



TO:
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Office of Legal Affairs
New Jersey Department of Environmental Protection

Comments on Adopting Advanced Clean Car Rules II

About Unitarian Universalist FaithAction NJ

Unitarian Universalist FaithAction NJ is a faith-based group that affirms the worth and dignity of every person and respect for the interdependent web of all existence of which we are a part. For these reasons, we are especially determined to make sure that state policies support good health and quality of life for all people, living beings and natural systems in New Jersey.

Comments

The presence of pollutants from industrial facilities and vehicle emissions is a serious challenge to health in New Jersey. Pollutants increase the incidence of both heart disease and cancer, the leading causes of death in New Jersey. These conditions are so serious and persistent that New Jersey is often referred to as a "Cancer Alley". In recent years, COVID has become a leading cause of death and is strongly related to levels of pollution. In addition, greenhouse gas emissions promote climate change, which also threatens health and life now and in the future

We strongly support the Advanced Clean Car II (ACC II) rules, primarily because they will reduce greenhouse gas emissions and accompanying pollutants and will do so sooner rather than later.

We strongly support the immediate adoption and implementation of the proposed Advanced Clean Car II (ACC II) rules as a critical part of a series of policies and actions to improve the health of NJ and to address the current and future climate crisis. Delay of this rule and delay of widespread adoption of advanced clean cars in New Jersey will hurt the health and daily functions of people, living beings and natural systems. Other reasons for supporting it include reducing the overall cost of transportation by converting to electricity and reducing dependence on unreliable foreign sources of oil and gas. Electric vehicles are less complex and thus less costly to build and maintain. Also, using electricity is more efficient than using fossil fuels.

Many specious arguments have been made against ACC II. Most are summarized in the NJBIA's comments on this regulation. As a further show of our support for the immediate adoption and implementation of these rules we will correct the false statements that have been offered up to oppose the rules.

- 1) **Higher cost of cars.** It is widely believed that electric vehicles are more expensive than internal combustion engines, but this belief is just a delusion.

The focus on vehicle purchase price intentionally ignores the cost of health care to families and the insurance system as a whole due to increased cancer, increased heart disease, and loss of work and school days from asthma attacks. The focus on purchase price of vehicles also intentionally ignores the cost of recovery from increased and more frequent pollution-fueled disasters such as hurricane Sandy, flooding, and forest fires. In addition it purposely ignores the cost to NJ economy and tax base from extreme weather conditions such as effects on tourism industry such as shore tourism.

The cheapest gas powered car in the US available in NJ in 2023 is the Nissan Versa S. It is listed in Car and Driver as costing \$17,075. The cheapest electric powered car available in the US in NJ in 2023 is the Chevy Bolt EV LT cost 27,495 according to Car and Driver. However, the electric car costs the buyer **less** than the gas car because they could be eligible for a \$7,500 federal rebate; plus a \$4,000 NJ rebate; and \$1,821.54 elimination of NJ sales Tax. The net effect is that the electric car could cost the hypothetical electric car buyer \$14,174 vs. \$18,206.21 to purchase the gas car. This example doesn't even look at the lower cost of operations and maintenance for electric vehicles. These figures will vary depending on the specifics of the situation.

Looking at averages and broader statistics there are many differences and details that can be drawn as to cost of purchase. Yes, the current average advanced car purchase price is higher - \$4600 higher, on average - but that's more than compensated by savings on fuel, which would average about \$600 a year, with a payback period of 10 years using a discount rate of 5.5% (the current Federal discount rate). It's also more than compensated by the \$7500 in rebates available from the Federal government for qualifying electric vehicles, the sales tax exemption and the up to \$4,000 rebate from the state of NJ. Furthermore, the average purchase price is biased by the prevalence of luxury cars being sold in the electric vehicle market - Tesla sells more than half of the electric vehicles sold in the US.

- 2) **Increasing price of electricity.** The intuition is that an increase in demand for electricity will increase the price, but that depends on many other factors, in particular, how much of the electricity is produced from renewable sources. Numerous scholars have looked at the impact of renewable energy on the electricity market¹. They find that because the marginal costs of renewable energy are close to zero, an increase in renewable energy generation shifts the supply curve to the right, thereby lowering prices. Also, even if the price of electricity should increase due to increased demand, that is more than offset because consumers no longer need to pay for fossil fuels. A more accurate comparison of prices would compare the total cost to consumers of energy from all sources.
- 3) **Lack of market for electric cars.** The letter from Ray Cantor points out that of 7,000,000 vehicles in NJ, fewer than 100,000 are electric, or only slightly more than 1%. But in NJ, in 2023, the number of new EVs sold was 32,000 out of a total of 500,000 new cars sold, or about 7-8%. Each year since 2014, about 1.35 times as many new EVs were sold as the year before². If that continues, by 2032, all new vehicles sold in New Jersey would be EVs, illustrating once again the power of compound interest. Furthermore, by far the most popular luxury cars are electric, in particular, they are Teslas (28% market share). In other words, people who can buy whatever car they feel like tend to buy electric. This suggests the market for EVs will continue to be strong.

