From: ROY WHITAKER <roywcom@comcast.net> Sent: Wednesday, February 8, 2023 11:16 AM To: Garvin, Shawn M. (DNREC) <Shawn.Garvin@delaware.gov> Subject: Electric car mandates

TO: All State of Delaware Officials

February 8, 2023

TOPIC: State of Delaware, concerns with mandatory electric vehicle mandates

## **EXECUTIVE SUMMARY**

The State of Delaware needs to stay out of the taxpayer decision making process for the purchase of personal transportation vehicles. Neither the State nor Federal Constitutions have granted authority to government to regulate what we can have access to, purchase and use for personal transportation. It is not government's responsibility nor within its authority, to enforce regulations and edicts that are clearly discriminatory and affect our rights to Life, Liberty and the Pursuit of Happiness. The State of Delaware's approach to the topic of electric vehicles has over the years apparently been clouded by rose colored glasses and many missteps. The State of Delaware is diverse and one size cannot and will not fit all needs. To continue to pursue the current State of Delaware **mandatory** push to battery powered vehicles is unacceptable, ill-advised and must stop now.

## **ISSUES WITH ELECTRIC VEHICLE MANDATES, HISTORY**

The State of DE was an early supporter of the Federal EPA Clean Cities Program (1) which started in 1993. Delaware later adopted and instituted the EPA Clean Cities electric vehicle grant program which could assist with the purchase of battery powered vehicles. Mass production electric vehicles were not generally available at that time. I have personal experience with two of the Clean Cities grants, one of which was used for the purchase of a State of DE vehicle. Both of the vehicles utilized lead acid battery technology which had the drawbacks of short range, high weight, and functionality. The State vehicle was a converted Chevy S10 and only able to transport maintenance staff. It was unsuitable for snow plowing like the other trucks in the fleet. These 100% battery electric vehicles were not maintenance free. Both vehicles required regular and periodic battery fluid level and battery cleaning maintenance plus all other traditional vehicle maintenance like brakes, tires and repairs due to wear and tear. The true operating costs also included recharging and battery replacement cost at the end of their life cycle. There were also the environmental costs of lead-acid battery production, recycling or disposal; and producing the electrical energy to charge the batteries; plus the energy inefficiency of transporting the electricity over miles of wires, and then transforming it to a usable voltage to recharge the batteries. The current lithium battery technology for electric vehicles has improved but the cost and environmental damages have actually skyrocketed. Lithium batteries have also created additional safety considerations due to fires. This includes property damage, air pollution, and fire extinguishing water runoff.

In the paragraph above are listed multiple environmental and operating concerns that should be thoroughly reviewed for electric or any other type of alternative fuel vehicles. It is worth noting that the biography (2) for the Director of the Clean Cities programs for the State of Delaware "holds a bachelor's of science degree in Natural Resources, with a wildlife management concentration". This is a concern as one might otherwise expect to see a PHD with a strong emphasis on environmental, energy, and transportation

heading up such a program and advising State officials. The biggest educational background concern is that the topic is not being adequately investigated and the myriad considerations being brought forward for transparent discussion.

The concern with the skillset of those advising and making decisions on energy for the State of Delaware is not mentioned capriciously as State officials have previously demonstrated very poor decisions in this regard. The State of Delaware has repeatedly proven that it is incapable of making the best decisions when it comes to energy. The Bloom Energy (3) debacle has added millions of dollars to the energy costs of Delaware residents. The legislators who facilitated this debacle did NOT protect the taxpayer's interests or uphold the Constitution as they were sworn to do. "Dan Simmons, vice president of policy at the Institute for Energy Research, a Washington, D.C., nonprofit that studies government regulation of energy markets, said having ratepayers subsidize a private energy business is unusual". "Bloom was given a whole bunch of incentives and the surcharge, which is very strange," he said. "It looks like Delaware was doing everything it could to give Bloom money." "Simmons questioned the wisdom of such a deal, noting that since so-called Bloom Boxes are similar to a natural gas power plant, it would have been cheaper just to build a plant." From (4): In 2019 DNREC also fined Bloom \$40,000 for air quality violations and it noted: "The controversial package of Delaware subsidies has since sent hundreds of millions of dollars to the California fuel cell producer." This transfer of wealth has occurred while the Delaware taxpayers are still subsidizing the California based company.

