

Subject: Stop the proposed Delaware Electric Car Mandate

Date: Wednesday, April 26, 2023 at 3:09:43 PM Eastern Daylight Time

From: Donald Nayden

To: HearingComments, DNREC (MailBox Resources)

CC: Donald Nayden

April 2, 2023

Dear Governor John Carney and Secretary Shawn Garvin,

I am 71 years old, retired, and my wife and I have lived in New Castle County for the last nineteen years. I grew up in Maryland and we have lived and worked in Ohio, Ottawa Canada, and Maine between 1996 and 2003 before moving to Delaware.

I am writing you today to let you know that I strongly oppose the proposed Delaware Electric Car Mandate and explain my opposition.

First, I believe government mandates should be limited to, and restricted by law, for emergency situations that require near-term, government controls to protect the safety and well-being of the population. Examples would include extreme weather events, an outbreak of disease, and maintenance of law and order in the event a civil disturbance or urban riot. All other laws, restrictions, regulations, etc., should follow the legislative process that include public hearings, debate by representatives, and senators, and approval by the voters at the ballot box.

Second, Delaware ranks 45 among all states in the number of automobiles registered. Government provided data shows that all ten of Delaware's air monitoring stations have met or exceed Federal Clean Air standards since 2017. The one exception was the short-term, trace amounts of pollution from the smoke caused by the forest fires in the Western states last year. Clearly, the push for EV's in Delaware is NOT to control carbon emissions from gasoline powered automobiles. Additionally, government studies of air quality were conducted during the recent pandemic and mandated shutdown of businesses and schools to prevent the spread of Covid-19. The fifty percent reduction in commuter traffic measured only a *three percent improvement* in the quality of the ozone layer. A Delaware ban on the sale of combustion engine vehicles will have almost no impact on the improvement of air quality in Delaware but will double the cost of vehicle ownership and auto insurance for Delaware vehicle owners.

Third, based on the Secretary's brief overview of the proposed Delaware Electric Car Mandate at a town hall meeting on March 30, it is high unlikely that the infrastructure required to support the Mandate could be implemented by 2035. The time, effort, and funding to implement the upgrades, and in some cases, the complete replacement of power system sources, is far beyond the twelve-year target for the Mandate.

The Pacific Gas & Electric Company provides natural gas and electricity to over 16 million customers in Northern and Central California. That's 43 percent of California's 39 million residents. Every summer, without fail, PG&E advises its customers to reduce their use of electricity when temperatures reach the mid-ninety-degree level or above. PG&E power stations and distribution network cannot meet peak demand requirements. According to published reports as of June 2022, California leads the nation with 39 percent of the nation's registered EVs with 563,070 units. Delaware, by comparison had 3,010 EVs registered as of June 2022. California's legislation to ban the sale of new gasoline powered automobiles starting in 2035 and promotion of EV use is astounding when PG&E cannot provide 16 million customers reliable electricity to run their refrigerators, air conditioners, and television sets. Furthermore, PG&E's own data shows that their power substations had an average age of 60 years, fully 20 years older than the typical electric utility service. Other PG&E equipment averaged 53 years in age, 18 more than the industry average. PG&E is currently trying to exit bankruptcy and does not have the capital to replace its aging infrastructure. This situation will make a great Hollywood disaster movie someday.

Fortunately, here in Delaware, Delmarva Power has successfully reinforced the local energy grid, add new

technology and smart devices, and target projects to increase resiliency and reliability by 47 percent over the past 10 years.

Fourth, Consumers look at costs. Purchasing a car or light truck is generally the second largest cost for consumers after the purchase of a house. The same can be said for those who rent or lease a house, apartment, or condo. The Tesla Model Y is the best-selling EV in the US and has a list price of \$66,000. That is twice the cost of a 2023 Toyota Camry at \$31,000, or a 2023 Honda Accord at \$33,000, and about 40 percent more than a Mercedes Benz C-300 at \$46,000. The Camry, Accord, and C-300 will last far longer and run twice as many miles than any EV made today. And all of these gas powered cars have no issues operating in winter temperatures below 20 degrees Fahrenheit. Consumers would be wise to check auto insurance rates before purchasing an EV. Forbes Advisor reports that the average annual auto insurance premium of a 30-year old driver with a new 2023 Tesla Model Y is \$2,648 or \$220 per month. Rates vary by state. I am currently insuring *three* gas powered autos in Delaware for \$215.75 a month.