The major vehicle manufacturers have announced that they are going to produce the majority of their cars as advanced clean cars by 2035 The market will have more choice driven by the auto manufacturers themselves.³

- 4) **Loss of jobs.** The real question is not whether jobs will be lost in specific energy sub-sectors, but whether they will be lost in the energy sector as a whole. Clearly, jobs will be lost in motor vehicle maintenance, since EVs are so much simpler than ICEs, and also in fossil-fuel based market sectors, but there will need to be many more jobs in the solar and wind industries, which are growing rapidly, and in the energy transmission, switching, and storage industry. In fact, according to NJ Spotlight, "the clean energy sector is adding jobs 53% faster than the rest of the economy. The largest jobs growth occurred in clean-vehicle manufacturing, which added nearly 50,000 jobs

¹ <https://www.sciencedirect.com/science/article/abs/pii/S0140988319303275>

² data from <https://dep.nj.gov/drivegreen/nj-ev-data/>

³ <https://www.consumerreports.org/cars/hybrids-evs/why-electric-cars-may-soon-flood-the-us-market-a9006292675/>

and outpaced the gas- and diesel-powered vehicle industry by more than 250%.”⁴ It should also be noted that NJ has no vehicle manufacturing plants, however NJ will have increased local jobs created by local solar, wind, energy storage, and grid related jobs. Shifting to renewables will actually increase jobs in NJ.

5) **Reduced grid reliability and inadequate charging infrastructure.** Change always creates risk, but will the change due to use of different methods of power generation be more risky than the change due to the changing climate? New Jersey has already seen more than \$37 billion due to Hurricane Sandy alone⁵. Flood, wind, and fire damage from other catastrophes just increases that. However, in spite of the difficulties of changing our energy sector, New Jerseyans are good at managing change. Change invites innovation, and New Jersey has been a leader in innovation in the world, starting with Hamilton’s development of manufacturing around the Great Falls in Paterson, continued by Thomas Edison, and thousands in the pharmaceutical industry and at Bell Labs. This is a grand opportunity for New Jersey to continue its tradition of innovation by supporting research into management of distributed energy, methods for storing energy, and methods for obtaining stored energy for vehicles. New Jersey should consider establishing research groups and incentives for research and business development in these areas.

6) **Dependence on foreign sources for raw materials for batteries**

Current high density battery technologies rely on limited raw materials such as lithium. Due to a recent discovery in the US,⁶ we will not be as reliant on foreign sources for lithium, and worldwide costs may actually decrease. However, lithium extraction creates both environmental and human problems that need to be addressed. Some alternatives, such as hydrogen fuel cell technologies that rely on limited raw materials such as platinum and palladium, raise similar issues. Innovations in battery technology using more common, safer materials would be helpful, and research and development is under way to replace and exceed these technologies and limits.

High energy density batteries dependent upon rare materials could become a thing of the past without any major science breakthroughs as the vehicle fleet becomes dominated by electric vehicles and financing and manufacturing opportunities arise such as battery leasing; fast swapping systems⁷; and redox flow “liquids at the pump”. Such approaches could support the continuation of New Jersey’s locally operated “gas” stations businesses serving the electric vehicle fleet in a new form.

Respectfully Submitted on behalf of
Unitarian Universalist Faith Action NJ
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Charles Loflin, Executive Director

⁴ <https://www.njspotlightnews.org/2023/09/clean-energy-jobs-powering-growth-in-national-economy-and-nj/>

⁵ <https://www.nature.org/en-us/about-us/where-we-work/united-states/new-jersey/stories-in-new-jersey/sandy-one-year-later/>

⁶ <https://m.economictimes.com/news/new-updates/game-changing-lithium-deposit-unearthed-in-nevada-oregon-border-region/articleshow/103685451.cms>

⁷ See for example US Patent 445040400A Inventor Marion V. Gwyn Abstract: “A system for replacing electrical batteries in electrically powered vehicles in a minimum period of time on the order of one minute or less.... The system enables a substantially discharged battery to be removed from a vehicle and replaced with a fully charged battery in a very short time, e.g. about one /minute.” Note patent expired 2001/12/04.