To add further insult to injury, <u>Bloom was cited by the EPA in 2021 for hazardous waste violations</u>. *"Bloom's non-combustion process that produces electricity from fuel cells generates hazardous waste"* (4). The public was not fully informed that there is hazardous waste generated by a supposedly "green" fuel cell electricity generating facility nor was the State properly following up on its legal and proper hazardous waste disposal for years:

- 33 shipments of hazardous waste to a permitted receiving facility, from September 8, 2015 to October 3, 2016
- 225 shipments of hazardous waste sent to a non- permitted receiving facility, from September 8, 2015 to October 3, 2016
- 105 shipments of hazardous waste sent without a hazardous waste manifest to a permitted receiving facility, after October 3, 2016.

To summarize the hazardous waste violations, there is hazardous waste generated at the Bloom electricity generating facility in New Castle County, it is stored there, and later shipped out to what was previously a non-permitted disposal facility. I guess the local residents can only hope it was not dumped directly back into our environment. Delaware officials wanted to be on the cutting edge of technology but did not do their proper research, reviews, and processes. Subsequently the State officials were not capable of protecting the environment nor the taxpayer's wallets.

To make a final point that Delaware officials are often not acting on behalf of the taxpayers and do not understand energy, accounting, or the electric car business it is worth mentioning the Fiskar plug in electric car manufacturing debacle. From Fox News(5) *"Delaware taxpayers appear to be getting soaked twice under a deal in which the Democratic governor loaned \$21.5 million to a plug in electric carmaker to set up shop in the state. The company has yet to produce a car in Delaware, and taxpayers are footing the electric bill for the idle plant." "This is never a good roll for the government -- corporate welfare, "said Paul Chesser, an associate fellow at the conservative-leaning National Legal and Policy Center. <i>"Let the market put up the money, not the taxpayer."* The point of including the Fiskar story is to make it clear that the State should **never** be involved in mandates or other commitments regarding what should be free market decisions. These cases have repeatedly proven that the taxpayer will suffer and our ability to enjoy our God given rights to Life, Liberty and the Pursuit of Happiness are being restricted by State of Delaware official's actions. Further, the Delaware officials who created and entered into these agreements have not followed their oath to the constitution.

## ENVIRONMENTAL CONCERNS

To break out the environmental concerns from paragraph one into sections I list the following points with a very brief summary. Each one is actually worthy of a much lengthier report to fully appreciate that there

truly is no free lunch with alternative fuel or electric vehicles:

