exceeds each of the categories Prius already excelled in... the very definition of "leap frog". But instead, those aspects which fell short are topics of trolls... apparently issues not actually important, just things to make Volt appear unworthy. It's really too bad things worked out this way.

11-04-2010 **Repeating History.** Remember the big problems of the past? Apparently, many have forgotten already. It was the obsession with marketshare & stock-price. Well, guess what everyone is cheering about now... Rather than focus on profit or how vehicles are directly competing, it's all about the total quantity sold. The upcoming IPO will only raise enough money to pay back the government roughly a third of what's still owed. Where will the other billions of dollars come from? How will the automaker achieve CAFE requirements when the two premiere fuel-efficiency vehicles aren't popular sellers? In other words, GM is far from the end of their troubles still. And of course, if you point any of that detail out, the supporters retaliate. So, many have given up at this point. Looking at the first full month of sales for Cruze, seeing only 5,048 sold despite 18,000 having been produced is a bad sign. They even tried spinning Camry & Corolla numbers as "*slipping*" and "*falling*" even though the actual quantity grossly outsold the GM vehicles. Compare their 12,389 Impala and 12,353 Malibu to the 18,636 Corolla and 25,014 Camry. It's the same old statistical misleading. That mindset is back. With new GM is repeating what old GM had done, how can we expect a different outcome?

11-04-2010 **Prius Sales.** Toyota's leading fuel-efficiency vehicle frustrate the competition. How do you compete with a vehicle that has been the top-seller in Japan for 18 consecutive months? That's amazing popularity. But what makes that even more impressive is the fact that there is no longer any government incentive anymore. Yup, the tax credit expired. That did cause sales to drop. But still selling 21,769 was enough to keep Prius at the number one position. That's truly impressive. Here in the United States, where guzzling relatively cheap gas is still in fashion, the sales of 11,731 seem to pale in comparison. But put into perspective, it makes you think. GM claims their "*fuel efficient*" new SUV called Equinox is a runaway success, yet only 12,773 were sold. Whatever the case, consumers ultimately understand the difference between 30 MPG and 50 MPG. And with the price of oil climbing again... it's now at $86.95 per barrel... don't expect the gas to stay under $3 for too much longer. Sales of Prius will continue to frustrate the competition. It's a vehicle which offers a genuine solution to ease our emission & efficiency problems.

11-05-2010 **They Wouldn't Listen.** It's been quite an enlightening experience to read the posts on the daily blog for Volt lately. I haven't posted anything since last week. The so-called "troll" activity of others has almost completely vanished. What's the point anymore? It's as if they didn't learn anything. You see the same old ambiguous comments about fuel economy, despite so much more being known now than years ago. They had plenty of opportunity to prevent this. They didn't have to start from scratch all over again upon production starting. All the issues with EPA and CARB were already present back when the concept was first revealed. Yet, only now they are beginning to hear what we've been saying all along. That's the irony of being well informed. You get blamed for causing trouble even though what you're doing is trying to prevent it. Was our effort in vain? Pointing out details of how MPG estimates are measured and how emission-rating is determined fell on deaf ears. Now, that's the very thing they want to better understand. They wouldn't listen. In fact, they ridiculed claims of how that would affect price and consumer demand. Time has run out.

11-05-2010 **Giving Up.** When you find out that a moderator from the big GM forum just purchased a Cruze, you cannot resist seeking out a quote from the thread which he announced the purchase. Here's my favorite: "*I've long felt that buying a Toyota was a sure sign you've given up on life. That the car defined the drudgery you felt your life had become. That it's an indication that excitement is alien to you and that you prefer drab, boring, emotionless fare*." Needless to say, the mindset of insulting the competition rather than actually addressing need is quite prevalent. It's that want verses need problem all over again; however, now it's with a car instead of a SUV. How strange is that when the comparison vehicle is smaller, only offers 6 more horsepower, and is nearly half as efficient as Prius? What happened? Is this the market we face now? With a MPG estimate of just 22/35, you'd think it was still 2000... certainly not 2010. Who's the one that's giving up? At $3 per gallon, it sure looks like those sticking with the status quo are... not someone purchasing technology which utilizes electric motors and a battery-pack.

11-06-2010 **Last Stand, range.** A major bragging point for Volt is the fact that the electric-only range is greater. It's a bit of a senseless aspect to focus on, since price is a major influence in the capacity decision... not any type of technical limitation... though Volt is at a major disadvantage compared to Prius when it comes to engine efficiency. Regardless, one particular GM salesperson simply cannot let it go. The situation has become rather amusing, because no one else seems to care anymore. He just wants to make one last stand. You know how it is. Some just want to go down fighting. How could I refuse to respond to this obvious provoke: "*It looks like almost all if the automakers will have an EV or PHEV in the next 24 months, but only Toyota has had the foresight to build one with only 12-14 miles AER.*" That made me wonder if he had forgotten about the announcement coming from Toyota in just a little over a week. Oh well. Whatever. I chimed in with this: Thanks for the heads up. It’s a interesting line up… a variety of no-plug hybrids… a full EV… a plug-in hybrid using sub-packs, so capacity can easily be increased.

11-06-2010 **Last Stand, winner.** Don't you love how a winner is declared based upon a bragging point rather than something of actual merit? That was what this particular effort attempted with: "*The December Motor Trend is reporting 127 MPG for the Volt without trying very hard. Same issue gave the Prius plug-in 70 MPG. Clear winner: VOLT.*" Again, this was another one of those individuals fighting to the bitter end. In his case, he was a devoted supporter of Michigan. So, it doesn't take much imagination to figure out how Prius rubs him the wrong way. I get a kick out of how the actual goal of producing a high-efficiency vehicle simply gets disregarded. It's all about being better than the competition at the moment. After all, with the upcoming IPO, the immediate future is of huge importance to them. Anywho, I felt the need to call out attention what truly determines a winner: SALES are the measure progress. Don’t lose track of what’s trying to be accomplished. The point is to replace traditional production.

11-06-2010 **Last Stand, trucks.** The number of advertisements for them seems to have skyrocketed lately. I wonder why? Since the shortcomings of the SUV have been exposed as bad for the automaker, the consumer, and the country, focus has clearly shifted to pickup ownership. Super-Heavy-Duty is the push. It's attention to horsepower and towing-capacity more extreme than ever. Who needs that? Will we end up seeing them as commute vehicles after awhile? What's going on? I suspect it has quite a bit to do with production & profit. With gas positioned to permanently climb above $3 per gallon, it makes sense that a last stand on unnecessarily large trucks is made. Even if they are only used for utility, the size is overkill. Considerably smaller vehicles could accomplish the same task. With the rise of consumer attention toward efficiency, this as a final effort makes sense. The status quo is crumbling. Change is difficult to deny at this point.

11-06-2010 **Last Stand, standards.** Those upcoming CAFE standards loom in the not-too-distant future. That's clearly another reason to push trucks now... quickly, before regulations will restrict such imbalance of responsibility. It goes way beyond offering choice, which is quite lacking in the first place. How the heck will the increase in fleet MPG be achieved by automakers not offering high-efficiency vehicles that don't require a plug? Lots of 50 MPG Prius make it easy. With nothing but 30 MPG cars, what the heck will some do? Think about how other countries take the matter seriously. How come we still don't? Will there end up a small volume of EV to offset the difference? Not bothering with the expense of developing a plug-in hybrid makes that pretty much the only alternative. Resistance to these new standards reveal the same pattern of how automakers fight change to the bitter end. A last stand was inevitable.

11-06-2010 **Last Stand, detail.** The devil being in the detail is often good advice, something to always be aware of. You should question vague conclusions. Turns out, that 127 MPG should really have been stated in terms of all fuel consumed, both gas & electricity. That's easy to agree with. But equating the 33.7 kWh energy equivalent for 1 gallon of gas is confusing, at best... not even taking the presence of ethanol in account. Stating consumption in those terms is more accurate, but most people aren't aware of electricity usage rates anyway. But if you did look at that number, they stated a 105 MPG equivalent. Toyota's effort to confirm a generalized 75 MPG for the PHV model is definitely proving to be a good one... knowing that consumers will just look at the gas quantity and will likely just plug in each day for overnight recharging. That's what they expect. I simply cannot envision much at working recharging anytime soon, especially in the north. Heck, we didn't even have plugs available for simply engine-block heaters. Long story short, it's important to pay close attention to detail. Efficiency estimates will exploit assumption making.

11-06-2010 **Last Stand, reports.** These are what really stick. People take the reports from professional media at face value. I have always looked at them with at bit of skepticism. Why would a magazine which focuses heavily on power & speed ever be interested in Prius? Searching through their history, you'll only find brief mentions of Corolla & Camry. Cars that middle-market drives haven't their interest. Performance is their past. Now, they are attempting to expand that definition beyond the traditional to include fuel-efficiency. That's a new topic with uncertainty. Who will be buying & reading their reports? Needless to say, this last stand embraces Volt's driving experience. So of course, they pointed out the PHV model Prius engine "*can be triggered if you drive away from your house enthusiastically*" in contrast to Volt. What did they mean by that? When I drove the PHV, that steep 40 MPH hill just 2 blocks from my house certainly didn't trigger the engine, despite starting at the bottom from a dead stop. I shot up it 4 separate times to test the tolerance was amazed how much harder you could push the pedal than the 2010. Yet, they imply that's not the case. If the power to climb the hill wasn't enough, how "*enthusiastically*" must you drive?

11-07-2010 **Last Stand, sales.** What irritates certain individuals the most is the discussion of sales. Seeing the daily topic today of "affordability" made me wonder. Controversy draws a lot of traffic. That's a benefit, especially to one who's lately lost a chunk of it. It's also a benefit from acknowledging the problem. So, it looks like it's a good thing. Unfortunately, the statistic itself leaves much to be desire. The answer to the "*Who's the market for Volt?*" question turns out to be only 7 percent, taking the tax-credit into account. That most definitely isn't the mainstream. With the first & second years of Volt production low, what will stimulate those which follow? Will we have to wait until something realistic is offered instead or will the climb of gas prices be enough? Both Toyota & Ford are position to offer plug-in hybrids that are affordable. Sales for them will be considerably easier will far less of a price premium. Both Hyundai & Honda hope to capitalize on that opportunity too. What does that mean for the slow pace of GM? Won't the new stockholders be expecting some type of return for their investment? And what about those efficiency requirements. Without substantial sales, you certainly can emphasize the word last.

11-07-2010 **Last Stand, again.** Don't be surprised to read complaints about the media again and again. This time, it was a long article praising Volt and summarizing Toyota's design with: "*...the Prius is a very mechanically complicated car and is still gasoline-dominant in its design.*" That's just so wrong. Arrgh! The system in HSD is clearly less complex than a traditional 6-speed automatic transmission. It makes you wonder if they actually know or just want to make Prius appear less desirable. As for the "*gasoline-dominant*", the reporter obviously hasn't driven a PHV model. Despite having the same drivetrain components within, the engine is off most of the time... only providing assistance while accelerating hard and while cruising faster than 62 MPH. The electric motor does most of the work. Power from gas is a supplement. But from the last stand point of view, they wouldn't want you to know that. In that case, they only want you to focus on detail of the model without the plug. Pay no attention to the other...

11-08-2010 **Next Year?** It's easy to imagine hype being sustained all the way until Earth Day. Beyond that is far from clear though. Toyota's upcoming new hybrids along with the plug-ins will definitely entice the other automakers to sound off about their plans. What will that mean for GM and Volt? That's when expansion beyond the initial selected markets will be expected. We'll have enough real-world data collected to solidify consumer expectations. The spin won't have as much of an effect then. We've seen it before with other new technology rollouts. Combine that with the progress of the IPO and you've got some interesting outcome on the way. Change of some sort is inevitable. There simply won't be any reasoning for status quo. All the delay excuses we've heard in the past from a variety of sources can't compete with actual wheels on the road. Whatever happen next depends upon what we witness firsthand. 2011 will be the year for that.

11-09-2010 **Volt Fade.** Suddenly, it has vanished from the headlines. To think how crazy things had been up until very recently. I could barely keep up with all the hype. It was unbelievable how, in the face of bitter disappointment, some would defend a technology that didn't achieve the goals set out for it. At first, the theme was that there would just be a delay, that those goals would simply be delivered the next time around. Now, it seems so much less certain. With the pressure of competition rapidly building, there's a feeling of time having run out... hence this fade. It's a quiet without knowing what to anticipate next. What will next year bring? What are consumer expectations? What if they do suddenly demand technology that's clean, efficient, and affordable? Remember, all along there's been a concern about too little, too slowly.

11-09-2010 **Waiting.** The wait for the next Prius can be agonizing. We certainly had our share of dealing with eager awaiting future owners in the past. Now though, it's worse. There's a sense of competition. The upcoming PHV model won't be alone. There will be other plug-in choices. One expressed the concern this way: "*Toyota can't wait too long to put it out because other choices are out sooner rather than later (Volt, Leaf, etc.). Besides, I'm getting impatient already.*" I couldn't help but to interject this: Rushing to market doesn't seem to be working out for GM. Look at how much focus there is already on goals that weren't met yet. They're being thought of as shortcomings already. Toyota's 600 PHV currently collecting real-world data around the world will provide a clear expectation for consumers. Determining all the unknowns prior to rollout while GM struggles dealing with their fallout sounds like a good plan to me.... especially since the PHV is the 4th Prius delivery wait I've had to endure over the past decade. Like the others, I know that's well worth it... since I've already driven one. Patience.

11-09-2010 **Hybrid Debate?** Looks like Hyundai is attempting to stir up a debate with Toyota. The claim is: "*At high speed, the Prius's (fuel efficiency) is worse than a regular car.*" How can anything so easy to disprove be openly stated like that? Said by the president of Hyundai Kia Motors research & development division, you'd think he'd worry about people providing evidence to the contrary and harming his credibility. The very concept doesn't even make any sense. The engine optimization and use of electricity should make it simple to understand there's an efficiency benefit on the highway. If not, what about the EPA estimate clearly pointing out a substantial MPG advantage over traditional vehicles? Of course, it's hard to take those comments seriously when they also included a claim that the Hyundai hybrid system doesn't have 2 electric motors like Toyota or Ford, instead it only has 1 along with a "*small starter generator*". What kind of twisting of definitions of that? A generator is an electric motor!

11-10-2010 **Interesting Points.** Reading reports from high-performance publications always makes for good discussion. Here's my reply to the various points brought up about Volt's latest review: 101 MPH is totally pointless for real-world driving, well above the legal limit. But that's what to expect from a "performance" magazine. 127 MPG makes you wonder what those that remember the 230 MPG will now think. It's also a nice match for those who have an aftermarket plug in their Prius. 70 MPH is a misconception that I bet will live on for quite some time. The actual direct-drive speed can be all the way down to 30 MPH. But most publications continue to focus on the first speed ever mentioned rather than the detail which followed later. And what about price? That obviously isn't in the criteria for "superior". The hefty premium with no chance of an affordable option due to the CS-mode efficiency being so low makes it "uncompetitive". Needless to say, GM has designed a nice vehicle that simply isn't a viable choice for middle-market consumers.

11-10-2010 **CS-Mode MPG.** It already happened. Someone saw a value listed on a document and didn't dig any deeper. Accepting numbers without examination is a recipe for trouble. This was a great example. It makes you wonder if the number was stated that way intentionally. Being a little ambiguous is what certain sources thrive on. They reap the benefits of attention uncertainty brings. Or they could have just wanted to present Volt in a better light. After all, clarification & corrections after publication often aren't acknowledged. But then again, it could have simply been an honest mistake. After all, new technology brings understanding challenges. Regardless of intent, damage is done. Thank goodness online research is so much easier now. Some will seek out multiple sources to confirm claims. This was my response to that particular situation today: Better look again. Close inspection of the detail shows the 51 MPG came from the 150-mile loop test they performed, which included 44.5 miles of EV driving. 150 miles / 51 MPG overall = 2.94 gallons; (150 miles - 44.5 miles EV) / 2.94 gallons = 35.9 MPG for CS-mode.

11-10-2010 **Technology Comparisons.** Even the best of intentions easily go astray. Hopefully, this was seen as constructive: Which Prius? There's the no-plug model, the planned 2 EV sub-pack model, and there's the potential for higher EV capacity as well. Volt is one-size-fits-all. It's neither affordable, offered without a plug, nor expected to be available at the same volume as Prius for a very long time. Some of us are quite concerned about how much improvement can be delivered prior to the tax-credit expiring. It's the big picture, realistic production replacement. We'd like GM to offer a competitive, profitable vehicle that achieves the emission & efficiency goals which middle-market will be able to purchase rather than traditional vehicles. Also, don't forget about adaptability of the technology... minivan, truck, coupe, sedan, wagon. If it's not viable for a size or type, what will be produced instead?

11-10-2010 **Volt Delivery.** It has begun... but the process is a remarkably slow one. 15 supporters got 3-month loaners today. The first true production vehicle comes off the assembly-line 2.5 weeks from now. Dealer test-drive units aren't expected until late next month. Rollout to the first few initial markets will last the next 6 months. Availability to the entire nation isn't expected to be complete for nearly 1.5 years. It's really hard knowing what to expect anymore. All the speculation has screeched to a halt. Everyone is waiting for real-world data. Finally. The hype was terrible... so much passion contending with so many assumptions. It sure is nice that this undeniable milestone has officially been reached. Of course, that does mean that some of the originally stated goals are officially not met. Not a game-changer. No leap-frogging. Just a choice in a growing market. Sounds fair enough.

11-11-2010 **Debate?** Twisting of the situation entirely around is no surprise. The absence of so-called troll activity on that daily blog for Volt has led some enthusiasts to conclude that it means the car fulfills all those goals GM had set out to achieve. In reality, that's just plain not true. Since that has all been confirmed at this point, there's no reason for debate anymore. Speculation is over. Discussion complete. Of course, it was stated this way: "*I think that ends the debate on whether the Volt can deliver.*" Don't you love how incredibly ambiguous that is? Deliver what? It's the whole vaporware argument all over again. They refused to identify criteria originally, knowing it would come back to haunt them later. Sure enough. When confronted with the "*50 MPG*" and the "*nicely under $30,000*" claims, they pretend neither was ever promised. Instead, it's mission accomplished.

11-11-2010 **Opel Ampera Price.** With a starting price of Volt at $41,000 here in the United States, you'd hope the model for Europe would be similar or maybe even less. No such luck. In fact, it's quite the opposite. The price announced today sure made for a great example of sticker shock. It's 42,900 Euros. That $58,618 at the current exchange rate. Holy crap! How can GM expect to sell many of this plug-in with a price so extraordinarily high? It simply doesn't make any sense. That most definitely doesn't qualify as a vehicle intended for middle-market. Talking about not even trying to design something for the mainstream. This is so disappointing. The turns of events over the past few months certainly lower sales expectations. It's the very thing some of us had feared all along... created a highly desired, but not often purchased, showcase vehicle. In other words, it has become a newsworthy niche rather than something will actually see in joe consumer's driveway.

11-11-2010 **GE Announcement.** This certainly was interesting news to read about. GE intends to purchase 25,000 electric vehicles by 2015 for their fleet services. Almost half will be Volt from GM. Interesting, one of the two "customer experience and learning centers" they'll be creating will be located just 20 miles from where I live. Talking about close! The expectation is this will deliver about $500 million in revenue over the next 3 years for GE. It's quite thought provoking, an industry move toward electrification sooner than expected. Of course, with GM's production volume low and the price of oil high, the current situation isn't exactly well time. This support validates the "too little, too slowly" concern quite well. Do you think there will be a change in plans as a result? Greater commitment is what was needed prior to this. What happens at this point? All the attention will hopefully be a good thing. I sure bet the attention of the other automakers is peaked now. GE will likely be placing orders will them too. Competition is good.

11-12-2010 **Cruze Spin.** Is it hard to believe that the official EPA estimate for the manual transmission ECO model of Cruze is presented in an extremely bias way? The supposed hybrid competitors to it were listed by GM as Fusion, Altima, and Camry. All bigger and more expensive vehicles. Civic, Insight, and Prius were all conveniently missing from the list. Some of us call that lying by omission. Apparently, this is acceptable marketing. It sure looks like painting a rosy picture right before IPO to me. Sadly, the highway estimate of 42 MPG is being given all the attention with an adjective of "*impressive*" or "*class leading*" and mention of 28 MPG for city is just slipped in afterward. What makes me crazy is the fact that combined MPG is missing entirely and that you must purchase the manual. Not wanting to shift gears yourself means the step down to 36 highway, 24 city, which gives a combined efficiency of only 28. Lastly, think about how emissions-rating isn't mentioned at all. The spin is pretty bad.

11-13-2010 **Volt Challenges.** Stating it that way is a bit of an understatement. Ironically, GM's new "Runs Deep" motto perfectly describes the problems they face. It's troubling to think how long it will take for consumers to discover this. Heck, even the enthusiasts have reverted back to quibbling about small details rather than dealing with the big picture. It's really an unfortunate situation. A friend of mine put it this way: "*Many people fell for the lure of the 40 miles on EV lust. Look at it deeper and you will see what really is.*" Volt is a niche vehicle. It's clearly not designed for those who drive more than 12,000 miles per year or who don't have a plug available. Then for those who it does favor, many simply cannot afford it. He also said: "*It is a perfect example of what a hybrid should not be.*" Volt is the design people argued against a decade ago, double the complexity with very little MPG benefit. Engine operation should be much more efficient (50 MPG) and much cleaner (PZEV).

11-13-2010 **Misconceptions.** New ones are inevitable. But what about old ones? Automakers still take advantage of assumptions by heavily promoting just highway efficiency, knowing many consumers will only focus on it and disregard everything else. After all, most people have no idea what MPG their vehicle actually gets. They simply recite the value they saw on the window-sticker when they first purchased it. Low values for Prius are intentionally spread with the hope that people will just assume that's normal for all owners. Data from previous generations is presented as if it is still relevant to the newest. Heck, there are some who still believe the hybrid system in Prius does virtually nothing when driving on the highway. They honestly believe it's basically just dead weight at those high speeds without any benefit. Antagonist efforts to prevent people from learning, by undermining discussions with selective information, often works enough to distract & confuse. The only saving grace is the test-drive experience. That's often when consumers discover the truth. That's why this is such a critical time for Volt.

11-13-2010 **Actual Sales.** All that hype & propaganda will finally lose traction. It's the real-world data beginning to emerge that should finally put to rest most of the speculation and blind hope. No more expectations of a dramatic paradigm shift either. The aspects of business will finally have to be addressed. Being realistic may be pushing it, but the passion of Volt enthusiasts was intense. They simply didn't want to be reasonable until they had to. In fact, today's posts still show remarkable optimism for the technology itself without regard to the market as a whole. In other words, that "*too little, too slowly*" is still very much a concern. What happens in second year will tell a very interesting story. The history books will eagerly be awaiting that chapter. Success requires demand. Interest isn't enough. It all boils down to actual sales.

11-13-2010 **No Highway Benefit.** The misconception is popping up in discussions quite often. A great quotable example came up again today, this one I couldn't resist replying to: "*Hybrids are designed for traffic jams... If you're like me and focus mainly on the highway fuel economy, chances are you will NOT want to pay more for the privilege of lugging heavy, useless batteries around while on cruise control at 70 mph.*" That particular misconception fascinates me more than any other. It makes me wonder how many people genuinely believe that and what kinds of decisions they've made as a result. It's just plain not true. I've experienced over 50 MPG on long-distance highway trips quite a number of times now. Optimization to the gas engine only possible due to having an electric motor available should be obvious. Clearly, it isn't. Do they just assume the EPA highway estimate is incorrect?

11-14-2010 **Completely Lost Touch.** Reality has floated away, gone. The first ever Volt gathering was yesterday. Immediately following, the comment from the host was: "*The Volt is a luxury/sports sedan and the Prius is an economy car, period.*" He further went on to say: "*It was powerful, had smooth acceleration, was nimble...*" Sound familiar? How about this: "*I've driven a 2010 Prius, and it isn't in the Volt's league at all, not even close.*" That's the very thing some of us feared all along... GM creating an electric Corvette or Camaro rather than a Malibu. Back when Saturn was still around, we often referred to Aura. In other words, they've completely lost touch with what was actually needed. It's as if the term "economy" has become synonymous with affordable. Appealing to the mainstream, so traditional vehicle production can be replaced with something offering much better emissions & efficiency, simply isn't a priority for them. The very same thing happened with Two-Mode, despite heated arguments to the contrary.

11-15-2010 **Return of BAS.** It was discontinued due to incredibly poor sales. Now it's back, with an upgraded version. The battery-pack is more powerful, using Li-Ion now. The electric motor is bigger too. But then again, you can only get so much power from 15 kW. It's still an ASSIST type hybrid. Though, GM is making an effort to disassociate with the "hybrid" term. Sound familiar? How about the "*GreenLine*" name? Does anyone remember that anymore? It was the original name for BAS, abandoned back in 2007 when people discovered it didn't reduce smog-related emissions... hence not actually being green. Now GM is changing the name for the newest version of BAS, calling it "*eAssist*". That makes sense not to associate 30 MPG combined (25city/37hwy) with anything thought of as a hybrid... but sure is disappointing that they still call it a "fuel saving" technology. 30 MPG is pretty disappointing for efficiency in 2011. What is the plan for making the technology available in other vehicles? The point of such minimal improvement is rapid & deep market penetration.

