

## ***Imagine if gas cars were "new" tech...***

I often wonder what would happen if EVs had the same 100 years of constant development and refinement behind them as have the internal combustion engine powered cars. Imagine that today's EVs were capable of 400+ miles of range, phenomenal performance (don't need any more development for that!) and capable of quick recharge (ah, don't need much development for that either - just deployment if we determine it is worth the effort and expense).

Assume that the money spent on gas stations over the past 100 years had instead been spent on charging infrastructure - and we had quick chargers every 10 miles on the interstates, plus in every large municipal parking facility. Mechanics had been tooled and educated for battery maintenance. Our energy all came from renewable sources, so we were energy independent and our air was squeaky clean.

Then, suddenly, in 2010, some crazy guy has the idea to introduce a new type of vehicle. The Gasoline Car! What would the public conclude after hearing the following key features from the press?

- The car is powered with gasoline, a toxic, volatile, flammable, carcinogenic liquid fuel.
- Drivers have no control over where the oil to make the gasoline comes from, its supply, or how much it costs.
- The USA uses our tax money to keep our oil "rights" secure.
- Gas car drivers are prohibited from fueling their cars at home, and must drive to a special location for this service.
- Drivers must stand around at this "station" while the tank fills... and not smoke, or create static electricity, and try not to drip any on their hands or shoes.
- There are so few gas stations that the cars are not practical for long trips.
- Expanding the fueling infrastructure will cost billions in tax dollars.
- The price of the fuel changes daily, for no apparent reason and with no advance warning.
- The fuel for the car is 10 times more expensive (and rising) than the electricity that drivers have been using.
- Only about 15% of the energy in the fuel goes into pushing the car down the road. The rest is lost in noise and heat and in forming pollution.
- All fuel at the gas station must be delivered by huge (fuel-burning) trucks with which drivers will be sharing the freeway.
- Drivers cannot make their fuel at home from the source they choose.
- The fuel spoils in storage, and there is no safe way of disposing of "sour gas."
- Drivers will have a constant fear of "running out of juice," as well as exploding into a huge fireball.
- The car requires regular, expensive maintenance to keep it running correctly; oil changes, plugs, filters, etc.
- The cars make noises even without moving. Special silencers are required just to make the cars acceptable on residential streets. The blind LOVE these cars, but are confused about the silencers.
- The cars spew exhaust that is toxic to everything that lives.
- Rescue personnel may leave a trapped occupant to die instead of risk the hazard that spilled gasoline would present at an accident site.
- EV technicians do not know how to work on these cars, so the danger of being stranded after a breakdown is significant.

- The technology is untested, and relies on so many high-precision mechanical parts to work perfectly together, that the chance of breakdown is significant.
- The cars get worse gas mileage and pollute more as they age and wear.
- The cars are difficult to start on a really cold morning... unless the car is kept plugged in over night (finally, something familiar!).
- Lubricating oil must circulate, and the engine must warm up before full power of the engine can safely be used.
- The car must have a transmission that changes gear ratios constantly to give you enough power to drive confidently.
- The car will have NO torque at zero RPM and a complicated clutch mechanism is required to get rolling.
- When slowing, 100% of the car's kinetic energy is wasted to heat instead of used to refill the car's fuel tank.
- The car will continue to burn fuel and pollute even while stopped in traffic.
- The car needs to be kept running if the occupants just want heat or AC
- The cars eventually leak oil on the garage floor and on the roads... and runs into the storm drains.

Quick! Get on the list to buy one of the first units!