- Electric vehicle pollution concerns and issues due to lithium and rare earth mining: These items need to be considered in the overall analysis of electric vehicle operation. It needs to look at the issue from "cradle to grave". In the US we take a look at the life cycle impact (6) with an over-weighted focus on the carbon impact while minimizing the source and disposal pollution aspects. If we look at the state-wide carbon impact we may be better off planting more trees (7) than polluting foreign or domestic lands. We cannot pat ourselves on the back for having a lower carbon footprint if we have simultaneously caused the destruction of lands equal to the size of our state, along with putting communities and populations at risk.
- Pitfalls of lithium mining and battery manufacturing: Lithium mining has concerns(8) that have been well explored and documented. Digging into the earth and then processing the lithium ore subjects the environment to toxic exposure. This includes the land, workers, waterways, and the communities which are unlucky enough to located nearby. The lithium-based batteries also require cobalt and nickel. The Democratic Republic of Congo(9) has a large amount of these critical materials but the: *"DRC is one of the world's poorest countries as poverty and humanitarian crises plague its citizens."* Sadly these materials are often mined in smaller operations that employ up to 40,000 children (9). The smelting operations for the nickel also expose the local populations to carcinogens. The battery manufacturing has the same types of environmental exposures for the now concentrated toxic materials.
- Electric vehicle rare earth mining issues affect vehicle cost and have risen substantially in recent years (10) "Speaking with INN about 2021, Managing Director Ryan Castilloux said that on the supply side there were a couple of surprises that led the market to become exceptionally tight through the second half of the year, lifting prices of certain rare earth oxides, metals and alloys to 10 year highs" Additionally, (11) "China already has 80 to 90 percent of the global rare earth market". This supply could stop in an instant and with a US four-star General (12) making a statement that we would be at war with China by 2025 we can expect all of the rare earth elements from China to stop shipping. Chinese mining interests also own or control mining in other countries to control the pricing and availability. There are no immediately usable alternatives.
- Battery and electric vehicle fires, air pollution and runoff. Although there has been no single culprit noted in the causation of electric vehicle fires, we are aware that when a battery pack gets punctured from a road hazard or accident it often causes a runaway overheating resulting in a fire. If one battery cell becomes defective, it can have a thermal runaway and will light off the adjacent battery cells. Although there have been vehicle fires since vehicles were made, the addition of pounds of flammable toxic batteries has made the fires hotter, all consuming, tending to emit excessive amounts of toxic and carcinogenic smoke and particulates, will typically take hours to extinguish while using from 5,000 to 20,000 (13) gallons of water to extinguish, and are subject to re-light themselves even days later due to ongoing chemical thermal reactions. Since a fire can happen driving down the road or even parked in one's garage, the considerable amount of water being used to control the fire is going to have random opportunity to run off or into the property. If the toxic compounds and heavy metals make it into a local stream the effects will be deadly to the fish and biology of the stream. If penetrated into the ground, it will end up in the groundwater supply. Most people might discount the water runoff issue, but Delaware residents have seen the PFAS issues (polyfluoroalkyl substances, perfluorochemicals, forever chemicals found in our blood) in the Delaware (14) groundwater, and they are spreading. "PFAS are considered "emerging contaminants" by federal environmental and public health regulators.' The DNREC website further notes "Some toxicological studies have found that exposure to these substances can cause serious health effects." There are no studies or proof that over time we will not experience similar poisoning from electric vehicle/lithium battery fire runoff. (15) "lithium at all therapeutic dosages can cause adverse health effects-primarily impaired thyroid and kidney function".
- How will we scrap out all of the excess battery powered vehicles that cannot have their batteries replaced because they are unavailable, unaffordable, or obsolete? "According to US federal regulations, depleted lithium-ion batteries are classified as hazardous due to their lead content (average 6.29 mg/L; s = 11.1; limit 5)(16) Summarily, much like nuclear waste, at this exact moment in time there are NO good end of life options for the lithium batteries. The rare earth materials in the electric motors and electronic controls have equal disposal challenges if done properly. What goes into a landfill properly, however, is not guaranteed. End of life considerations must be included in any discussion. There should an accounting for the cost, energy, hazards, and expected outcomes

for all materials.

