

I totally object to Delaware adopting the California Advanced Clean Car II rules (herein called the Rules or Rule) for several reasons.

- 1) If all US climate policies in the most optimistic circumstances were fully achieved and adhered to throughout the century, this will reduce global temperatures by .057 degrees Fahrenheit ( Bjorn Lomborg, Copenhagen Consensus 2023). Clearly the adoption of the Rules will have an even more negligible effect on reducing global temperatures, undercutting one of the stated reasons for the Rules, reducing the impacts of climate change.
- 2) In 2022 the average price of an electric vehicle was \$61,488 versus \$49,507 for a gasoline powered vehicle (Kelly Blue book, Feb 14, 2023). This Rule will place an undue financial burden on the citizens of Delaware. In addition, there is no guarantee that tax credits or rebates for electric cars will continue in the future to slightly offset these burdensome additional costs.
- 3) Ford motor company's electric car division projects a loss of 3 billion in 2023 after losing 2 billion in 2022 (Fortune Magazine, March 24, 2023). Clearly, electric car production is not a sustainable enterprise. While Tesla has been profitable, its stock value plummeted by 700 million last year ("Tesla's Profits Soar to a Record Level but Challenges are Mounting", NPR business January 25,2023) a future sign of market and technological uncertainty. Obviously, the proposed rules represent wishful thinking regarding the future availability of electric vehicles.
- 4) Batteries require several key elements, namely lithium, cobalt, manganese, graphite and nickel which would require enormous amounts of these elements. This would require a dramatic increase in mining, processing, and transporting and the subsequent environmental impacts. In addition, the poor environmental disposal practices for lithium continues to plague the industry. (What Materials are Used to Make Electric Vehicle Batteries ? AZOM Newsletter, Nov 2 ,2022, Blaise Manga Enuh Ph.D. <https://www.azom.com/article.aspx?ArticleID=22142>). None of these elements are available in significant quantities in the United States.

China, which is increasingly becoming a threat to democracies around the world, has control of 80% of the processing capacity of these key elements and is the largest producer of graphite. (<https://www.mining.com/web/ranked-top-25-nations-producing-battery-metals-for-the-ev-supply-chain>). Adopting these rules, mandating electric vehicles, would necessitate obtaining the key elements from China thereby enriching China, and would negatively impact national and world security.

The Rules are obviously short sighted and do not take these global issues regarding the availability of key elements and national and world security and into account.

- 5) Public acceptance for the purchase of an EV is tepid at best. According to a recent gallup poll (March 1,2023) while 43 % of US adults *might* consider purchasing an EV, 41 % *unequivocally* would not. Several reasons for not purchasing an EV include the lack of charging stations, range anxiety, charging time, lack of services for repairs, power outage, grid concerns and inadequate performance in extreme temperatures ( "Survey Finds More Americans Unlikely to Consider an EV " ,Medora Lee 5/9/2023 USA today ) The proposed Rules do nothing to address these valid concerns.

- 6) The Rules are also based on the false narrative that the implementation will improve air quality. Yet, according to the Delaware Annual Air Quality Report of 2019, Executive Summary “In 2019 all pollutants except ozone are below the national air quality standards. Concentrations of air toxics in Wilmington continue to show generally low or declining levels. As measured by the air quality index (AQI), there are only a few days that fall into the category of moderate or unhealthy for sensitive populations. **Continuing recent trends, the number of days with good air quality continues to increase.** (emphasis added). Since good air quality will constantly increase without the Rules, the Rules are completely unnecessary.
- 7) Moderate Non attainment for ozone and reducing NOx and VOC to meet EPA dictates is stated as a reason for imposing the Rules. Yet, there is substantial information indicating that trees can and do reduce ozone and other contaminants, and some references are noted below:
- Ozone Removed Annually by Tree Cover, Enviro Atlas Fact Sheet July 2020  
[www.epa.gov/enviroatlas](http://www.epa.gov/enviroatlas)
  - Ozone Reducing Urban Plants:Choose Carefully, Science, August 5,2022 Vol 377 Issue 6606
  - Air Pollution Removal by Urban Trees and Shrubs in the United States, Urban Forestry and Urban Greening 2006  
[https://www.fs.usda.gov/ne/newtown\\_square/publications/other\\_publishers/OCR/ne\\_2006\\_nowak001.pdf](https://www.fs.usda.gov/ne/newtown_square/publications/other_publishers/OCR/ne_2006_nowak001.pdf)
  - Air Pollution Removal by Urban Forests, National Park Service,  
<https://www.nps.gov/articles/000/uerla-trees-air-pollution.htm>
  - Air Quality Effects of Urban Trees and Parks , National Recreation and Parks Association, 2010 <https://www.nrpa.org/globalassets/research/nowak-heisler-research-paper.pdf>

Delaware should embark on a **serious investigation** to use trees to reduce air pollutants. This investigation, as a minimum, should include a thorough literature search, first order calculations, and developing pilot programs including monitoring and modeling necessary to investigate its efficacy. If this proves to be an effective strategy, it should be proposed to the USEPA. If it is rejected by the USEPA, then their rejection should be challenged in the courts.

Thank you for your time and consideration.

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