11-15-2010 **Classic Conflict.** This is far from new. Same problem, different vehicle. In this case, it's Volt... being declared triumphant already! The celebrating simply amazes. How can victory be achieved before the first sale? Needless to say, the focus on "performance" has distracted from required purpose to such a degree that enthusiasts have no idea what it is anymore. Somehow they think the technology will be a revolutionary success, wiping out competition. Even when confronted, some absolutely insist this is what consumers in middle-market will have in their driveways instead of what automakers currently deliver in high volume. This is what I posted in response to the premature conquest: Reality is that Volt wasn't designed for mainstream buyers, like those who purchase Malibu. They're the ones which original goal of "*nicely under $30,000*" was targeted at. Since that's where the business-sustaining profit comes from, it makes sense about some feeling let down. It's the classic want verses need conflict.

11-16-2010 **Purpose.** There are a select few who absolutely insist HSD has been a horrible failure, continuing to declare Volt technology superior. Whatever. I say my piece, this time on the big GM forum, then wonder what they'll spin next: 2,000,000 Prius sold, despite the misconceptions and all the resistance to change. No other model from any automaker comes even close to that. Squeezing the hybrid system into an existing traditional vehicle has not proven successful in volume for anyone. Stop avoiding acknowledgement of that already, it's getting tiresome. Remember how Volt was first tested, prior to the body being available? It's not like GM couldn't have continued to follow that opportunity. They didn't though. Toyota won't be either. Haven't you noticed the bigger "Prius" on the way? Twist reasons all you want. Sales are the goal. The point is to replace traditional production. Seeing Volt produced & sold at minimum mainstream volume (60,000 annually in this market) is the measure of success. That milestone was set for the second year, then abruptly backed away from in July. When do you see it happening now?

11-16-2010 **Vague Claims.** Read online posts carefully. Comments like this are becoming increasingly more common: "*I find it hilarious that as the Volt becomes more and more popular that the trolls become more desperate.*" Notice how much assumption is required on the reader's part. We have absolutely no idea what a supposed troll is anymore. The definition seems to have grown so wide that anyone saying anything even the slightest bit negative is one. You're not allowed to be constructive. Now is the time for cheerleading only. Also, notice how the desperate adjective doesn't actually describe anything. It too is so vague, it could mean just about anything. So... if you support a plug-in vehicle that isn't Volt... you wait GM to fail? That was implied in a post today. In other words, paranoia is setting in and anything not of the enthusiast liking is considered an effort to undermine and must be called out as trolling. The claims are getting absurd. Being vague has contributed heavily. See the kind of problem that emerges from not setting clear goals?

11-16-2010 **Blast From The Past.** Cruising up north for a long weekend getaway, we had to take a detour due to construction. To my astonishment, I found myself driving down a long lost stretch of country highway. It was the same one from 9 years earlier. Being able to drive along the shoreline of a large lake like that is quite rare, especially when the opposite side is mostly just trees. But there I was, again. This time though, it was the Silver 2010 rather than my Green 2001 Classic. Not only did I have a digital camera, the clouds were adding to that spectacular scene... exactly as it had way back in the past! What an amazing stroke of luck. Needless to say, I had to stop for photos. Here's what I originally saw... photo album 19 ...and recently at that very same location... photo album 157

11-16-2010 **Sunflower Surprise.** After a decade of taking Prius photos, it has become quite a challenge finding new scenic locations. Sometimes you still get lucky though. This was most definitely the case. What a surprise! The odds of stumbling across a picturesque field of sunflowers close enough to take photos of with the Prius in the foreground is rare. Also getting puffy turbulent clouds in the background is amazing. Having all of that along pointing in the right direction made it a true miracle... since the bright yellow heads of the flowers rotate to always face the sun... turning to follow the light as it travels across the sky throughout the day... hence being called sunflowers. The variety of color from the flowers, the trees, and the sky make it among my best finds ever. I'm pretty proud of this particular opportunity... and quite glad the shadows rolling across the field and the amount of traffic flying by on that busy road allowed me to still capture the moment. See... photo album 151

11-17-2010 **GM IPO.** Stock was offered today. Exactly as anticipated, the timing of this event was such that certain information still would not be available and new hype would help to conceal that reality. Supposedly, those long awaited Volt estimates from the EPA are just days away. It's no surprise they weren't revealed prior to today. The announcement just this morning of a new concept electric-assist, auto-stop, 1.0 liter, 3-cylinder, gas powered vehicle expected to provide 56 MPG city and 65 MPG highway was no surprise. From an automaker with a long reputation for "*over promise, under deliver*", it was pretty much an expectation that they'll paint a rosy picture right when the public the opportunity to purchase stock. Supporters were angry that any doubt should emerge from this. Huh? How's this any different from examples in the past? Of course, an interesting question about this situation is: Who are the purchasers? Wouldn't it be intriguing if a bulk of the stock went to foreign investors?

11-17-2010 **RAV4 EV.** The first-generation model still has 746 of them on the road. That makes for an alluring endorsement of the second-generation officially revealed today by Toyota at the Los Angeles autoshow. This debut was long anticipated by many. We've heard of the Toyota investment in Tesla. Panasonic recently did too. Having an EV model of RAV4 emerge as a result was the hope of many. Testing models to be built next year will be exploring how realistic an all-climate range of 100 miles could be. In other words, the vehicle will be using an extremely large battery-pack to compensate for distance losses caused by use of the A/C and Heater. The faster you travel, the greater the consumption too. Anticipated price is unknown, but the expectation of availability in 2012 was confirmed. And yes, the PHV model Prius is still also planned for 2012.

11-18-2010 **Business Reminder.** Attempts to have constructive comparisons on the big Prius forum are interesting. Today, it was this: "*Ok, let's make it real world: take a Volt and a Prius both with a fully charged battery and give them one gallon of gasoline and see which one goes the farthest.*" I'm quite curious what the response to my comments will be: That isn't real though. Reality is that consumers are tied to a budget. Feats of engineering have to balance out with how much someone can actually afford. Isn't the point to sell the technology in very high volume? If so, engineering a vehicle without regard to price doesn't seem sensible. That's why the target of $30,000 has been so important. In other words, greater emphasis should have been placed on engine efficiency. Examples like the 26.1 MPG show how poor of an overall design the vehicle is, making a decision to offer a smaller battery-pack to reduce price is quite unrealistic. That heavy dependence on electric capacity limits product diversification... which impairs business opportunity.

11-18-2010 **Quadruple Sighting.** It was an exciting moment. There were 4 of us at the same intersection at the same time. Enough 2010 Prius have been sold now that I can look forward to this happening from time to time. Of course, some will likely be 2011 models. But no one has coined a name for the newest generation yet. As time goes on... and they become even more abundant... someone will come up with some type of label that sticks. Until then, I suspect the "*gen-3*" identifier will have to do. It doesn't really matter yet, since that's the one most everyone makes reference to anyway. It will be the one which offers a plug too. So this one will be the purchase choice for years to come. That makes for especially good odds of more sightings like the one today... perhaps even a quintuple.

11-19-2010 **Revolutionary.** The tone has really changed. No more revolutionary rollout for Volt. It has become an evolutionary outlook, where the expectations are now being set at 5 to 7 years... rather than just 2 as the enthusiasts had absolutely insisted all along. It's amazing how information like price, efficiency, and emissions can result in so much backpedaling and downplay. That wouldn't be so bad if it were only the attitude we had to deal with; however, there's the misleading too. The insinuations that Prius can't ever support a larger motor or battery-pack than what's currently in the PHV model is enough to make a person crazy. It's that same old "more is better" argument. Such a familiar problem. That contributed heavily to the fallout of the past. Rather than diversifying the product-line, focus was almost entirely on growing large & powerful vehicles. The motivation was easy profit. How will it play out this time? The competition intends to start a revolution, pushing production volume higher & faster than GM is planning. Remember the "*too little, too slowly*" concern?

11-19-2010 **EPA Estimates.** That label stating standardized fuel-economy measurement results is required to sell a vehicle in the United States, now. Many years ago, that wasn't the case. The large guzzlers simply had an empty sticker in the window, no MPG values. Regulations had turned a blind-eye to efficiency, encouraging consumption by offering tax credits for the largest consumer vehicles. Back then, guzzling was the thing to do. Not anymore. In fact, it would be ideal seeing a zero in place of MPG. But that's not realistic. Though, some automakers are striving for it. Problem is, offsetting emissions doesn't actually solve anything. If electricity comes from dirty sources, consumers will be quite mislead by thinking they're driving green. Somehow, the EPA must make this information easy to understand. But how? A vehicle like Volt uses both gas & electricity. Expressing how much in a standardized way is really a challenge... one who's time has run out. Substituting one fuel for another isn't enough. It must actually be cleaner and more efficient. The long-awaited new window stickers featuring EPA estimates are coming soon, very soon.

11-20-2010 **Quantity & Speed.** Over and over again, the concern about "*too little, too slowly*" has been expressed. A decade ago, there were arguments whether carbon emissions were a problem and if automotive batteries were viable. Today, some still argue. Rather than focus on solutions, certain debates still rage on. Since hybrids like Prius have already proven realistic & affordable, why are some still raising doubt? Why aren't they doing what needs to be done? The answer is an unfortunate reality... resistance to change. Notice how Volt was designed and production planned which will keep it a niche for quite a number of years still? Toyota continues to push to deliver 1 million high-efficiency vehicles annually starting in 2012. There will be 11 new hybrids, the PHV model (plug-in) Prius, and all-electric RAV4 & iQ vehicles. Other automakers, like Ford, Hyundai, and Honda, are all taking the need for quantity & speed seriously too. How will GM achieve the upcoming CAFE (fuel-efficiency) requirements? A large chunk of their production must change. Without a no-plug model of Volt, how will vehicles delivering only 30 MPG combined EPA estimates fulfill the need?

11-20-2010 **Scenic Detour.** The past emerged again, this time in a different season though. The contrast was dramatic. Back in 2001 with the Green Classic model Prius, it was harvest time. The grass was still plush with life & color but the corn next to it was lifeless & dry. I drove off the road to get close, hoping the farmer off in the background harvesting at that very moment wouldn't mind. The photos I captured from that experience were quite memorable. So on the cold January afternoon this year, in the dead of winter, I found myself driving home from a late-season holiday lunch near that same location. Couldn't resist taking a scenic detour. Same road. Same field. Same hill. Very different look... which had nothing to do with it being 9 years later. This was due to the snow. The fields were now swept with a blanket of white, only hinting at what had been there when it was warm. The sky was a beautiful blue, complete with wispy clouds to emphasize the rolling hills on the horizon. The 2010 Prius wasn't Silver though, it was coated with a layer of salt sprayed from the road along with washer-fluid dripping down from the back window. The moment capture the extremes of the cold-season... when the weather actually cooperates. See... photo album 158

11-21-2010 **Too Late.** It's been interesting reading daily posts, watching some Volt enthusiasts change their stance as real-world data emerges. Hearing the message from the market about the need to be affordable is finally sinking in too. Of course, some are twisting that to seem as though the situation is actually the opposite. Oddly, that is a good sign, since it is a recognition of change. Anywho, this really got me: "*For some reason, the phrase *Too Little…Too Late* comes to mind when I see what the competition is scrambling to come up with now!*" That's why I document what happens, when it happens. So they can't make up something different later: No scramble. Roughly 2 years after rollout of the third generation hybrids was the plan all along. Believing that those designs had not been in the works until recently is evidence of greenwashing. Look back. Notice how all the automakers have been waiting for the very same thing, high-volume production of lithium based automotive-grade batteries. Now that they are becoming realistic, those plans can finally be put into motive. Too late doesn't make sense anyway. For that to be true, Volt would already have to be a top-seller. In reality, the "*too little, too slowly*" is still very much a concern. The industry leaders will be those automakers which achieve mainstream sales for a profit without relying on a tax credit. And it's quite likely more than one configuration will achieve that. Until then, it's just spin.

11-22-2010 **Game Over.** The official EPA estimates are now being finalized. That draws an end to the market without any plug-in vehicles available. Not offering anything whatsoever was a very different world from the one we just entered this evening. Greenwashing will be far more difficult, which is the point of the new measurement system. Nissan Leaf is the first to exhibit these values. 34 kWh/100miles is the efficiency listed on the new window-sticker. For perspective, 33.7 kWh is equivalent to the energy from 1 gallon of gas (without any ethanol). Displayed in as a MPGe value, it's 99 combined (city/highway). Just missing 100 makes will make interesting historic trivia, especially since the city value was 106. For highway, it was 92. Who knows what consumers will make of that MPG equivalent. But what will be easy to understand is the 73 miles for EV range. EPA takes the use of A/C and Heater as well as High-Speed travel seriously, quite unlike particular Volt enthusiasts. Realistic representation of vehicle operation is very important. Efficiency of motors & accessories vary. You cannot just base estimates on capacity alone. Heck, even lithium battery chemistries vary. So, obviously performance will too. Anywho, that nonsense of the past is over. A new game has just begin. It has different rules. Sales will play a major role.

11-22-2010 **Deduction Only.** Anyone else sick & tired of the "*it took Prius 10 years*" excuse? The Volt enthusiasts absolutely refuse to acknowledge the reality that the first 6 years here were filled with fierce industry resistance, lots of misconceptions, and low gas prices. Remember all the anti-hybrid campaigning, with Hummer as the king of the guzzlers? Remember the fear of job loss we were told hybrids would bring? Remember Fuel-Cell vehicles? It was utter madness. What really rubs me the wrong way now is how the tax-credit for Volt is totally taken for granted. The enthusiasts pretend Prius had the same benefit. That's not the case. In reality, the only purchase incentive available was a deduction. There's a huge difference between $7,500 and $400. But they pretend the short-lived tax-credit for Prius, that didn't start until 2006, was something we had way back in 2000. Truth is, Prius achieved mainstream production & sales volume prior to 2006. The incentive at that point was to reach a wider market, not establish it as with Volt.

11-23-2010 **Winter Now.** The commute to work was at only 16°F. The reality of Fall fading away has quickly set in. With the ground covered by a thick layer of snow, the hope for warmer soon isn't realistic. Seeing 25°F on the drive how was a good example of normal here. The forecast is for single-digit temperatures. I don't suspect that will last long. In fact, we could still see days above freezing in the upcoming weeks. Near the end of the year though, not a chance. That just brings ice and lots more snow, both terrible for commuting. Thankfully, the design of Prius handles the situation well. MPG in the low 40's is hardly anything to complain about; however, I certainly do miss driving with the roof open. That's not going to happen again for a long time. It's all about heated seats now.

11-24-2010 **Still Developing.** Hearing that GM development continues is intended to quiet those questioning the speed of their progression. I saw the need to point out the "*over promise, under deliver*" pattern. And I did... knowing it would torment those trying to downplay the growing feeling of disappointment... those who saw this coming yet hoped the outcome would somehow be different: While Two-Mode was being developed, we were told it would be widely adaptable, that it would be competitively available in midsize vehicles. That turned out to be OPUD. So, hope was shifted over to the Volt platform instead. Developing something specifically for midsize vehicles made sense. They'd take what they learned from Two-Mode and optimize accordingly. Concerns arose as the effort progressed though. And now as rollout begins, it too turned out to be OPUD. What's next? What design criteria should the next development effort strive for? What price, efficiency, and emission goals should be set?

11-24-2010 **Yup, Over.** At the end of the day, just as people were leaving work and about to start their long holiday weekend, boom! News that the EPA had just released the window-sticker for Volt spread across the internet like wild fire. It was amazing how people brought the hype to an abrupt conclusion, simply by seeing those values. It's safe to say many had certain expectations that were not met. The overwhelming feeling was disappointment... making the timing seem much more than just coincidence. Anywho, Volt turns out to be just a little less efficient at 36 kWh/100miles instead of the 34 for Leaf. The engine efficiency is mighty close to my prediction of 38 MPG. It's rated at 37 combined. (That's 35 MPG city and 40 MPG highway.) In other words, there's no surprise. We anticipated those numbers already. What's shocking is the MPGe value. Volt measures at an energy equivalent of 60. A compact FULL hybrid without a plug but using a lithium battery could potentially deliver the same efficiency. Interesting, eh? The real catcher though is the EV range. That's listed as only 35. It wrecks the importance of the 40 they had so heavily promoted. One other interesting value is 12.9 kWh is listed as the overall electricity consumed. Knowing that recharging the battery-pack to restore the 10.4 kWh usable capacity results in a 2.5 kWh charging loss will make people think twice about 240-volt connections... since they aren't as efficient as 120. Needless to say, things are going to be different after the holiday. The nonsense we've had to endure prior to the official numbers being available is over.

11-24-2010 **EV Button Threshold.** In the past, many had simply regarded the EV button as an infrequent feature. That was primarily due to not knowing when it would be available. Prius places high priority on emission reduction, running the engine more often than expected for the sake of keeping the cleansing system hot. Since without heat, the catalytic-converter is not effective. Knowing what the threshold was for the heater gave great insight. For the Iconic Prius, it was 145°F was the threshold. For the 2010 Prius, Toyota was able to drop it all the way down to 114°F. After having discovered the EV button provided more electric power than usual, I was quite curious about its temperature threshold. During the warm months, you've got lots of heat to spare after initial warm-up. During the Winter, it's an entirely different matter. And with the temperature only in the teens here now, opportunities to observe were abundant. Sure enough, I noticed a pattern. Watching the ScanGauge, I saw that when the coolant dropped to 155°F the system would automatically disengage EV mode. The engine stays off if power demand is still in the green zone on the Eco-Meter. But if it is in the white, the engine will start. Using this will be quite intriguing the next time I get stuck in traffic jam caused by fresh snow.

11-25-2010 **Ignoring PHV.** It was a given that enthusiasts would. The lack of constructive analysis no surprise. Comparing Volt to the plug-in Prius makes too much sense. They still just down-vote facts they don't like. It's why few attempt discussions with them anymore. But that was expected. Unfortunately, the model of Prius which also offers the ability the recharge using an external power source is also being ignored by the media too. Most reports highlighting the new information from the EPA simply referred to Prius as getting 50 MPG, as if there's no way it could ever get higher. My favorite though was from the Detroit Free Press. They made no mention of Prius whatsoever. Their article started with this: "*The Chevrolet Volt will get 60 m.p.g. when using both its batteries and gasoline engine, according to the U.S. Environmental Protection Agency, but 93 m.p.g. when driven in electric-only mode.*" Then it went on to point out the 37 MPG combined estimate and made comparisons to Leaf with emphasis on driving range. Makes you wonder what they'll be saying a few months from now.

11-25-2010 **Bashing?** To some on the big Prius forum, it looks as though some of us are bashing Volt. After all, the efforts by GM appear to look good if you aren't aware of the rest of the market or the need. To those that are, there is much concern. So, I responded with there analogy of the situation: Think of it as a grading system, something like this... A = no mpg penalty, cleaner emissions, and a profitable price within reach of middle-market. B = no mpg penalty, cleaner emissions, and a profitable price but a little expensive for middle-market. C = mpg & emission-rating like a traditional vehicle, and a profitable price within reach of middle-market. D = mpg & emission-rating like a traditional vehicle, and priced well above middle-market. F = same as D, but only available in low-volume and select areas. To quantify, compare to the PHV model Prius. The design targets are 50 MPG, an emission-rating of AT-PZEV, and a price close to $30,000. The first two have already been delivered. The third depends upon lithium battery production and package configuration. In other words, the grade will be at least B. What are the goals of Volt and how well do they actually match the needs of middle-market?

11-25-2010 **$83.99 Per Barrel.** Watching the price of oil continue to climb has been the ultimate validation of "*too little, too slowly*", especially with the price of fuel listed at $3.20 per gallon by the EPA. Diesel is already that price. Volt requires premium gas, which is $3 here. How many more years before something affordable delivering more than 35 MPG combined is available from GM? That's the concern. Nothing for middle-market in the meantime sends a lot of business to competitors. Having kept the initial design of Volt with a more efficient engine and reduced the EV range would have targeted the mainstream and left great opportunity for a higher-capacity option later. Instead, there's now a configuration which will attract far fewer than hoped. It's not like we all didn't see this coming either. But the complaints fell on deaf ears back when there was time to change. Now, they're stuck with a niche.

11-26-2010 **Being Called Out, taunt.** I'm back and active on both the big GM forum and the daily blog for Volt. The first thousand miles of real-world data are available... and they're gloating already. Specifically, it was 16 days, totaling 1,005.7 miles driven, using 5.87 gallons of gas (displayed, not measured at the pump). That comes to 171.33 MPG overall. They don't focus on CS-mode miles. Fortunately, the driver is honest & forthcoming about that particular information. 218.6 miles were driven using engine-generated power, resulting in a 37.24 MPG average. It's still Fall there, so temperatures are quite comfortable... quite different from here. Anywho, both venues taunted me. I particularly liked this: "*Can anyone prove me wrong? Go ahead, Prius aficionados - see if you can even come close to this with a Plug-in Prius prototype!*" Needless to say, I gladly responded to the opportunity.

11-26-2010 **Being Called Out, data.** It's like they don't study the competition at all. The previous generation Prius offers many augmentation options. Some owners have chosen to go with battery-pack upgrades as large as what Volt uses. With a more efficient engine, even with the slower EV threshold you'll still get an impressive MPG boost. And of course, I had real-world data at the ready... which really upset them. The numbers from this particular Prius owner make you take notice. They tell quite a story. Here's the detail from his 2 years of driving that aftermarket conversion: Total miles: 18,685.6; Total gas used: 131.39 gallons; Total gas cost: $334.24; Total kWh used: 2,737.8; Total kWh cost: $219.02; Total fuel cost: $553.26; Average MPG: 142.2; Average MPGe: 86.9; Average cost per mile: 3.0 cents per mile; Best Tank 3,536 Miles 314 MPG 115.43 MPGe; Approximately 550-600 charge/discharge cycles total.

11-26-2010 **Being Called Out, dead.** Don't you love how some attempt to draw a conclusion for you? In this case, seeing that data meant absolutely nothing. The person just raised doubt about how efficiency is measured, made reference to smaller range, and then concluded: "*In other words, the Prius plug-in looks pretty dead even before it goes on sale.*" I saw it as an opportunity to point out aspects of the new window-sticker with: The purpose of the new EPA information is to stop greenwashing, just like that. What does dead even mean? Look close at the new window-sticker. Notice the "gallons per 100 miles" values? Consumers will see the 3.6 for Cruze, 2.7 for Volt, 2.0 for Prius, and 1.3 for the PHV. That makes understanding how the technology affects gas consumption very easy. The same is true for the the consumption of electricity, through the new "kW-hrs per 100 miles" values. Consumers can already see the 34 for Leaf and 36 for Volt. Isn't the point to inform about the efficiency of each vehicle?

11-26-2010 **Being Called Out, questions.** It all comes back to sales in the end. Saying that makes them crazy. They attempt to divert attention and score bragging points by asking unrelated questions. I keep bringing the discussion back to the purpose of selling high-efficiency vehicles. From their perspective, it appears as though I avoiding their questions, changing the topic rather than answering. Eventually, they'll notice the pattern. The same thing happened with Two-Mode. They called me a broken record for always focusing on sales. Concern for sustaining the business through the new technology was taken for granted, just assumed an effortless success. Two-Mode was also declared superior with no regard to price. It's the same old engineering-only problem we've seen all along. They want nothing to do with the business aspect. In fact, the response to my "it all comes back to sales in the end" comment was this so eloquently word statement: "*Stop the stupid stuff will you.*"

11-27-2010 **Being Called Out, trouble.** Watching Volt follow the history of Two-Mode has been an intriguing experience. The same trophy-mentality in the beginning was a sign of trouble to come. Some had no interest in the business. Their focus was entirely on engineering. They defined success exclusively on aspects of performance. It became an obsession. That's pretty easy to see now too, as enthusiasts have already declared Prius obsolete even before the first Volt has been sold. That's why they call supporters of Prius like me out now. Being vague is practical still. They just claim you are wrong without any explanation. No detail is expected by readers yet, since those lurkers just assume there are facts to support it. They don't though... since technical achievement doesn't pay the bills. Consumers actually have to purchase it.

11-27-2010 **Being Called Out, attitude.** With rapidly declining interest in Volt due to price and delivery-wait, it was inevitable that I'd become a target for enthusiasts. After all, they need someone to blame for the state of uncertainty they face now in. It will take at least 6 months before enough real-world data emerges to establish a pattern. In the meantime, they poke at Prius owners, some in a very condescending way. Even other enthusiasts are getting upset by the attitude. Though, it still doesn't stop them from calling me out. What I get a kick out of is the sales mocking, where they assert many Prius purchases will be stolen by Volt. Since when have Prius owners been interested in that level of performance? In fact, I know quite a few who stepped down from that for the balance Prius offers. I know many others who have been won over by the test-drive experience, not realizing how enjoyable the electric propulsion could be from an affordable vehicle like that. Anywho, the sales references are always with reference to this market only. They don't want to acknowledge the reality of the situation in Japan, where there won't be a Volt and Prius has been the top-seller for 1.5 years now. Oh well. Emotion about vehicles isn't what middle-market buyers aren't known for anyway.