 Power generation pollution. Natural gas and some oil wells utilize fracking (17) which has air and water pollution concerns. The normal well drilling process can also result in pollution when it is on land or in the ocean. Similar concerns exist with the transportation system, whether ships, pipelines, or trucks experiencing leaks. Coal mining also has air and water impacts plus various emissions when used to produce around 11% of US electricity needs. Nuclear energy has pollution concerns in the mining, transportation, processing, accidental leakage/contamination, and long-term storage of the spent fuel. Nuclear supplies around 20% of US electricity needs. Solar photovoltaic collectors have both manufacturing and disposal pollution concerns(18). Windmills(19) have a similar manufacturing pollution concern and both solar and windmills have a carbon footprint and polluting rare earth minerals. There are end of life pollution issues with all of the types of electrical power generation, even hydropower. The supposed "green energy" options from solar photovoltaic and windmills are particularly polluting at end of life. The US EPA (20) notes that "Hazardous waste testing on solar panels in the marketplace has indicated that different varieties of solar panels have different metals present in the semiconductor and solder. Some of these metals, like lead and cadmium, are harmful to human health and the environment at high levels. If these metals are present in high enough quantities in the solar panels, solar panel waste could be a hazardous waste under RCRA. Some solar panels are considered hazardous waste, and some are not, even within the same model and manufacturer." Yosh Harimoto's March of 2021 article (21) in Wind Watch summarizes the windmill disposal problem, "The public is eager to hop on the green energy bandwagon without considering the full consequences of the energy source. The U.S. must slow down its turbine production and spend more time carefully planning the lifecycle of this infrastructure." Windmills which are continually being installed are comprising a greater share of the energy production every year. They are also responsible for the death of many birds with the US numbers ranging from hundreds of thousands to over a million. The exact number is irrelevant if someone is repulsed by even one bird getting sliced in half by a windmill blade it is too many. Solar panel residential/commercial installations and solar panel farms are also subject to damage from tornadoes, hail, windstorms and the damages can lead to the release of cadmium which is described by the EPA (22): "Cadmium and its compounds are highly toxic and exposure to this metal is known to cause cancer and targets the body's cardiovascular, renal, gastrointestinal, neurological, reproductive, and respiratory systems.". John Hinderaker | August 2019 article notes: The fact that cadmium can be washed out of solar modules by rainwater is increasingly a concern for local environmentalists like the Concerned Citizens of Fawn Lake in Virginia, where a 6,350 acre solar farm to partly power Microsoft data centers is being proposed. "We estimate there are 100,000 pounds of cadmium contained in the 1.8 million panels," Sean Fogarty of the group told me. "Leaching from broken panels damaged during natural events — hail storms, tornadoes, hurricanes, earthquakes, etc. — and at decommissioning is a big concern." Cadmium is a serious US governmental concern (23).

## **FINANCIAL**

The financial considerations of owning a battery, hybrid, or plug in electric vehicle are many. Original purchase and subsequent resale are only part of the equation. Due to the seemingly shrinking financial opportunities across the state of Delaware there is a strong market for used cars. Many of the wage earners are now being substantially challenged with the high level of inflation and are hard pressed to pay rent and put food on the table. It is discriminatory to force them into paying more for any type of transportation. Eventually, in the future decades, there may be lower cost battery electric vehicles available, but they likely will be imported from offshore and may not be readily serviceable over the long term. Someone purchasing a relatively recent model year used petrol vehicle with 100,000 miles on it can be reasonably confident that the motor is only going to require minor repairs to get another 100,00 miles of use. Purchasing a used battery or hybrid electric vehicle could subject them to the replacement cost of the battery pack that is nearly equal to the purchase price they just paid for the vehicle. For a Prius there is a range of cost depending on the model year (24) and new battery packs average around \$4,000. Other vehicles that may have lower production levels are noted as being from around \$4,000 to \$20,000 (25). Extended range or large capacity battery packs in some vehicles would double these estimated costs. Sometimes the replacement battery pack is unavailable or has delayed delivery, rendering the vehicle useless.

The cost to charge an electric vehicle has some variability in cost (.14/KW-.50/KW) depending on the local

utility cost plus any premium being added by the charging entity. If multiple Tesla's are being charged at a group charging station during peak the charging cost per vehicle increases (26). With no guarantees on electrical pricing or charging station use costs there could be unforeseen financial costs that would make an electric vehicle unaffordable. The country of Norway has raised the charge rates in the past couple of years and (27) is now twice as expensive as filling a petrol-powered vehicle.

Another large financial impact may be due to geopolitical instability. There is a high likelihood that the rare earth supplies from China will soon be further restricted or totally eliminated. With China basically capturing and owning the entire market it would take years or decades for the exploration, permitting and construction of new rare earth mines. To enact time restricted mandates and quotas in this unstable environment is short sighted and will cause considerable harm to Delaware taxpayers and businesses. This impact would be greatest on lower income wage earners who rely on an affordable supply of good used cars that are ready for use. Accidentally or purposefully discriminating against anyone could readily be tied to a legal action.

