ONLINE PUBLIC COMMENTS FOR REVIEW
Date: 09/28/2023

Regulation: 250-RICR-120-05-37

Title: Rhode Island's Low-Emission Vehicle Program

Comments Pending Review

Comment ID: 13000-2635
Comment By: Ann-Christine Duhaime **On:** 08/17/2023
This comment is currently disabled for public display.

Comment:

RI DEM - Office of Air Resources
235 Promenade Street
Providence, RI 02908
RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37
Dear Ms. Priest,
My name is Ann-Christine Duhaime, and I am a resident of North Kingstown, RI. Currently I own a hybrid Toyota Prius C, but intend to switch to a fully electric vehicle in the upcoming months.
I am writing in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations because they will:
1. Reduce greenhouse gas emissions as required by the Act on Climate.
Transportation is the largest source of GHGs in the state. Rhode Island's Executive Climate Change Coordinating Councils (RIEC4) 2022 Update to the GHG Reduction Plan estimated that the state will need roughly 43,000 registered electric vehicles (EVs) on the road by 2030. Currently, there are fewer than 7,000 EVs registered in the state. The only state policy currently advancing vehicle electrification in Rhode Island is the DRIVE rebate program, which does not have long-term funding. ACCII would steadily increase the supply of EVs in the state; without it, Rhode Island will not be able to reach 86,000 EVs by 2030 or 45% GHG reductions. Additionally, MHDVs make up 6% of the vehicles on the road in Rhode Island but contribute 24% of the transportation sector's greenhouse gas emissions. Every new fossil-fuel powered vehicle locks the state into years of further climate-warming emissions.
2. Increase consumer choice.
Auto manufacturers are producing EVs for sale on the global market and send supply to those areas with the most supportive policies. That's why, for example, there are many EV models available for sale in Europe that aren't available in the United States, or why within the US there are more options in California than Rhode Island. Adopting ACCII will put Rhode Island on the map and force automakers to send EV models to the Ocean State, benefiting dealerships and consumers by making sure the full range of choices is available to Rhode Islanders.
3. Protect public health.
As a physician who is working in the climate and health field, I know well that gas-powered cars cause a huge amount of public health harm by releasing particulate matter and other localized air pollution. The American Lung Association estimates that the cumulative health benefits of electrifying transportation will amount to nearly $4 billion by 2050 in Rhode Island alone.
Additionally, MHDVs have a disproportionate impact on public health: despite making up only 6% of the vehicles on the road in Rhode Island, they are responsible for 50% of nitrogen emissions and 44% of particulate matter (PM2.5) emissions within the transportation sector. These pollutants are detrimental to human health and have been specifically linked to heart attacks, lung cancer, and the exacerbation of asthma. The Union of Concerned Scientists estimates that adopting ACT will lead to $150 million in health savings for the state.
As you know, the Intergovernmental Panel on Climate Change (IPCC) has warned that we are in a climate crisis, and that shifts in all sectors away from fossil fuels are critically necessary in the short term. As a healthcare provider and worker in climate and health, I can attest that even though things now don't look that different superficially, this is the biggest public health crisis we have ever faced. It is affecting us locally and is a global problem which affects people worldwide. We must take action, and we must do so now. Making more electric vehicles available can only help, as people want choice. My preference is for a small vehicle rather than a large one, and encouraging manufacturers to ramp up production because people are buying them is part of the pressure we bring to bear to change patterns in the U.S., one of the highest per capita carbon emitters in the world. On average, Americans emit just under 20 tons of CO_2 equivalents per year, while the world average is only 5 tons/year. A significant amount of that is our personal transportation. According to the IPCC and other calculations, we need to get down to 2.1 tons/person/year to meet the 1.5 degree warming goal that will keep temperatures from worsening "snowball effects" that make them rise even faster, possibly to the point of our being unable to adapt. These regulations will help us take those steps.
Thank you for this opportunity to provide comments.
Sincerely,
AC Duhaime, MD
Saunderstown (North Kingstown), RI

Attachments:
RI DEM letter re EV regulations.docx

Comment ID: 13000-2636
Comment By: Timothy French **On:** 08/24/2023
This comment is currently disabled for public display.

Comment:
The Truck and Engine Manufacturers Association hereby submits the attached comments on the proposal of the Rhode Island Department of Environmental Management to adopt California's Omnibus Low-NOx and Advanced Clean Trucks regulations.

Attachments:
EMA Comment's on Rhode Island's Proposal to Adopt CA's Low-NOx and ACT Regs (Aug 24 2022).pdf

Comment ID: 13000-2642
Comment By: Susan Chakmakian **On:** 09/06/2023
This comment is currently disabled for public display.

Comment:

Chelsea Priest
Department of Environmental Management
RI DEM - Office of Air Resources
235 Promenade Street
Providence, RI 02908

RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37

Dear Ms. Priest,

My name is Susan Chakmakian and I am a resident of Cranston, RI.

I am writing in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations because they will:

Reduce greenhouse gas emissions as required by the Act on Climate.
Transportation is the largest source of GHGs in the state. Rhode Island's Executive Climate Change Coordinating Councils (RIEC4) 2022 Update to the GHG Reduction Plan estimated that the state will need roughly 43,000 registered electric vehicles (EVs) on the road by 2030. Currently, there are fewer than 7,000 EVs registered in the state. The only state policy currently advancing vehicle electrification in Rhode Island is the DRIVE rebate program, which does not have long-term funding. ACCII would steadily increase the supply of EVs in the state; without it, Rhode Island would not be able to reach 86,000 EVs by 2030 or 45% GHG reductions.
Additionally, MHDVs make up 6% of the vehicles on the road in Rhode Island but contribute 24% of the transportation sector's greenhouse gas emissions. Every new fossil-fuel-powered vehicle locks the state into years of further climate-warming emissions.

Increase consumer choice.
Auto manufacturers are producing EVs for sale on the global market and send supply to those areas with the most supportive policies. That's why, for example, there are many EV models available for sale in Europe that aren't available in the United States, or why within the US there are more options in California than Rhode Island. Adopting ACCII will put Rhode Island on the map and force automakers to send EV models to the Ocean State, benefiting dealerships and consumers by making sure the full range of choices is available to Rhode Islanders.

Protect public health.
Gas-powered cars cause a huge amount of public health harm by releasing particulate matter and other localized air pollution. The American Lung Association estimates that the cumulative health benefits of electrifying transportation will amount to nearly $4 billion by 2050 in Rhode Island alone. Additionally, MHDVs have a disproportionate impact on public health: despite making up only 6% of the vehicles on the road in Rhode Island, they are responsible for 50% of nitrogen emissions and 44% of particulate matter (PM2.5) emissions within the transportation sector. These pollutants are detrimental to human health and have been specifically linked to heart attacks, lung cancer, and the exacerbation of asthma. The Union of Concerned Scientists estimates that adopting ACT will lead to $150 million in health savings for the state.

These regulations would therefore benefit Rhode Island environmentally, economically, and from a public health standpoint. This combination of positive outcomes resulting from this program is why I am in support of it.

Thank you for this opportunity to provide comments.

Sincerely,
Susan Chakmakian
Cranston, RI

Comment ID: 13000-2643
Comment By: Joel Gates **On:** 09/06/2023

This comment is currently disabled for public display.

Comment:

The following is my Letter to the Editor printed in the August 18, 2023 edition of Providence Business News:

Revving into a greener future, Rhode Island is set to join over a dozen states in embracing the electrifying potential of zero-emission vehicles. In May, Gov. Daniel J. McKee announced plans for the R.I. Department of Environmental Management to adopt Advanced Clean Cars II and Advanced Clean Trucks standards, which will help protect Rhode Islanders from the health and climate harms of tailpipe pollution and expand the electric vehicle market. This is just one of the many steps needed toward a cleaner and more sustainable transportation system.

I leased my first electric vehicle in 2014 and never looked back. Besides providing smooth acceleration and a quiet ride, EV's offer drivers long-term savings on fuel expenses and lower maintenance costs due to their simplified design and fewer moving parts.

Recent advancements in EV technology have been remarkable - with increased battery capacity, allowing for longer trips without the "range anxiety" of running out of energy with no access to a charging station. Over the past decade, I have witnessed a significant increase in the number of charging stations across the state and region.

Thanks to automaker commitments, federal charging infrastructure investments, EV buying incentives from legislation such as the Inflation Reduction Act and the Infrastructure Investment and Jobs Act, and consumer demand, the availability of EV models continues to grow, providing options that suit the needs and preferences of different individuals, families and businesses. These improvements, coupled with incentives and rebates offered by state and federal governments, have made transitioning to EV's more accessible, affordable and appealing than ever before!

As the EV market grows, it stimulates demand for manufacturing, charging infrastructure development and associated technologies, creating employment opportunities in battery production, electric-vehicle manufacturing, and charging station installation and maintenance. This growth presents an opportunity for the Ocean State to foster innovation, attract investment and position itself as a leader in the EV revolution.

Currently, the transportation sector is the leading contributor to greenhouse gas emissions in Rhode Island, accounting for 39.7% of total emissions in 2019, according to the DEM. By transitioning to EV's, we can significantly reduce pollution to meet our climate goals and drastically improve air quality for communities. While it is true that the production of electric vehicles has some environmental impacts, they are significantly safer and cleaner than their fossil fuel-powered counterparts and do not emit harmful pollutants such as smog-forming nitrogen oxide pollution and diesel soot pollution, which can cause respiratory problems and increase the risk of cardiovascular diseases. Low-income and communities of color are disproportionately shouldering the burden from polluting vehicles because highways, transportation corridors and polluting fossil fuel infrastructure are more often located near these communities.

As the wheels of progress turn, Rhode Island must accelerate the adoption of cleaner vehicle standards to make EV's more affordable and available. The public health, climate and economic benefits of EV's make them a critical part of a greener economy. It is crucial for policymakers, automakers, businesses, and communities to work together to drive us toward a cleaner, healthier, and more equitable future for all!

Comment ID: 13000-2644

Comment By: Dolores Mackenzie **On:** 09/07/2023

This comment is currently disabled for public display.