11-27-2010 **Being Called Out, success.** Regardless of what any enthusiast or media source says, it's ultimately up to the consumer. Their decision of what to purchase is what defines success. Automakers are business which seek profit. Interest & Recognition don't pay the bills; sales do. In the past, consumers have been unwilling to pay much of a premium for helping to reduce emissions & consumption. How quickly will that actually come? History, the idea of "leap-frogging" or a "game-changer" is nonsense, since progress has always been too slow for that. It takes an entire lifetime of a vehicle (8 years minimum) to even stir more than just curiosity. After all, if it's not time to vehicle replacement yet, it will still remain in service. Selling it used means one less new purchase. It isn't until the vehicle is sent to the recycler that progress occurs... earning merit through change... which is what success is measured by, not by bragging about a performance statistic.

11-28-2010 **Being Called Out, models.** When you push for more than a single model of Volt, back while it was still being developed, you got called a troll. The enthusiasts saw that effort to diversify as an attempt to undermine. They didn't trust those already having extensive experience with the hybrid market. Some even got hostile when you pointed out that one size does not fit all. Up until this weekend, hope had been placed on the second-generation design fulfilling the obvious market gaps the first does not address. All of a sudden, they've decided another model is a good idea after all. Should I call them out as hypocrites? They're guilty of now endorsing the very idea we suggested over and over again in the past, but was accused of trying to harm Volt. Do you think it has anything to with the EPA estimates? Of course it does! Now a model with a more efficient engine and smaller battery-pack makes perfect sense. Too bad they didn't listen to those of us trying to convey that need in the past... those of us deeply concerned about "*too little, too slowly*".

11-28-2010 **Being Called Out, 60 MPG.** That's the biggest point of contention. When it comes to how much impact each Volt makes toward CAFE requirements, the MPG estimate was anyone's guess. How do you account for a vehicle with uncertain plug-in intervals? For that matter, what about the reality that EV range varies based upon the speed & temperature? Turns out, the equivalent measure officially given is 60. In other words, if Toyota were to design a sub-compact FULL hybrid that achieved 60 MPG even without a plug, it would be counted the same way as Volt. It's the maximum for the new "*Dual Fuel Vehicle: Electric-Gasoline*" category. And since the PHV model Prius will be in that same category, it's a fair expectation it too will be given a 60. After all, a depleted efficiency of 50 is quite a bit close to 60 than just 35. Makes you wonder how many will have to be sold to achieve required fleet efficiency, eh?

11-28-2010 **30,585 Maintenance.** Not much to actually report. Though, it was a bit late for the 30,000-mile service schedule. Of course, the oil still wasn't due for a change yet. The engine air-filter was and got replaced even though it looked surprisingly good. The cabin air-filter was actually long overdue, since I have the solar system in my Prius. That was about in the condition I'd expect it to be at the normal interval. It got replaced too. There wasn't really much else needed at that point. The next oil change, I'll inspect the underneath of the car thoroughly. The tires will require replacement in the Spring, so the brakes will get inspected at the same time. Since this newest Prius doesn't have any belts, that's a nice perk. For this particular maintenance effort, it only took about 10 minutes and didn't cost too much. It's nice not having to pay for labor. Changing both air-filters yourself without tools was no big deal. $26.21 was the price for the engine (part: 17801-37020). $24.28 was the price for the cabin (part: 87139-YZZ08). That's $54.02 total after tax.

11-28-2010 **Liquid Cooled.** That interesting bit of information which emerged today. Even though the upcoming hybrid from Hyundai will only be the ASSIST type, the automaker is still making big claims about its abilities. Having a clutch to disconnect the 15 kW electric-motor from the gas-engine for independent operation will give it an advantage over the design from Honda, but there was still the heat concern. You can only run an air-cooled motor for so long before it becomes too hot. Being liquid cooled allows for sustained operation. Of course, that is still a rather small amount of power available, roughly 20 horsepower. So the extent of independent operation benefit remains an unknown, but it will be able to provide more assist. That's something a hybrid with a plug will be able to take advantage of... though the simplicity of a FULL hybrid and the much larger electric-motor (Prius is 60 kW, 80 hp) will still be difficult to compete with.

11-29-2010 **Production Begins, Prius.** Thailand was focus of Prius attention today. It's where production outside of Japan began, a first for the third-generation model. It was supposed to be here. Too bad that effort is still delayed . But then again, reaching into the market in Thailand for Toyota is much more difficult than it is in the United States. The expectation is to produce up to 12,000 annually there. Let's hope that effort goes well. Predicting demand is hard enough here. Designing a product diverse enough to appeal to a variety of different markets is a challenge. Sales speak volumes. Time will time.

11-30-2010 **Production Begins, Volt.** It became official today. No more demo units. Actual production models are what will be coming out of the facility now. Interestingly, this is one of the first comments about this milestone I stumbled across: "*I don't see the Volt and Prius competing with each other*." That's what I said all along. There isn't a no-plug model and price difference aims it at totally dissimilar consumers. Of course, it doesn't matter. Here's what I stated as why: Volt won't be competition until price is competitive and quantity is increased. And even then, the fact that it depends upon a plug keeps it in a different category. Consumers will be hesitant to vote with their wallet until enough real-world data emerges to make the choice worthwhile. Since their requirements for a high-efficiency vehicle are far from certain, engineering achievement doesn't necessarily equate to high-volume sales. This market here doesn't represent the rest of the world either. As much as Detroit yearns to declare victory, the production that starts today is really just a milestone along a long road to success.

11-30-2010 **Declaring Victory.** This was easy to predict. You could see it coming... all that hype with so little substance. Now, there actually is a vehicle consumers now have access to. It's not the Volt originally promised. Nonetheless, something is actually getting delivered. But how will these initial impressions influence rollout? Some are started to become worried, clearly expressed by this from a devote GM supporter: "*Why can't people wait until there are actual stats??!?!?!*" Also easy to predict is my urge to respond to that. And I did: Because some want to declare victory already. In reality, there are aspects of GM's own past fighting against itself... like the complexity argument. Ironically, the "range anxiety" problem applies too... not running out of electricity, it's running out of miles on a lease. Financing charges are going to be an issue too. It's too bad the rollout is so slow. Waiting is better for everyone. But that's going to be tough. You know how people draw conclusions right away. We've seen it before, many times.

11-30-2010 **Logging Suggestions.** Seeing the real-world log featuring daily-driving data from a Volt is holding the interest of many now. I like seeing that, but also see shortcomings which could be easily be overlooked by the casual reader. The amount of kWh consumed is missing, so are the losses from charging. Electricity isn't free. When the tank is refilled and the price paid is absent too. Hopefully, some of it will be added later. But then again, this experience is limited to 3 months. Here's what I posted about my observations: Unfortunately, suggestions simply end up getting negative votes. It's really hard to be constructive when getting arbitrarily dismissed like that. But in an attempt to make the real-world data more informative, here it goes anyway... Looking at the daily-driving log, notice how there is no on-going average. Without one, there's no way of seeing how individual days influence the overall efficiency. All that's provided is a final total. And that's based upon computer estimates, not actual measurement at the pump. Experience reveals the process of approximating the quantity of fuel injected results in several MPG for the margin-of-error. Also, notice how there's no mention of CS-mode efficiency, nor is there the number of times plugged in each day.

11-30-2010 **Water Pump.** The definition of "recall" has changed. Until recently, that was thought of as the result of a horrible defect, an urgent required safety fix. Now, it's often voluntary and doesn't mean the problem is widespread. In this case, I see it as a proactive move to ensure reliability. Antagonists will obviously spin it to appear different. 650,000 Prius worldwide are affected. Here in the United States, that's 378,000 for model-years 2004 through 2007. The proper term for this is a LSC, a Limited Service Campaign. The description of the situation is as follows: "*A fault in the water pump can cause air bubbles to build up and disrupt the flow of coolant, which can lead to overheating.*" If this happens, the check-engine light will illuminate and the vehicle will enter a fail-safe mode to protect the hybrid system. During the 118,185 miles I drove my 2004, that never occurred. I haven't ever heard of it happening to any of my friends either. For that matter, there was no mention of it in the big Prius forum either. So, I see it as a proactive move on Toyota's part. We'll see how the media & competition reacts. They no longer like crying wolf anymore. Consumer attitude has changed since the craziness 10 months ago.

11-30-2010 **240,000 Now.** Out of the blue, this count is what GM is now hoping to deliver for Volt production. It's yet another chapter in the ever-changing story for the automaker. They have a long history of expectation changes. The number is based upon "potential" buyers... which really makes a person wonder when the interest of an individual was expressed. Remember how much less people thought Volt would cost, just a few months ago? It wasn't too long ago that people expected much higher MPG too. The fear of competition may have sparked this particular announcement. There's always a possibility that the "too little, too slowly" concern is being taken more seriously than we hear about publicly too. After all, the extra capital suddenly available from the IPO likely stirred plans anyway... especially with the need to make Volt profitable without depending upon tax-credit to help sell it.

11-30-2010 **Coolant Observation.** Late in the evening, I was alone on a country highway. The temperature outside was 18°F. The temperature of the coolant was 190°F. With the system toasty warm, despite being cold outside, it wasn't a surprise seeing an average of 50.9 MPG displayed. Peaking the summit of a very long hill, gradual enough that biking along it during the summer is a pleasure in either direction, I allowed the Prius to slow from 55 to 45 MPH. The engine shut off. I thought what the heck, why not enjoy that 0 RPM the entire way down? I still had a mile and a half to go when it hit me. That was an ideal opportunity! How much warmth could be retained while driving that remaining distance using only the electric motor and still have the heater running at the highest temperature with the fan on medium? The coolant was 186°F at that point. I watched the degrees drop as the distance passed. At the bottom, my aftermarket gauge stated 166°F. That's pretty darn good. I still had enough warmth left to use EV-mode. It was a great example of how the insulation of the system along with the added grille-blocking really help improve efficiency in the Winter.

12-01-2010 **Judging Volt.** This one stirred some emotion: "*I just would like to see the Volt judged on it's own merits.*" It was a bitter reminder of GM's ever-changing stance throughout the years, the reason why enthusiasts absolutely refused to set any goals. If you leave intentions vague, there's no such thing as a shortcoming. Expectations can simply be spun after the fact, which is exactly what we're seeing now. It's all so vague, the measure of merit could be anything... with respect to design. I still hold true to sales. Genuine progress is easy to see if the vehicle is frequently spotted on the road in regular traffic... like Prius is now. Anywho, this is how I responded: As constructive of an approach that may sound, it translates to basing measure upon what GM wants to sell us rather than what consumers actually needs. GM clearly stated goals of 50 MPG and "nicely under $30,000" originally, then ended up giving into the temptation to deliver a niche sports car rather than a family vehicle for middle-market. Haven't you notice how all the promotion places heavy emphasis on performance (power & handling) while downplaying engine-efficiency and price?

12-01-2010 **10,224 Sold.** Stable is good. More sales would be better. During this time of transition, it's understandable though. Hearing so much about upcoming high-efficiency vehicles, holding off on a Prius purchase isn't rocket science. With respect to other vehicles in the market, Prius just barely didn't make the top-20 seller list this month. So, it's still drawing more interest than many others. As the price of gas goes up and the reputation craziness fades away, the situation will obviously improve. Until then, sales here continue to be double the minimum for mainstream. Claims of Prius being just a fad or a niche are long gone, proven well beyond a doubt long ago. Of course, in Japan the popularity is quite different. Expectations are that Prius held the #1 position again. We'll see.

12-01-2010 **Now We Know.** All those test-drives which didn't allow for anything faster than city speeds... was a major point of suspicion. Things just didn't add up. If you had something that really impressed, why not show it off? Isn't that the point of a test-drive? Needless to say, now we know why. A friend of mine put it this way: "*Remove the 35 EV miles from the Volt. What else about this car is still appealing?*" How about that for a question to ponder? It summarize the shortcomings well. With the engine running, there are a number of other vehicles available which are just as appealing. You can see why the mere thought of offering a smaller capacity battery-pack resulted in harsh & angry responses. Volt transforms into an ordinary vehicle as soon as the EV is depleted. That's not the case with the PHV model Prius. It continues to be a hybrid, delivering 50 MPG efficiency and PZEV emissions, when there's no more plug-provided electricity available. Prius gets a BOOST from plugging in. Volt requires the plug; without, it's similar to many other traditional cars on the road.

12-02-2010 **Please Wait.** Finding out that dealer orders (both sold & unsold) already account for the entire 2011 inventory of Volt, combined with the reality of gas prices now exceeding $3 per gallon (due to oil having climbed to $89 per barrel), is putting a lot of pressure on the enthusiasts. In fact, they're not happy at all about people like me being validated by the "*too little, too slowly*" concern. We knew the current design of Volt was far too expensive and waiting for the second-generation would take far too long. As a result of this pressure, quite a few have joined in the greenwashing campaign to make the PHV model Prius appear to be vaporware. Since the Volt they were promised was never delivered, they somehow want casual observers of the market to believe the promise for Prius won't either. Of course, for the PHV model, that's already in the hands of consumers and the next new hybrid from Toyota will use a lithium based battery-pack instead of the current nickel. So even without the plug, the entire production infrastructure is in place to deliver it. In other words, by the time GM ramps up production, they'll be in the same position Toyota already has planned. That's somewhere around 4,000 per month. Of course, Toyota is also working toward producing around 80,000 no-plug FULL hybrids per month at the same time. What will the rest of GM's inventory be? More waiting, eh?

12-03-2010 **Lots Of Snow.** It's coming down pretty hard this evening. The expectation is to get a least 8 inches... and it certainly looks like we will. I parked between the hardware and big-box stores. In both for a total of about 40 minutes, I was greeted with a fresh blanket of snow 2 inches deep on the Prius. It's a darn good thing driving through snow like this with a Prius is well proven at this point. Seeing sales slow down below the current rate of 140,000 annually here wouldn't be good in this increasingly confusing market. Fortunately, consumers do ask normal questions, like about Winter driving, often now. They take the efficiency & reliability for granted now, despite greenwashing attempts of the past. I think that's why Prius continues to sell well here, in the heartland. Being far from either coast means focus on the hostile climate. Seeing Prius on the road in battle with snow covered roads like everyone else is a strong endorsement. And today, whether I liked it or not, I contributed to that.

12-04-2010 **Settling Down.** The absence of anything in debate anymore marks a sign of change. Hype about Volt has been replaced by television commercials which really don't tell you anything; they just portray a future where plugging in becomes the norm. That's it. Like when diesel got stuck in that very long wait for the reduction of sulfur, Volt is now stuck waiting for improvements from a next generation design. With orders and demos accounting for production until 2012, there isn't really much for the consumer to do at this point. That leaves enthusiasts at a loss, especially those who don't intent to purchase one themselves. Selling the idea is tough. Pushing the "range anxiety" angle to make Leaf appear less appealing ends up favoring Prius. And talking down Prius at this point falls on deaf ears due to the huge price disadvantage for Volt. Then there's the real-world data. Enthusiasts don't like the MPG estimate, so they disregard it. They don't like the idea of counting kWh consumed either. That's why we're seeing things settling down now. The arguments have come to an end. Doubt is gone. We know all the facts now.

12-05-2010 **Shiny Clean.** Winter turns all cars a salty color around here. That whitish layer of crust is something you simply cannot avoid. It's often too cold to wash off and stays that way so briefly, most people don't bother. You just get use to the car always being dirty during the cold season. It's a rare sight to see shiny clean, especially after new snow falls. But I got lucky last February. When I brought the Prius in for the brake recall, they washed it. No charge for the unexpected desalting was a nice surprise. The dealer just happened to be a only a mile from two scenic locations where I could take great snow photos with lots of trees in the background... while the Prius was still clean! So, I took full advantage of that opportunity... photo album 159 photo album 160

12-06-2010 **Honda CR-Z.** It appears as though sales of the hybrid are so poor, Honda is killing it already. The vehicle itself won't go away though. They'll just be replacing the hybrid system with a traditional engine & transmission. Converting it will make it the successor to CR-X, which is what consumers really wanted anyway. With such disappointing MPG, this decision makes sense. It's too bad the ASSIST design had so much invested in it, knowing all along there would always be a struggle to compete with FULL hybrids. Some of us argued that very point an entire decade ago. Only now is it becoming painfully obvious. Between CR-Z and the new Insight, the reality that consumers don't understand enough detail about how vehicles operate should be clear. The fact that automakers are reluctant to abandon such a huge development investment should be too. But at some point, it's better to cut losses rather than risk losing even more. So, Honda should definitely be given credit for this choice.

12-08-2010 **Fading Away.** Watching the hype of enthusiasts fade away makes the previous scramble to document, as events were unfolding, totally worth it. Many of the hoped for design & operational aspects of Volt came up short. The over-promise problem played out right before their eyes. So rather than learning from the Two-Mode outcome, they experienced the disappointment firsthand. I sure am glad the "vastly superior" nonsense is over. It's too bad they lost sight of what was actually needed. All that potential wasted. Oh well. It was inevitable that real-world data served as a wake-up call. Now, it will be the sales which confirm a niche vehicle was delivered, not something for the masses. Think about who express a passion for what they drive. How often is it someone from middle-market driving something produced in high-volume?

12-09-2010 **Why?** Now that the Owner's Guide for Volt is available online, some enthusiasts are hunting through it and asking questions about what they find. This quote especially caught my attention: "*Vehicle storage at extreme temperatures can cause damage to the high voltage battery.*" Needless to say, it was quickly dismissed entirely and my intent questioned. I was asked why I would ever want to know about that. It's the same old shot-the-messenger problem, but this time it was quite impolite... bordering on being hostile. I spoke up for myself saying: Some of us aren't afraid to ask the difficult questions and are not deterred by childish insults. We're well aware that consumers will want to know those answers. We also know that lithium chemistries & implementations differ. Seeing the minimum temperature mentioned in the Owner's Manual (14°F) is well above the daily high we routinely experience here in Minnesota makes the question quite valid. I won't be able to plug-in the entire time I'm at work. 9 hours of exposure to much colder conditions means what? People aren't going to make such an expensive purchase without knowing. Getting an evasive response to asking will really make them wonder about that recommendation to plug-in whenever the temperature is below freezing. Why?

12-08-2010 **Subjective Measure.** That's all most supporting Volt want to focus on anymore. I find it vindicating. Seeing the kWh/100mile consumption-rate of the PHV model Prius at 23.2 compared to Volt's 36.0 is something measured objectively, so is the MPG of 47.2 for the PHV and 31.1 for Volt. Both are something easy to declare as "vastly superior", but that's not necessary... since those numbers speak for themselves, as does the emission-rating. Whether or not the feel behind the wheel is "better" is an opinion that differs from person to person in degree and importance. Ask yourself what the priorities are of those purchasing the high-volume profit-sustaining vehicles. Isn't the purpose to replace traditional vehicles in significant quantity prior to the tax-credit expiring and the CAFE requirements increasing?

12-10-2010 **Camry #1, now.** It's been the top-seller in this country for quite a number of years now. That position seems threatened as time progresses though. Of course, there are some who spin the situation... both intentionally and unknowingly. 438,270 Prius have been sold worldwide this year through October. It seems quite likely that the final two months will push that total above the half-million mark. That's a long sought after milestone. It represents the reality that mainstream acceptance is so strong that phasing out of traditional vehicles is possible. That's a long process, taking many years. But starting that process is realistic, based on sales. Camry is the target. Prius has established enough of a reputation for hybrids at this point to allow a successor to be introduced and be sold side-by-side with an HSD variant of the traditional. Why not? Rather than expend a lot of resources concealing what's under the hood, take advantage of the emerging market where gas is $3 per gallon and plug-ins are also available. Offer a new vehicle large & powerful enough to appeal to consumers who desire more than Prius provides without the need to retrofit anything.

12-10-2010 **Camry #1, later.** This topic drew interest on the big GM forum. None had considered the big picture though. And of course, me pointing it out typically upsets the delicate balance there... especially since offering choice messes up their one-size-fits-all approach. But with the daily blog for Volt, they prefer cheerleading rather than in-depth discussion. Oh well. I posted this anyway: Since Toyota is planning to debut a new hybrid next month thought to compete directly with its own Camry & Camry-Hybrid, the topic is a bit moot anyway. Prius "V" is expected to offer a hybrid system with a 2.4 liter engine along with seating for 7... think a larger version of Prius in wagon form. Optimized for better efficiency with the latest HSD design (including a lithium battery-pack) using a dedicated body, it tends to make sense that sales will go to it instead. The ultimate goal is to phase out traditional vehicles in favor of those that are much cleaner and more efficient. So, this move really isn't a surprise. Overall sales are what to watch. The new hybrid should help Toyota retain or gain marketshare.

12-10-2010 **Cruze Sales.** These quotes really compelled me to respond: "*Why the panic sounding headline?*" and "*What's the problem here?*" Needless to say, sales are below expectations and the media is taking a different stance on the situation than GM supporters. I sounded off with: Some of it has to do with the fear of getting caught up in a double-standard, the rest is just plain old profit earning. Critics have been reaming on Prius for supposedly "poor" sales lately. 10,224 were purchased here in November. That's clearly higher that the 8,066 for Cruze, which was intended to take the industry by storm. Instead, the most directly competing vehicles are still holding their own. 16,202 Corolla were purchased then. That's twice as many. GM's next step is quite uncertain. How is anyone's guess. But with production well under the capacity planned, something needs to be done in the short-term (next year) to increase sales.

12-11-2010 **Geek-Mobile.** The anti-Prius sentiment is spreading... all the way up to the CEO of GM. Of course, you wouldn't expect him to give praise for anything but a GM vehicle anyway. But making this comment upset some Volt supporters: "*I wouldn't be caught dead in a Prius.*" The reason is simple, they don't want direct comparisons. Rather than just ignoring Prius and establishing a new category of efficiency technology, more and more Volt is being considered an advanced hybrid... exactly want they've been trying to avoid. What I particularly liked was his other comment: "*We commonly refer to the geek-mobile as the Prius*". Isn't that the honor enthusiasts had always hoped for Volt? I certainly remember all the applause for new interface & operational aspects of Volt, the very thing that a geek would truly appreciate. In the light of the hypocrisy they now face, I posted this in response: What will consumers think after seeing the displays in Volt and hearing about the smart-phone abilities?

12-11-2010 **Northern Minnesota.** It looks great there in the Fall, even if your timing is off. That was the case last year. We arrived up there too early for the colors. Only a hint of them were revealed so far. That meant fantastic weather for photo taking though, in between the gloomy cold showers which roll during the season. And sure enough, I had an opportunity to escape into the woods with a camera and the Prius. Exploring those back roads is fun. You never know what you'll encounter. I especially like finding shots where I can climb back to include a tree in the foreground. Seeing all that green now, this time of the year when everything has turned white, is quite refreshing too. It gives you something to look forward to as the days grow shorter and the temperatures continue to drop. Here's what I captured, for reminiscing about later... photo album 160 photo album 161

12-12-2010 **Even More Snow.** I've haven't heard the official total yet, but it's easy to see we got well over a foot of the white stuff yesterday. Needless to say, I didn't touch the Prius. Being a Saturday, it was easy enough to just avoid going anywhere... though, I am yearning for photo opportunities now. A fresh layer of snow blanketing everything usually looks really good at night illuminated by Christmas lights. But with many people switching to LED instead (which I think look much better, since the colors can be much deeper), there's barely any heat emitted to melt snow covering them. So, running around with the camera this time could be a whole new experience for me. I'm not sure what to expect... other than the extreme cold which follows a storm front like this. Right now, the temperature is below zero and the forecasted high is only 3°F. It most definitely is Winter now!

12-12-2010 **Last Of The Greenwashers?** I'm talking about the Volt enthusiasts. Those resisting change entirely will still try to undermine, of course. This particular individual continues to attempt to make Volt look better by misleading about Prius. His latest attempt is to repeatedly post information about the previous generation as if it also applied to the 2010. When it's pointed out that the information is outdated, he simply ignores it... pretending as though you never provided a correction. In this particular case, he's trying to portray the catalytic-converter warm-up cycle as a weakness. That sacrifice of gas allows Prius to earn a PZEV emission-rating. Since Volt doesn't to that, it's a big reason why it only get an emission-rating of ULEV. Saving gas has a penalty of being dirtier. But his focus solely on MPG allows him to overlook that reality. Anywho, it boils down to the improvement the 2010 offers; Toyota went to a great deal of effort optimizing the emission-system for rapid warm-up. He doesn't want you to know that. So, he continues to post outdated information hoping you won't discover it doesn't actually apply to the newest model. He absolutely insisted: "*it gets single-digit MPG during the first mile*". That just plain is not true for the 2010. I even provided real-world data from my drive to the grocery store this morning, after not having driven for a day and half due to the snow storm: The temperature outside was 14°F. It was a 10-minute, 3-mile drive. The first mile (4 minutes of driving) resulted in the following displayed for MPG: 10, 20, 25, 50. That just plain is not single-digit, no matter how you spin it. The drive resulted in a displayed average of 31.7 MPG.