Fifth, EVs have, at a maximum, two-thirds the range of travel when compared to gasoline and diesel-powered vehicles, and that is under ideal conditions. EV batteries, like all batteries, have a finite life and deteriorate over time. The battery life depends on the size, daily usage, load demand, charging cycles, external and internal temperature variations, accessory usage, and other factors. EVs are no match when compared to combustion engine vehicles used for traveling distances of 300 miles or more, travel in extreme weather conditions, and passenger and cargo capacities that exceed EV specifications. Battery output for EV models have proven to be far less efficient in extreme cold and hot temperatures. Thirty-eight of our fifty states regularly experience extreme temperature variations during the winter and summer months. Severe thunderstorms, hurricanes, tornados, and blizzards cause power outages across our nation throughout the year.

On January 3, 2022, traffic along a 50-mile stretch of Interstate 95 came to a standstill shortly after a multi-vehicle collision near Fredericksburg Virginia. A snowstorm blanketed stranded drivers with seven to 11 inches of snow. Virginia State Police answered over 2,000 calls for assistance from stranded motorists, some of whom were stranded for eighteen hours. Given a choice, I would rather be cold and stranded in my gasoline powered Chevy Traverse than freeze to death in an EV. And, if necessary, when conditions improve, AAA can bring me five gallons of gasoline to refuel my gas tank. AAA cannot bring me a can of electricity to recharge my dead EV battery.

Government records report that there were more than 285 million vehicles registered in the United States as of December 2022. Another source reported that there were 1,454,480 registered EVs as of December 31, 2021. Doing the math, EV registration is a mere .0051 percent of all vehicles registered in the U.S. It has taken *fifteen years* for the number of EVs to reach *.0051 percent* of all U.S. registered vehicles. The expectation that consumers will magically switch to more expensive EVs with their performance and functional limitations and the promise of a future power system to support recharging before 2050 is a fantasy worthy of the Disney Corporation.

Sixth, EV's pose a significant fire hazard. Although, the frequency of EV vehicle fires is currently less than that of gas-powered autos, the intensity of an EV fire is much greater. Fire departments report that it can take 10,000 to 20,000 gallons of water to extinguish an EV fire. EV batteries can fail for a number of reasons, including internal and external short circuits, overcharging, high ambient temperatures, rapid cycling, vehicle collision, and battery age. When the heat generated by a battery exceeds the amount of heat being dissipated, unmanaged heat can cause an uncontrolled chain reaction to surrounding batteries and lithium-ion battery cells can overheat, fracture the protective outer shell, produce smoke, combust in an explosive manner, and result in a thermal runaway. Effective thermal management is vital to vehicle occupant safety.

Seventh, with all the attention and concern about our environment, how will depleted EV batteries be recycled? What is the cost of recycling EV batteries for the owner, the recycling center, and the state and local governments who should be regulating and monitoring the recycling and salvaging process? What happens to EVs damaged in vehicle collisions? Online forums share EV owner experiences where EV manufacturers, auto collision repair shops, and the insurance industry are not prepared to repair or replace major components of EVs when damaged in a collision.

Governor and Mr. Secretary, what are the current Delaware regulations for the disposal or recycling of EV cars and batteries?

I would sincerely appreciate hearing your thoughts and perspective on the Delaware Electric Car Mandate. I do hope that you take a careful and considerate approach to alternative power sources for automotive vehicles that can be safely, planned, tested, economically implemented, and maintained for the long term. Thank you.

Respectfully,

Donald W. Nayden
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