Comment:

Chelsea Priest September 7, 2023
Department of Environmental Management
RI DEM - Office of Air Resources
235 Promenade Street
Providence, RI 02908
RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37
Dear Ms. Priest,
My name is Dolores Mackenzie, and I am a resident of Warwick, RI..
I own an electric vehicle, a 2018 Tesla Model S.
I am writing in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations because they will:
1. Reduce greenhouse gas emissions as required by the Act on Climate.
Transportation is the largest source of GHGs in the state. Rhode Island's Executive Climate Change Coordinating Councils (RIEC4) 2022 Update to the GHG Reduction Plan estimated that the state will need roughly 43,000 registered electric vehicles (EVs) on the road by 2030. Currently, there are fewer than 7,000 EVs registered in the state. The only state policy currently advancing vehicle electrification in Rhode Island is the DRIVE rebate program, which does not have long-term funding. ACCII would steadily increase the supply of EVs in the state; without it, Rhode Island will not be able to reach 86,000 EVs by 2030 or 45% GHG reductions. Additionally, MHDVs make up 6% of the vehicles on the road in Rhode Island but contribute 24% of the transportation sector's greenhouse gas emissions. Every new fossil-fuel powered vehicle locks the state into years of further climate-warming emissions.
2. Increase consumer choice.
Auto manufacturers are producing EVs for sale on the global market and send supply to those areas with the most supportive policies. That's why, for example, there are many EV models available for sale in Europe that aren't available in the United States, or why within the US there are more options in California than Rhode Island. Adopting ACCII will put Rhode Island on the map and force automakers to send EV models to the Ocean State, benefiting dealerships and consumers by making sure the full range of choices is available to Rhode Islanders.
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Gas-powered cars cause a huge amount of public health harm by releasing particulate matter and other localized air pollution. The American Lung Association estimates that the cumulative health benefits of electrifying transportation will amount to nearly $4 billion by 2050 in Rhode Island alone.
Additionally, MHDVs have a disproportionate impact on public health: despite making up only 6% of the vehicles on the road in Rhode Island, they are responsible for 50% of nitrogen emissions and 44% of particulate matter (PM2.5) emissions within the transportation sector. These pollutants are detrimental to human health and have been specifically linked to heart attacks, lung cancer, and the exacerbation of asthma. The Union of Concerned Scientists estimates that adopting ACT will lead to $150 million in health savings for the state.
Having owned an electric vehicle for 5 years, I would never go back. They are essentially maintenance free, no more pumping gas, and the range is not bad!
Thank you.
Sincerely,
Dolores Mackenzie
8 Central St
Warwick, RI 02886

Comment ID: 13000-2645
Comment By: Harvey Buford **On:** 09/07/2023
This comment is currently disabled for public display.

Comment:

Dear Ms. Priest,
I chaired the Hopkinton Conservation Commission for 30 years. I observed numerous damages from climate change over that time that science directly connects to use of fossil fuels. I installed solar panels, battery, and a recharger. The latter recharger and even the battery were in anticipation of purchasing an electric vehicle. The above program will help me and others acquire and put these desirable vehicles into duty. How can we meet our plans to reduce fossil pollution without implementing this Low-Emission Vehicle Program Rule?

Please know I have talked to several who already have battery operated cars and quite a few that want their next purchase including me to be an EV. Our Town Council two years ago removed gasoline stations as a (new) permitted use and added recharging facilities to the permitted use. It certainly makes sense.

Thanks, Harvey Buford

Attachments:
Chelsea Priest September 7.docx

Comment ID: 13000-2646
Comment By: Amanda Babson **On:** 09/07/2023
This comment is currently disabled for public display.

Comment:

Chelsea Priest Sept. 7, 2023
Department of Environmental Management
RI DEM - Office of Air Resources
235 Promenade Street
Providence, RI 02908

RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37

Dear Ms. Priest,
My name is Amanda Babson, and I am a resident of Narragansett, RI. I own an plug-in hybrid vehicle, a 2017 Toyota Prius Prime, which I've owned for 3+ years.
I am writing in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations because they will:
1. Reduce greenhouse gas emissions as required by the Act on Climate.
Transportation is the largest source of GHGs in the state. Rhode Island's Executive Climate Change Coordinating Councils (RIEC4) 2022 Update to the GHG Reduction Plan estimated that the state will need roughly 43,000 registered electric vehicles (EVs) on the road by 2030. Currently, there are fewer than 7,000 EVs registered in the state. The only state policy currently advancing vehicle electrification in Rhode Island is the DRIVE rebate program, which does not have long-term funding. ACCII would steadily increase the supply of EVs in the state; without it, Rhode Island will not be able to reach 86,000 EVs by 2030 or 45% GHG reductions. Additionally, MHDVs make up 6% of the vehicles on the road in Rhode Island but contribute 24% of the transportation sector's greenhouse gas emissions. Every new fossil-fuel powered vehicle locks the state into years of further climate-warming emissions.
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Additionally, MHDVs have a disproportionate impact on public health: despite making up only 6% of the vehicles on the road in Rhode Island, they are responsible for 50% of nitrogen emissions and 44% of particulate matter (PM2.5) emissions within the transportation sector. These pollutants are detrimental to human health and have been specifically linked to heart attacks, lung cancer, and the exacerbation of asthma. The Union of Concerned Scientists estimates that adopting ACT will lead to $150 million in health savings for the state.
When I bought my vehicle, I wanted to get an all EV, but the options available at the time didn't meet my needs, but I plan on all my future vehicles being all EV.
Thank you for this opportunity to provide comments.
Sincerely,
Amanda Babson
61 Inez St.
Narragansett, RI 02882

Comment ID: 13000-2647
Comment By: Josh Grodin **On:** 09/08/2023
This comment is currently disabled for public display.

Comment:

Penske Truck Leasing Co., L.P.'s comments on Rhode Island's Proposed Low-Emission Vehicle Program.

Attachments:

Penske Rhode Island DEM ACT Comment Letter_9.8.23.pdf

Comment ID: 13000-2648
Comment By: Patrick Kelly **On:** 09/08/2023
This comment is currently disabled for public display.

Comment:
Please see the attached files.

Attachments:
AFPM Comments Rhode Island Proposed ACC II Adoption.pdf

Attachments:
AFPM Comments Rhode Island Proposed ACC II Adoption.pdf

Attachment A AFPM Comment ACC II California AFPM-WSPA-CIPA Comment.pdf

Attachments:
AFPM Comments Rhode Island Proposed ACC II Adoption.pdf

Attachment A AFPM Comment ACC II California AFPM-WSPA-CIPA Comment.pdf

Attachment B AFPM Comment ACC II Proposal EPA LDV Comment.pdf

Attachments:
AFPM Comments Rhode Island Proposed ACC II Adoption.pdf

Attachment A AFPM Comment ACC II California AFPM-WSPA-CIPA Comment.pdf

Attachment B AFPM Comment ACC II Proposal EPA LDV Comment.pdf

Attachment C AFPM Comment ACC II Proposal NYSDEC ACC II.pdf

Attachments:
AFPM Comments Rhode Island Proposed ACC II Adoption.pdf

Attachment A AFPM Comment ACC II California AFPM-WSPA-CIPA Comment.pdf

Attachment B AFPM Comment ACC II Proposal EPA LDV Comment.pdf

Attachment C AFPM Comment ACC II Proposal NYSDEC ACC II.pdf

Attachment D AFPM Comment ACC II DELAWARE Comments.pdf

Attachments:
AFPM Comments Rhode Island Proposed ACC II Adoption.pdf

Attachment A AFPM Comment ACC II California AFPM-WSPA-CIPA Comment.pdf

Attachment B AFPM Comment ACC II Proposal EPA LDV Comment.pdf

Attachment C AFPM Comment ACC II Proposal NYSDEC ACC II.pdf

Attachment D AFPM Comment ACC II DELAWARE Comments.pdf

Attachment E AFPM Comment ACC II Proposal RBN Blog.pdf

Comment ID: 13000-2649
Comment By: Amanda Barker **On:** 09/08/2023
This comment is currently disabled for public display.

Comment:
Please see the attached sign-on letter in support of RI adopting ACCII, ACT, HDO, and Phase 2 GHG Rule's in full by the end of this year. Thank you!

Attachments:
RI Low Emission Vehicle Program Comments (1).pdf

STATE OF RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Proposal to Amend Section 250-RICR-120-05-37 (Rhode Island's Low-Emission Vehicle Program); Proposal to Adopt California's "Omnibus" Low-NO_x Regulations and Advanced Clean Trucks (ACT) Regulations	))))))	**Proposal Notice Date: August 7, 2023** **Public Comment Deadline: September 8, 2023**

COMMENTS OF THE TRUCK AND ENGINE MANUFACTURERS ASSOCIATION

August 24, 2023

Timothy A. French
Truck & Engine Manufacturers Association
333 West Wacker Drive, Suite 810
Chicago, IL 60606

STATE OF RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Proposal to Amend Section 250-RICR-120-05-37 (Rhode Island's Low-Emission Vehicle Program); Proposal to Adopt California's "Omnibus" Low-NO_x Regulations and Advanced Clean Trucks (ACT) Regulations	)))))	**Proposal Notice Date: August 7, 2023** **Public Comment Deadline: September 8, 2023**

The Truck and Engine Manufacturers Association (EMA) hereby submits its comments on the proposal of the Rhode Island Department of Environmental Management (DEM) to adopt California's "Omnibus" Low-NO_x (Omnibus) and Advanced Clean Trucks (ACT) regulations. EMA is the trade association that represents the world's leading manufacturers of medium-duty and heavy-duty (MHD) on-highway vehicles and engines, and is a key stakeholder in the development and implementation of the Omnibus and ACT regulations that the California Air Resources Board adopted in 2020 and 2021.

Recently, EMA has entered into a comprehensive agreement with CARB regarding the implementation of a suite of state and federal regulations to help transition the MHD on-highway vehicle sector to zero-emission (ZE) trucks. (See CARB website; "CARB and truck and engine manufacturers announce unprecedented partnership to meet clean air goals.") That agreement includes, among other things, commitments to cooperate on the implementation of CARB's ACT regulations in the increasing number of "opt-in" states, and to align CARB's MHD "Omnibus" low-NO_x regulations with EPA's recently-finalized "Clean Trucks Plan" regulations as of the 2027 model year.