12-15-2010 **Beyond The Hype, remember.** Much of the Volt propaganda is fading as rollout progresses, though a few recent reviews still tout overly optimistic expectations. The first deliveries to regular consumers are expected today. What I focus on is the actual experiences now being documented, not test-drive exploits. Remember all the bragging about Volt using a better type of electric motor than Prius? Easily forgotten detail of the past like that is now easy to dismiss upon seeing real-world data. The hype didn't live up to expectations. In fact, what was delivered is actually less efficient. They don't want you to remember any of that hype. So, getting beyond it is in the interest of enthusiasts anyway. It's like all the promotion of getting better MPG than Prius in CS-mode. That never made any sense, since an extra conversion step will obviously come with an efficiency penalty. The EPA estimate solidly confirmed it too. But the claim they want us to forgot more than anything is price. They don't want anyone to remember the "*nicely under $30,000*" importance. Reminders of abandoned priorities brings up uncertainty of the second generation, a good example of how hype can backfire later on.

12-15-2010 **Beyond The Hype, data.** After a little over a month, there's been 2,100 miles documented by an early Volt rollout recipient. To summarize the engine use, 498 miles / 14.9 gallons (displayed) = 33.4 MPG. That real-world data we now have is somewhat informative. We still don't have any idea what the actual MPG difference between computer-displayed and measured-at-the-pump is, nor do we know how often/long it gets plugged in at work either. The data is also a bit misleading since the engine starts up to warm the battery-pack in sub-freezing temperatures. But it does still confirm that Volt is far from the "*game changer*" it was hyped to be. With efficiency that low, it struggles to even compete with the no-plug Prius. Just think what the perspective will be about Volt when the PHV model Prius is finally delivered. GM has quite a challenge to face still, reconfiguring Volt to cost far less while also trying to improve both efficiency & emissions.

12-15-2010 **Beyond The Hype, rollout.** It's going to take right up until the time the PHV model Prius becomes available before GM will offer Volt in all 50 states. That's an unusually long rollout plan. In the meantime, Toyota continues to push HSD penetration. Seeing it in new dedicated vehicles is very exciting. Some simply won't stir much interest. But the potential is there for a real winner. The new bigger Prius could take the market by storm. Using the latest & greatest technology, including a better battery-pack, makes you think. Whatever the case, the rollout of the current Prius continues. Imagine the platform that will provide for the aftermarket suppliers years from now. Its larger electric-motor, the greater speed & temperature tolerances, and consumer confidence of plugging in will usher in opportunity that has only been a shot-in-the-dark so far. Many approaches for dealing with ever-increasing gas prices, along with energy & environmental concerns, are being addressed. Understand the "too little, too slowly" concern? Much needs to be done in the near future.

12-15-2010 **Beyond The Hype, change.** Think about employment situation now. It's quite different than when those statistics about daily driving first promoting Volt were collected. Many jobs close to home have vanished. People are quite willing to drive further for a steady paycheck now. People have also seen gas prices shoot to $4 per gallon. Reality is that gas has steadily climbed to a permanent $3 average and talk of plugging in has become common enough to reduce concerns caused by misconceptions. Monster-Size vehicles no longer dominate the roads anymore either. All that is helping to push the hype aside, but it's not the biggest influence for those who express interest for having their next purchase not be a traditional vehicle. Those consumers want actual detail, not the generic propaganda often associated with hype. They don't want to know "*up to*" values. They want true representations of what they'll experience owning each specific type of high-efficiency technology. We've progressed from simple engine & transmission configurations which all deliver relatively similar performance to vehicles taking advantage of batteries & electric motors which profoundly affect performance. Change is in the form of much greater variety than the market has ever offered.

12-16-2010 **Ambiguous Hope.** How do you interpret this statement: "*I'm convinced that cars like the Volt are destined to take over the world.*"? Ever since the vaporware comments all those years ago, we've never really known what car like Volt would be. The abandonment of those original goals ushered in uncertainty. GM clearly built a high-efficiency vehicle they wanted to sell, not one that consumers actually needed. Now they have the challenge of convincing consumers that it's worth the premium. Price is currently well out of range of middle-market and the design is heavily dependent upon plugging in. There's nothing to compete directly with Prius or the new larger version being revealed next month. GM is betting the farm on the ability to plug. Meanwhile, Toyota is refining the PHV model of Prius to deliver an affordable plug-in option which will appeal to middle-market consumers. At the same time, they're planning a full-electric vehicle too. That in itself leaves GM poorly positioned for competition. To make matters worse, other automakers are pursuing plug-in choices for middle-market as well. So... how exactly will the "*take over the world*" happen?

12-17-2010 **NiMH.** That's the type of battery used in Prius now and has been all along. It's actually what the current PHV model uses for HV driving too (hence the reason EV speed lowers to 46 MPH after the sub-packs are depleted). The thought always has been that there will be a switch over Li-Ion in the near future, possibly being introduced with the upcoming larger Prius. But unless you plug in, there isn't much to be gained from the switch. Cost is still an inhibitor... so much so, Toyota has decided to continue using NiMH for all its no-plug hybrids. Production capacity is the business reason which comes to mind after taking cost into consideration. Why wouldn't you want to focus Li-Ion where its use would be most effective? Since the goal is maximum market penetration, to replace traditional vehicles with hybrids, this decision makes sense. Remember the target set for the early part of this decade? Toyota wants to production 1 million hybrids annually.

12-17-2010 **First Sonata Hybrids.** They are expected in January. The price is set now. It will be $25,795 plus $750 destination. In this market where Volt is still an unknown for most consumers, this rollout should be interesting. Seeing a MPG of 35 city and 40 highway can be attractive for that size & price for those wanting better efficiency without any noticeable deviation from the traditional model. The use of a lithium polymer battery is an industry first. How this particular configuration will sell is anyone's guess. How it will affect a later plug-in option is a big unknown too. Whatever the case, we are clearly beyond the question of whether or not hybrids will become a common choice. The message of one-size-fits-all should be crushed as well. Hopefully, consumers will finally start looking closer... at details like motor-power and battery-capacity... to figure out why hybrids differ so much... then perhaps the influence of A/C powered by electricity rather than the engine.

12-17-2010 **Honda Plug-In Hybrid.** Detail is beginning to emerge. We've been wondering how their ASSIST hybrid would be configured to deliver electric-only drive of at least 100 km/h (62.1 MPH). Will they abandon much of the current design and simply squeeze in another motor with a clutch? Sure enough, that appears to be the case. Li-Ion with a capacity of 6 kWh will power a 120 kW motor. That's double the motor size of Prius, yet the top speed will be the same. Interesting, eh? Of course, with an EV range of roughly 15 miles, you still have to wonder what the efficiency will be after the battery-pack is depleted. The fact that the PHV model Prius still delivers 50 MPG once the need to plug-in again arrives will be a big selling point. The other which will become a major production/profit advantage) is the fact that an extra motor or clutch isn't needed. Of course, now the question is will that second motor be used at times other than for EV, enough to qualify it as a FULL hybrid? Remember how Prius has the ability to create & consume electricity at the same time, bypassing the battery-pack entirely or topping it off while still providing assist?

12-18-2010 **Generalizations & History.** This is when it hits the fan. Being vague about the market and not studying what happened the past has consequences. And no matter how much you provide information to help them prepare for this stage of rollout, it mostly just gets ignored. Oh well. It's not like I didn't try: The importance of middle-market hit Two-Mode hard, contributing much to the investment in Volt. Drawing upon current Prius owners for initial sales of both Volt and Leaf is a hint of the challenge which still awaits. The technology uncertainties and high price place a burden of growth on owners, since that’s who consumers will query for purchase information. Automaker advertising simply doesn't cut it at this stage, since all it accomplishes is raising awareness… not provide detail. Real -World data will play a major role in the spread of interest. The lack of it is like handing over sales to the competition. In other words, silence from owners has consequences. This group must now switch from reacting to events to taking a proactive stance… something which hasn’t been a strong point in the past. Lastly, let’s not forget about the market in Japan, where Prius has been the #1 seller for the last year and a half. That's clearly going to influence decisions made by Toyota, Nissan, and Honda.

12-18-2010 **Will & Won't.** I really liked the summary about Volt that US News & World Report published today. They stated: "*What the Volt will do for GM: Restore some luster. Draw people to showrooms. Provide a technology edge.*" Notice how that supports what many of us have been saying all along. The focus on image and potential pushes aside the reality that the actual product isn't something that will sustain business. A compelling interest isn't what pays the bills. They also stated: "*What the Volt won't do for GM: Boost sales. Earn profits. Push it far ahead of competitors.*" We're getting back to discussions about the basics now that hype is subsiding. There's a big difference between need & want. Enthusiasts didn't want to address that. Some possibility don't understand or even realize there is a difference. We'll never know. What we do know is that automakers must sell vehicles to survive. As the price of gas and consumer demand for greater efficiency both continue to rise, what will GM produce to make profit from?

12-18-2010 **Profit Then & Now.** It makes me crazy how some bring up events of the past claiming the same thing will happen now, despite all the changes since then. That was today's comment on the big GM forum about the Prius many years ago and the overall effect it had for the automaker: "*It's worked very well for Toyota.*" They love to generalize like that. It's an unfortunate hazard of forum threads. They don't support the level of depth needed to properly represent, especially when it comes to years of history. Members wanting to undermine often take advantage of that, misleading by providing a vague summary. I at least tried to inject a dose of reality anyway: That's because much of the profit from those guzzlers was immediately invested into hybrid development. Little profit is available for that anymore. In fact, the entire industry has changed a lot since then. The market is quite different now. GM has other financial obligations too. Lastly, don't forget that mainstream acceptance was achieved prior to tax-credits being available. Maintaining sales volume above 60,000 happened with only a deduction and an appreciation for the PZEV emission-rating.

12-19-2010 **New Owners.** They come and go, often just making a brief appearance to say "hello" followed by fading online participation. The very first delivery in the United States raised an immense fuss about the dealer messing up her opportunity or some such nonsense, got it on time anyway, then vanished. Her promises to share experiences never materialized. Hopefully nothing that extreme will happen with Volt, but they are getting tacit readers to make an appearance after taking delivery. Just the opposite is the webmaster of that daily blog for Volt, who ceased sharing his early rollout real-world data and does not appear interested in sharing any from the Volt he just purchased. That raises warning flags. The loudest voices grew silent as soon at Two-Mode rollout began too. Nothing ever materialized afterward either. It became a deafening silence surprisingly quick. Needless to say, watching what unfolds over the next few weeks should be very interesting.

12-19-2010 **Intense Demand.** An editorial today made me shake my head in dismay. Volt was declared "*smoking red-hot winner*" today by sighting the "*250,000 potential buyers*" as proof. Back when the second-generation Prius rolled out, here in the United States dealers already had pre-sold 16,000 of them even before delivery began. The third saw even higher numbers. What's with the "*potential*" spin? Expressing interest certainly does not result in a sale. Remember all the fallout when price was announced? This comment totally disregarded that recent history entirely: "*It's obvious now that the high price-tag isn't a deterrent to sales, and that would-be buyers don't think $42,000 is out of range.*" The only thing obvious is that an editorial like that would come from a Detroit publication. Ugh. To have a profitable vehicle, 10 times as many need to be produced & sold each year. To have a true winner... something that really would be considered a game-changer... the volume needs to be at least 20 times more. It's simple logic. Not being among the top-sellers means change isn't occurring at that speed & scale. Gradual acceptance is not what enthusiasts want... hence the proclamations in the editorial.

12-19-2010 **Another Proclamation.** The drawing of conclusions so quickly boggles the mind. The loss of the understanding between the difference of want & need isn't though. So, this most recent comment by a Volt enthusiast was very much expected: "*GM really is listening to customers and building the cars we want to buy.*" I have no doubt the performance aspects of Volt will continue to rate quite favorably. But I can't imagine that being compelling enough to overcome the shortcomings of price or engine-efficiency. For the true green, the emission-rating won't be enough either. Mainstream consumers have been expressing these as a priority all throughout the availability of Prius and expect the option to plug-in the next step forward. Instead, we see compromises for the sake of EV driving... with Volt, but not with Prius. I guess that begs the question of who those GM customers actually were.

12-19-2010 **Short Trips.** This time of year, we certainly hear from a lot of new owners. They all wonder the same thing, why has the MPG suddenly dropped? It's pretty much the same response every time. We find out they only drive a few miles each way, which isn't enough to warm-up the engine. That part of being green (the need to have a hot catalytic-converter for exhaust cleansing) is often overlooked. Many focus on MPG, consequently never realizing carbon & smog emissions are not directly related. Needless to say, the same question getting asked over and over and over again becomes tiresome. So, the veterans take turns answering. Today, I chimed in with: For short trips (3 miles), that is normal. The emissions-system requires heat for cleansing. Running the engine is how it gets that heat. Driving further, you'll notice MPG goes up. My commute with the Iconic model (gen-2) throughout the winter here in Minnesota average low to mid 40's. Being 33 miles round-trip contributed to that. Think about the other hybrids that don't bother to deliver a PZEV emission-rating. They favor MPG rather than being cleaner, yet Prius trumps them on efficiency anyway.

12-20-2010 **Slow & Cold Commutes.** I documented 4 of them recently, taking a MPG display photo after completely the commute to work then later upon conclusion of the drive home. The first was following a nasty storm that dropped 17 inches of snow. The temperature plummeted. It was -6°F for the morning commute. With snow still messing up the roads, the only thing to look forward to is "black ice" on the cleared spots, where vehicle exhaust instantly freezes and builds up as people drive. Fun, eh? It warmed up to 1°F on the way home. The second commute was somewhat better, 0°F there and 10°F for the drive back. What we call "normal" for winter returned on the next; it warmed up to 18°F for both directions. A few days later, rising from normal, we got dumped up with about 8 more inches of snow as a result. Of course, 23°F is still quite cold for some. For us here in Minnesota, that means little chance of freezing rain. Snow is easier to deal with. The Prius certainly likes those conditions, see... photo album 162

12-21-2010 **No Pattern.** After 2 years of a particular die-hard Volt enthusiast pushing the idea of a "*typical driving pattern*" without any data whatsoever, I had it. To think such a weak attempt to promote would be allowed to continue. Many recite the same statistic over and over again too. Haven't they noticed how testing results vary? A single, small sample is bad enough, but nothing but a crude estimate goes too far. But rather than quibble over detail this time, I pointed out the fact that there isn't actually any consistency. Real life varies far too much. That's why Prius owners share lifetime averages. Anywho, I waited until the dust settled then posted: Reality is that there isn't a pattern. The demands of the real-world include that late-night run to the drive-thru, getting the new movie you want to rent or buy, a run to the store for some household item, visiting friends or family... church, entertainment, recreation, coffee, groceries, kids. Add to that the variable range caused by the influence of outside temperature, weather, and traffic, there's no way to accurately portray an expectation with only a few data points. That's why the EPA estimates include a YMMV disclaimer. Of course, now that Volt is available, there shouldn't be dependence on estimates anymore anyway. You should be switching over to providing real-world data instead.

12-21-2010 **Reverse Perspective.** The engine RPM during warm-up is something Prius makes an effort to keep low. That behavior has led some to believe there's a problem. They don't expect that or it revving up hastily when called upon. Curiosity got me to silently study posts for a few days before finally responding with: It's intriguing to read how newer owners have become so accustom to the smoooooth feel of a CVT that any type of "shifting" sensation is perceived as a problem. In the past, people use to complain about the opposite. Times have obviously changed. Prius using the electric-motor more to increase the longevity of the gas-engine during warm-up is nothing new. I've noted it with all 3 generations over the past decade. In fact, here in Minnesota that seasonal change is what I've become accustom to. In short, nothing's broken. That's how it was designed to operate. Also, have you noticed the transition when dropping to 2-bars while climbing a hill? The engine will kick into heavier use then too.

12-21-2010 **$90 Oil.** The price of a barrel continues to climb. $3 Gas has become an everyday part of life, no longer an exception. Online experience sharing of high-efficiency technologies is the expectation now... at least for Prius & Leaf. They both have big forums. Volt is still struggling to draw attention to its forum, relying heavily upon an often-off-topic daily blog instead. Enthusiasts still seem oblivious to importance of those organized real-world exchanges. Lurkers stumble upon threads and easily get drawn in, searching for more. Owners are happy to contribute, answering questions and providing more detail as it becomes available. With interest rising... as well as fuel prices... there should be a greater effort to keep communication following. It's the same mistake those in support of Two-Mode made. This is not a time to continue with mindless promoting. Constructive dialog is needed. Silence from owners is a killer. Watch history repeat...

12-22-2010 **Finally.** It is somewhat surreal finally having all the hype about Volt fade away. Even the stanch GM supporters are acknowledging it... though not going as far as admitting this is yet another example of "over promise, under deliver". Oh well. At least we attempt to focus on facts... though I expect that to be short lived. Remembering the past is not their strong point. Anywho, I posted this today... expecting the usual anti-GM accusation in return: GM has delivered a game-player rather than a game-changer. Seeing the real-world range reduced to low-30's in the winter, real-world MPG in the mid-30's for an average, an ULEV emission-rating, and a price well above middle-market has ended the gen-1 debates. The hype is finally being put to rest. Consumers will decide among the variety of upcoming choices with their wallet. Sales will be the measure of progress.

12-22-2010 **Diverting Attention.** Sure enough. Negative comments about Volt are deemed an attack on GM's credibility, resulting in an accusation of promoting Prius... even if all you ever mention is facts about Volt. Talking about a close match to what happened with Two-Mode! It's like reliving the past. Needless to say, the reaction of enthusiasts to the hype fallout is to divert attention. People like me make a good target for that. But since I'm aware of the situation, I simply ignore the attempts to make it personal. After several, I picked this particular comment to respond to: "*Would it hurt to simply congratulate GM on a job well done?*" The lesson learned from Two-Mode is that GM will attempt to produce what they want to sell you rather than what you actually need. There's still a huge void in the product-line, nothing for middle-market. The hype of a plug-in for "nicely under $30,000" with 50 MPG after depletion addressed the need. Congratulations await that, not what's currently being delivered. In other words, it would like giving a student an "A" for a paper well written on a topic that wasn't assigned.

12-23-2010 **Game Player.** More than anything, that label really irritates the Volt enthusiasts. They simply don't have a comeback. There's nothing constructive as a rebuttal. The responses just end up pointless. Needless to say, I'm enjoy smiting their smug with such tenacity & brevity. Getting from that "superiority" attitude down to something actually beneficial to middle-market consumers has been a challenge. They didn't want to be part of the next generation of vehicles. No partnership from them. It was only king of the hill... for nearly 4 years. Thank goodness the long-awaited rollout is bringing about a long-overdue attitude adjustment. Vehicles like Camry & Corolla have never been head-turners. Those are the ubiquitous cars that bring in profit, quietly & steadily. They co-exist among many other choices, yet sell well despite not drawing much attention. They focus on delivering a pleasant & reliable ownership experience at an affordable price. Prius adds efficiency & emissions to that purpose; later a plug will be available too. All those priorities have been well balanced. Volt emphasizes extremes at the sacrifice of engine-emissions, engine-efficiency, and an affordable price. There isn't a no-plug option either. In other words, it's a tough sell. Rather than changing the game as hoped, it must play with others.

12-23-2010 **Upcoming Spin.** Now that real-world numbers are becoming available, it's a good bet that spin is on the way. As we've seen with other efficiency technologies coming up short in the past, those wanting to support the one at a disadvantage will focus on semantics rather than address actual data. The measure of EV efficiency is a great example already. Volt uses a different type of electric-motor than Prius, so there's no reason to expect them to operate the same anyway. But with two independent reports already pointing out that Toyota's design is quite a bit more efficient (roughly 40 percent), it's a topic GM backers are now avoiding. Spin will come from the "purist" perspective too, where even just using the gas-engine for 10 seconds of acceleration is a horrible thing. It's back to Volt having an engine for emergency situations only, rather than using it several times a week as many actually will from exceeding the EV capacity (especially during the winter). In the end, it really doesn't matter what they spin anyway. Progress is determined the same way: SALES

12-24-2010 **Substitute.** That's the spin which surfaced today. It was a great example of greenwashing... where so-called facts were presented that were confusing to follow and really didn't have much to do with the issue at hand anyway. They love to debate architecture rather than address what consumers actually need. The supposed best design is superior, regardless of whether or not it can be sold in high-volume and at a profit. With this particular claim, Prius isn't a proper "substitute" since it doesn't abide by the absolute of never needing any gas... disregarding Volt's winter warm-up and periodic maintenance-cycle, of course. Efficiency in CS-mode is "irrelevant" as far as they're concerned too. I just posted this, amazed that being constructive is of no concern to them still: Good thing all it takes is just a simple test-drive puts that spin to rest. Hills and acceleration for all suburb driving is totally realistic without ever firing up the engine. The test-drive experience clearly demonstrates that. Cruising at 60 MPH with the engine off does too. The design has always been with the intent to ultimately support EV drive. The proof is the ability to operate the motor with the engine in motion. Battery limitations are the obvious hold up. It simply doesn't make any sense to use bigger than a 60kW motor without the power to fully utilize it. Semantics are of no interest to consumers. We've been through this already with Two-Mode.

12-26-2010 **Start-Stop.** Remember when Prius first rolled out here? Ford bragged that they had a system capable of starting the engine faster. That was of course greenwashing, since faster isn't necessarily a good thing for emissions. That idea never really gained much attention either. The technology itself has aspect of greenwashing as well, since consumers typically don't understand the criteria which allows stopping & starting. For example, if you have the A/C running, when the engine shuts off it does too. Traditional vehicles share a belt, so the best they can offer with the engine off is continue to run the blower but not the condenser. There's also a timer. You don't want the engine to stop & start too often. Honda owners found this frustrating, where start-stop would not re-engage during their commute unless they accelerated above 10 MPH. This was to prevent the on, off, on, off, on, off you'd otherwise encounter in slow traffic. How much of an overall efficiency benefit the feature varies too, which is a big deal if the added cost is too high. A special 12-volt battery and a bigger starter is required. An electric coolant pump is also needed. It should be interesting to see where this idea goes now.

12-28-2010 **Missing Reports.** It's seems quite odd that deliveries of Volt have begun, yet those owners aren't saying anything about their efficiency observations. You get other information about the experiences so far, but nothing about EV range or MPG. Even the daily log we once had no longer provides updates. Real-World data is absent. Why are reports missing what many want to know more about? It's like that "*Freedom Drive*" all over again, where we were given everything but the most requested information. Knowing that what actual owners get says much more than template type reviews. Prius owners do that all the time. In fact, most introductions include personal efficiency data information with detail. For Volt, nothing so far... not even a vague summary. It makes you wonder how long it will take to finally get something. Stay tuned.

12-29-2010 **Scratched.** In other words, oops! With the abundance of sand (from local glacier deposits) used on our roads here, it's no surprise that some gets splashed up onto the windshield. It ends up on the floormat too, where the ice-scraper is kept. I got stuck in a surprise ice storm the other day, where the snow suddenly changed to rain and I was inside the mall oblivious to it. That was a rude awakening... entertaining though, watching other shoppers trying to escape the parking lot while I scraped off the thick layer of ice. Unfortunately, I must have encountered a bit of tough sand combined with a little to much power scrapping. Needless to say, I put a very fine scratch in the glass about 4 inches long right at eye-level. Oh well. Thankfully, that's all. It could have been worse.

12-30-2010 **Stealth.** It's interesting reading the various definitions from the variety of owner perspectives. Here's the official one: *Electric-Only driving (up to 42 MPH for Classic & Iconic Prius, 46 MPH for 2010) without the engine in motion.* It's easier to understand why the term came about if you know when it happened: August 1, 2000. The automotive world was quite different way back then. Very few even knew what a hybrid was. That new category of vehicle needed new design identifiers to keep misconceptions from overwhelming the rollout effort and supporters embraced the fact that most people wouldn't realize "stealth" was actually a double entendre. They'd just assume it was meant to point out the smooth & silent mode. The second meaning took stealth to a higher level, where Prius would push it's way into the mainstream catching many totally off guard. And sure enough, the second generation model ended up causing the industry to panic. They had no idea a hybrid would stir so much interest or that the technology would prove both reliable & profitable. Pretty sweet, eh?