## **ENERGY SOURCE**

The least aware members of the public and even some people associated with electric cars believe that you just plug in an electric car to the unlimited electric supply at home, work, or the local charging station. They fail to realize that this supply must be A) generated somewhere, B) sent across wires to our homes, C) stepped back down in a transformer, D) made available in our homes. Whether the electricity generation is from coal fired plants, fuel cells like Bloom in New Castle, natural gas plants, nuclear plants, oil fired plants, or windmills, there is a real and tangible financial and environmental cost. Just like food does not come from a grocery store, it actually comes from dairies, farms, our waters, and such.

There are real and tangible downsides to each source of electrical energy that is available for people to recharge electrical vehicles. As an example, all the fossil fueled generating plants produce emissions but there are catalysts that can minimize the emissions on natural gas generation. Although natural gas is the cleanest burning the effort to extract it from certain areas requires fracking. Oil wells may also utilize fracking. Coal fired plants have both air emissions and ash residue disposal issues. Both the fabrication of and decommissioning of windmill farms and solar farms also needs to be considered.

# **RESILIENCY and EMERGENCIES**

If a sizable portion of our personal and commercial transportation needs in the state of Delaware are on the electric grid both our resiliency and emergency response will be seriously hampered. We have seen multiple grid losses in nice weather due to operator error, vehicular accidents, or system hacking, plus outages due to tornadoes, outages due to hurricanes, and we are always potentially exposed to disruptions from solar flares and electromagnetic pulses. With some additional generation coming online and the oldest generation being retired, the United States power generating capacity has been relatively stagnant for years. There have not been any sizable grid improvements or grid (solar flare/EMP) hardening. Moving a large percentage of our direct petrol consumption over to the electric grid will result in brownouts, shortages, and complete outages. Putting the population of the state and the commerce of the state at risk of complete electric grid loss to merely shift vehicles from petrol to electric is unwise and likely criminal. The additional deaths caused by electrical disruptions and small generator mishaps will be notable but could have been avoidable.

At present we have a totally functioning fuel supply and vehicle transportation system that works well and is resilient. There are a finite number of resources on this planet. Simply put, there are NOT enough resources to convert the entire vehicle transportation system over to electric vehicles. This would <u>cause</u> some people to be unable to own and operate a vehicle or travel freely. To force a mandate on the people appears to have an end goal that the State officials are attempting to remove the freedom of travel from the residents that they are supposed to represent. Whether it is accidental or overt, forcing communist concepts upon the residents of Delaware by subterfuge is unacceptable.

One of the many aspects of electric vehicle charging has already been experienced in Switzerland. Although the Swiss enjoy an average per capita income superior to the United States and Delaware, they have trouble getting enough electricity distributed during inclement weather (28). The final outcome of this is that it is illegal to charge up their cars during periods of power restriction. If someone is unable to properly recharge their car they may be unable to drive to work the next day.

The hassle, inconvenience, or restrictions of charging electric cars has changed how electric cars are used and in some cases, there are many owners, noted in a Business Insider article (29) 20% who are switching back to petrol. This number will likely increase with situations like California's recent electrical supply or charging restrictions (30) and electrical outages. *"Nearly a million Californians are now without power as the electric company deliberately shut it off this week, fearing high winds would spark wildfire."* 