Consistent with the recent agreement between EMA and CARB, EMA does not oppose the DEM's proposal to opt-in to the Omnibus and ACT regulations starting with the 2027 model year. As noted, CARB and EMA have agreed to take steps to ensure that the California and federal MHD low-NO_x regulations are fully aligned starting in 2027. Accordingly, EMA has agreed not to oppose any state opt-ins to the Omnibus regulations that take effect starting in the 2027 model year or later. Similarly, EMA has agreed not to oppose any opt-ins to the ACT regulations that take effect as of 2027.

That said, EMA does want to highlight four important prerequisites to the successful implementation of the ACT regulations in Rhode Island: first, the DEM will need to take steps to align the manner in which ACT credits and ACT deficits are generated; second, the DEM will need to establish a coordinated and pooled ACT credit banking and trading program before the end of the year; third, the DEM will need to take steps to ensure that the necessary ZE truck recharging and hydrogen-refueling infrastructure is put in place in Rhode Island sufficiently in advance of the implementation of the ACT regulations' annually increasing ZE truck sales mandates; and fourth, the DEM will need to work with other agencies and departments to ensure that sufficient ZE-truck purchase incentives are available to trucking fleet operators in Rhode

Island. EMA's comments will expand on each of these prerequisites to a viable ACT program in Rhode Island.

As the DEM has recognized, the availability of zero-emission vehicle (ZEV) credits will be integral to the feasibility of the ACT regulations. Indeed, the DEM's proposal specifically allows for the early generation of ZEV credits starting with the 2024 model year (which begins in just over four months). However, there are a number of issues currently frustrating the development of a robust ACT credit program that the DEM will need to address. Specifically, the underlying regulations currently create a misalignment between when and how ACT deficits are generated (with respect to sales of conventionally-fueled MHD vehicles) and when and how ACT credits are generated (with respect to the sales of ZE trucks). The ACT regulations currently state that deficits and credits are generated as follows:

> *1963.1 (a) Deficit Generation. Starting with the 2024 model year, a manufacturer shall annually incur deficits based on the manufacturer's annual sales volume of on-road vehicles produced and delivered for sale in California. Deficits are incurred when the on-road vehicle is sold to the ultimate purchaser in California.*
>
> *1963.2 (a) ZEV Credit Calculation. A manufacturer may generate ZEV credits for each ZEV produced and delivered for sale in California for the manufacturer-designated model year. ZEV credits are earned when a new on-road vehicle is sold to the ultimate purchaser in California.*

California has recognized the operational mismatch in credit/deficit generation and in early credit reporting requirements, and has acknowledged that future updates will be needed to the ACT sales/credit reporting system to account for, among other things, vehicles that have been sold by OEMs but remain on dealer lots, and for vehicles that may be delivered for sale in California but are sold thereafter to an ultimate customer out-of-state. To that end, CARB has issued a Manufacturers Advisory Correspondence (MAC), that states as follows:

> "Credits and deficits are accrued when a vehicle is delivered to the ultimate purchaser in California. However, we recognize that all sales for a given model year will not be delivered to the ultimate purchaser by the time the first annual report is due for the applicable model year. ***Future updates will be necessary until all sales for the model year are completed and compliance can be determined.***"
> Manufacturer Advisory Correspondence, ACT 2023 (ca.gov)

The specific problem centers around the regulatory language stating the ZEV credits "are earned when a new on-road vehicle is sold to the ultimate purchaser in California." Vehicle manufacturers, especially in the MHD market, often are not aware of the timing of when a given MHD vehicle is sold to an ultimate purchaser, especially since the vehicle manufacturer may have initially sold the unfinished truck to a body-builder, truck dealership or other intermediate third-party in the MHD vehicle distribution chain. For example, a vehicle could be sold by an OEM to a dealership group, and then to a body-builder company (that up-fits the vehicle with a box, or a refrigerator unit, or a tow-bed, or whatever), and then back to a dealership, where it might eventually, after all that, be sold to an ultimate customer who puts the truck in service.

Given that chain of distribution, OEMs are typically not aware of their MHD vehicles' final sales transactions and state registrations until the trucks show up in the OEMs' warranty systems (for which there is no strict timing), or, more likely, until their vehicles show up as registered in the Polk data base as new registrations. Thus, the best and most accurate source of data that OEMs have is often Polk, since it contains the timing of registration and the state of registration, and so can serve as the "final arbiter" of whether or not a vehicle has been "sold in California" so as to count under the ACT regulations.

The problem with this process is that it lags the manufacture and initial shipment of the MHD vehicle by months, and sometimes even years, and is, in the end, a process over which OEMs have no control. In that regard, if an OEM sells a vehicle in Nevada, there is nothing that stops a final customer from registering it in California, and the OEM would have no ability to control or even be aware of that transaction upfront. Consequently, and by way of example, if an OEM plans 9% ZEV sales into California, or Oregon, or any other opt-in state, that OEM will not actually have upfront control over where the ZEVs ultimately end-up in the hands of ultimate purchasers, which means that the OEM will not actually know upfront in which state the credit from the ZEV sale will actually count. The adverse consequence of that is that OEMs may unwittingly undersell ZEVs in certain originally-targeted states, which can lead to ACT non-compliance, through no actual fault of the OEM. This is especially likely, since, when faced with potentially limited availability of conventionally-fueled vehicles in the vehicle stock of California/opt-in-state dealerships, fleets might look to purchase vehicles from out-of-state dealerships, and then, without the OEM's knowledge, register those vehicles in California, thereby frustrating OEMs' calculations and plans for percentage-based sales of ZEVs in the various ACT states.

In recognition of this significant misalignment and timing problem, and as part of the previously referenced agreement between CARB and EMA, CARB has confirmed that:

> *In a show of good faith, in calendar year 2023, CARB issued guidance on ACT credit reporting, clarifying that compliance determination and sales reporting requirements are both defined when vehicles are produced and delivered for sale in California. CARB staff will also propose to initiate a rulemaking action to that effect in calendar year 2024. Staff also will propose to modify section 1963.3(b) to lengthen the number of years a manufacturer has to make up a deficit from one year to three years.*

In another section of the agreement, related to Omnibus NO_x credits (not strictly ACT), but for the same reason, CARB also has clarified that:

> *A MAC prescribing how to demonstrate legacy engine cap compliance (for example, via labeling data) [will be issued]. CARB staff's intent is to be flexible regarding de minimus accidental leakage of non-legacy engines to California.*

As a piece of the "fix" to make it easier to determine which vehicles will count as California vehicles, CARB is asking manufacturers to add the letters "CA" to their engine labels for vehicles which the OEMs *intend* for sale in California. CARB staff have not actually provided language yet that clarifies how OEMs should make this determination, but they have signaled their intent to use this "as-labeled" mechanism for legacy engine compliance reporting, and it may be suitable for ACT credit-generation purposes as well, in California.

That said, given the compressed time between now and the beginning of next year when early ACT credits can start to be generated in Rhode Island, the DEM will need to take its own steps to make clear that ACT credits can be generated when an OEM delivers a vehicle to another party where the vehicle is *intended* for sale by the OEM in Rhode Island. The implementation of the ACT regulations in opt-in states, including Rhode Island, will be frustrated if not thwarted if OEMs will have to wait months or years to review the Polk data to determine where a given ZEV credit can be applied. Such a waiting period could easily lead to under/over-sales of ZEVs in the respective ACT opt-in states, and could result in wide-scale non-compliance, again all through no fault of the OEMs. Accordingly, the DEM needs to address and remediate this issue as soon as possible. In that regard, as noted, CARB may not make its own intended regulatory fix (aligning the generation of deficits and credits) by the end of the year. Thus, the DEM will need to take some affirmative steps of its own to resolve this issue before year-end.

Turning to the second prerequisite to a successful ACT program in Rhode Island, the DEM will need to work with California, NESCAUM and the other opt-in states to establish a pooled ACT credit program, since the sales volumes in several of the opt-in states, including Rhode Island, are simply too low to sustain viable stand-alone ACT credit programs. Significantly, in the recent agreement between CARB and EMA, CARB has agreed to "work with OEMs and section 177 states in an effort to develop and implement a pooling structure for states that have adopted the ACT regulations to provide OEMs flexibility."

Such a pooled credit program will need to allow for the use of credits among the various pooled opt-in states regardless of which particular opt-in state a credit may have been "earned" in – i.e., without regard to which individual opt-in state turns out to be where each individual MHD ZEV is ultimately registered and operated. Since the transaction path for a commercial vehicle is so much more complicated and obscured than for a passenger vehicles (as described above), manufacturers have limited capability to track and precisely distribute exact percentages of ZEV products in each opt-in state (the number of which continues to grow).

Moreover, while an "as-labeled, as-sold" approach can work for one very large state, like California, it would be unworkable to have such a program for the multiple other states (perhaps up to seventeen states) that may end up opting-in to the ACT regulations. Manufacturers would be forced to sell a California-labeled version, a New York-labeled version, a New Jersey labeled version, a Colorado-labeled version, and a Rhode Island-labeled version, etc. – which would seriously constrict the inter- and intra-state sales of trucks, along with the supply lines and business practices with which the commercial vehicle industry works. A cement truck builder, for example, would need to know which of seventeen states a particular truck would eventually be sold in, months or years down the line, at the time of ordering a vehicle – or risk holding on to an extremely expensive capital investment they cannot sell, because their customer is in one particular ACT opt-in state, and not another. The ultimate ramifications could effectively end the "stock truck" business if the country is subdivided into enough different pools. It would also make inventory management, ordering systems, and logistics extremely complex, as we would move from having individual truck models (or two, for CA- and non-CA) to however many different state ACT credit banks there might turn out to be. It would become entirely unworkable very quickly.