12-30-2010 **Typical Greenwashing.** When a vehicle transforms from long-anticipated to finally-arrived, the debates change too. But just like in the past, it's the same old stuff. That response was quite predictable. The typical greenwashing we've seen before is back again. What a nuisance! They... who are now antagonists rather than enthusiasts ...will hunt out an extreme example an portray it as if that was the norm. Fortunately, that's fairly easy to discredit though. What's more of a challenge is when they find numbers that represent some type of credible average, but don't reveal the data is outdated. Unfortunately, that happens quite a bit too. Blog readers aren't always aware of generational improvements. And if the antagonist ever gets caught misleading like that, they just claim innocence of not knowing that information was no longer relevant. Sadly, even after "correcting" them several times, they still continue. That's when you know they are intentionally greenwashing. Watch for it. We are now seeing that activity in discussions about Volt.

12-30-2010 **The Data.** We finally found out why there has been a deafening silence about Volt efficiency in real-world driving from new owners. Back when the evaluation vehicle reports were being posted, it was still Fall. The season was pleasant & comfortable. Heck, the east coast didn't even have any snow until just a few days ago... then it changed, dramatically. It's much colder now. Temperatures below freezing are significantly reducing EV range... since the heater is needed. Vindication! All those posts over the years warning them about the effect Winter will have. They just blew me off, labeled me a troll. Now they're faced with "*I told you so*" entitlement. But instead, I've been quite polite when several "25 mile" observations were professed. Interestingly, they responded with far more positive votes than I've ever received. What an odd twist of fate! Needless to say, the hope of 40 or even 35 all year long has vanished. Reality has come crashing down.

12-31-2010 **MPG Reports.** They're emerging now. Two owners who both purchased a Volt in Washington D.C. then drove back to homes in Florida shared their experiences. Both reports are as expected... verifying what we expected ever since that horrible publicity stunt GM pulled in July. Remember how they drove 1776 miles yet never revealed what the resulting MPG was? It was so obvious they'd delay telling us what to expect for CS-mode efficiency until after the EPA estimates were released. Sure enough and they're just as low as predicted. The conversion loss is too great. One owner reported 37 MPG and the other 35 MPG. For GM to tell us over and over how Two-Mode was more efficient due to its ability to avoid mechanical to electrical back to mechanical conversion, then have Volt enthusiasts argue against that in support of the original 50 MPG target, simply made no sense. To look back at all the arguing they did, only to find out they had embraced an unrealistic hope. More than ever, we all wonder what 2011 will bring.

12-31-2010 **Focus Change.** This particular attention shift is what I've been looking forward to for a very long time. Now that hype & speculation is over and the many shortcomings (over promise, under deliver) of Volt are confirmed, we can change focus back to Prius. Phew! Rollout is just a milestone along a lengthy journey. The realities of delivering a profitable plug-in vehicle at high-volume before the tax-credits expire should sink in. For Toyota with the PHV, that effort is well underway. They've got 600 of them collecting real-world driving data from ordinary consumers. Efficiency & Emissions are goals already achieved. Reduction of cost and best use of capacity available is the challenge now. Optimization without limiting opportunity is a balance between business & engineering. I especially like the system in Prius due to the flexibility of offering the choice of a plug. Let's change focus to that now.

1-01-2011 **Looking Back.** How many totally unrealistic Volt estimates did we have to tolerate last year? Over and over it was the same 40-miles by 365-days calculation. Every knew the 40 was only a crude estimate for city driving in warm temperatures. Any travel at high-speeds or in the winter would result in low EV capacity/range. The denial ran deep. The response was always negative... sometimes even hostile. Enthusiasts were angered by the voice of reality. It was very frustrating! Thankfully, that year has come to an end. We begin the new one with a new perspective. Efficiency is undeniably lower than hoped, price is considerably higher, and the promise of increasing production to meet demand uncertain. A barrel of oil has averaged over $90 for a week, pushing the average for a gallon of gas to over $3. In short, times have changed. Looking back tells quite a different story than what we see looking forward.

1-01-2011 **New Expectations.** What should this year bring? Expecting sales to replace hype is good for everyone. Which technologies will get those sales though? Slow rollout of all plug-in choices combined with the introduction of new hybrids during a time of $3 gas following a deep recession is much to consider. Making the new technology profitable should be an expectation. Without that, using it to replace traditional vehicle production is a long-term struggle rather than the industry change long overdue. Expecting consumer awareness is quite realistic. How they'll respond to learning about the various choices is far from certain though. In the past, there was heavy emphasis on price. It's importance was abundantly stressed... but that was when the determination of efficiency was rather basic... just an increase in MPG. The introduction of electricity from a plug complicates matter significantly. Conveying what to expect for efficiency from each new technology depends heavily upon the availability of real-world data. Will that happen or will a whole new greenwashing approach emerge? This year definitely ushers in new expectations, but what are they?

1-01-2011 **Speed of Change.** It's remarkable sometimes. People resist intensely. But when fighting it begins to look silly, they finally give in. Denial only works as long as misconceptions exist. Greenwashing only works when facts aren't readily available. We've heard about the EV for years, but the reality that they won't be realistic for the majority is still all too clear. Hybrids offering a plug are different. Now that price, engine efficiency, and driving range are all known for Volt, decisions about what the future will start to formulate. It represents an extreme, but still a technology with the potential to reach the mainstream and become common... eventually. The PHV model Prius is must easier to imagine as a choice... soon, since it basically just builds upon the electric abilities already present. Speed of change is impaired when education is required. That's not the case anymore. The benefit of adding a plug is something the typical consumer can figure out on their own. And seeing how easy that next step is, change can come about quickly.

1-01-2011 **Night Snow Flash.** These photos are among my favorite to take, since the outcome is so unpredictable. Snow is coming down heavily and you have almost nothing for light to see with. Protecting the lens from getting wet is quite a challenge. In the cold & wind, one hand has to hold an umbrella for shielding. The other holds the camera in a way that zooming and pressing the button can be done quickly. You have to decide upon the angle & framing of each photo ahead of exposing the lens to the elements directly. Hands cannot wear gloves. Lens-tissue must be readily available for the inevitable wiping off of water droplets. Falling from climbing through the snow from seeking great shots is highly probable. And sure enough, all happened this time. But that was totally worth it. Seeing the results of those flakes illuminated in the foreground from the flash and the Prius covered with a fresh blanket of snow in the background is quite rewarding. Just don't ever ask for all the exposures that didn't focus correctly. All that action in the dark often confused the camera... photo album 161 photo album 162

1-02-2011 **Colorful Memories.** Following a gloomy morning rain storm, the clouds parted and the sun shined. I found a great location for capturing some spectacular colors of Fall. Of course, that isn't much of a challenge being up in Northern Minnesota. It's quite scenic. I did have to wash the Prius though. Almost of week of being parked outside after the drive to there made it quite dirty. The timing was nearly perfect. There were areas where the leaves had reach peak colors. Catching the season change like that, combined with amazing formations filling the sky in the background, meant I was extremely lucky. Taking full advantage of that opportunity, I snapped as many photos as I could. After all, the circumstances can abruptly change. Waiting for the shadows from clouds to pass by causes enough delay. Good thing the Prius is able to do most of that running around and waiting using only electricity. Anywho, here's the colorful memories I was able to capture... photo album 164 photo album 165

1-04-2011 **Getting Warmer.** The day started with a commute at -2°F degrees and a report on the radio about another Toyota lawsuit. Both were predictable. January is always this cold and antagonists time their announcements to coincide with the upcoming reveals in Detroit. It didn't matter though. Even before hearing about what 2011 will be bringing, we found out what happened in 2010. Sales of Prius surged back to normal. 15,253 were purchased here in the United States, bringing the final total for the year to 140,928. The total in Japan is expected to be around 315,000. Meanwhile, the reality of $3 gas is sinking in... but with a warm feeling, quite unlike the panic caused by $4 gas. It's the acceptance of hybrid technology into everyday life. Blatant greenwashing of the past has educated consumers. They see Prius everywhere now, contradicting claims of the past. Soon, they'll see a bigger Prius too. Choices from other automakers reinforce the feeling of change for the better. The nightmare of the past, where the guzzler was king, is finally coming to an end. Yippee!

1-05-2011 **Cold Reviews.** I wonder how many of these we'll actually get. Hmm? The results of plug-in driving in temperatures below freezing vary dramatically. Sadly, detail about those particular drives are sparse and numbers are randomly provided. Sometimes the reference is to an overall experience. Others mention just a particular moment in time. I can only imagine the mixed messages that sends to consumers. Expectations will differ wildly, totally dependent on the particular information they happen to stumble upon. That's not a good way to promote an emerging new automotive choice. It's confusing enough just trying to figure out what "*cold temperatures*" actually means. For many, that would appear to be anything below freezing. For someone like me in Minnesota, it has to be lower than 15°F before even considering it to be cold. They routinely drop to the negatives too. Leaving your car parked outside in that all day while you work is the true test of a technology being robust enough. Unfortunately, that hasn't been mentioned in any of the reviews published so far.

1-06-2011 **All Along.** Oddly, my response to this particular comment didn't stir any of the usual hostility: "*Maybe the legitimate owners could write up a review to counter-balance that BS.*" It would appear as though the filler banter we had in the past, just to keep discussions active, is no longer acceptable. Funny how things change. Controversy was welcome. Not anymore. It was easy to dismiss when claims couldn't be proven. But now that Volt is actually in the hands of consumers, enthusiasts have to adjust their tactics. Distancing themselves from prior propaganda is a big deal. That means finally embracing certain facts; otherwise, it's pretty much impossible to move on. Here's what I posted: That's the hope. All along, it's been about focusing on real-world data and realistic expectations… not that dang hype… the 50 mpg… the $30,000 price… the 40-mile EV in any temperature. No more down-voting when actual facts are presented.

1-07-2011 **On The Fence, fallout.** It's been brewing for weeks. That awkward position of "*over promise, under deliver*" being confirmed meant it was up to the Volt enthusiasts what happened next. With the Detroit autoshow just days away, the pressure burst. The greenwashing spin appeared with a vengeance. You can only read excuses for so long before finally responding. Their decision for dealing with the sudden rise in attention to Prius, Leaf, and the Focus EV made it an effort to fight the fallout rather than just accepting this generation for what it was. You know there was much disappointment and people like me can't really say much of anything without it appearing to be negative. After all, what do you do when your predictions... which are documented in detail... actually happen? It's the consequence of hoping for "*vastly superior*" from a product that didn't turn out that way.

1-07-2011 **On The Fence, low AER.** That "*all electric range*" value really irritates the Volt enthusiasts. Despite all the evidence & arguments pointing out the big drop caused by lows temperature, they remained in denial until actually witnessing it firsthand. Needless to say, the resulting spin is that many interested in Volt will simply just wait for the next generation to purchase instead... as if there is no consequence of a multi-year delay and the next will magically solve a problem with has existed for decades. I pointed out the following: Actually, that appears to be contributing to a resurgence in Prius sales, bringing them back to a level not seen for quite a while. Maybe it's just an amazing coincidence, but it's hard deny the change in consumer behavior timed so perfectly with the rollout of Volt. It's also difficult to overlook how the effects of temperature weren't taken seriously until very recently. Prius is readily available, affordable for middle-market, and well proven. Losing Volts sales to Prius from those who had been sitting on the fence waiting for real-world data to become available shouldn't be a surprise. The recession and higher gas prices has caused many to take long-term decisions like vehicle purchases much more serious than in the past. It's too bad that OPUD set expectations so high. As a consequence, focus is on the next generation design rather than celebrating the achievements GM has genuinely earned. It all boils down to the choice of wanting to be a "game changer" rather than a "game player". So the question now is: What should expectations be for the current Volt?

1-07-2011 **On The Fence, blame gas.** The obvious knee jerk response to my post was to blame the price of gas, claiming such a big jump needed no more of an explanation that that. Remember all the resistance to the idea that GM needed a hybrid which delivered around 50 MPG, that if Volt delivered it in CS-mode the choice of not offering a no-plug model made no sense. We all knew there was a need. We all knew the price of gas would steadily climb. We all knew the rollout of Volt itself wouldn't be complete until early 2012. The reality that it alone wasn't enough resulted in hostile arguing. Why not offer a second model? Well, we know that now too. Efficiency isn't even close to what they had hoped. Here's what I posted in return: Just a few months ago, people still believed 40 miles of EV with 50 MPG was realistic. Now, consumers know neither is. The market has been in need of an affordable high-efficiency choice positioned between Malibu & Cruze. GM ended up delivering something quite different.

1-07-2011 **On The Fence, excuses.** There was a little bit of acknowledgement of gas price alone wasn't the only factor. Unfortunately, that excuse is still considered the most prominent. So much so, they didn't even want to address the others. I felt no remorse pointed them out: Looks more like the price of gas was the last straw. Don't you remember the huge outcry last spring, when that "direct drive" rumor surfaced? It turned out to be true. With so many promoting Volt for having the purity of the engine never providing thrust, that was a major turning point. The next was the price announcement in the Summer. All those years leading up to that, there was that "*nicely under $30,000*" expectation. That also resulted in a huge outcry. Then came EV range. It was followed by MPG. There was also the "*too little, too slowly*" bankruptcy recovery concern. Had GM been more forthcoming all along, especially since had been testing pre-production Volts for a whole year prior to that, each aspect would have contributed to a different outcome.

1-07-2011 **On The Fence, goals.** Not wanting to move on by just discussing goals instead, it got ugly. After all this time, certain individuals still haven't accepted the reality that the market will be filled with a variety of choices and one size does not fit all. How will GM become competitive? How will that be profitable? How will CAFE requirements be achieved? Needless to say, the same old diversion technique of making it personal was attempted. I see that as an opportunity to repeat the message as well as point out the attempt, and did with: Don't like the message, shoot the messenger. 50 MPG. 40 miles EV. Nicely under $30,000. PZEV emission rating. 200,000 per year. Abandonment of those original goals was easy to foresee. So it could have been considered a waste of time... until noticing that there was a fear of accountability... which is overwhelming clear when discussing gen-2 expectations. Avoid detail, any quantity that could be measured against to determine progress.

1-08-2011 **On The Fence, differences.** The squabble resumed today. This was delightful to see: "*PHEVs run primarily on gasoline. EREVs run primarily on electricity. Big difference.*" After 4 years of greenwashing spin through the use of a new coined marketing term, there still isn't any clear difference. The owner of an aftermarket upgrade to his Iconic Prius posted 2 photos a few days ago, documenting an average of 802 MPG after driving 853 miles. That sure looks like results a Volt owner could report. Where's this big difference claimed? Battery capacity and usage is what influences outcome. Comparing Volt to a PHV model Prius, the overall annual GPY (gallons per year) consumption of gas will vary from owner to owner. Distinguishing differences is far from the extreme claimed. I was happy to reply with: The word "primarily" couldn't be any more vague. Heck, some could take that as meaning 51%. In reality, the difference is based upon how they are used. Driving the PHV to work, I averaged 160 MPG via the 70 MPH route. Via the 55 MPH route, the MPG is even higher. Consumers will see both as plug-in vehicles that use gas at times.

1-08-2011 **On The Fence, misrepresentation.** Remember all the boasting about how Volt would "leapfrog" the other technologies? That didn't happen. In fact, there is still uncertainty about whether or not it will even be competitive. This is why we want real-world data so much. Prius owners especially don't want to misrepresent. We're well aware of the reality that estimates can lead to disappointment. It's far better to share actual experiences than to generalize. Unfortunately, antagonists do quite the opposite. They want to undermine. We've seen that many times already. The ASSIST hybrid, Two-Mode, and diesel supporters all attempted to portray Prius in an unappealing way. The most obvious, which Volt enthusiasts already do, is compare the price of Volt to the most expensive model of Prius. Pretending the plug-in capacity can never be more than 10 miles is another, despite the fact that aftermarket upgrades already offer +30 mile capacity. Misrepresentation like that thrives on being vague. Notice how the MPG reports from Volt owners have again vanished? It's too bad they didn't want a plug-in ally. Those on the fence will see this... then buy a Prius.

1-08-2011 **Energy-Monitor Photos.** I hadn't actually published any other than the shots I took inside the PHV. Many from my 2010 model Prius were taken back when I first got it. But they weren't a priority. In fact, like Toyota, I was downplaying the old Energy-Monitor in favor of the new Eco-Meter... which is much more informative, especially for owners who have driven their Prius for a while. Heck, I now find myself taking advantage of it to use the extra electric power available from EV-mode. Nonetheless, knowing energy-flow is still worthwhile, even if those arrows don't provide a quantitative measure. There's quite a variety possible. The samples I'm sharing now depict only a few. Unfortunately, those illustrations don't give you any idea how frequently the flow actually changes. It's quite often. That's the brilliance of the FULL hybrid. Squeezing out even the briefest efficiency opportunity is surprisingly easy with a power-split-device available. These photos help to show that... photo album 166

1-08-2011 **2011 Calendar.** It took 1.5 years to capture & publish enough moments with the 2010 to finally have variety worthy of a calendar. Phew! Of course, that meant the daunting task of selecting which photos would actually be included. I needed to create 12 individual pages, each with its own unique theme. That's normally really fun. But already a week into the new year and the big autoshow in Detroit about to begin (exacerbated by the last-minute scramble for Energy-Monitor photos), there was a sense of urgency. Though in the end, it's rewarding to see a collage for each month emerge. Knowing the resulting images could also be viewed on portable devices like a smart-phone or tablet is an extra benefit this year too. The 5 previous calendars from the other generations of Prius didn't have that medium for sharing back in their time. I'm quite pleased with the results. Check out what's now available for downloading... calendar "F"

1-09-2011 **Next Month.** After the autoshow hype begins to settle, then what? Gas prices will obviously have an influence. Routine fill-ups are a constant reminder that change is coming. My guess is that's when we'll finally start hearing from everyday consumers. Enthusiast interest often doesn't match what middle-market actually buys. Getting behind the wheel of a luxury or sports car will naturally result in many positive comments, but that's not what they need... and the days of carefree fulfillment of want are over. It's pretty amazing hearing from former SUV owners who admit they didn't give any thought to efficiency back when they first bought it but now place a high priority on MPG. How much of a premium will consumers be willing to pay? How much of an efficiency improvement is needed? What about the ability to plug in? What about the cost of upgrading to a 240-volt charger rather than just using a regular 120-volt connection? Then of course, there's the issue of vehicle downsizing. 2011 is ushering industry change, drawing much attention to efficiency as Prius becomes a common vehicle.

1-10-2011 **Prius V.** The new "Versatile" model was introduced today. This was my post on the big Prius forum in response to that. No surprises here. Driving a Classic model for 3 years then an Iconic for 5.5 years informed me well that the engine in the 2010 was overkill from a power viewpoint. The thought then was that the same system would be used in a larger vehicle later, especially having driven the 2010 now for 1.5 years later. Today, we got confirmation. From a business viewpoint, Toyota has a killer platform. They'll be able a high volume that's both affordable & profitable. From an efficiency viewpoint, the 40 MPG combined (42c/38h) is definitely competitive. Gotta love the emission expectation too. But what should really make you think is the point that there's nothing to cause an acceptance delay. Since the same system is already in the 2010 and is already well proven, there shouldn't be any hesitation. No first-year jitters is a big deal. Heck, it even looks like a Prius... but it's bigger, fulfilling the wish scores have had about size. This new choice should make for a very interesting next step. I'm certainly looking forward to how it will shake up the market.

1-10-2011 **Ford C-Max.** Similar to the upcoming Prius V, there's another hybrid in the wagon shape which will be available... except this one revealed by Ford today actually does fulfill the minivan requirement of offering sliding back doors. Oddly, there weren't any MPG estimates provided though. The only efficiency hint was that the target is to be higher than 39 MPG combined (41c/36h) the hybrid Fusion currently offers and the CS-mode (for the plug-in model, also revealed today) will be better than Volt. Details of when, price, battery-capacity, and how many were also left as unknowns for now. In fact, the only other bit of information which we've come to expect that was shared is the anticipated PZEV emission-rating. An unexpected bit was the plan for the plug-in to provide a 500-mile overall driving range. So despite not being told much, it's quite clear that Ford is intentionally besting GM. Another hybrid that will also offer a plug is great news. Toyota & Ford will be able to effectively reduce traditional vehicle production. Who knows what the heck GM will do. Consumers need no-plug choices offering at least 40 MPG. Automakers need a platform which easily & inexpensively offers a plug. C-Max looks to fulfill both needs well.

1-11-2011 **Blog Limitations.** The reason why the Volt enthusiasts have been called enthusiasts rather than supporters is all they've ever done was blog. A new one was introduced each day, they post a few entries, then it dies. All is lost the following day. In fact, they actually looked forward to that daily refresh... since certain topics have obviously been difficult to deal with. Information easily strayed off-topic too, making the hunt for detail later pretty much impossible. I'd drop hints about the the need for things like a FAQ and the benefits of using the forum they've had available for years. But the forum just sat there, getting only a few new posts per week. Meanwhile, the daily blog would get a few new posts every few minutes. Such a waste. Prius supporters have been well aware of the power of forums for an entire decade and make reference to them all the time, drawing in newbies with a resource which makes finding facts and contributing information quite convenient. Well yesterday, it changed. The homepage on that Volt website reduced the blog section down to just a small single entry, switching heavy emphasis onto the forum instead. But the initial results was reduced activity on the blog and no change on the forum... which is stunning, since today was the big reveal in Detroit. You'd expect activity to be buzzing. On the big Prius forum, activity there was so intense the entire website slowed to a crawl attempting to handle the big jump in post count. It should be interesting to see how they transition from blogging to forum threads. At least the webmaster is now making an effort to deal with those blog limitations. Of course, he ceased sharing real-world data for his Volt over 3 weeks ago.

1-11-2011 **Hatchbacks & Wagons.** I liked this question about the new Prius today: "*Why bother with an entire new body/hardware to have a new class of car that barely distinguishes itself from the standard Prius??*" Study the market. Prius drew a number of consumers by being incredibly practical in addition to delivering outstanding emissions & efficiency. SUV owners looking for an alternative wouldn't be caught dead in a minivan. Squishing back into a sedan with a tiny storage area in comparison is a turnoff. Prius is actually a bit too small for some anyway. Why not offer a wagon version, especially since that's a rapidly growing new market? So what if it doesn't deliver 50 MPG? That expected 40 MPG is a huge improvement for those wanting to replace their guzzling SUV. Of course, some of us saw the 1.8 liter engine as an opportunity to power a larger vehicle, since it really is more than what's needed for the 2010 Prius. Toyota planned ahead. Reuse like that is good for business. Consumers need choice. And heck, think about how the larger cargo area offers room for more battery.

1-12-2011 **Too Little, Too Slowly.** Seeing the reality of that problem finally sink in is quite fulfilling. All along, that's been the concern. We expressed it over and over again. The response was consistently a state of denial. High gas prices returning in 2011 isn't what those waiting for a second generation plug-in wanted to acknowledge. Even the difference between getting a new hybrid that offers seating for 7 verses one that will be available in the Summer with the likelihood of strong sales and profitability immediately is an easy argument to win now. There's very much the feeling of change having arrived. Heck, those who had just recently attempted to mislead are finding their audience has moved on. Understanding the difference between need & want is much clearer now. It sure is nice that the hype is quickly fading into memories of the past. Too bad certain individuals didn't take the warnings & advice long ago. Isn't it amazing what a little bit of real-world data and wallet pain can do?

1-13-2011 **Hybrid Premium.** Being horribly vague and avoiding numbers is nothing new. We've seen it all before, for many year now. Today, it was this repeat: "*No hybrid has yet justified its cost-premium, regardless of...*" I enjoyed responding to that with: What premium? Greenwashing of the past doesn't work anymore. Don't believe or assume. The numbers simply don't back up the vague claims or the changes over the years. With a real-world efficiency gain of 15 MPG at $3 per gallon, the difference between 35 and 50 over the distance of 150,000 miles is $3,857. At $3.50 per gallon, it's $4,500. At $4 per gallon, it's $5,143. A new Prius can be had for $25k. No other gas vehicle that size actually delivers 35 MPG; you have to step down to compact for that.

1-13-2011 **Magnesium-Sulfur.** Reading about that type of rechargeable automotive-grade battery currently being researched by Toyota was an exciting addition to the autoshow stories. Unsurprisingly, no detail of any sort... like cost or timeline... was shared. All we got was the fact that it is capable of holding twice the energy of Lithium-Ion. Being able to increase EV capacity for the PHV model Prius to about 25 miles without needing additional physical space sure would shake up the market. And something is needed later to tip the balance, transforming the plug-ins from niche to mainstream. This could have the potential for that. In the meantime, establishing proper expectations is still needed. That's what the real-world data being gathered now will help with. Whatever the case, the age of gas-only vehicles is clearly in its final stage. Externally supplied electricity will being playing a role in the next. Battery technology is at the heart of that.

1-14-2011 **Big Picture.** The cannot/refuse to see-the-forest problem is nothing new either. Examples of how enthusiasts dance around it are abundant. This is way discussing goals is so difficult. They simply disregard overall production and overall need, focusing pretty much entirely on engineering rather than acknowledge the realities of business. Heck, some literally use the "*vastly superior*" label still. Anywho, it was time to put out numbers again: Doing the math, it's easy to see that 1 Volt must be sold for every 2 Prius just to break even. And that's at the current sales volume, without considering the plug-in model. Here's the numbers: 500,000 Prius at 150,000 miles each delivering 50 MPG will consume 1.50b gallons of gas. 250,000 Volt at 150,000 miles each delivering 150 MPG will consume 0.25b gallons of gas. 250,000 traditional vehicles at 150,000 miles each delivering 30 MPG will consume 1.25b gallons of gas.