### **GENERAL CONSIDERATIONS**

Things are not always what they seem to be. On a DNREC website (31) the writer and electric car driver is quoted as saying "Dey said he likes his Bolt because it is easier to drive, quieter, and doesn't pollute. Plus, he said, the performance matches or beats any gas-powered vehicle. "The fact is, if it comes down to it, I can beat any car off the line at the intersection,". The State website is now spreading misinformation and marketing "emotional feelings" about electric vehicles. There is absolutely no aspect of driving an electric vehicle, battery powered, hybrid, fuel cell or whatever that is easier to drive in electric vs petrol. The vehicles all have the same controls, brake, throttle, steering, etc. Some of the newer vehicles do have lane assistance and such but it is also available for gas vehicles too. As far as the Bolt being quieter, the original low speed quietness of electric vehicles has now been changed. As of September 2019, all of the newer hybrid and electric vehicles must have a "noisemaker" to warn pedestrians that they are nearby (32). "The National Highway Traffic Safety Administration's long awaited "Quiet Car" rule will require all electric vehicles to make noise, so pedestrians can better hear and avoid them." Weblinks (33) show that 77,000 Bolts were being reviewed for battery failures/fires and that one owner was told to be ready to wait four years due to insufficient supply of batteries. As noted above in the environmental section, Dey's electric Bolt Car does pollute. From the original electrical generation to the mining of the lithium and rare earth materials, to the final disposal of the vehicle, and if we looked at the toxicity of the battery, this car has polluted as much, or more than a petrol car. In regard to electric vehicles performance, we all know that jack rabbit starts are energy wasters and should not even be suggested as a reason for owning an electric vehicle on a State website. Furthermore, there are more and more issues being noted with greatly reduced battery performance during cold periods. (34) Recharging the lithium batteries in cold weather is also an issue and may take extended periods. In some cases, it has been reported that over a full day or even multiple days may be required. (35) The US Dept of Transportation has a guideline summary (36) which basically states that it can take from one hour to recharge a smaller plug in hybrid battery pack to 50 hours for a larger battery pack on a level 1 charger. Higher capacity battery packs for extended range will lengthen charge times as will cold weather. (37) Domenick Nati got a message that said that the battery could not charge until it was warmed up by the charging station. But two hours later, he was still getting the same "Battery is heating — keep charge cable inserted" message. He went several days with the problem and also could not get any Tesla service personnel on the phone during the time to help him. Ultimately, he had to cancel all his holiday plans because he had no way to travel." Depending on the expected use, length of the commute, and weather, most can recharge overnight. Overnight uninterrupted charging, however, may not be suitable for someone who is frequently on call, or a fireman, etc. This is another case where the free market choice of vehicle buying should be left to the public and not be touched by State officials.

Regarding the argument and planning that the public should be investing in charging stations to be used by the public is a falsehood. The private sector has more control over all matters and like outlined with Bloom and Fiskar above can better handle situations without direct burden to the taxpaying public. One of the newest sources for scrap copper appears to be the electric car charging stations (38), *"Out of the 40 stations that we have, 38 of them were stolen and the other two were damaged," said CEO of the nonprofit One Generation Jenna Hauss. She says the estimated cost in damages is over \$18,000. There are many stories of charging cables being stolen around the country and I would expect it to be more widespread as people find more and more unprotected chargers. Let the Royal Farms, Wawa's, and 7-11's install the charging stations and maintain them like other states. There are also issues with long lines at charging stations during peak charging, peak travel times. We should also foresee the likely incidence of road rage (39) (charger rage?) if someone gets impatient waiting for a public charger.* 

With clarification that pure battery cars still pollute it is worth noting that in some applications there exists a good argument for hybrid vehicles. Every time you use your brakes it makes sense to turn the mechanical motion back into stored electricity via onboard generation. Storing this regenerated energy is better than

wasting it as heat. This can make sense for certain vehicles that are driven lots of miles, do not have to tow something (40), etc. It is noted that the hybrid argument is also dependent on multiple longevity and service factors. We had a Generation 3 2010 Prius that lost its power inverter at 180,000 miles and would not move at all. The value of that vehicle at that time was around \$3,000 dollars. The cost to get a new inverter installed was \$4,000. That car would have been scrapped out except that Tovota covered it under an unpublished warranty. That vehicle is now nearing 250,000 miles and has averaged around 50 mpg over its lifetime. Due to the higher initial cost of the Prius, if the inverter replacement cost had not been covered it would have been more advantageous to drive a similar but less expensive gas only car getting 35 mpg for those 180,000 miles, which would not have needed the inverter or had the higher initial cost. For example, if someone did not drive many miles, the age of the car would have had a higher impact on the resale value, and the initial higher investment in a hybrid would have been financially unwise. For someone who may have trouble affording our current extreme and financially painful inflation, it could mean the difference between eating/feeding a family and driving to work. The explanation above provides the reasoning on why the decision should be left to the consumer, not State officials. Further, State of Delaware websites should state facts and not opinions that are not supported by quality studies and standards.