In light of the foregoing, the opt-in states (perhaps coordinating through California and NESCAUM) will need to pool all ACT credits and deficits equally, without any discounts,

regardless of which individual opt-in state turns out to be where a particular ultimate purchaser resides. In essence, all ACT opt-in states will need to be treated as "one big state" for the purposes of calculating ACT volumes. That would have the benefit of allowing manufacturers to ease state transitions into the ACT program, since OEMs would be able to leverage credits they had already built-up in other states to offset conventional vehicles in new states that have not yet developed a robust ZEV market. It would preserve a continued functional body-builder and TEM (truck equipment manufacturer) market, and avoid potential shortages of the new trucks that are needed to move goods and do work throughout the nation. If a bridge-builder needs a new cement mixer, and cannot get one because the only ones available have been shipped to and labeled for the wrong opt-in state, that affects not just OEMS, but all of the economic sectors that relies on trucks. Even more fundamentally, since the GHGs at issue are global pollutants, not local air contaminants, it should not matter where a particular ZEV truck ends up among the opt-in states so long as the overall ZEV-truck sales mandates are being met.

A third prerequisite to the deployment of a successful ACT program in Rhode Island is taking steps to ensure that the necessary infrastructure to recharge battery-electric (BEV) trucks and to refuel hydrogen fuel-cell (FCEV) trucks will be in place *before* the ACT ZE-truck sales mandates kick in. The DEM will need to monitor the progress and pace of that necessary infrastructure development, and potentially will need to implement delays in the phase-in of the ACT sales mandates if that infrastructure is not installed at scale and on time. As the DEM is well aware, trucking fleet operators in Rhode Island simply will not buy ZE-trucks if they cannot be sure that the necessary ZE-truck infrastructure is in place and fully operational before they purchase a ZE-truck. That is a real challenge, since the DEM's own analysis indicates that the ACT program in Rhode Island could require the sale of more than 3,000 BEV trucks and 100 FCEVs by 2030. Those sales in turn would require the installation of approximately 2,800 MHD charging ports and multiple hydrogen refueling stations in Rhode Island *before* 2030. The DEM will need to help coordinate and ensure the development of that vital infrastructure development.

As a fourth and final prerequisite to a successful ACT program, the DEM will need to coordinate with other state agencies and departments to ensure that sufficient publicly-funded incentives are available to trucking fleet operators in Rhode Island for the purchase of ZE-trucks. As the DEM is aware, the current price of a ZE-truck is more than twice that of a conventionally-fueled truck. As a result, trucking fleet operators are unlikely to purchase ZE-trucks in the near-term without some form of incentive funding to offset the significant difference in capital costs. While the total cost of ownership (TCO) calculations continue to improve for ZE-trucks, it may take until the 2030-plus time period for those TCO calculations to come out consistently in favor of ZE-trucks. During that interim period, it is vital that the DEM take additional steps to try to ensure that sufficient public funding is available to bridge the capital-cost differentials for MHD truck purchasers in the state.

It is vitally important that the DEM address the foregoing issues promptly. More specifically, if MHD truck manufacturers cannot be assured of when and where their ZEV-truck credits can be generated and used – i.e., if OEMs cannot be assured that ZEV-truck credits will be generated when a ZEV truck is "delivered for sale" in a particular opt-in state as intended by the OEM – then truck manufacturers could be compelled to take other measures to ensure compliance with the ACT's ZEV-truck sales mandates. Stated differently, if an OEM cannot predict with a reasonable degree of certainty when a ZEV-truck credit will be generated in a given opt-in state, the OEM would have no compliance option other than to reduce the sales of conventionally-fueled

trucks into that state to protect against violating that state's ACT ZEV-sales requirements, which requirements are set based on a percentage of sales of conventionally-fueled trucks. To guard against violating the ZEV-truck sales mandate in an opt-in state, OEMs would have no choice other than to reduce the scale of that mandate by reducing the number of conventionally-fueled vehicles sold into the opt-in state, especially if the state lacks the necessary infrastructure capabilities and incentive programs, or has trucking fleets that are poorly suited to the early deployment of ZEV-trucks in the first place.

Thus, unless the DEM can promptly solve the ZEV-credit problems at issue (as well as assure that the needed infrastructure and incentives will be in place), there is a risk, as other commenters have noted, that opting-in to the ACT program could lead to reduced availability of new conventionally-fueled trucks in Rhode Island. We note again that we do not oppose the proposed opt-ins, but in order for it to be successful, Rhode Island (along with the other opt-in states) will need to address the significant issues discussed above.

EMA appreciates the opportunity to submit these comments, and we look forward to working with the DEM on the implementation of this important rulemaking going forward.

Respectfully Submitted,

TRUCK AND ENGINE
MANUFACTURERS ASSOCIATION

Chelsea Priest
Department of Environmental Management
RI DEM - Office of Air Resources
235 Promenade St.
Providence, RI 02908

RE: Rhode Island's Low Emission Vehicle Program Rule 250-RICR-120-05-37

Dear Ms. Priest,

My name is Joel Gates. I'm a resident of Glocester, Rhode Island. I currently own 2 EV's, a 2019 Chevy Bolt and a 2023 Tesla Model Y. I am completely sold on all the advantages of electric vehicles and will never purchase another internal combustion engine vehicle.

So I am writing to you in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations!

Please see the other attachment which is a copy of my opinion letter printed by the Providence Business News on August 18, 2023. Thank you for taking my comments into consideration.

Sincerely,
Joel Gates
Glocester, RI

Josh Grodin
Vice President – Government Affairs

September 8, 2023

Chelsea Priest
Rhode Island, Department of Environmental Management
235 Promenade Street
Providence, RI 02908

RE: Comments on Rhode Island's Propose Low-Emission Vehicle Program

Dear Ms. Priest:

Thank you for the opportunity to provide comments on the Rhode Island Department of Environmental Management's (DEM's) draft language for the proposed adoption of the Low-Emission Vehicle Program. Penske Truck Leasing Co., L.P. ("Penske") is a nationwide leader in low-emission transportation and has made a company-wide commitment to a comprehensive transition to zero emission vehicles, and we share DEM's greenhouse gas reduction goals and federal air quality objectives.

Our commitment to zero emission transportation technology is reflected by our investments over the last five years in numerous medium- and heavy-duty electrification demonstration and deployment projects. As a rental and leasing company, Penske understands we play a unique role in accelerating the greater adoption of zero-emission vehicles by enabling fleets to test, iterate, and ultimately adopt zero-emissions in collaboration with an experienced partner. Our projects have afforded Penske invaluable insight into the collaborations necessary for success, including working with agencies such the California Air Resources Board (CARB), national utilities, major vehicle manufacturers, charging infrastructure manufacturers and developers, battery providers, and customers in the deployment and operation of new battery-electric transportation services across the entire supply chain.

We believe there are very few, if any, large transportation providers doing more than Penske to advance zero emission and infrastructure technology. Penske currently operates one of the largest commercial fleets of medium- and heavy-duty zero emission vehicles (ZEVs) in the United States with battery electric powered trucks from multiple OEMs, including Freightliner, Volvo, Navistar, Ford, Roush, Kalmar, Orange EV, and many others. Many of these ZEVs which operate nationally, are fully equipped with medium- and heavy-duty EV charging infrastructure. In addition to our current sites, we are now in the planning and development stages to equip most of our owned sites throughout the country with charging equipment that will allow us to advance our shared zero-emission goals.

Penske's growing familiarity with ZEVs, coupled with our comprehensive and incomparable understanding of charging infrastructure and real-world commercial fleet applications, uniquely positions us to be a resource for DEM. Our for front-line experience on the availability, use, and application of ZEV's, and allows us to serve as a partner in DEM's efforts to draft, adopt and implement a successful Advanced Clean Trucks (ACT) and any future zero-emission fleet regulations.

On behalf of the entire Penske team, we want to thank DEM and your staff for the time to hear our concerns and find a way forward that both addresses rea-world concerns while also achieving critical zero-emission progress.

Recently, the State of Rhode Island released draft language for the Low-Emission Vehicle Program, proposing the incorporation CARB's Advanced Clean Truck (ACT) ruling and amending 250-RICR-120-05-37 to include new standards for medium- and heavy-duty vehicles. Based on our experiences navigating similar rulings for

the states of California, Oregon, New York, New Jersey, and Washington, Penske offers the following comments for consideration as your agencies implement this new requirement.

Future Zero-Emission Fleet Regulations

The ACT regulation is a first step in enabling a transition to zero-emissions across the commercial fleet sector. As the State of Rhode Island examines the best pathways to zero for its industries, Penske is appreciative of the opportunity to share its experience to help the state more effectively meet its goals and objectives. The following information provides background on the short-term rental market and zero-emission economics that affect near-term opportunities for electrification.

Short Term Rental Vehicles

Short-term rental and leasing companies play distinct and critical roles in the trucking, logistics, and freight movement industries throughout Rhode Island and the U.S. Truck rental and leasing is especially important in the mass commercialization of new truck technologies, including "try before you buy" strategies, provision of unfamiliar maintenance services, delivery of unconventional fueling or charging capabilities, and arrangement of much needed financial flexibility. Penske's customers have depended and will continue to depend on our well- established expertise to try, assess, and ultimately minimize their risk as they move to adopt zero-emission technology.

Short-term rental vehicle owners have a unique inability to control actual utilization of their vehicles into and throughout the state of Rhode Island. These interstate operations entries are not coordinated or managed as part of a fleet utilization strategy but instead end up in various states due to temporary customer decisions and not owner decisions.

Rental trucks are fundamentally temporary transportation assets that are utilized by multiple customers throughout the year. Flexible fleet access serves a critical economic role for small businesses that do not specialize in transportation, enabling businesses to add extra capacity during peak seasons, manage growth in an uncertain market, and replace trucks at a moment's notice. These rental vehicles may be owned by a single entity, i.e., a rental or leasing company, but the vehicles have no single operator, no designated single routes, and no single home facility. These variabilities are the reason why rental vehicles' operational profile does not meet the basic standards for near-term electrification.

As the state of Rhode Island determines how to account for short-term rentals in its zero-emission transition, Penske hopes this background provides a better understanding the of realities and limitations of operational control for rental owners will impact how these vehicles are reported, registered, and regulated for the transition to zero-emissions.