1-14-2011 **Negative Reviews.** In the past, it was easy to dismiss anyone posting a negative comment about Volt as someone who hated GM and was being paid by the competition to undermine. Simply just label them a "troll" and move on. Now, things are different. Reviews are emerging from unknown new owners. A few are quite negative. It's interesting to read reactions to the over-inflated expectations. Enthusiasts obviously didn't take the warning to prepare for this ahead of time seriously... leaving them at a loss of how to deal with them now. I'm quite curious what will happen. It's too bad the 40-mile EV and 50 MPG efficiency hype was allowed to thrive for so long. Denial contributed to the problem originally. Will it continue to? Are the enthusiasts finally ready to become supporters? This means real-world data must be shared... something that's been almost totally absent lately.

1-15-2011 **Hype vs. Reality.** What was revealed to us 4 years ago is quite different from what we actually got. Most just want to move on at this point, especially those who were responsible for allowing unrealistic hope to continue for so long. Anyone who studied the EV knew very well that demands of the heater reduce available range significantly. But enthusiasts absolutely insisted the "*40 mile*" promise took that into consideration. It obviously didn't... and they know that well, now. It's a harsh reality they're finally coming to terms with. Too bad they didn't listen to those sharing that information all along. Oh well. It's like the price target. That was totally unrealistic too. Yet, that hype remained right up to the price announcement. As for MPG after depletion, that approach never made any sense. So, Volt now faces a market rapidly filling with choices. It's a plug-in hybrid competing against both pure EVs and other plug-in hybrids... not the "*game changer*" they wanted.

1-15-2011 **Anticipation.** I remember discussions an entire decade ago, predicting how the acceptance of hybrids would play out. Anticipating the rise of gas prices was a fundamental part of that. How could demand continue to rise and the supply of easy to extract & refine oil shrink without affecting price? There's the obvious problem of carbon & smog emissions too... not to mention the political concern about the sources. Finally, every automaker is planning some variant of hybrid & plug-in. They delayed acceptance as long as they possibly could. Looking back, it's truly amazing how much resistance to change there actually was. All those absurd claims that Hummer was better or that all we needed was just a way to make the giant-size vehicles more efficient. It was denial which ran so deep, the history books will devote much to documenting what happened. Of course, it's not all well yet. There's still the issue of misplaced priorities. Not taking price seriously is the biggest. Now that gas prices have risen, a struggling & confused market due to an imbalance of competitiveness is what I anticipate now.

1-15-2011 **$3 Gas.** The impression is that price is here to stay, as a new base. Summer brings higher prices. People travel more then. Demand for gas increases. With oil holding steady above $90 per barrel for a while now, seeing this price for gas now makes sense. Expecting to see anything below $3 anymore isn't realistic... especially for those vehicle lifetime expense calculations. Some didn't believe this would happen. Where are they now? What will they be driving next? It's truly amazing how naysayers just vanish. Regardless, the days of making excuses for carefree guzzling are over. To think of all the greenwashing we had to put up with. Sure glad that's in the past. The hybrid has become so deeply entrenched into the mainstream, it's not going away. Remember how it was once declared just a passing fade, a niche that didn't make any business sense?

1-15-2011 **What If, thoughts.** Could it be that as the design of Volt was being tested the results led those making decisions to choose different priorities? Sales of the SUV were fueled by the false pretense that they were safer. Guzzling wasn't considered irresponsible by back then. And of course, gas was cheap. Change comes painfully for some. Failure of Two-Mode to stir profitable business meant leaving customers without a replacement option. What would they buy when the time came? Since those previous purchases were quite expensive anyway, concern about reaching middle-market didn't have to be paramount. This would explain the emphasis on drive experience instead. Knowing the feel behind the wheel would have to compensate for shortcomings of the original goals makes sense. Switching from SUVs with power & abilities never used for daily commuting to a plug-in that essentially reverts back to traditional vehicle performance after battery depletion would be a discreet way of achieving CAFE requirements. It's obviously not the best solution. Getting hybrid efficiency & emissions after depletion is what's still needed... hence: too little, too slowly.

1-16-2011 **What If, post.** Here's what I ended up posting about this on the big Prius forum: Stepping back to look at the big picture a number of years ago, it had become increasingly clear that favor for the SUV was taking a negative turn. GM's proposed solution was Two-Mode. It would keep the mighty guzzler alive by increasing efficiency to an acceptable level. But that turned out to be a huge business failure. The system was expensive and didn't provide enough efficiency improvement. Fast forward to the end of 2010, when we confirmed that Two-Mode had mutated into smaller system which a 4-cylinder engine could utilize. Unfortunately, it too was expensive and didn't provide enough efficiency improvement. But attaching that revised hybrid system to a platform which was primarily dependent on externally supplied electricity would strike a balance. For those looking to replace their thirsty guzzler with a car, the high sticker-price and 35 MPG estimate is a realistic choice. GM found a solution to satisfy both their own customers and the upcoming CAFE requirements. It's not "vastly superior" as enthusiasts continue to claim. Whether or not it is even competitive remains to be seen, especially as consumers discover just how much EV capacity is reduced by using the heater. What happens next will be an interesting chapter in automotive history.

1-16-2011 **What If, premium.** When the tax-credit expires, how will consumers react? Reducing production cost by $7,500 while also delivering higher MPG with cleaner emissions in the short time available seems like a miracle. It would really be fascinating if middle-market was somehow able to pay that premium GM is asking. But then again, even a reduction to $33,500 is still beyond the reach of many. There was resistance to hybrids for years due to price... or at least that was the excuse. Will people shift priorities that much and pay that much to be green without any "range anxiety"? What if they could and did? And how would a battery technology breakthrough affect the approach currently committed to?

1-16-2011 **What If, competition.** With the announcements from both Toyota & Ford about their upcoming plug-in hybrids as well as others like Hyundai & Honda considering them, it makes you wonder what consumer expectations will be for battery-capacity. Gut responses are that EV range should be large; however, that line of reasoning quickly falls apart upon seeing +100 MPG operation firsthand. Knowing there will be a much heavier dependence on the engine during Winter gives pause for thought too. Then you have to ask about A/C use. Do you know how often you'll deplete the pack entirely? In other words, there will be many questions about energy consumption. The competition will almost certainly take different approaches to answer those questions, to get consumers to purchase their particular technology. But what if they don't? Imagine a cooperative effort to dramatically reduce the production of traditional vehicles.

1-17-2011 **What If, emotion.** All that hype over the years about Volt promises stirred emotion, creating passionate enthusiasts. As a consequence, many became blinded by hope and simply brushed off each expectation that wasn't met. Now we are at the point where purpose has been obscured and the competition a challenge. Sadly, some have even turned to greenwashing... with same old techniques we've seen before from antagonists of the past, like using outdated facts. And of course, there's an intense effort now to focus entirely on the driving experience. The resistance to any type of calculation is truly amazing. Purchase criteria, like being affordable, aren't taken seriously... because those are just excuses. Clouding of logic is the intent. They play with your emotion. But what if it's not too late and that can still be changed?

1-17-2011 **What If, backlash.** When seems to be more of the issue than if. That comes from being in the middle. Promotion of Volt mocks both hybrids and pure electrics. It's presented as "*vastly superior*", so naturally the enthusiasts have been echoing that sentiment. I summed up the situation this way: It's becoming an interesting wake-up call. Lessons were not learned from previous major efforts falling short, like Two-Mode. Specifics from Volt include the both electric-range & engine-efficiency being less than expected, along with the emission-rating disqualifying it from privileges which were assumed to be easily achieved... not to mention a price much higher than hoped. How much of a difference between hype & reality are consumers willing to accept? Some type of backlash could be on the way.

1-17-2011 **Vapor Trail.** It was night, but the city lights illuminated the street well. The temperature was in the low teens. We waited for the light to turn green. It did. We both launched. The scene was quite amusing. I wonder if anyone noticed... or for that matter, do they ever? The majority of people simply don't pay close enough attention to characterize a detail like the steam coming from the tailpipe. But in this case, conditions were right for unusually large vapor trails from the bitter Winter air... and I just happened to be looking in the right direction. Upon completing a brisk acceleration, I knew the engine would shut off. It did. But what I hadn't really given any thought was the visual effect that created. Suddenly, there was nothing behind the Prius. It abruptly stopped. The traditional vehicle next to me still had a big plume following behind. I would have loved capturing that on video.

1-18-2011 **Everything Freezing.** Today looked & felt like it colder is on the way. We are in the dead of Winter now, where temperatures in the single digits are the high. The forecast for the end of the week is -20Â°F for my morning commute! To make matters worse, the $3.09 we had been paying for a gallon of gas finally changed. I wondered when it would. Here in the Midwest, our fuel is amongst the cheapest in the country. Out on the West Coast, they pay $3.89 already. So, seeing $3.19 on the drive home from work wasn't a surprise. Needless to say, the outlook is a cold one for those still resisting change. By the time the weather turns favorable enough to melt the snow, discussions of plug-in differences would have become common. Any remaining apprehension for hybrids will evaporate. We're approaching that point where abandoning beliefs of the past will be very easy. It's about dang time!

1-19-2011 **CAFE Requirements.** They are the reason so much emphasis is being put on next year, rather than 2011. That's when automakers must meet new higher MPG standards. Raising overall efficiency is a challenge... once the easy trick of reducing vehicle weight and engine size is used. Both Toyota & Hyundai have reached their goals already. So, their upcoming new rollouts are actually opportunities to which advantage of growing consumer interest, well preparing them for the next CAFE increase. The rise in priority toward efficiency should be a good thing for everyone. Acceleration needs had been met longer ago, so pushing vehicles even faster was pointless. The same was true for seating & cargo room, the largest vehicles were already exceeding need. And towing capacity got absurd: gross overkill. Finally focusing on what had been neglected in the past is most definitely a step in the right direction... just in the nick of time too. Climbing gas prices make high efficiency quite appealing.

1-20-2011 **Displacement.** This was the question posed this morning: "*Will the Chevrolet Volt be a failure or a success?*" Having dealt with the displacement issue countless times already, I chimed in right away with: Volt enthusiasts addressed this topic a few months back. They absolutely refused to define what success actually meant. Responses were just a vague "*yes*" without any quantitative goal stated to measure merit. Needless to say, that will allow them to spin the outcome as a result. The most common evasion technique is to direct attention to 1-for-1 comparison, rather than stepping back to consider an automakers overall sales to see how much gas was actually displaced. Only selling 25,000 Volt hardly competes with 500,000 Prius when you realize there were also 475,000 purchases of much less efficient vehicles. The extremely high price for Volt and the requirement of a plug is quite a challenge to deal with. Not offering an affordable choice and something for those who don't have an outlet available is clearly an impairment to success. In other words, lack of diversity is business risk the automaker really shouldn't be taking.

1-21-2011 **Trophy Mentality.** Getting over that is really proving to be a challenge. It's becoming increasingly more difficult to find any real-world data for Volt. The recent reports of the effects of Winter (specifically heater use impact) seem to be silencing owners. We get lots of spin from the enthusiasts though, attempting to downplay this situation. It's too bad. This all could have easily been avoided had they just acknowledged what we already knew over a year ago. Remember those initial test drives? Oddly, the response from GM is to increase production plans. The very latest is that they are working with suppliers to be able to raise 2012 capacity to 120,000. That's an interesting turn of events. Of course, with a base price of $41,000, even with a tax-credit the demand for that many is quite uncertain. Is this the best way to finally address the "*too little, too slowly*" concern? Taking advantage of the current trophy mentality could prove a worthwhile risk if gas prices end up skyrocketing in the near-term. After all, the next generation model is likely to be very different to achieve the many goals this one missed, the effort with Two-Mode is faltering, and the competition is preparing an onslaught.

1-22-2011 **Expectations.** As the announcements from other automakers continue, attention is getting drawn away from Volt. It's too bad they didn't want to be a game player. The consequences of declaring to be "*vastly superior*" are already starting to show signs of trouble. The most obvious is the complete absence of driving data. Nothing. And when you ask why, the responses have been hostile. Shouldn't we expect to hear about owner experiences? The unexpected move by GM to deliver double the original second-year planned volume may be adding stress to the situation. It's like placing a big bet on a single play. Of course, that could have something to do with the 2010 sales of Prius. We now have the final count for Japan. It was indeed an all-time record: 315,669. Add to that the 140,928 sales in the United States along with the 50,000 or so from all the other markets and you've got a number very close to the half-million mark. No wonder those cheering for Volt are feeling pressure now. Knowing all which has unfolded so far, what are the expectations? What should happen next? What is the best way to achieve that ultimate goal of replacing traditional vehicles with something much cleaner and more efficient? How much are consumers willing to pay for that?

1-23-2011 **Price Panic.** A directive recently given by the CEO of GM was to reduce the cost of Volt by $10,000. Consequences of missing the original goal of "*nicely under $30,000*" is obviously sinking in. That statement made many years ago had been made for good reason. This confirms abandoning it wasn't a good idea. In the not too distant future, the niche will become saturated and the tax credit will expire. There's only so much demand for a plug-in car with a base price of $41,000. The competition has adhered to that original goal, never wavering from a price unrealistic for middle-market... in other words, something they'll be able to sell year after year in high-volume with government subsidies. Panic comes from the enthusiasts, fearing too many compromises will be made to achieve the much lower price. They never wanted a balance like that. Heavy emphasis on speed & power with no regard for price makes that rather blatant. They simply argue "*the price is worth it*". Isn't that the same reasoning for luxury vehicles?

1-23-2011 **Lowering Price.** To get price down, reducing production cost is the most obvious approach. Increased volume helps, but you have to very careful that it doesn't result in increased advertising expenses. Squeezing $10,000 out of a $41,000 vehicle isn't realistic from production alone, not even close. For Volt, many wants were fulfilled... things well in excess of need. Acceleration speed is the most blatant. The consequence was efficiency sacrifices and a higher price. How do you think the enthusiasts will react to a slower, less powerful Volt? What about the elimination of that second display-screen and the On-Star interface? How about a smaller battery-pack capacity? There's also the possibility of relying more on direct-drive from the engine. Delivering a cleaner emission-rating is a problem too. Requiring premium-grade gas (91 octane) isn't a price-conscious design aspect either. What the next few years bring with respect to lowering price will most definitely be interesting.

1-24-2011 **Over Promise.** True to form, GM's mention of significantly increasing production volume for Volt without any realistic way of doing it to that scale resulted in a celebration of accomplishment. My favorite from that was this superiority declaration: "*GM built a car that can out-Prius any Prius.*" So, even knowing that the vehicle itself has a number of shortcomings which may or may not be overcome with the next generation, victory was the message to convey already. I couldn't believe it. That particular group of enthusiasts (the daily blog) simply doesn't care about being constructive anymore. Good thing other venues have a very different attitude toward Volt. Perhaps they are cognizant to the repeated problem of over promising. Anywho, here's what I posted: Whoa! Talking about hanging the "Mission Accomplished" banner prematurely!!! Prius earned its reputation from selling at mainstream volume (5,000 per month) in a time when gas was cheap, guzzling was encouraged, and there wasn't a tax credit. Things quite different now. There is already a well-established market for high-efficiency vehicles and sales of Volt only just began. Demand cannot be determined by the surge of initial purchases. It takes at least 6 months to get a feel for what on-going sales will be like.

1-25-2011 **Data Sharing.** Rather than the simple spreadsheet as before for Volt, we got summary provided by the subscription service. Naturally, it made no mention of engine efficiency. An overall MPG value was the featured statistic. To complete the greenwashing, actual gallons consumed wasn't included. There was an estimated "saved" value though. That immediately stirred emotion. It said 103 gallons had been saved from 3,443 miles of driving. Huh? That didn't make any sense. Using my average MPG of 46.1 from last month, it would have only taken 75 gallons to travel that distance with a 2010 Prius. Where the heck did that other 28 gallons come from? And what about the distance traveled using electricity? Needless to say, that service was providing very misleading information. Even using the upcoming new fleet standard of 35.5 MPG wouldn't use that much gas, even without plugging in. What the heck kind of data sharing is that?

1-25-2011 **Whatever.** Today's intense fallout allowed for an opportunity to sum up the situation. Enthusiasts place blame on anyone looking forward, rather than just celebrating the moment. I preferred the big picture: Ironically, the problem is from within. Each of the outspoken supporters for Volt have a different set of goals, but are too preoccupied with the outsiders to notice. The same type of conflict happened with Two-Mode. Awareness occurred during rollout. It wasn't pretty. The variety of responses to recent topics confirm it. There is no concise purpose being conveyed. Those varying priorities send mixed messages to consumers. The who & what becomes a confusing mess. Measuring success, or even progress, isn't possible. Looks like there is no interest in dealing with this either. Whatever. It's not like the outsiders didn't attempt to point out the upcoming struggle.

1-25-2011 **Reality.** The downplay of Volt is well underway now. This was a great example: "*Before something becomes mainstream, it will be a niche.*" Remember how it was supposed to take the industry by storm? It's really unfortunate events of the past weren't taken seriously. Some of the fallout could possibly have been prevented. I replied with this: Assuming all low-volume products will appeal to the mainstream over time is quite a leap. Typically what happens is the product is optimized before going high-volume, dialing back features the business learned weren't appealing to middle-market... and dealing with shortcomings. Volt-2 is going to disenchant many enthusiasts. Dropping the price by $10,000 while also improving both engine efficiency & emissions is going to change characteristics quite a bit. The angry responses to asking about goals is a clear indication of that. The resistance to sharing detail about real-world data is too. There's a painful transition coming. Look at the level of emotion this topic stirred. It would be naive to believe difficult choices aren't on the way.

1-26-2011 **Why?** Such a valid & constructive question like this is finally asked, especially on that daily blog for Volt: "*But I don't get why you are so Prius-centric. Do you ever say anything supportive about any other car?*" I enjoyed answering that: It's easy to get that impression, here. Elsewhere, I appear to be anti-GM because I am indeed supportive for others. The problem all along has been the lack of choice. Either you like this particular configuration of Volt or you are deemed someone trying to cause harm, one extreme or the other. That's why I asked over and over again for goals. Some I actually do agree with. But certain individuals here were so deeply entrenched with the thought of using just a few gallons of gas per year that they fought me relentlessly... especially after discovering I was correct about the effect of the heater, the efficiency of the engine, and the price. Look back when it started (which is well documented here and in my blogs). Back then, I was seeking an ally. Volt would be a fellow plug-in. They didn't want that. The "*leapfrog*" idea mutated into "*vastly superior*", which still doesn't make any sense from a vehicle hoping establish a plug-in infrastructure. Why are they so against the plug-in Prius?

1-26-2011 **Assuming Prius.** Driving one since 2000 profoundly raises your awareness of factors which influence energy consumption. The Volt enthusiasts always assumed information I posted was to undermine the success of Volt. After all, why would someone supporting another automaker ever want to help? They completely dismissed the concerns of "*too little, too slowly*" even though that was an effort make sure the spread the technology was fast enough to avoid another EV1 debacle. The most blatant example is their misrepresentation of Volt during Winter driving. Absolutely insisting the full EV range would be available was lunacy. They were setting themselves up for disappointment. So, who do you think they took they frustrations out on upon learning what actually happens? Being correct is an awkward position. Having real-world data to support it is even worse. How do you present it without sounding like it is an "*I told you so*" or for them to acknowledge it without sounding hypocritical? Needless to say, it's all out in the open now. The following are EV ranges documented by owner driving at temperatures mostly around the freezing point: 27.0, 25.6, 24.7, 25.6, 23.4, 25.6, 26.4, 22.8, 27.9, 31.2, 27.2, 26.6. Notice how much of an impact Winter driving has.

1-26-2011 **Interesting Spin.** The next step to come from a rollout with obvious shortcomings is to spin information being posted. Those disingenuous about purpose will attempt to alter perception. This is why stating goals prior to this stage is so important. It prevents the ability deny promises were not kept. Anywho, the lack of empathy for GM with Volt is now frustrating enthusiasts and bewildering new forum members. I responded with the following summary of the situation: Interesting spin. In reality, there has been a long-standing goal of delivering a high-volume affordable choice that is extremely clean. GM's current configuration is too expensive for the mainstream and the engine is neither clean nor efficient. When initial rollout of Volt completes in 2012, there will be a variety of choices on the market. Right from the start, Toyota's plug-in approach will cost less, be cleaner, and be more efficient (both gas & electricity). There will also be a selection of no-plug models available. Will GM really be a one-trick pony still then? It all comes back to the "*too little, too slowly*" concern. What they deliver appears to look good until you step back to look at the big picture.

1-26-2011 **Kia Picanto.** We are hearing less and less about efficiency vehicles that are neither a hybrid nor offer a plug. Nonetheless, new models continue to be announced. Today it was from the autoshow in Geneva, a Kia Picanto featuring a 1.0 liter, 3-cylinder, 68-horsepower subcompact with start/stop. It could potentially deliver up to 57 MPG highway. The United States will not be getting it. No acceleration information was provided, but you could only imagine an engine like that isn't exactly going to deliver enough to satisfy the market over here. It does give good reason to stop and think about what the rest of the world actually wants & needs. This is why I so often asked who the market for Volt was, because only a select group of buyers here means it isn't a game-changer. What size & power do you think our market here will consider acceptable as a minimum?

1-27-2011 **Preconditioning.** This is a rather strange & unexpected discovery about Volt. When I had the PHV model Prius, it was exciting to try the "remote start" button. It doesn't actually start the car itself, since it's primarily electric. What it does is run the electric A/C to make the cabin comfortable before you enter. If the car is still plugged in when you press the button, it will supposedly draw the electricity needed to run from the wall rather than the battery-pack. That's great! Unfortunately, I didn't have a meter available at the time to document detail when invoked. I didn't get to investigate the Winter equivalent with the heater either, since it was Summer at the time. What I did observe though was that the engine never started. To everyone's surprise, with Volt and the heater in Winter, it actually does! What the heck? Sure enough, there's a warning in the owner's manual about doing that in enclosed areas. That is quite a surprise. Why did GM chose to implement the feature this way? The advantage preconditioning could have provided is now an impairment for those wanting the absolute of not using any gas. Ironic, eh?

1-27-2011 **Gauging Demand.** The constantly changing stories from GM is nothing new. You never know what's truly going on. We've seen countless examples of that with Two-Mode. Now the same thing seems to be happening with Volt too. So, it's no surprise that demand cannot be gauged based on the automaker's announcements, especially since they thrive on media attention. Watching sales counts is the true measure of progress. Anywho, GM now expects to complete rollout by the end of this year rather than the first half of next year. That could help alleviate the potential for greedy dealer markups. It would definitely be a convenience & savings for those flying out to purchase one then driving it home halfway across the country. Unfortunately, the press-release today stated the following: "*For the first 35 miles, the Volt can drive gas-and-tailpipe-emissions-free using a full charge of electricity stored in its 16-kWh lithium-ion battery.*" Looks like GM already abandoned their "25 to 50 miles" range expectation. We know for a fact that EV drops to around 25 miles in the Winter. We also know the engine starts up for preconditioning. We know that the engine will run for driving warm-up after sitting out in the cold for a while too. Arrgh!

1-28-2011 **Labels.** We're seeing them much more often now. The most common are "*haters*" and "*trolls*". They are intended to draw negative attention to that person. Growing tired of that and actually having a relatively receptive audience on the big Prius forum still, I pointed out: Those labels have mutated into meaning someone who says something contrary to the status quo. It's really sad how difficult it has become to be constructive now. If you're not shaking pom-poms cheerleading, you're labeled as someone attempting to undermine. That's pretty bad. This isn't a success/failure situation. In reality, it's a grading system. Prius earned an "A" from delivering on all the goals consumers challenged it to. Volt looks more and more like a "D" for coming up so short on price, emissions, and engine efficiency.

1-28-2011 **Rare Opportunity.** There is now someone who has both a Prius and a Volt in his garage. On the big Prius forum, he has begun sharing Volt experiences with us. I chimed in with: The information many of us would like to know is how it will appeal to the mainstream. The enthusiasts go on and on about the feel of the ride, using it as justification for the very high price. Hearing "*it's worth it*" doesn't mean much to the mainstream, who has very different priorities. Over the past decade, we've watched Prius evolve into a car that balances wants & needs of middle-market so well it has become the clear choice for them. The next step of plug augmentation is a natural one, easily embraced by many since there is no paradigm shift. Heck, you don't even need anything beyond a standard 110-volt socket to plug into. It's a simple & affordable way to boost efficiency. As an owner, what observations can you point out that would appeal to the consumer who normally spends less than $30,000 for a new vehicle?