The residents of Delaware have all different types of driving from city to rural, in-town local, to high speed out of state daily commutes, from single driver, to work vehicles with multiple passengers and equipment. To try to force all drivers into a one size fits all mandate is unacceptable and egregious. The harm (41) that will be caused to the state economy and residents over time will be significant. The harm cannot be justified by someone's desire to either "save the planet" by forcing us into ill-thought-out plans that did not really look at the big picture nor by someone's desire to have total control over the population and our personal freedom to travel.

If the goal of the electric car mandate is to literally tie every Delaware resident into a WEF/Globalist carbon penalty/tax (42) or restrict their driving freedoms, there is no authority within the Delaware or US Constitution to do so. "Toyota CEO Akio Toyoda last week revealed that a "silent majority" of carmakers do not agree with the globalist vision of an electric vehicle-only future but are too afraid to say so". (43) The WEF already made it clear at their December meeting that "This means everyone in European Union countries will have to pay for CO2 emissions" The California goal for a carbon neutral state (44) is going to put undue hardship on the people and businesses of their state. "The resource board's plan "has acknowledged what dozens of studies have confirmed—that a complete phase-out of oil and gas is unrealistic," said Catherine Reheis-Boyd, the group's president, in a statement. "A plan that isn't realistic isn't really a plan at all. This WEF/Globalist agenda plus other damaging policies is why the residents representing approximately 90% of the land mass and half of the population of the state are working to split off from the existing state to form New California State (45). It appears that the State of Delaware officials are trying to hitch their horse to the wrong wagon. While the urbanized cities of California mold themselves into an anti-business, high crime, uncontrolled homelessness environment that is bad for business and bad for the people, The State of Delaware should be emulating the larger rural side of the state that still believes in their Constitution and the rights of the people.

## **CLOSING**

For the reasons elaborated above and other facts which were not included in this document it will be unacceptable for any and all State officials to proceed with the unconstitutional plan to implement mandatory electric vehicle regulations, codes, or other requirements that shall in any way restrict the inhabitants of the State.

Respectfully submitted,

Roy Whitaker

# **RESOURCES**

1 DE Clean Cities Program

https://cleancities.energy.gov/coalitions/delaware

**2** Breanne Preisen Biography (https://cleancities.energy.gov/coalitions/delaware#bio) Breanne.Preisen@delaware.gov 302-735-3366

Breanne Preisen is the Clean Cities Director for the state of Delaware, Division of Climate, Coastal and Energy and also serves as the Clean Transportation Project Specialist managing the clean vehicle incentive program. Prior to joining the Division, Breanne has extensive background working in the environmental education, fisheries and land management fields within local government and in the private sector. Breanne holds a bachelor's of science degree in Natural Resources, with a wildlife management concentration from Delaware State University.

3 Bloom Energy Fuel Cell Debacle

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4 Bloom hazardous waste fine

https://delawarebusinessnow.com/2021/01/bloom-fined-1-16-million-by-epa-for-not-filling-out-hazardous-waste-shipment-manifests/

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6 Carbon lifecycle impact

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7 Carbon and trees

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8 Solar panel toxicity

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9 Cobalt and nickel pollution

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13 20,000 gallons of water need for fire department to extinguish battery fire

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14 Groundwater pollutants, PFAS

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https://www.usgs.gov/news/lithium-us-groundwater

16 Lithium battery disposal concerns

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