

Townsend, Erle

From: William Piombino <bpiombin@maine.rr.com>
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To: DEP Rule Comments
Subject: Comment on Chapter 127-A: Advanced Clean Cars II Program (Reposting)

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I would respectfully like to comment on this proposal. Electric vehicles are not yet appropriate for a rural state or area such as Maine. As an engineer, I fully understand the advantages of electric motors versus internal combustion engines and they are significant. However these advantages can not yet outweigh the disadvantages, specifically:

1. Cost, both original purchase and eventual battery replacement. Without the federal subsidy, electric vehicles have declined significantly.
2. Limited charging stations and limited range, making it difficult and inconvenient for trips longer than local trips. Charging is time consuming if you can even find a station, especially in remote parts of the state.
3. Social and environmental impact of mining for metals, metal refining, battery manufacturing and disposal. The total environmental impact needs to be addressed, not just part of it.
4. No effect on climate change until the amount of reliable energy produced by means other than fossil fuel surpasses fossil fuel. Nuclear and hydropower are such sources. Wind and solar do not pass the reliability test yet and come with their own significant environmental impacts. Again, consider the total impact, not just one isolated piece of it.

In 2022, 4,231 billion kilowatthours (kWh) of electricity were generated at utility-scale electricity generation facilities in the United States. 60.4% of this electricity generation was from fossil fuels—coal, natural gas, petroleum, and other gases. 18.2% was from nuclear energy, and 20.3% was from renewable energy sources.

Data from U.S Energy Information Administration (eia) . <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3>

So 423 billion kWh of non fossil fuel electric power generation is required to be built and put on line before there is a net positive impact from electric vehicles by moving fossil fuel power generation under 50%. This assumes that the total power needs of the U.S. Don't grow beyond 2022 levels and the 423 billion kWh is online 100% of the time. In reality, you probably need more than 500 billion kWh of capacity to deliver 420 kWh 365 days of the year .

We aren't there yet. It will be interesting to see what 2023 full year data reveals and we should look at the historical trends from last several years. Based on historic trajectory, when does fossil fuel generation fall below 50%. As you are well aware, there has been a multi year battle in Maine to bring down Hydropower from Quebec. Such headwinds do not help the cause of reducing fossil fuel usage, it only exacerbates it.

Thank you for the opportunity to comment

Regards,
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