1-30-2011 **Volt Progress.** The first full month of sales is almost complete. Spin of the outcome is inevitable. Enthusiasts will praise those numbers, comparing them to unrelated efforts of the past. Analysts will point out the 300,000 hand-raisers won't translate to that many purchased in the coming year or two. Those consumers are simply exploring their curiosity. Just like with Prius, only a small portion of those expressing interest will actually buy. In the meantime, that daily blog is finally seeing much less activity, as it gets replaced by forum threads. Of course, the exception is when it comes to the politics of tax credits. That's still a hot topic for circular blogging, where arguments never make any progress. But there is progress on another front; the hype is all but totally gone now. The effect Volt has on the market will likely be somewhere in the middle, looked upon as influential rather than a success or failure.

1-31-2011 **C-Max Detail.** The recent reveal of this upcoming new vehicle from Ford featured the traditional model. What we didn't find out until today was that the hybrid model would be very similar to the Prius V, much more so than anyone had expected. It won't have either a third row of seats or sliding back doors. In other words, it will be another clean & efficient wagon for consumers to choose from. Watching attempts to change the market like this is refreshing. It appears to be well timed too. Potential for consumers to embrace them is much higher than in the past. For those looking for something "new" to get away bad decisions with their previous vehicle could find it quite appealing. After all, wagons were quite popular decades ago... before the SUV... before the minivan. Remember back that far?

1-31-2011 **Oil Expectations.** The short-term outlook from the Department Of Energy was released today. Within the next 2 years, the expectation is that the price of oil will steadily climb to $99 per barrel. That will take the 2010 national average up from $2.78 per gallon to $3.17 for 2011, then to $3.29 for 2012. Permanently higher each time you fill your tank have an influence on what gets purchased next, but when? Will the supposedly "fuel efficient" new SUVs remain in service for the next decade? Ages ago, a truck was an occasional vehicle, not the daily driver. Will that treatment return as it becomes increasingly more expensive to use? And of course, that begs the question of what those owners will consider for us in its place. What's efficient enough? Is driving a significantly smaller vehicle acceptable? How much will they be able to afford? Will they embrace hybrids? What about plugging in? Facing questions like this, the next few years will definitely be interesting.

2-01-2011 **Assessing Intent.** Watching others get criticized for their take on Volt is interesting, since I'm normally the target. Some ask, why be so hard on GM? Others are just outright hostile toward anyone saying anything negative. Needless to say, it provided a chance for me to inject comments about those intention assessments: Unfortunately, GM's reputation for "over promise, under deliver" is well earned. The contrast to Ford is quite amazing; you'd think they were from entirely different cultures. One hypes to death. The other simply gets the job done. GM set out to build a green car, but totally neglected the emission-rating. They repeatedly stated the importance of price, yet built a car well outside that budget. They heavily promoted efficiency after depletion, then abandoned that goal. This is why some of us have been pushing to get GM back on track by asking questions of purpose. You know there's trouble when basic questions like "Who is the market for Volt?" are evaded. Heavy emphasis is placed upon the drive experience while disregarding priorities of the mainstream. If you follow business decisions closely, the picture revealed is troubling. Ask yourself about the potential for Volt to become a profitable high-volume vehicle. What will it replace and how long will that take?

2-01-2011 **Strange Month.** We got numbers early this morning for Volt. There were 321 sold. Huh? That's 5 less than in December, which wasn't even a full month. If there's a long waiting-list still, how come so few... especially when we know for a fact that demo-model deliveries to dealers are now underway? There's that accelerated rollout to other states now too. Things just don't add up. Even with production ramp-up vehicles in transit, something doesn't seem accounted for. When will the rate increase to reach that revised plan of 25,000 for the year? What should we be expecting for this month? How will enthusiasts react to this news?

2-02-2011 **Constructive Comments.** I got a surprising amount of attitude about the PHV model Prius from some on the big GM forum yesterday. One in particular gave me good reason to be amused with: "*But the Prius is obviously a quick-and-dirty attempt by Toyota to at least be an answer to the Volt.*" Then he went on to compare the EV ranges, summing it up with: "*For shame.*" Finally, all the high praise for Volt and scorning of Prius came to: "*I'm sure there will be apologists about but the fact is it's a pathetic attempt.*" And before I had a chance to respond, someone interjected their opinion by posting: "*Toyota rushed to market an inferior product to the Volt and came up short.*" How can any of that be taken seriously? It bring smug to a whole new level. You don't stand any chance of constructive comment... or do you? I thought pointing out that Volt and the PHV have very different goals had fallen on deaf ears. Apparently not, since 2 days later not a single person responded to this: Tell yourself 50 MPG after depletion and a PZEV emission-rating weren't goals. Go ahead, overlook the price goal too. That's how they differ.

2-02-2011 **Looking Back.** That is what's happening now, since Volt deliveries are underway. The summary which caught my attention included this: "*...some of the most heated discussions centered on whether the Volt would ever actually make it to production.*" I responded with what will most likely be frowned upon, but nonetheless a reminder of what happened: The devil is in the details. That history is extremely well documented too. Let's not forget how often the topic of goals was brought up for this very reason. What was called "Volt" back then is not what is being produced now. The issue was really a matter of *when* not *if*. The next generation of Volt will be considerably closer to what was originally promoted. In the meantime, there's a vehicle enthusiasts really like that doesn't match the purchase-priorities of mainstream consumers. In other words, the heated discussions may be over but there is some waiting still.

2-03-2011 **Volt Sighting.** I walked out the door and there it was, the very same block I had seen both my first Two-Mode vehicle and a Tesla Roadster. First thought was it would be just about as rare too. How many years did we hear that it would deliver 50 MPG after depletion? What about all the nonsense about the 40-mile EV range being just a minimum? And for the absurd price hopes, I can't help but to shake my head in disbelief. Studying the technologies involved, all that simply wasn't realistic. Heck, it's even quite a stretch for the second generation model. But they didn't listen. So, now my thoughts center around how to deal with the fallout. Volt will clearly be a popular vehicle for enthusiasts. For the mainstream consumers who I have consulted with about their needs over the past decade, only a curiosity. Price has always been heavily stressed in importance from them. Once the battery-pack is drained, Volt reverts to the same efficiency & emissions as traditional vehicles. That means reducing the battery-pack to lower the price reduces the most appealing aspect of the vehicle. Still getting 50 MPG from the PHV after depletion won me over. That makes it really easy to sell. What will draw sales to Volt? The one I saw today had a commercial plate on it, indicating a business or government office. When will sightings of them owned by consumers become routine?

2-04-2011 **Understanding Hype.** Trying to explain to someone how an idea can be more powerful than a fact is like beating a dead horse (pardon the expression). Some just plain don't believe you. When the evidence is right there for all to see, how could it still be denied? Ugh. Needless to say, that's what I've been dealing with for years. In fact, that's where the "*halo effect*" term came from. The claim was made that all Prius did was make consumers believe Toyota was a greener automaker, resulting in more sales of dirty vehicles. They simply dismissed Prius as an image builder, rather than a mainstream seller... despite the actual sales numbers to prove it! Denial on that scale is truly amazing. Having Prius outsell so many traditional vehicles, yet still be accused of not accomplishing anything beyond deceive consumers, was a great example of resisting change. People with something to lose greenwash, telling you what you want to hear rather than just sticking to facts. It's quite frustrating. I summed up the situation we currently dealing with for Volt with the following: That is how hype works. Comments are made which are somewhat vague & ambiguous. You end up competing against a hope, rather than a reality.

2-04-2011 **Hybrid Sales.** They were pretty much down across the board, for all models. January isn't usually a good month anyway. The turbulent Winter weather likely contributed to purchase hesitation too. But with the price of a barrel of oil around $90 and a gallon of gas above $3, you'd think sales would at least remain stable. Instead, it really looks like people are getting use to paying more. Just tolerating higher prices isn't a good sign. Whatever the case, here's the totals for the top-10 sellers: Prius 10653, Insight 1554, Fusion 969, RX450h 912, CR-Z 894, Camry 860, Highlander 689, Civic 653, Escape 520, MKZ 370. The total of all 5 models of Two-Mode combined only came to 430. We also know that Volt was 321 and Leaf 87. So how the market will grow is quite unclear. Even the future of diesel for passenger vehicle is uncertain. The top-seller is still Jetta TDI. But with only 2938 purchased last month, that's not exactly a popular alternative to hybrids. As gas prices rise and the old guzzlers get replaced, hopefully a threshold will be hit where the market suddenly booms. At least Prius remains on the top-20 overall (all vehicle types) sales chart. For January, it was in position 19.

2-04-2011 **How Will It Be Better**? Asking what will make Volt a better plug-in hybrid than the PHV sure makes discussions interesting, especially on the big Prius forum. It's hard to tell how constructive the posts are though. But at least we're trying. Having some participating who never believed there was any Volt hype makes it quite compelling. It's hard to imagine someone owning a Prius who never paid any attention to Volt until now. They certainly have a thought-provoking perspective. Anywho, I couldn't resist this particular comment in that discussion from such an owner: "*Sometimes the thing that costs more is better*." Since I think trying to convince someone to spend that much more is quite unrealistic, this response shouldn't be much of a surprise: The fact that Volt reverts down to the same emission & efficiency level as other traditional vehicles after depletion means being "better" is limited exclusively to the EV range. Automaker brands like Toyota, Ford, and Chevy are in the business of selling lots of vehicles for a profit. Consumers are well aware that if you pay more, you'll get a nicer vehicle. That's what the luxury-market has been all about for decades, selling far fewer vehicles. Prius targets middle-market instead, where high-volume sales come from. Adding capacity and a plug to Prius package-3 makes a model within the usual spending range for them. It's affordable. It offers an undeniable boost to MPG. It doesn't require anything beyond a 110-volt outlet. It still delivers emissions & efficiency much higher than traditional vehicles after depletion. That makes it good business. What are the specific points which will make Volt a "better" plug-in hybrid?

2-04-2011 **Prius+ In Europe.** Rumor now is that Toyota will soon reveal this new hybrid at the Geneva autoshow in Europe. It is thought to be the Prius-V with a 3rd row of seats. That configuration for a vehicle of that size is common there. Here in America, even minivans are looked down upon by many. In fact, SUV sales are again on the rise, with interior space as the excuse. How this will be accepted is anyone's guess. Efficiency is looked upon differently in other markets. Gas isn't quite expensive enough here and unfortunately the "boil a frog" situation is playing out. (Consumers here are getting used to paying more for a gallon of gas, rather than changing their vehicle preference.) Perhaps it will become an option here later. For now, the Prius-V is a response to the request for an interior larger than Prius. And for a market where 30 MPG is hyped as impressive, the jump to 40 MPG will certainly stand out for a car seating 5.

2-05-2011 **Reality.** It's finally sinking in. True, the Volt enthusiasts are in such denial about the "*direct*" drive design they are now calling it "*mechanical*" to disassociate themselves from previous claims. Not meeting the qualifications to be a SERIES hybrid (the engine can assist at any speed above 30 MPH) means it falls into the same plug-in hybrid category as Toyota & Ford. They don't like that at all. But what can they do now? Enough reports have come in about 25 miles being the common observation for the Winter EV driving threshold to invalidate those previous claims too. To think it was just a few months ago some were absolutely insisting (to the point of hostility) that 40 miles was a realistic expectation year-round. They were quite incorrect about engine efficiency expectations as well. The cold temperatures have resulted in averages just above 30 MPG. That is so far below what they had been claiming, the only exoneration available is to point out how frequently the engine runs for the sake of generating heat. In other words, the so-called "*trolls*" were right all along. The hype didn't make sense... and there is now confirmation of that. Reality is quite different from what many had hoped for.

2-05-2011 **Intentional Greenwashing.** This new article published today promoted Volt. It was from an online source which specializes in reporting GM technology. So, it's safe to think they are well informed. Yet, there were two blatantly incorrect statements used to summarize the design: "*The 2011 Chevrolet Volt is powered by 16-kWh, T-shaped lithium-ion battery that powers the electric drive unit, which allows it to drive 40 miles on battery power alone.*" and "*The Chevrolet Volt also carries an 84-hp 1.4 4-clyinder engine that allows the five-door, FWD sedan to travel additional miles while averaging a fuel-economy of 50 mpg.*" The 40 miles is just plain not true. The EPA states 35 miles. Owners experiencing the extremes of Winter have been pointing out their observations of 25 miles. What possible excuse could their be for 40? As for efficiency of 50 MPG, where the heck did that come from? The combined estimate is 37. City is 35. Highway is 40. Seeing values so wrong is an indication of greenwashing. And considering the source, it certainly looks intentional.

2-05-2011 **Summer Cooling.** Looking ahead, what will Summer bring? Remember how Ford had circulated liquid through their hybrid battery-pack to keep it cool? We know for a fact that Volt has a liquid cooling system for its battery-pack and that it will get considerably warmer due to being using more extensively. Also, let's not forget how much more lithium-based batteries are to heat than NiMH. Will pumping coolant through the battery-pack and radiator be enough? Will the condenser ever be involved? If so, will it be powered by the battery-pack or the engine? And of course, how much will that reduce EV driving range. Or will there be a temperature threshold which will cause the engine to run, regardless of what capacity the battery-pack is at? Think about how the engine already does that for Winter warming. Will Summer cooling be any different?

2-05-2011 **Purpose, asking.** I asked the following question today on the big Prius forum: "*Wasn't the purpose of Volt to be a clean, efficient, affordable alternative for vehicles like Cruze & Malibu?*" It was in response to yet another endorsement for the drive experience. How are the upcoming CAFE requirements going to be met, not to mention remaining competitive? When the tax-credit expires, what changes would have been made to reduce the price? Techniques like drawing a deeper discharge to shrink the battery without losing range is what other automakers could also do. Enhancements to the engine for greater efficiency are as well. Power will likely be reduced as a consequence. That will take away from the drive experience, the only thing which currently makes Volt stand out. Being told "*Keep an open mind.*" and hearing "*I see no point to disparaging it yet.*" totally overlooks the fact that we've been expressing these very concerns for years already. Remember what the auto task-force stated upon seeing the bankruptcy recovery plans?

2-05-2011 **Purpose, expectations.** This is what I ended up posting: We've been through this already, with Two-Mode, and have been expressing the same concerns ever since. How much longer must we continue to wait... and for what? Giving us a choice would be an entirely different matter. Then we actually could choose. Instead, all we get is a single Volt configuration that GM wants to sell us. There isn't a second being planned, only different body styles. Imagine a model offering a smaller battery-capacity, an engine that's cleaner and more efficient, a modest interior & dash, with a much lower price. How come GM continues to extremely vague about intentions, yet knows the clock is ticking with the tax-credit and the CAFE requirements? They still also have more money to pay back. What should our expectations be?

2-06-2011 **Purpose, questions.** It probably isn't any surprise that also asking that same question on the big GM forum resulted in nothing but a sarcastic response. The thread was a discussion about GM looking into cutting the price of Volt. That cannot be done without careful consideration of purpose... which should be well known at this point. That daily blog always used the excuse of not knowing anything for certain until rollout. Well, now that rollout is underway, where is that information? In other words, what kind of marketing are we going to see? Which aspects will advertising draw attention to? Who will the consumers that will be targeted? How many do they expect to sell after it is established? When should we expect the first design revisions?

2-06-2011 **Purpose, approach.** Delay tactics are a given. It's easy to see how Volt will settle into a state of uncertainty, the same way Two-Mode has. You hear about a next generation coming, but there isn't any detail whatsoever available. The "over promise, under deliver" lesson seems to have been learned in that case. But then again, any talk of pushing monster-size guzzlers which deliver MPG in the low 20's falls on deaf ears now. Consumer interest has shifted to non-hybrid SUVs that deliver 30 MPG instead. Toyota's approach to offering a plug-in is to provide a model of Prius much like a package option. You want a big boost to MPG and the ability to run errands using only electricity, that's the choice for you. It's the Prius everyone is already familiar with that enhances the EV ability already available. Since Volt is unique, saying we must wait several years before consumers will understand it seems sensible... until you ask what the purpose of "it" actually is compared to the other plug-in hybrids.

2-06-2011 **Purpose, big picture.** Stepping back from the obvious current struggles, we have to ask what the overall purpose is... look at the big picture. Oil will still be used for commercial & industrial needs. So, elimination on that scale isn't realistic. Is it for consumer use? Is there really a problem using a small amount, especially if it becomes so small we can substitute something like cellulous ethanol instead? Isn't this the purpose of Volt to reduce gas usage to the point of it being a neutral energy & emission concern? If so, why couldn't a plug-in like Prius also have the same purpose? I witnessed an excess of 200 MPG when on the highway in the PHV traveling at speeds above the EV threshold. Isn't that efficient enough to achieve the goal? What about a future model using a larger traction-motor for faster EV? People get so hung up with particulars of a technology that they forget to (or sometimes refuse to) reflect upon its purpose.

2-07-2011 **Purpose, image.** It's quite intriguing to hear some GM supporters point out how Volt is mostly just to improve image for now, a "halo" vehicle to stir interest in GM vehicles. They certainly have a different attitude than the Volt enthusiasts. That could be due to actually caring about the well-being of the business. For example, Cruze is finally starting to catch on. Last month, there were 13,631 purchased. Talk of second-generation BAS (renamed to "eAssist") available later this year is also stirring some hope. They really like the idea of that being spread across the entire product-line. In other words, it's what they hope will keep GM competitive. Of course, there's still no mention of price or emissions. The television commercial for Volt during the Super-Bowl yesterday seemed to support the image feeling well too, frustration from spending lots of money to advertise a vehicle with this notice at the end: "*Available only in select states. Quantities limited.*"

2-08-2011 **Purpose, worth.** The more you push, the more they push back about Volt being superior. Much of the talk today on that daily blog was about being better than Leaf. But then I finally interjected when Prius got dragged into it, responding to the usual greenwashing attempts. That only made it worse; however, it all had a point. The question of who is being answered. Each encounter repeats the "*worth its price*" argument. That pattern is quite easy to see now. Disregarding practical needs of a family doesn't matter. That isn't who's going to buy one anyway. The approach Prius took to winning over middle-market consumers is of no interest. Volt really isn't intended to appeal to potential Cruze & Malibu buyers. A future generation may... and likely will due to the need to offer something mainstream. But that's not what this current one is all about. There is very much a sense of pride with the 2011, which isn't something logic can overcome. Passion for a vehicle is what enthusiasts are all about.

2-09-2011 **Purpose, replacement.** There's only so much of that nonsense you can actually take. I waited though, hoping for an idea of the most elegant way to remind them of purpose... and the opportunity to use it in reply to an exceptionally desperate post. Sure enough, that patience worked out really nice: Do whatever it takes to distract from purpose, eh? Whatever. I've developed a tolerance for the spin & insults. They confirm expectations are not being met; otherwise, the response would be about them instead. Purpose for the new technologies is to replace traditional vehicles with something cleaner and more efficient. And there's only one way to fulfill that purpose: *SALES*. You can point out whatever fancy feature you want. In the end though, if it doesn't result in a sale, what difference does it actually make?

2-09-2011 **Purpose, discovery.** Design detail will continue to change the perception of new efficiency approaches, like Volt, over time. Though as we've seen so far, some enthusiasts will deny certain aspirations ever existed upon being proven incorrect. The latest example is discovering that the engine will start up repeatedly throughout the duration of your drive when the temperature is well below freezing. The assumption was that it would only happen once, then the waste heat from usage of the battery-pack would keep itself warm. That isn't the case... which messes up their "no gas" bragging rights even more... since preconditioning runs the engine too. Knowing that and the reality that both time & distance have a major impact on vehicle operation too, the hype completely falls apart. To further stress the discovery process, it's fascinating to point out that the PHV being tested now is actually the first generation rollout. What will end up being offered to the general public will be the second. Remember back in 1999? Toyota did the same thing with the "Original" model of Prius. What most people think of as the first was actually the second, now often referred to as the "Classic" model. Feedback from those first drivers provided valuable information about what would be beneficial to improve prior to the second phase of rollout. That's why the suggestion to study history is so important. You may discover something important sooner than others.

2-09-2011 **Mechanical, not Electrical.** Yesterday brought the conclusion of the research performed by NASA, attempting to find out the true source of those sudden-acceleration cases for Toyota. It was no surprise that they confirmed it was not an electrical issue. That would have been truly bizarre. For us to drive all those years without any trouble whatsoever, then getting a bunch of claims all at once from such a wide variety of vehicles. That goes way beyond coincidence. Of course, listening to the crazy 911 call of the most famous incident revealed how easy it would be to stage an event for attention or to redirect fault. Driver error is realistic. Physical involvement of the pedal is realistic too. Electrical was unlikely, since circuits are shielded and standards have been in place for decades. It's reasonable to think some type of power surge could have been the cause, but no evidence was found to support that. Experts from NASA performed many tests over the 10 months. They didn't find anything electrical. How do you think those who insisted that was the problem will respond to this news?

2-10-2011 **Getting Closure, part 1.** There are lots of newbies joining discussions now, most whom are completely unaware of anything that happened prior to 2011. So, there expectations are to find cheerleading. You know, the do-no-wrong & nothing-but-praise kind of posts. Instead, they see get some against-the-grain posts from people like me attempting to retain a constructive focus... which of course is followed by a few hostile responses. They find that bewildering. I find it a relief. Just like with previous fumbled rollouts of the past, those most upset feel the need to vent their frustration on an easy target before finally accepting their disappointment. It's pretty obvious too, since so much of those responses are filled with insulting language and personal attacks, along with some downplaying of outcome. That's a good sign. Let it out. Get it over with. Interesting part is, one such individual stated this before launching spewing his feelings: "*I know it won't do a thing for you, but it might make me feel better.*" And yes, this was the same person who had hoped for 60 MPG. So, you could imagine he had a lot to say about the situation.

2-10-2011 **Getting Closure, part 2.** Here's what I had to say in response to him, purposely sticking to facts and avoiding any expression of emotion myself: If that makes the situation easier to deal with, go ahead. Now being aware of the complexities from efficiency & emissions, that's probably the fastest way to get over the past anyway. SALES are what measure progress. That's what makes a difference. All of the plug-in vehicles will be judged that same way, especially since most automakers already had extensive motor & battery expertise prior to the recent rollouts. And there is work remaining still… 2013 a model of Volt with a PZEV emission-rating is expected to be available. 2015 the next generation of Volt featuring a more efficient engine and a much lower price is expected to be available.

2-10-2011 **Getting Closure, part 3.** I also responded to a newbie starting to ask the who's and what's about that rather heated exchange: I'm a frequent poster on record for stating concerns that the price, efficiency, and range targets were unrealistic for initial rollout… too little, too slowly… over-promise, under-deliver. Being vindicated comes with intense emotion… from those who disagreed with me in the past. $30,000 was a big hope. With a price like that, or even a few thousand more, it could reach a wide market. I argued for years saying that wasn't realistic. Finding out the initial price was significantly higher really upset those who had argued that wouldn't happen. 50 MPG after depletion never made any sense. If that could actually be delivered by the end of 2010, it would be a competitive choice by offering a second model with a tiny battery-pack. I stated it would actually be about 38 MPG. Sure enough, the EPA confirmed it. 40 MILE range year-round was the claim. I repeatedly stated how that couldn't be possible, pointing out how demanding use of the heater is. And we all know how that played out. Owners have overwhelming confirmed a range reduction from cold weather driving. In short, we're in an awkward position now. Frustration of having learned the hard way must be vented before being able to move on. And of course, shooting the messenger is often an effective release.

2-10-2011 **Autoshow Coverage.** This week, the big one is Chicago. Like most of the others, we get articles written by reporters... not journalists. When it comes to Prius, that's quite obvious. They spend a few minutes observing, then write about it. No research beyond that takes place. Because after 13 years... supposed experts in this field... since have no idea how the hybrid actually works. This time, it was: "*The Prius runs on electricity until it hits 18 mph, at which time an internal combustion engine kicks in.*" I know the observation was arbitrary. But I doubt any readers will question it. In fact, most will likely assume that cutover point, where all travel slower than 18 is always electric. In reality, it has been a mix of gas & electric or just electric alone all the way up to 42 MPH until 2009, when the threshold was then increased to 46 MPH. But it varies based on driving & vehicle conditions. It also varies by automaker. So, you'd think with the complexities & differences there would at least be a little bit of research. Nope. And sadly, there are some online who quote those articles as credible sources. Remember all the trouble we had in the past from that? It's what feeds greenwashing, providing the opportunity to mislead without drawing suspicion. To make matters worse, reporters are just reusing old reports about Volt now that it's available. And you guessed it, they state you'll get 40 miles per charge.

2-10-2011 **Hybrid Trucks.** Sales of Two-Mode never took off. In fact, the 2010 total for all 5 models from GM (Escalade, Tahoe, Yukon, Silverado, Sierra) was only 6,250 for the entire year. That's way under the margin of being profitable and far from revolutionizing the truck market... especially since 10,627 of Sierra and 28,172 of Silverado were sold in just January 2011. The Dodge Durango was dead on arrival. It was a terrible time for Chrysler/Dodge anyway. But since the United States government was offering $48 million of funding and the Canadian government $5 million to develop a plug-in model, the effort continued even though a non-plug version wasn't planned for production. The design ended up with a 12 kWh lithium-polymer battery capable of delivering up to 20 miles of EV. That's not too bad for a truck with a 5.7 liter 8-cylinder engine. But imagine the price for that! Needless to say, we got this message from the CEO of that division today: "*Truckers don't want to buy hybrids.*" So the best we'll ever see from that money is some prototypes. They don't have any intention of producing them for consumers. All along, we always knew the preference for trucks actually being used for utility are diesel. What could either a gas hybrid or a plug-in offer that would be both more appealing and cost-competitive?

