

The 'Battery Fairy' and other Delusions with Electric Cars



americanthinker.com/blog/2021/02/the_battery_fairy_and_other_delusions_in_the_demand_to_replace_gasoline_powered_vehicles_with_electric_cars_and_trucks.html



I continue to be amazed that serious people think gasoline powered vehicles can be completely replaced by electric vehicles in a decade-and-a-half, and that this would be a good thing, even if possible. Under threat of government action, however, the world's major auto manufacturers are falling in line boosting production of plug-in models, and upstart Tesla Motors is now the world's most valuable auto manufacture, based on the value of its capital stock issued and in the public's hands. Mary T. Barra, CEO of General Motors, has pledged to sell only zero emission vehicles by [2035](#). That would meet the deadline imposed by California Governor Gavin Newsom, who signed an executive order banning the sale of internal combustion vehicles in the nation's largest car market by 2035.

Charging electric cars at work makes sense, as it requires several hours.
But what if you want to drive on a long trip?

GM, rescued from liquidation courtesy of US taxpayers (and bondholders who were cheated out of their place in line as creditors by the Obama administration), may simply be sucking up to governmental power. But Akio Toyoda, CEO of Toyota Motors, the world's largest (or second largest, depending on the year). and grandson of the automaker's founder, has spoken out and called out fallacy of thinking that this is possible or desirable. [I must here disclose that I was a consultant for a Toyota company for several years, but that all my comments on the company here are based on publicly available information.]

According to this account in [CarBuzz](#):

As the grandson of Toyota founder, Kiichiro Toyoda, the scion was raised surrounded by all aspects of the auto industry and his business acumen is second to none. So when he had some harsh words for electric vehicles at the Japan Automobile Manufacturers Association end-of-year press conference last week, people took notice.

The Wall Street Journal was in attendance and noted the CEO's disdain for EVs boils down to his belief they'll ruin businesses, require massive investments, and even emit more carbon dioxide than combustion-engined vehicles. "The current business model of the car industry is going to collapse," he said. "The more EVs we build, the worse carbon dioxide gets... When politicians are out there saying, 'Let's get rid of all cars using gasoline,' do they understand this?"

Studies detailing the carbon emissions necessary to manufacture an electric vehicle reveal that on a net basis, there are more emissions for vehicle bought and used for its expected lifetime, than would be generated by buying and using a conventional gasoline-powered vehicle.

Toyota can certainly make electric powered vehicles. It introduced the hybrid Prius, after all, and has a strong position in that market. Toyota's mastery of the discipline of mass production of vehicles is such that it could do well no matter what power source is used. But the costs of complete conversion to electricity-powered vehicles are mind boggling.

Where will all the electricity needed to power to entire fleet of cars in the US (or Japan) come from? Despite the fantasies of greenies, it won't be from windmills or solar farms. They are too unreliable, take up too much land, and cost too much. Right now, it is coal and natural gas that produce the most electricity at the most reasonable cost. And they emit CO₂. Plus, there is considerable loss of power due to resistance in the transmission lines, requiring an even greater amount of gross power before the net power reaches the battery in the vehicle, charging at the user's home or some other location. Nuclear power does offer some potential, but how many people want to live near the hundreds and hundreds of nuclear power plants that would be required to fuel the nation's vehicles?

Then there is the small matter of batteries. The very large batteries needed for electric cars use lots of expensive lithium (and some other rare elements) whose supply is limited, and whose mining requires lots of scarce water. In fact, powering the world's vehicles by battery is simply impossible, given the limited world supply of lithium, as this [clever post](#) by Powerline's Steve Hayward makes clear. The title gives away the punchline:

WHO WILL TELL THE GREENS THERE IS NO BATTERY FAIRY?

For the longest while I have been asking, “Where do environmentalists and Democrats think all these batteries for our oil-free transportation fleet are going to come from?” It seems they think there is a Battery Fairy out there somewhere who will magically supply the ginormous battery capacity, and additional supply of electricity to charge them, in order to deliver us to our blessed fossil-fuel-free future.

He cites an article in Wired, [The Spiraling Environmental Cost of our Lithium Battery Addiction](#):

But there’s a problem. As the world scrambles to replace fossil fuels with clean energy, the environmental impact of finding all the lithium required to enable that transformation could become a serious issue in its own right. “One of the biggest environmental problems caused by our endless hunger for the latest and smartest devices is a growing mineral crisis, particularly those needed to make our batteries,” says Christina Valimaki an analyst at Elsevier. . .

It’s a relatively cheap and effective process, but it uses a lot of water – approximately 500,000 gallons per tonne of lithium. In Chile’s Salar de Atacama, mining activities consumed 65 per cent of the region’s water. That is having a big impact on local farmers – who grow quinoa and herd llamas – in an area where some communities already have to get water driven in from elsewhere. . .

Two other key ingredients, cobalt and nickel, are more in danger of creating a bottleneck in the move towards electric vehicles, and at a potentially huge environmental cost. Cobalt is found in huge quantities right across the Democratic Republic of Congo and central Africa, and hardly anywhere else. The price has quadrupled in the last two years.

I am glad that some grownups are pointing out that the electric vehicle conversion emperor has no clothes on. But that hasn’t stopped governments, manufacturers, and investors from pretending that electric vehicles are our only future.

As Herbert Stein famously said, *"If something cannot go on forever, it will stop."* We’re only beginning to discover that about the pipe dreams of an all-electric vehicle future.