Counting Compliance for Vehicles Funded by Grants

Clean vehicles still carry very significant economic risk for fleets as the technology has not yet reached a stage of maturity and reliability. Penske has been fortunate enough to work with funding agencies across the U.S. to secure funding to support our early demonstrations and vehicle deployments. Grants have been essential to helping to reduce that upfront capital risk for us and many of our customers who have had opportunities to deploy these units through our partnership.

Grant funding is becoming harder and harder for fleets to access at a time when they need it more than ever. The cost of battery electric yard trucks, for example, remains 2-3x the cost of the diesel version—for the vehicle alone. This does not even consider the cost and complexity of adding charging infrastructure. The Advanced Clean Truck regulation is pushing the manufacturers to bring more of these products into market which will hopefully reduce this cost differential sometime soon, but we are simply not yet there.

Penske's average customer is the small fleet—the company with less than a dozen trucks—and the increasingly stringent grant funding requirements that frequently prohibits leasing prevent many of our customers from accessing these trucks. We all collectively—the vehicle manufacturers and charging industry as well as regulatory bodies—need

to understand that this is very nascent technology that still needs support, testing, and early deployments. We should be finding ways to reduce barriers to fleets to adopt these technologies and not create new ones.

While we recognize that state agencies do not like to "pay for compliance" as a common practice, we recommend that Rhode Island consider parting with precedent for the monumental shift we are asking of fleets as they transition to zero-emissions. Allowing time and support for vehicles acquired with public funds to be counted towards compliance in the early years of a regulation allows fleets to better test, iterate, and adopt zero-emissions at scale.

Conclusion

Penske is appreciative of the opportunity to comment on DEM's proposed adoption of regulations to control emissions from news cars and trucks. We deeply resonate and align with the state's goals and objectives and hope that we can be a source of value as these regulations are adopted. Penske has and will continue to partner with state regulators, local agencies, and fleets throughout the U.S. to implement zero-emission truck projects. We believe our experience will support Rhode Island's goals by enabling more rapid rollouts of ZEVs via lower-risk leasing, maintenance, outsourcing, and charging efforts. These market- leading efforts will also help define and refine secondary market pathways, residual value calculations, and long- term maintenance planning. We will follow up with staff directly to share our experiences around technology, infrastructure, operations, and reporting to help support an efficient and effective transition to ZEVs in Rhode Island.

Thank you for this opportunity to contribute to the development of a successful Advanced Clean Truck and future zero-emission rules. We look forward to engaging with Rhode Island's DEM on the issues raised herein.

Sincerely,

Josh Grodin
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Chelsea Priest
Department of Environmental Management
RI DEM – Office of Air Resources
Providence, RI 02908

RE: Rhode Island's Low-Emission Vehicle Program, Proposed Amendments. Rule Identifier: 250-RICR-120-05-37

Submitted via rules.sos.ri.gov

I. Introduction and Summary.

A. AFPM and its interest in Rhode Island Department of Environmental Management's proposed adoption of ACC II.

The American Fuel & Petrochemical Manufacturers (AFPM) appreciates the opportunity to comment on the Rhode Island Department of Environmental Management (DEM) proposal to adopt California's Advanced Clean Car II (ACC II) standards, banning internal combustion engine vehicles (ICEVs). AFPM is a national trade association representing nearly all U.S. refining and petrochemical manufacturing capacity. AFPM members support more than three million quality jobs, contribute to our economic and national security, and enable the production of thousands of vital products used by families and businesses every day. AFPM members are also leaders in producing lower carbon fuels, such as renewable diesel and sustainable aviation fuel.

AFPM shares DEM's goal of reducing carbon emissions from transportation. Indeed, our members are investing heavily in technologies and processes that continue to reduce the carbon intensity of fuels while automakers are improving the fuel efficiency of internal combustion engines. Importantly, these investments can reduce carbon intensity of new and existing vehicles without relying on a lengthy automobile fleet turnover or trillions of dollars to massively expand the electrical transmission grid. Reducing carbon emissions from the transportation sector while meeting consumer needs will require a diverse mix of technologies, including liquid transportation fuels and electric vehicles. Innovation and competition among technologies will achieve the State's carbon reduction goals while delivering better results for consumers. Putting aside its serious legal and analytical infirmities, DEM's proposal does exactly the opposite—it stifles innovation and reduces competition by ignoring the fundamental importance of liquid fuels in delivering affordable and reliable energy while reducing emissions. DEM should withdraw this proposal.

B. Summary of AFPM's reasons for opposing DEM's proposal.

DEM proposes to adopt the California Air Resources Board's (CARB) ACC II standards, but it is preempted from doing so. The measures called for in the California ACC II rule (and therefore DEM's proposal) are expressly preempted and in conflict with federal legislation including the Energy Policy and Conservation Act (EPCA) and the federal Clean Air Act (CAA) and is contrary to federal statutory objectives set forth in the Renewable Fuel Standard (RFS) and other federal programs promoting (renewable) liquid fuels.

Furthermore, DEM's analysis supporting its proposed adoption of ACC II is arbitrary and capricious. Where it does not simply adopt CARB's analysis wholesale without meaningfully adjusting for the differences between the two states, DEM's analysis contains unsupported, inaccurate assertions regarding the costs and benefits of its proposal. DEM's evaluation thus fails to meaningfully analyze and transparently present the actual costs and benefits of its proposed action. DEM fails to adequately investigate whether its electric grid can handle the significant increase in demand for electricity that its adoption of ACC II will create, the potential electricity costs to consumers, the lifecycle emissions impacts of expanding electricity generation and transmission as well as electric vehicle (EV) production, the rising price of critical minerals needed for batteries, and the prospect of "leakage" as Rhode Island residents choose to buy non-EVs in surrounding states.[1]

DEM has not considered the broader geopolitical context against which it acts: the United States depends, and will necessarily continue to depend, on China and other foreign countries, for these minerals and metals (particularly copper) to produce batteries and expand the electrical grid.[2] Adopting policies like ACC II only increases that dependence. A transition to so-called Zero Emission Vehicles (ZEVs)[3] exposes Rhode Island residents to supply chain vulnerabilities largely beyond the control of regulators. This risk is exacerbated by long supply chains[4] and a reliance on geopolitical rivals who control those supply chains.[5]

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[1] *See also* Ramboll, Multi-Technology Pathways To Achieve California's Greenhouse Gas Goals: Light-Duty Auto Case Study (May 31, 2022), Sec. 1.1 of AFPM's attached comments on California's ACC II proposal (*see* Attachment A): "CARB has not conducted a full life cycle GHG analysis for the vehicle/fuel system to assess GHG emission impacts of their proposal and alternatives. CARB did not consider the upstream fuel cycle GHG emissions from out-of-state fuel production and transportation activities for California reformulated gasoline (CaRFG) and hydrogen (H2), and vehicle cycle GHG emissions associated with the vehicle production. These life cycle emissions are significant, particularly for battery electric vehicles (BEVs) as compared to internal combustion engine vehicles (ICEVs), due to the energy-intensive nature of producing a BEV battery. Failure to consider these GHG emissions has the effect of overstating the emissions benefits of the proposed ACC II regulation."

[2] As such, Rhode Island's adoption of ACC II conflicts with the dormant foreign affairs preemption doctrine under the Supremacy Clause, which preempts state laws that intrude on the exclusive federal power to conduct foreign affairs.

[3] On an LCA basis, of course, there is no such thing as a "zero-emission" vehicle since all vehicles have associated upstream and downstream emissions.

[4] *See* 2022 Global EV Outlook IEA (May 2022) at 6-7, 178-79, available at https://www.iea.org/reports/global-ev-outlook-2022 (accessed August 3, 2023).

[5] *Id.*

Section II of these comments discusses federal preemption of ACC II and pending litigation, while Section III addresses the constitutional barriers to adopting ACC II. Section IV describes the administrative infirmities that render this rulemaking arbitrary and capricious. Section V describes some of the unintended consequences of California's initial foray into EV mandates under ACC I.

II. ACC II is preempted by federal law.

Congress has not authorized federal agencies or states to force a transition to EVs through government mandates.[6] Indeed, this is a major policy question that is the subject of several lawsuits pending before the D.C. Circuit. When Congress has spoken on vehicle electrification, it specifically prohibited EV mandates,[7] required studies,[8] and provided financial incentives with strict eligibility limits based on domestic production requirements and income levels.[9] The decision to force a transition to EVs and ban the sale of ICEVs would constitute a major question of political and economic significance for which Congress must provide a clear statement; no such clear statement exists. As detailed in AFPM's comments on EPA's Notice of Proposed Rulemaking: Multi-Pollutant Emissions Standards for Model Year 2027 and Later Light-Duty and Medium-Duty Vehicles (hereinafter referred to as "AFPM LDV Comments" and included as Attachment B), the question of whether to shift from ICEVs to EVs, and how to accomplish this shift, will reshape the U.S. automotive market and would have vast economic and political significance for Rhode Island and throughout the country.[10]

A. ACC II is expressly preempted by the Energy Policy Conservation Act.

EPCA expressly preempts states from adopting or enforcing any regulation "related to" fuel-economy standards, regardless of any accompanying localized pollution benefits. This provision is self-executing, meaning no agency action is necessary for it to be effective. Moreover, Congress did not authorize NHTSA or EPA to waive this preemption provision.