2-11-2011 **Rollout Timing.** Looking at the schedule Toyota has, it's going to be quite a ride. Here, the price of gas is $3.19 and diesel $3.54 with the expectation to be much higher in the coming months. Fuel efficiency isn't being ignored as it had been in the past. How high of a priority it will become is the question. Prius-V will be rolled out this Summer. Prius-C should be next Spring. PHV will follow in the Summer. Consumers will see that as a consistent push for more efficient choices. It also sets up the timing of the next generation Prius well, giving the PHV an opportunity to become established prior to that next upgrade. Toyota stated other hybrids are on the way too. What will that do for the competition? Depending upon their stance, it could either open up opportunity for them to introduce their own models or feel like they are being forced to change.

2-12-2011 **Plug-In Decision.** We already know that Volt enthusiasts sway whichever way the wind blows, rather than standing firm with specific goals. The result is already mixed messages to consumers. Who exactly is that plug-in suppose to appeal to? It's quite clear who the market is for Prius; that's already well established. In fact, that's why a larger & smaller version are being planned. This should make the step up to the plug-in model just a matter of it being another package to choose from. Some of the misconceptions about EV now being dealt with should have settled down by then too. The heart of Prius is being a hybrid. Each generation uses electricity more than the prior. Seeing the advantage a plug offers shouldn't be that big of a deal... MPG will be higher. Of course, you know the competition will push the range as a shortcoming, despite the fact that it profoundly improves the current shortcoming of Prius now... efficiency of very short trips. What will the decision to purchase really be based upon?

2-12-2011 **Consumer Questions.** It's intriguing to read questions regular consumers are beginning to ask about plug-ins now. It's evidence we are finally beyond the hype. We're back to the most basic things, like: "*How easy is it to plug this into a standard wall outlet and is there an included accessory to do so?*" That begs the question of how long it will be before some start asking about electricity. For example, how come Volt uses a 16 kWh battery-pack to deliver 35 miles of EV yet there's just 3.5 kWh for EV from the PHV to deliver 14 miles? People like me are well aware of the HV requirements batteries must still fulfill after depletion and know that the approach is very different for those two plug-in hybrids. Volt shares the same pack for HV. Prius has another providing 1.6 kWh for just HV. Which is more efficient? Which will cost less? Which will last longer? It obviously gets very complicated trying to do comparisons, especially online where debates are vague & brief. There's new concepts to learn with too, like preconditioning. Questions are good. In the past, the enthusiasts drown out attempts at constructive discussion. Now, the real-world information is overwhelming their hype... leaving them with very little to respond with anymore. In fact, this is an entire post on the big GM forum today: "*Volt > Prius. End of story. Thank you for playing.*"

2-13-2011 **The Situation.** Here's what I posted today as a summary of what's been happening: Reading comments like "*cannot compete*" and "*old technology*" on this daily blog for Volt further reinforce the fact that enthusiasts are proud of the vehicle delivered. They are obviously quite pleased with how it works and simply don't share the concerns of others about price. We just keep getting "*it's worth the price*" comments. However, some of those others are regulars on the big GM forum, who currently see Volt as a niche and the need for scaling back the current design to bring price down enough to appeal to mainstream buyers. They want GM to move Volt beyond the halo status and aren't concerned about how it will affect the drive experience. In other words, while the enthusiasts are busy challenging posts from Prius owners, they have failed to notice GM supporters posting the very same thing. It's a repeat of problems from within we've seen before... the lack of agreement about goals. So, what happens now?

2-13-2011 **Spring Arrived!** Well, not really. But it certainly felt like it. Our taste of warm weather had finally arrived. It happens every February. We get a break from the severe cold. Sometimes, it returns afterwards. Other times, it ushers in the heavy & wet snow storms. This far north (Minnesota), we typically have the light & dry snow. It's great for Winter recreation. You rarely ever have to worry about rain. It's simply too cold for that. Well today, it was actually warm. I saw 42°F on the display. That meant time to open the roof... let the sunshine in and crack the tunes. Ahhh! That was absolutely wonderful. To think that it was actually 50 degrees colder last week. Supposedly, we'll be getting a few more days above freezing. Not a near record-high like today, but it's always nice getting to wash the crust of salt & sand off the Prius.

2-13-2011 **Geek-Mobile.** It's amazing how long it takes to figure out what the heck various people see. Sometimes, they genuinely mean no disrespect. But when they cannot articulate their feelings, you have to wonder. We've heard countless claims of Prius being ugly over the years, but oddly that never came with a reason why. For so many to not provide a description, you end up scratching your head bewildered. What was the common expectation they had which Prius did not fulfill? The latest attempt at an insult was the "*geek-mobile*" comment from the CEO of GM. Even the nature of that was never really determined. Why? How come some people agreed? For that matter, what was it that made Volt enthusiasts desire their vehicle instead? After all, shouldn't a supposedly futuristic vehicle look the part? Apparently not. It now seems as though the origin of the ugly claims stems from Prius not resembling a traditional vehicle. Who would have thought! Someone finally just blurted out that comment to me. They are actually expecting vehicles to retain the old-school boxy look with the rectangular light assembly in front. Unique new aerodynamically inspired lights and sloping body are not appealing to them, neither is cargo access that doesn't resemble a trunk. Makes you wonder what future vehicles will look like, not being able to take advantage of more efficient shapes.

2-14-2011 **Getting Absurd.** It may be more realistic at this point to say they're getting desperate. Some of the stuff being posted makes you wonder what in the world those not liking Prius actually think. This was my favorite: "*Prius is a mass market failure.*" How could a vehicle that's been in the top-20 sellers list (sometimes the top-10) here be considered a failure? Sales that high are something many vehicles never achieve. Then of course, I could point out how Prius was the #1 seller in Japan for 20 consecutive months. Ugh. Whatever. Another quote I'd like to point out is this: "*Have you forgotten that the Prius started at $40k when it first came out? $37k in 2003. Most would cost you at least $45k-$50k.*" It's hard to believe someone would attempt to rewrite history like that. Didn't he realize how easy it is nowadays to search for that information online? I only paid $20k for my 2001 and $25k for my well loaded upgrade in 2003. The ultimate though was this concluding phrase: "*...the fact the Prius is nothing more than just another car now.*" It's the compliment owner have been striving for. Prius has become ubiquitous. Yeah!

2-14-2011 **Honda Fit Hybrid.** Reaching the top-seller position is good reason to be proud. But with Fit, even in its domestic market, that seemed odd. How could such a small, practical, and affordable vehicle shoot from strong sales to #1 like that? The exact number was 14,873. That's substantially better than Prius with 13,711. Could it really have been just the government incentive alone? After all, that ended 4 months earlier. What the heck? Had Honda stumbled across some remarkable new way to appeal to consumers? What changed? Turns out, the situation wasn't that complicated. Last month was when the hybrid model was introduced in Japan and around half of the Fit sold then were that model. Ahh! When things don't add up, there's usually something important that hadn't been mentioned. That was most definitely the case in this situation.

2-15-2011 **Diesel & Hydrogen.** Neither one is showing much potential. Progress is extremely slow too. Spending lots of taxpayer money on research for them doesn't make much sense when there's the need for cuts to balance the budget... especially when plug-in opportunities are so much greater. The Obama administration is looking into phasing out that funding for diesel & hydrogen in favor of supporting electric vehicle efforts. The budget proposal also includes eliminating special "tax preferences" for oil & gas companies... which, believe it or not, would cost taxpayers more than $43 Billion over the next ten years. A proposed $588 Million would be used for electric (vehicles & infrastructure) instead, including a change from the current tax-credit to a point-of-sale rebate. Taking this stance sure supports the arguments that we are now seeing signs of peak oil. Change is coming.

2-15-2011 **Halo Vehicle.** I turned on the television at exactly the right time today. An hour-long special covering the autoshow in Detroit was just starting... and there was Volt, actually 3 of them. It was the centerpiece of the first 25 minutes of the show, in fact. The hosts began by pointing out the various performance aspects. No mention was made of the tax-credit though; price was simply listed with it subtracted out already. That's very misleading on many levels. But it didn't matter. They called Volt a "*plug-in hybrid*", then moved on to the pure electric vehicles. The segment concluded with Volt as well. I couldn't believe what they talked. The hosts stated Volt was a "*halo vehicle*", then went on to explain how it would sell in very low numbers and the purpose was to draw in consumers to the showroom to purchase something else. How about that? The downplaying of sales expectations is happening on several fronts now. So much for being a "*game changer*".

2-15-2011 **Daily Blog.** The enthusiasts for Volt thrived on it. That was their routine opportunity to discuss... stuff. The topic was rarely ever adhered to and it was common for the topic itself to not even be about Volt. It basically served as a mechanism for bonding them together, providing something to do while waiting. Constructive discussion was rare and got lost in the chaos quickly due to the lack of any thread structure. It was just a stream of posts listed together with only the day itself linking them. Well, now even that now looks like it will be lost. The webmaster has been working for a month to end the blogging and push people over to the forum instead... something which should have happened years ago. That way, everything is organized and can survive beyond just the daily attention. The announcement was made today that the website has been sold to the same business which operates the big GM forum. Interesting, eh? It gets better. Activity on that big GM forum has slowed down quite a bit over the past 6 months. Membership is now at 53,273. In the meantime, the big Prius forum continues to grow... now at 73,100 members! They've lost their leader and many of the outspoken have grown quiet as a result of the hype fading. So, it looks like they will be starting fresh. That could be a good thing. We'll see.

2-16-2011 **No Competition.** An ugly reality when it comes to the issues with Volt is that it's not a competitive design. For example, the upcoming HOV opportunity in California bases eligibility upon the same criteria as before... a minimum engine efficiency of 45 MPG and an emission rating of PZEV. They want to make sure when combustion takes place, it actually qualifies as clean. Prius does. Volt doesn't. So, GM is now scrambling to design one that is. Since we all knew about that criteria years ago, shouldn't it have been taken into consideration already? Another much bigger example is to offer a model which doesn't require a plug. As we see other automakers reach beyond 40 MPG with hybrids, how is a design heavily dependent upon plugging in going to compete? Cost reduction from higher production volume is a much greater challenge when there isn't a no-plug counterpart available. This is why one-to-one comparisons are a problem, they don't take the big picture into account. What about the business needs?

2-17-2011 **Civic-Hybrid.** Some detail was released today, following the reveal of the new body style. It's still an ASSIST hybrid, but efficiency will increase to a combined 45 MPG thanks in part to the switch to a Li-Ion battery-pack. It still won't be offered as a hatchback either, which is rather odd now that they are becoming so popular. Honda seems to be saving the large cargo area as a selling feature for Fit-Hybrid. With the non-hybrid (5-speed automatic) model of Civic offering 39c/41h MPG, its 30 more horsepower and lower price could make it too good of a choice... leaving the appeal of the hybrid as a big unknown. This newest generation still doesn't quite compete with what Toyota offered way back in 2003. This design won't be able to later offer a plug either. What are consumer expectations?

2-18-2011 **Uncertainty.** That daily blog came to a screeching halt, nothing new for 3 days. The attitude is grim. Heck, even the members on the big GM forum aren't interested in discussing Volt anymore. I tried provoking them too, responding to a claim 2 years ago which turned out to be blatantly incorrect... all hype. Speculation is growing that the GM did indeed deliver a vehicle they wanted to sell rather than what was actually needed. Remember how some have told me to be patient and I responded by pointing out the grading system? What GM built is nice, but doesn't actually fulfill requirements... like not adhering to the assignment a teacher gives you, hence a low grade. The website sale really stirs that message. Why would you work so hard for this moment, then leave when it finally arrived? We've seen this before. It's called disenchantment. That's when expectation aren't actually met. It's an uncomfortable position and the best thing you can do is just remain quiet. Based upon the lack of thread activity, that certainly looks like what has been happening.

2-19-2011 **Familiar.** Remember what happened as Two-Mode rollout progressed? We heard very little as hype faded. The same is happening with Volt now. The 647 supposedly sold over the past 2 months seemed to have a little ambiguity in the reports. You got the feeling some were only deliveries to dealers. But how many? Doing a search on AutoTrader last night, I came up with 164 Volts for sale. Huh? Wasn't the entire inventory already spoken for this year? If so, what's with them and accelerated rollout to other states? We're obviously not be told the whole story. What we are being told is quite familiar, just like that of Two-Mode. The highest priority for the next-generation model will focus on cost-reduction. The most promoted feature is "gas saved", which is very different from the amount actually consumed. It's not like we couldn't see any of this coming either. The same concerns & arguments from back then are surfacing again.

2-19-2011 **Trouble?** In the past, if you said anything negative about Volt you were either labeled as a "troll" or taunted for being envious. That's not the case anymore. The transition from hype to real-world observations has transformed attempts at constructive discussion to response with disgust. You now get labeled as a "GM hater" then disregarded. The only option available now is to wait. Giving GM a chance has become the theme. Even though concerns of price & efficiency have been confirmed, they see no need to put any pressure on GM to remedy the situation quickly. We are simply suppose to wait a few years for the next generation and hope for the best. In the meantime, there are supposedly enough consumers still willing to purchase with such volume that Volt can be competitive anyway. Claims like that sound like trouble, a new kind of hype emerging. What is realistic under these circumstances?

2-20-2011 **Winter Returns!** It's really getting ugly too. Our unusually long dry spell (3 weeks) went from sub-zero temperatures all the way to above freezing. It was a nice break from the inevitable heavy snowfalls we always get before Winter finally ends. Going out with a boom is the norm. Fortunately, it's still the weekend. But the forecast is for much as a foot and two inches have already fallen. The snow is quite heavy. Tomorrow's commute will likely be a mess. I never bothered to wash the Prius in the meantime. Looks like this clean snow will actually do that for me. Everything is white again. It could take awhile to get back to the clear roads we had become use to. Oh well. Eventually, I'll be able to open that roof again.

2-20-2011 **Prius Killer?** How could I resist bumping an old discussion asking such a question on the big GM forum? I posted: This thread began 1.5 years ago, a week after the infamous "*230 MPG*" campaign. People were expecting an affordable plug-in vehicle which could provide 40 miles of EV range and 50 MPG after depletion. Calling Volt a "*Prius Killer*" never made sense though, even back then. Many seemed to agree too. Trouble came from the hype that followed. There was a great stir from the rumor of Volt having a transmission with "*direct*" drive spoiling the purity hope. There was a huge controversy from the withholding of gas-consumption data from the "*Freedom Drive*" propaganda event. There was a major upset upon hearing the announcement of price. There was an outcry from not hearing any type of efficiency estimate until the very last moment before sales began. Each came with fierce defending prior to confirmation, then a whole lot of backpedaling afterward. The acceptance of a scaled-down version of Volt to reach a much lower price-point is slowly becoming a reality. The most effective approach may be by bumping these old threads back to active so people can reread comments from the past. Many seem to forget that history. The reminder of how & why things change can help. Downsizing is a big part of the market now. Approaches like Two-Mode were promoted to support this, but ended up not being effective smaller. Between higher gas prices and the need to meet upcoming efficiency requirements is forcing automakers rethink strategy and consumers rethink priorities.

2-20-2011 **Plural of Prius.** There was a big promotion online, getting people to vote for their favorite way of describing many Prius. For the past decade, the term had been just "Prius". That was the choice of Toyota, which many of the owners supported. We liked the nature of having singular & plural being the same. It was time for change though. After all, other hybrids will soon share the Prius name. Today, the results were announced. Over the past 6 weeks, there were 1.8 million votes cast. 25% was what it took to declare "Prii" the winner. That was followed closely by "Prius" with 24%. Next was "Priuses" getting 20%. Then came "Prien", which got 19%. The final choice was "Prium" at 13%. The tally was exciting, some many demonstrated interest. It's always good letting people express themselves with something like that. We like to participate. That's a good way to start out this new chapter in Prius history.

2-21-2011 **Arbitrary Purity.** The struggle for Volt enthusiasts has been to find a way of differentiating their plug-in hybrid from others. This originates from a conflict many years ago, back when GM shunned hybrids. Remember that "*stop gap*" nonsense? To avoid appearing hypocritical now, enthusiasts coined a new term. The argument for that was simple too. They just pointed out how Volt would never, ever have its wheels powered directly by the engine. Well, you know that turned out. The same is also the case for the "40 mile" range. With both of those purity criteria no longer available, they turned to acceleration & speed instead. Problem is, the devil in the detail. How much? We've played this game before. They state criteria that's arbitrary (not based on actual need), then increase it when that's delivered... intentionally preventing the goal from ever being reached. It gets to the point where there's no benefit anymore. So rather than focus on consumption & price, they end up just arguing semantics instead.

2-21-2011 **Turning Point.** More and more GM supporters are saying Volt came up short. They are tired of hearing that and hope admitting it will allow them to move on. Question is, to what? Leaving that as open-ended as possible results in no replies... which has leaves the opportunity for Prius attacks. Some simply don't want let go. The turning point won't come until then. It's hard for those few remaining to take that next step: "*Yeah, still better than Toyota pushing the Prius plug-in vaporware.*" At least with comments like that, it's easy to respond: Not even trying to be constructive anymore. Wonder what that indicates? The difference between the plug-in model Prius and Volt should be obvious at this point. Toyota is closely sticking to the price & performance goals. GM abandoned their goals, then discovered too late that was big mistake. So even before rollout began, there was already talk about what the second generation model must deliver. The situation is a mess now. They've got a vehicle the enthusiasts love and the mainstream regard as just a curiosity. In other words, Volt is a niche and GM is scrambling to figure out how to transform it without wrecking its appeal.

2-22-2011 **Winter Driving.** The return of the cold & snow sure was nasty. True, I enjoy the real-world opportunity to endorse the hybrid system in extreme conditions, but dealing with heavy & deep snow at each corner is rather annoying. You never know what will be waiting there for you. We got over a foot, so you can imagine how long it takes to get that all plowed well. You really don't want to stop in 8 inches of plow remains only to discover your attempt to go when traffic clears isn't going to be a rapid launch. But then again, it sure beats not going at all. With almost 35,000 on these factory tires now, the tread grip isn't exactly aggressive anymore. I let the traction-control do its job; though, I have been surprised to confirm how well PWR mode works for keeping momentum going in the first place. That works surprisingly well. MPG obviously plummets from that added demand. But the point is to get you from one point to another, which it does indeed deliver. I miss Summer!

2-22-2011 **Cost Perception.** What will the reduction for Volt make consumers think? Trimming off at least $7,500 won't exactly go unnoticed. How much change will that bring? Is that even enough to keep it competitive? The CEO suggested shooting for $10,000 lower. That makes sense too. If sales are a bit of a struggle prior to tax credit expiring, they could be more of a challenge later. But then again, the pressure from high gas prices could change the spending habits of those still buying monster-size SUVs. Of course, the loss of sales from them will push the need for profit to another source. What will that be? With so much resistance to offering a smaller battery-pack, will they shrink it anyway? After all, Toyota is still fully endorsing the hybrid approach rather than exclusive electric. It's taking advantage of both technologies. That "best of both worlds" approach works great when the system also offers engine efficiency notably higher than traditional vehicles. Since Volt's doesn't, that is a problem. Cutting back on trim-level only takes you so far too. How much does that transmission cost? With the much bigger electric-motors and power-split devices using clutches, that design isn't cheap. And even if consumers doesn't understand any of the technical aspects, will they notice how much different that second-generation is? Will that led to another "early adopter" phase?

2-22-2011 **Avoiding Times & Quantities.** As the hype for Volt fades, the final few attempt to spin what's left for attention while milking the only thing bragging point. I interjected with: "*Careful to avoid times & quantities. Typical vague response.*" They like when I chime in on that big GM forum. It gives them an excuse to pounce. That interaction had been quite beneficial in the past. It sometimes got them to reveal a detail they had been trying to conceal. But not anymore. The exchange of information flows the other direction now. It gives me an opportunity to recite goals, pointing out there are many requirements to achieve. That wrecks their cherry-picking, where they focus entirely on a single aspect of design. Anywho, I loved the response: "*Pot, meet kettle.*" The cliché was intended to make me appear hypocritical. Instead, I just pointed out all the goals again (as a subtle way of reminding them what Volt didn't deliver): 2012 mid-year; 20,000 produced; $30,000 or so; 3.6 kWh of EV capacity; 50 MPG after depletion; PZEV emission rating.

2-22-2011 **BYD Plug-In.** The upcoming F3DM model from BYD is starting to draw some attention. It expected to be the first plug-in vehicle available here from China. The size of the battery-pack and range expectation are the same as Volt, yet the price will only be $28,800. That really makes you wonder. The car itself is indeed stripped down to the basics. The engine is a 1.0 liter 3-cylinder, very much like the one originally planned for Volt. It's quite noisy. The switch to it was described as "*anything but smooth and subtle*". And the power is thought to be much less. In other words, this is the opposite extreme of what GM is offering. But with a price dramatically lower than the $41,000 base model for Volt. The plug-in hybrids Toyota & Ford are planning to offer will fit nicely in the middle. 2012 is when all are expected to be available.

2-23-2011 **Eggs & Basket.** Things took a turn for the worse today. The price of oil exceeded $100 per barrel. That concern of "*too little, too slowly*" became even more clear as a result. The ongoing downplay of Volt from a "*Prius killer*" and a "*game changer*" to a vehicle which needs a chance for early adopters to discover got ugly. Both the daily blog and the big GM forum made comments pointing out need quite unwelcome. Having no other option available (smaller battery-pack, no plug required, etc.) was adequate when the the price of gas was still tolerable. The rapid return of $4 gas isn't what they wanted to deal with so soon. To make matters worse, the timing well supports the upcoming new bigger Prius and the efforts of several automakers to deliver affordable plug-in hybrids. The Volt enthusiasts thought they had a lot more time. GM placed all their eggs in one basket. Not developing anything to compete directly with was a risk which shouldn't have been taken... and that's getting difficult to argue with now... especially if you want to avoid sounding hypocritical.

2-24-2011 **Let's Forget.** Pretend none of the hype for Volt ever happened and those still fiercely defending in lose their influence. What does a consumer see? And let's not forget, what does the consumer feel? After all, there is much emotion attached to the decision of which vehicle to purchase. Sadly, that often defies logic. It makes for quite a challenge to understand. But then again, in times of need consumers find it easy to become practical. So, wants give in to requirements. Knowing that, how would you respond to this: "*But, let's forget about those people for now and consider what the Volt is from an objective, scientific, useful standpoint. If you drive less than 40 miles per day, then you burn no gasoline at all.*" Does it resemble my reply: That's the problem. It isn't actually 40 miles and no gas. Winter delivers 25 miles and requires a small amount of gas routinely for warm-up. Summer still remains an unknown. The 35-mile estimate should be pretty easy without A/C. But with it running while cruising at high speed, what will range be? Unfortunately, science doesn't do a good job of factoring in the impact of price. That's a classic engineering verses business problem. How many consumers will do the math and deem the choice too expensive?

2-24-2011 **More PHV.** Looks like the tally is up to 160 in the United States now. The latest recipient was the South Coast Air Quality Management District (the San Bernardino area in California). They get 3. Unfortunately, that's the only information provided about this newest testing effort. The demonstration project as a whole is gathering a ton of real-world data from a diverse collection of driver. Not much has been shared yet though. Fortunately, we again got confirmation that the plug-in model still delivers 50 MPG after depletion (which I witnessed firsthand) and it will be "*a few thousand dollars more expensive than the existing Prius*". It sure is nice hearing that from Toyota. We also got a "*will go on sale early next year*" too. That correlates with the news of battery-pack production starting in the Fall. I can't wait to get mine. The time I spent behind the wheel of one last Summer holds vivid memories for me. In the meantime, it's watching the competition figure out what they'll offer.

2-24-2011 **Strange Times.** Just a few days ago, gas was $3.19 per gallon here. Now, it's $3.49 without surprise. We saw it coming. We also saw the fade of Volt coming. After all the awards encompassing the autoshows, then what? The enthusiasts lost their voice online. They've still got a forum, where great support as owners could be provided, but there isn't much interest. The desire is still for blogging. But support for that has been reduced. I hadn't expected things to play out this way. The timing is remarkably quick. It's amazing how quickly hype can vanish when such a variety of choices can be seen coming. The impression from consumers already seems to be one of expecting lower prices. Why pay so much when waiting just another year could bring something better? Each automaker will be offering new high-efficiency vehicles. There doesn't seem to be resistance anymore. Things have certainly changed. Seeing $4 gas again will shift the market, giving that extra encouragement that's always been needed. Heck, it should even make the "diluted" version of Volt easier for enthusiasts to accept.