The Alternative Line

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Dear friends; as this is being written, we have started a new millenium and it is mid January. My career has me working with GE Powerplant Engineering as a Global Sourcing Quality Engineer, so I get to travel all over the place and tell people what's wrong with their work. Nice job if you can get it. One result of that has been my greater awareness of the world's power grid situation. The past few weeks have seen reports of increasingly dire problems in California with the availability of electric power, which has culminated in daily outages for a substantial percentage of those folks, and the disruption that causes. I have also had the opportunity to see some of the third world (my daughter has a cow when I use that term – PC is "developing countries", which seems to me like they all have Kodak contracts, but I digress…), and realized how much we take our infrastructure for granted. Anyway, as you can imagine, developing added electrical capacity is not an overnight activity. Just think about the various environmental issues, engineering, site preparation, power lines, controls, systems and what-not, and frequency synchronization required to assure the electricity we so take for granted is available at the flip of a switch, and you begin to understand that California's electrical problem won't go away very fast.

There is no simple explanation for WHY they got in this situation, but a few things were key contributors. Basically, California tried like most of the country to deregulate the power industry. Unfortunately, they tried as well to be certain they offended as few people as possible, so they buried their heads and capped the sell price. Sadly, the cost for fuel in general, as well as the costs for all the transmission, EPA, legal actions, etc. were not so constrained. So there were not profit incentives to provide for the necessary upgrades, even while the demand for energy has never been higher as a result of the booming economy, especially in the high-tech Bay area most heavily affected so far. And it seems nobody thought about the consequences.

What has this to do with Porsche you ask? More than most of us realize. But to understand, you must retrace a little legislative and automotive history. At the start, Porsche AG built cars pretty much alike for the entire world, and pretty much whatever they thought people would buy. But over time, and led mostly by the USA, various countries have imposed increasingly stringent regulations on the automotive industry. Despite some countries actually exceeding US requirements (for example, the primary cause for the demise of the air-cooled 911 had less to do with exhaust emissions than with Swiss noise regulations – a water jacket absorbs a huge percentage of the db which would otherwise tip the scale), in one respect the USA is unique compared with the rest of the world. We stand alone in having more than a single specification within our borders. The cause for this can be defined in four letters; CARB. The California Air Resources Board, headquartered in the Los Angeles Basin, has dictated more stringent emissions requirements vs. what has generally been termed since as the "49 State" specs. We in CNY should be quite aware of this because an interesting situation developed about ten years ago. Several upstate counties in New York failed emissions checks by the EPA, which places remote monitoring devices strategically. It should be noted here that the selection of these sites, just like those for the NMSL compliance verification, is loaded with hidden-agenda malice, and political manipulation. In the case of the NMSL, these were used to confirm that at least 50% of the vehicles were traveling within the posted 55 mph maximum, since failure to do so would result in the loss of $ Billions of highway funding (taxes, taken from one person and redistributed politically to others – you know; collusion). So one result was draconian enforcement at those sites, even to the point of parking police cars just before the spot. Gamesmanship. The same is true for the interpretation from the EPA data. Such as blaming it essentially on automotive tailpipe emissions. At least I can take solace that the NMSL has been generally demonstrated to have had precisely the reverse of its intended result, as fatalities dropped an average of almost 30% when it was ABANDONED.

Anyway, EPA sought to impose tighter emissions specs on cars sold into the upstate NY market as a means to address the "problem". The absurd reality is that the real cause of the failures has little to do with local cars and much to do with New York being downstream of the prevailing winds from the industrial midwest, with their coal and steel production and fossil-fuel powerplants. Common sense (a TRULY uncommon commodity!) would otherwise expect that Manhattan would have worse air than Syracuse. But the reverse is true.

So EPA sought a solution. But that would mean multiple specs even within individual states. So the auto industry balked, and a compromise was reached. Since the USA already had a tighter emissions spec in California, it was agreed that there would be only the two specs; California and Other. But that has led to one very interesting unintended consequence; the appointed officials of CARB (surfers, I expect, based on their decisions) get to dictate what will be used in the frozen Northeast! And they also have imposed, and refuse to reconsider, a requirement that all makers selling in California in 2003 must sell 10% of their unit sales as ZEV, or Zero Emissions Vehicles. Let me tell you as an engineer; there ain't no such thing. At best, there is a NIMBY, or Not In My Back Yard. But the laws of entropy insist you get nothing for free. At the least, a ZEV as capably and commonly conceived today uses electrical energy stored in batteries to drive motors. But the electricity must come from SOMEWHERE. And it must be stored somehow for remote and movable access, and that means batteries. And THEY have a usable life of only about four years, at which time all those chemical poisons and what-not become pollution to the drinking water, if not the air. And what about the electricity? It will be generated by powerplants, located outside the LA Basin perhaps, but which are being allowed to buy older cars rather than required to actually clean up their smokestack emissions. And, of course, Michigan will continue to produce plenty of Stupid Urban Vehemouths, and let the smoke drift downstream to us, because the WIND takes Detroit air directly to… CANADA! Where the EPA doesn't have to measure!

Does anybody reading this have any idea what kind of travel duration can be expected from a battery vehicle when more than half its energy must be used as heat to defrost the windshield, a process in an internal combustion engine (EVEN an air cooled one) which is simply WASTE product? And, given the fact that there are two VERY nice hybrid compromises on the market, from Honda and Toyota, one would think the CARB would get a little more pragmatic? NFW, according to them. Anything more than ZERO is simply not ZERO. No joke.

But maybe there is justice, if only poetic. I can't wait to see how many of those 10% ZEV's can actually get fuel. I predict something slightly above Zero. Because anyone with $3000 can buy a 50 Amp Onan generator which runs on the fuel they can still pump from the ground in California. Only trouble is, it doesn't meet California emissions. Who knew? Get yours now before they run out.