ACC II is clearly related to fuel-economy standards. Courts have found that state regulations "relate [] to" federal matters when they have a "connection with" or contain a "reference to" these matters.[11] The Full Benefit-Cost Analysis and Technical Support Document acknowledges that the amount of fuel dispensed in the state will decrease as a result of this rulemaking.[12] DEM cannot avoid EPCA's preemptive effect by characterizing this rule as an environmental regulation despite its clear implications for fuel economy.[13] Indeed, because carbon dioxide emissions are "essentially constant per gallon combusted of a given type of fuel," the fuel

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[6] *See West Virginia v. EPA*, 142 S. Ct. 2587 (2022).
[7] *See* 49 U.S.C. § 32902(h) (prohibiting considering dedicated automobiles, which includes EVs).
[8] *See* EISA § 206.
[9] *See* generally Inflation Reduction Act.
[10] *See* AFPM LDV Comments (Attachment B) at 17-21.
[11] *See e.g.*, *California Restaurant Association v. City of Berkeley* (9th Cir. April 17, 2023).
[12] *See* Full Benefit-Cost Analysis and Technical Support Document available at https://risos-apa-production-public.s3.amazonaws.com/DEM/13000/ADDDOC_13000_20230807150351225.pdf
[13] See Rhode Island Government Register Public Notice of Proposed Rulemaking available at https://risos-apa-production-public.s3.amazonaws.com/DEM/13000/PBN_13000_20230807150350829.pdf accessed September 6, 2023.

economy of a vehicle and its carbon-dioxide emissions are two sides of the same coin.[14] Accordingly, "any rule that limits tailpipe [greenhouse gas] emissions is effectively identical to a rule that limits fuel consumption."[15] Any proposed rule establishing ZEV mandates (and thus *de facto* average fuel economy standards) impedes NHTSA's ability to establish fuel economy standards that satisfy EPCA's requirements.[16]

An EV mandate thus has more than a mere "connection with" fuel economy—it has a direct connection, and courts have had little trouble finding federal preemption of state laws promoting hybrids or EVs.[17] Rhode Island's adoption of ACC II "relate[s] to" fuel economy even more clearly than the New York taxi rules at issue in *Metropolitan Taxicab* and is thus expressly preempted by EPCA.

B. Rhode Island may not adopt ACC II because it is expressly preempted by the Clean Air Act.

ACC II is also expressly preempted by the CAA, which provides that "No State or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles...."[18] Unlike EPCA, EPA may grant California a preemption waiver under the CAA under certain conditions.[19] Before a waiver can be granted, the CAA requires EPA to evaluate California's waiver request to ensure that California did not arbitrarily determine that it needs "ZEV mandates" to address compelling and extraordinary circumstances. Practically speaking, EPA should deny California's ACC II waiver request. As our attached comments on CARB's ACC II proposal (Attachment A)[20] demonstrate, ACC II and CARB's analysis supporting it are flawed by CARB's failure to conduct an accurate lifecycle assessment (LCA) demonstrating ACC II is needed to address compelling and extraordinary conditions or that its benefits exceed its costs. The lack of compelling and extraordinary conditions is highlighted by the fact that a recent EPA report on air quality trends shows continued improvement of ambient air quality.[21] Moreover, EPA has never established a National Ambient Air Quality Standard (NAAQS) to address ambient greenhouse gas (GHG) concentrations, nor any requirements for states to implement plans and rules to reduce in-state, upwind, or downwind GHG concentrations. For these reasons, CARB's adoption of ACC II cannot qualify for a CAA preemption waiver.[22]

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[14] Fed. Reg. at 25,324, 25327 (May 7, 2010).
[15] *Delta Constr. Co. v. EPA*, 783 F.3d 1291, 1294 (D.C. Cir. 2015).
[16] See AFPM LDV Comments (Attachment B) at 25-26.
[17] See, *e.g., Metropolitan Taxicab Bd. of Trade v. City of New York*, 615 F.3d 152, 157 (2d Cir. 2010) (holding EPCA preempts local taxi-fleet rules merely encouraging the adoption of hybrid taxis).
[18] 49 U.S.C. § 7543(a).
[19] *Id. at* § 7543(b).
[20] Available at https://www.arb.ca.gov/lists/com-attach/477-accii2022-AHcAdQBxBDZSeVc2.pdf (accessed August 3, 2023).
[21] U.S. EPA, Our Nation's Air: Trends Through 2022, available at https://gispub.epa.gov/air/trendsreport/2023/#home (accessed August 3, 2023).
[22] *See* AFPM LDV Comments Attachment B at p. 28. AFPM incorporates these comments by reference.

The Principal Deputy Administrator for the Office of Air and Radiation Joe Goffman testified on June 21, 2023, that EPA has not determined whether it will grant a waiver for ACC II.[23] If EPA grants a waiver to California, other states may choose to opt-in to California's standards, provided "such standards are identical to the California standards for which a waiver has been granted for such model year...."[24] In the absence of a preemption waiver, Rhode Island is without authority to adopt ACC II.[25]

C. DEM must not finalize the ACC II rule before ongoing litigation concludes.

DEM's proposed adoption of ACC II is premature and presumes California has authority to promulgate ACC II. There are multiple lawsuits before the D.C Circuit arguing that EV mandates are preempted by the CAA, by EPCA, or by the RFS.[26] As we explain elsewhere in these comments, ACC II is in fact preempted.[27] Moreover, the pending litigation challenges the constitutionality of the CAA preemption-waiver mechanism as well as its specific application in the case of California's motor vehicle GHG emission regulations.[28] DEM should wait until this litigation is resolved before adopting ACC II. To adopt ACC II now risks considerable disruption and whipsawing of regulated parties' and other stakeholders' expectations and investments, as well as wasted DEM resources.

D. ACC II conflicts with important federal statutory objectives.

In its haste to phase out the oil and gas production and refining industries, CARB did not consider the impact of ACC II on the remainder of our energy system. ACC II will sharply curtail, if not eliminate, the demand for biofuels, and will create demand that will overburden the electricity generation and transmission systems. Nor did CARB consider the impact on other essential products such as jet fuel, asphalt, sulfur, petrochemicals, and lubricants. This willful blindness and tunnel vision places ACC II on a collision course with multiple Congressionally mandated programs expressly designed to have the opposite impact: Congress wants to

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[23] Moreover, because California concedes ACC II will not meaningfully address the impacts of climate change in California and ACC II will slow fleet turnover and retard California's progress toward meeting the NAAQS, California and Rhode Island are not eligible for a waiver.
[24] CAA § 177, 42 U.S.C. § 7507 (emphasis added).
[25] See *Am. Auto. Mf'rs Ass'n v. Comm'r, Mass. Dep't. of Envt'l Prot.*, 998 F. Supp. 10, 17-18 (D. Mass. 1997) ("A state regulation relating to control of emissions from new motor vehicles or engines can survive pre-emption if, in accordance with [Clean Air Act] § 177, it adopts and enforces standards which are 'identical to the California standards' for which the EPA has granted a waiver 'for such model year.' But a state may not either adopt or enforce a standard which does not meet these requirements. Put another way, under § 177, a state can pass regulations only if it accepts as the basis for its regulations a California "standard" which has been granted a waiver in accordance with § 209(b))." (citation omitted) (emphasis added)) (granting summary judgment for plaintiff and holding preempted Massachusetts state ZEV production, delivery, and reporting requirements).
[26] *Id. See also* Interv. For Pet'r Br., *NRDC v. NHTSA*, Doc. 1976944 (Dec. 8, 2022) (D.C. Cir. No. 22-1080) (arguing EV mandates are impliedly preempted by the Renewable Fuel Standard).
[27] *See generally Ohio v. EPA*, No. 22-1081 (D.C. Cir. filed May 5, 2022). See also *Texas v. EPA*, No. 22-1144 (D.C. Cir. filed June 30, 2022) (challenging Department of Transportation's Corporate Average Fuel Economy (CAFE) rulemaking, alleging violation of statutory prohibition on incorporating EV mandates into such regulations).
[28] *See Ohio v. EPA*, (D.C. Cir. No. 22-1081) *oral argument scheduled on* September 15 (The D.C. Circuit may not resolve the matter until 2024, with potential Supreme Court certiorari proceedings to follow).

increase biofuel production and ensure a reliable electricity supply. Because ACC II undermines and conflicts with the fulfillment of these Congressional objectives, ACC II—and DEM's adoption of it—are necessarily preempted.

It is a "well-established principle that the Supremacy Clause, U.S. Const., Art. VI, cl. 2, invalidates state laws," like ACC II, "that interfere with, or are contrary to federal law."[29] Even where Congress has not completely displaced state regulation in a specific area, state law is nullified to the extent that it conflicts with federal law. Such conflicts arise "when compliance with both state and federal law is impossible" or "when the state law 'stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.'"[30] The ACC II program fails on both counts and is, therefore, expressly and/or impliedly preempted by federal law.

First, Congress's intention to increase production, distribution, and use of biofuels is expressed in no less than three statutes, which do everything from mandating biofuel blending in liquid fuel to incentivizing its production through loans and loan guarantees. EPCA includes provisions related to the integration of alternative fuels in the transportation sector and requires a "reasonable distribution" of the burden of any energy-use restrictions.[31] DEM's adoption of ACC II would eliminate any role for these alternative fuels for new vehicles in Rhode Island by requiring 100% EVs and PHEVs (Plug-in Hybrid Electric Vehicles) by 2035, removing a substantial portion of the demand for these fuels and depriving federal investments of significant value. This deprivation is made worse by the fact that Maine, New York, Delaware, Maryland, Connecticut, New Jersey, and other Sec. 177 states may adopt California's engine and motor vehicle emission standards under CAA Section 177, 42 U.S.C. § 7507, and the potential that manufacturers are unlikely to produce two separate fleets to satisfy 177 states vs. the rest of the country. ACC II contradicts EPCA's requirement that any burdens stemming from energy-use restrictions be reasonably distributed across all industry sectors.

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[29] *Hillsborough Cty., Fla. v. Automated Med. Lab'ys, Inc.*, 471 U.S. 707, 712-13 (1985) (citations omitted).
[30] *Capital Cities Cable, Inc. v. Crisp*, 467 U.S. 691, 699 (1984) (quoting *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941)) ("Under the Supremacy Clause of the United States Constitution, federal law preempts contrary state law. In general, the types of preemption recognized by federal courts can divided into three categories: express preemption, field preemption, and conflict preemption. Express preemption occurs when Congress preempts state law in express terms. Field and conflict preemption, by contrast, take a more contextual approach. Field preemption exists when it is clear, despite the absence of explicit preemptive language, that Congress has intended, by legislating comprehensively, to occupy an entire field of regulation and has thereby left no room for the States to supplement federal law. As for conflict preemption, even if Congress has not occupied the field, state law is naturally preempted to the extent of any conflict with a federal statute. Thus, conflict preemption exists when compliance with both state and federal law is impossible, or when state law stands as an obstacle to the accomplishment and execution of the full purposes and objective of Congress." (internal quotation marks and citations omitted)).
[31] *See* EPCA (42 U.S.C. § 6374, requiring alternative fuel use by light duty Federal vehicles), *id.* § 6391(b) (prohibiting "[u]nreasonably disproportionate share of burden" between segments of the business community and requiring that, "[t]o the maximum extent practicable, any restriction under authorities to which this section applies on the use of energy shall be designed to be carried out in such manner so as to be fair and to create a reasonable distribution of the burden of such restriction on all sectors of the economy").

And the Energy Independence and Security Act (EISA) includes specific provisions to increase production of biofuels under the RFS program and requires blending of increasing volumes of biofuel and other renewable fuels.[32] ACC II conflicts with these federal objectives and deprives federal funding programs of value by mandating complete electrification of the transportation sector. These programs set aside significant funding for the development and use of liquid fuels for transportation, with the expectation that these fuels will continue to play an important role in meeting transportation energy demand for many years.

Second, federal policy explicitly supports "the modernization of the Nation's electricity transmission and distribution system to maintain a reliable and secure electricity infrastructure that can meet future demand growth."[33] The ACC II program conflicts with this policy by introducing material security and reliability risks to California's electricity grid, and to the grid of Rhode Island and other states who may adopt ACC II. AFPM discusses the significant national and energy risks associated with *de facto* ZEV mandates in its comments to EPA's LDV proposal.[34] In short, ACC II increases reliance on imported critical minerals and metals for battery production and grid expansion that could have serious negative consequences for our energy and national security. The supply chain for key minerals needed to produce electric vehicle batteries is not assured and will require dramatic increases to meet expected demand.[35] The extraction and processing of battery critical minerals is concentrated in politically unstable or unfriendly nations. Domestic copper and aluminum smelting capacity is insufficient to meet grid expansion needs, and new mines can take over a decade to increase domestic supply. The deployment timeline necessary to develop new resources for batteries and the grid is impracticable and presents unnecessary risks to our energy and economic security. In contrast, domestically consumed liquid fuels sourced from petroleum and bio feedstocks are largely sourced in North America, and the U.S. benefits from its position as a net exporter of petroleum and refined product exports.

Rapidly electrifying the transportation sector will both substantially increase electricity demand in Rhode Island and other states that may adopt ACC II and increase dependence on electricity services. Electrification of the transport sector will stress an already fragile grid and amplify the risk that the grid will be targeted for either physical or cyber-attacks. A 2023 Government Accountability Office Report revealed that due to the increased connectivity from industrial

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[32] EISA (Title 42, Chapter 152, Subchapter II: Programs for investment in biofuel research and infrastructure, centered around "increasing energy security," which is of special federal concern); 42 U.S.C. § 7545(o)(2)(B)(ii) (the RFS establishes requirements related to determining the applicable volume of cellulosic biofuel for the calendar years 2023 and later, based on considerations such as available infrastructure, consumer costs, and energy security). *See also* AFPM LDV Comments (Attachment B) at p. 21.

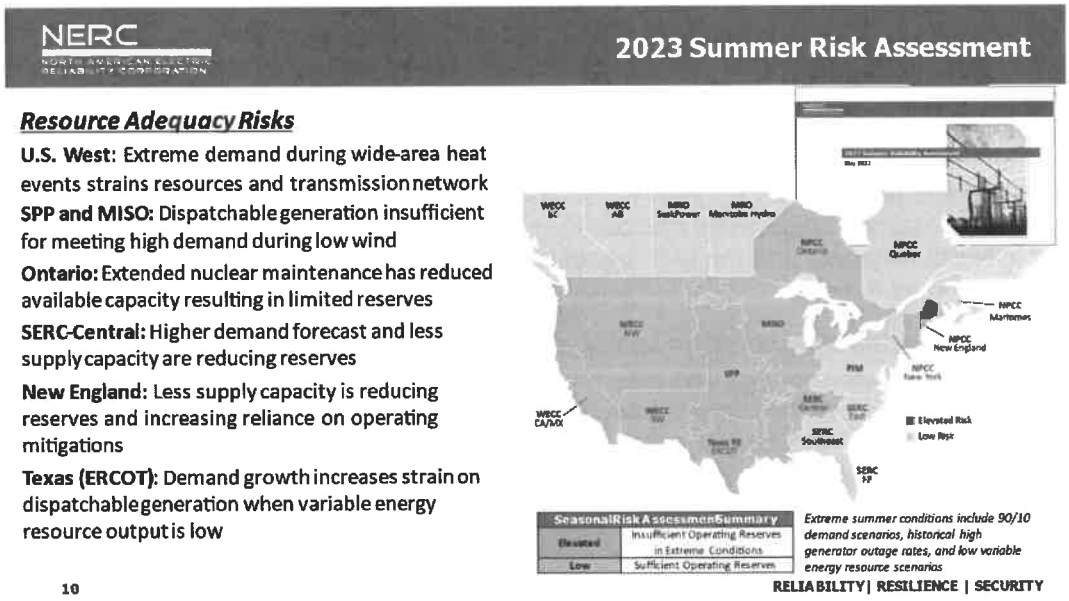
[33] 42 U.S.C. § 17381.

[34] AFPM LDV Comments (Attachment B) at 4-11.

[35] *See* International Energy Forum, Critical Minerals Outlook Comparison, August 2023 at 25 (although beyond the scope of the report comparing eleven studies on the demand for critical minerals, the authors noted geopolitics, high capital costs, ESG pressures and extended times to develop new mines "indicate a high risk for periods of demand exceeding supply."

control systems, the grid distribution systems grow more vulnerable to cybersecurity attacks."[36] According to the report, "threat actors can use multiple techniques to access those systems and potentially disrupt operations," as a potential adverse impact to grid distribution systems.[37] As demand increases due to accelerated electrification, grid reliability will pose a greater challenge due to additional resource buildout. As detailed in AFPM's LDV Comments, there is significant doubt that the U.S. electric grid can reliably support the proposal. Demand for electric vehicle charging will place significant stress on generation, transmission, distribution, and consumer charging systems, that are unlikely to meet increased demand in such a short timeframe.[38] As recently reported by the North American Electric Reliability Corporation (NERC), while electricity supply has improved in 2023 versus 2022, several operating regions are still at-risk during periods of peak demand.[39] As shown in Figure 1, NERC's recent summer assessment shows roughly two-thirds of the U.S., including Rhode Island and other New England states, face increased resource adequacy risk in the summer of 2023 before any additional increases in ZEV sales requirements under ACC I or ACC II.

Figure 1: NERC 2023 Summer Risk Assessment[40]



[36] Gov't Accountability Office, Cybersecurity High-Risk Series: Challenges in Protecting Cyber Critical Infrastructure, GAO-23-106441 (Feb. 2023), available at https://www.gao.gov/assets/gao-23-106441.pdf (Accessed August 24, 2023)
[37] Id.
[38] *See* discussion at AFPM LDV Comments at 11-17 and 34-36. DEM should better assess grid impacts from a regional basis before mandating a rapid shift to EVs.
[39] NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION, "2023 Summer Energy Market and Electric Reliability Assessment" (May 18, 2023).
[40] *Id.* Rhode Island is located in the Northeast Power Coordinating Council (NPCC), which is under an elevated risk.

Further, the report found that increased use of networked consumer devices that are connected to the grid's distribution systems—including EVs and charging stations—also potentially introduce vulnerabilities because "distribution utilities have limited visibility and influence on the use and cybersecurity of these devices."[41]

ACC II will increase electricity demand, undermining federal requirements targeting increased grid reliability. The increased demand for electricity under Rhode Island's proposed adoption of ACC II will likely stress Rhode Island's grid and the grids of states adopting ACC II, potentially compromising grid reliability in direct contravention of federal policy.

Because DEM's proposed adoption of ACC II conflicts with and presents an obstacle to clearly stated federal objectives, DEM lacks the authority to promulgate these regulations—and indeed is preempted from doing so.

III. DEM's adoption of ACC II constitutes a regulatory taking requiring just compensation.

DEM's plan to eventually phase out the sales of all ICEVs constitutes a regulatory taking. AFPM members invested substantial amounts of money in making their refineries, terminals, distribution networks, and renewable fuel facilities efficient and productive to supply our nation with cost-effective fuels. Therefore, our members and the broader industry have significant investment-backed expectations with respect to their properties, at least some of which may be forced to close because of DEM's proposed adoption of CARB's EV mandate. Rhode Island landowners also would be harmed. Landowners in the state receive compensation from renting their land to companies. Policies that shut down facilities in the petroleum supply chain would prevent companies and Rhode Island landowners from realizing these investment-backed expectations. Thus, adopting ACC II would constitute a regulatory taking based on its substantial interference with these expectations, and the state would be obligated to provide just compensation for companies' losses.

Therefore, as DEM considers the potential costs of policies that would shut down fuel infrastructure and other facilities, it should—at a minimum—account for the estimated costs of just compensation for the loss of property use and interference with investment-backed expectations that would inevitably result.

IV. The adoption of ACC II constitutes arbitrary and capricious rulemaking.

Even if EPCA and the CAA did not preempt Rhode Island from adopting ACC II, the proposed regulations are substantively deficient and based on incomplete analysis as detailed in sections C (inadequate economic analysis) and D (deficient environmental assessment) below.

There are numerous issues of central relevance that DEM failed to analyze or simply imported from California without adjustments needed to reflect conditions that are different between California and Rhode Island. These include critical mineral dependence and supply, grid composition, the cost of regulated upgrades, and EV total cost of ownership.

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[41] Gov't Accountability Office, Electricity Grid Cybersecurity: DOE Needs to Ensure Its Plans Fully Address Risks to Distribution Systems, GAO-21-81, at 18.

A. DEM may not overlook Rhode Island's administrative requirements for enacting new regulations.

Under the Rhode Island Administrative Procedures Act ("APA"),[42] state agencies' notice of proposed rulemaking must include the purpose of the proposal,[43] legal authority for the proposal,[44] citations of any sources relied upon,[45] and a summary of the regulatory analysis.[46]

Furthermore, a regulatory analysis must contain:

1. An analysis of the benefits and costs of a reasonable range of regulatory alternatives reflecting the scope of discretion provided by the statute authorizing the proposed rule;
2. Demonstration that there is no alternative approach among the alternatives considered . . . which would be as effective and less burdensome to affected private persons as another regulation. . . . and,
3. A determination whether:
    a. The benefits of the proposed rule justify the costs of the proposed rule; and,
    b. The proposed rule will achieve the objectives of the authorizing statute in a more cost-effective manner, or with greater net benefits, than other regulatory alternatives.[47]

The Rhode Island Office of Regulatory reform has explained this requirement as requiring "a detailed and systematic appraisal of potential regulatory impacts."[48]

The Small Business Regulatory Fairness in Administrative Procedures Act ("SBRFA")[49] requires state agencies to proposing regulations "that may have an adverse impact on small businesses" to prepare an economic impact statement that includes;

1. An identification and estimate of the number of the small businesses subject to the proposed regulation;
2. The projected reporting, recordkeeping, and other administrative costs required for compliance with the proposed regulation, including the type of professional skills necessary for preparation of the report or record;
3. A statement of the effect or probable effect on impacted small businesses;

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[42] R.I. Gen. Laws §42-35-1, et seq.
[43] R.I. Gen. Laws § 42-35-2.7(b)(1).
[44] R.I. Gen. Laws § 42-35-2.7(b)(2).
[45] R.I. Gen. Laws § 42-35-2.7(b)(7).
[46] R.I. Gen. Laws §§ 42-35-2.7(b)(9); § 42-35-2.9(a).
[47] R.I. Gen. Laws § 42-35-2.9(b).
[48] RHODE ISLAND ADMIN. PROCS. ACT REG'Y MANUAL 2 (August 2016), https://omb.ri.gov/sites/g/files/xkgbur751/files/documents/reform/APA/Regulatory-Manual.pdf.
[49] R.I. Gen. Laws § 42-35.1-1 et seq.

4. A description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation.[50]

State agencies are required to prepare a regulatory flexibility analysis that considers using regulatory methods "that will accomplish the objectives of applicable statutes while minimizing adverse impact on small businesses."[51] This includes considering;

1. The establishment of less stringent compliance or reporting requirements for small businesses;
2. The establishment of less stringent schedules or deadlines for compliance or reporting requirements for small businesses;
3. The consolidation or simplification of compliance or reporting requirements for small businesses;
4. The establishment of performance standards for small businesses to replace design or operational standards required in the proposed regulation; and
5. The exemption of small businesses from all or any part of the requirements contained in the proposed regulation.[52]

State agencies must also prepare a fiscal note for all regulations which "affect the state or any city or town financially."[53]

Under the Rhode Island Pollution Control Act ("RIPCA"), the director of the Department of Environmental Management has the authority "[t]o make, issue, and amend rules and regulations consistent with this chapter for the prevention, control, abatement, and limitation of air pollution."[54]

DEM does not actually demonstrate that adopting ACC II will control, *i.e.,* reduce carbon dioxide emissions in total. As we explain here and in Section IV.D of these comments, and in our attached comments on CARB's ACC II proposal (Attachment A), in the absence of a proper and thorough lifecycle GHG emissions analysis, neither CARB nor DEM can demonstrate the aggregate GHG impact of ACC II. Our attached comments on CARB's ACC II proposal include a study from Ramboll that evaluated whether alternative vehicle technology and fuel pathways could achieve lifecycle GHG emission reductions similar to or greater than the ACC II proposal. Unlike CARB's and DEM's partial analyses, Ramboll evaluated the full lifecycle impacts of EV technologies under the ACC II proposal to more completely and properly characterize the potential near-term and long-term GHG emissions performance. Ramboll considered other pathways that would not require a replacement of the entire transportation infrastructure system, and that would also not require the wholesale transformation of electric energy production and distribution infrastructure on an unprecedented short time scale. Instead, these other pathways would allow battery, hydrogen, and lower-carbon intensity gaseous and liquid fueled vehicles to

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[50] R.I. Gen. Laws § 42-35.1-3(a)(1)-(4).
[51] R.I. Gen. Laws § 42-35.1-4(a).
[52] R.I. Gen. Laws § 42-35.1-4(a)(1)-(5).
[53] R.I. Gen. Laws § 22-12-1.1
[54] R.I. Gen. Laws § 23-23-5(12).

compete to achieve GHG targets for light-duty transportation in the quickest and most cost-effective manner while addressing emissions from the existing fleet. Ramboll's conclusions showed that CARB's attributions of GHG reductions to its proposed ACC II regulation were incomplete and emphasized the need for CARB to conduct a full lifecycle GHG emission assessment to quantify the cradle-to-grave effects of the draft ACC II proposal. CARB did not remedy these inadequacies in its analysis before adopting ACC II, and DEM's reliance on CARB's assessment suffers from the same deficiencies.

Even if CARB's analysis included the carbon emissions associated with battery production and had been otherwise adequate (which, as our attached comments on its proposal demonstrated, it was not), DEM cannot simply rely on CARB. DEM must conduct an adequate LCA of the effects of adopting ACC II on statewide GHG emissions. An adequate LCA would consider factors such as the mix of the fuel base for electricity supplied to the grid on which Rhode Island's EVs will charge, expected miles traveled by Rhode Island drivers, Rhode Island temperature trends throughout the year and their effect on charging needs and battery capabilities, and many other state-specific factors.

For the foregoing reasons, DEM fails in its duties to prepare a systematic regulatory analysis, including analyzing and minimizing the impacts on small businesses and the economic and environmental impacts of the proposal, as well as a fiscal note.

B. DEM's analysis is based on unwarranted assumptions.

DEM provides no or inadequate support regarding cars, car components, and the costs of both. It mostly relies on CARB's analysis. Considering DEM's heavy reliance on CARB's analysis, we refer to and incorporate by reference our comments on CARB's ACC II proposal (Attachment A) and our comments on proposals from New York (Attachment C) and Delaware (Attachment D) proposals to adopt ACC II.

Similar to other states "adopting" ACC II, DEM provides no analysis or support to demonstrate that there will be an adequate EV fleet to meet the requirements of its proposed adoption of ACC II.[55] Moreover, DEM fails to consider whether the myriad direct and indirect federal and state subsidies required to bring current and future EVs into the marketplace are sufficient for EV sales and technology to be feasible, or whether these subsidies can even reasonably be expected to continue in their current state throughout the ramp-up required over the next decade and beyond under ACC II.[56]

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[55] Analyst data suggests that automobile manufacturers are unlikely to produce as many EVs as they had hoped. *See e.g.,* Keith Naughton, Ford CEO Sticks to 'Crazy High' EV Goal, Bloomberg News (May 19, 2023), available at https://www.bloomberg.com/news/articles/2023-05-19/ford-ceo-pitches-50-billion-ev-plan-to-challenge-tesla#xj4y7vzkg (Accessed August 8, 2023).

[56] Because passenger vehicles have domestic manufacturing and sourcing requirements in the IRA to be eligible for the clean vehicle tax credit and many of the required critical minerals are imported, it will be challenging for all vehicles to be eligible for the full federal clean car tax credit. *See* IRA, Section 45W(c) (The IRA requires 50% of the value of battery components to be produced or assembled in North America to qualify for a $3,750 credit and 40% of the value of critical minerals sourced from the United States or a free trade partner also for a $3,750 credit).

Similarly, with respect to battery availability and costs, DEM provides no analysis of whether the likely future supply and demand trends for critical minerals and other battery components will allow for the necessarily massive supply ramp-up in conjunction with continued falling prices. A recent study comparing eleven reports evaluating critical mineral demand requirements for the energy transition concluded forecasting future critical mineral demand requirements is highly uncertain due to variations in energy markets, costs, and technological advancements.[57] Therefore, there is little basis for CARB's and Rhode Island's conclusion that there will be ample critical minerals and battery components.

1. DEM failed to consider the feasibility of ACC II

The supply chain necessary to support new technologies contemplated by ACC II is not well established and is likely to increase dependence on critical minerals from foreign sources. Reliance on a limited number of technologies (e.g., ZEVs) on the timeline required by ACC II may result in a non-resilient transportation sector vulnerable to unexpected disruptions and cost increases. Unstable critical mineral supply chains could disrupt this future. ZEVs, as compared to ICEVs, have a much greater reliance on several critical minerals. DEM ignores the obvious benefits of a multi-technology approach that would reduce the risks associated with a ZEV-focused approach. For example, Toyota recently noted in a memo to its dealers that "the amount of raw materials in one long range battery electric vehicle could instead be used to make 6 plug-in hybrid electric vehicles or 90 hybrid electric vehicles . . . the overall carbon reduction of those 90 hybrids over their lifetimes is 37 times as much as a single battery electric vehicle."[58] There are six minerals critical to the production of ZEVs: cobalt, copper, graphite, lithium, manganese, and nickel.[59]

Critical mineral supply, especially those essential to the manufacturing of a lithium-ion (Li ion) battery, is dominated by China, Australia, and the Democratic Republic of Congo.[60] Of the foreign nations that produce cobalt, molybdenum, and other minerals needed to produce ZEVs, China has disproportionate influence. While 70 percent of global cobalt production comes from the Democratic Republic of Congo, most of those mines are owned/operated by China, and more than 60 percent of cobalt processing is in China. Moreover, 67 percent of the world's graphite is also produced in China.[61] The U.S. imports most of its manganese from Gabon, a less politically stable country, providing 65 percent of the United States' supply.[62]

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[57] International Energy Forum, Critical Minerals Outlook Comparison, August 2023 at 25-26.
[58] William Johnson, TESLARATI, "Toyota releases new defense of lagging EV strategy" (May 18, 2023). available at https://www.teslarati.com/toyota-defends-ev-strategy/.
[59] INTERNATIONAL ENERGY ADMINISTRATION, "The Role of Critical Minerals in Clean Energy Transitions," (revised March 2022) available at https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions. [hereinafter IEA Report 2022].
[60] TURNER, MASON & COMPANY. "Evaluation of EPA's Assumptions and Analyses Used in Their Proposed Rule for Multi-Pollutant Emissions Standards" (June 7, 2023) (Research funded by AFPM and available upon request) [hereinafter "Turner Mason Report"].
[61] G.R. Robinson, et al., U.S. GEOLOGICAL SURVEY, "Professional Paper 1802 Critical mineral resources of the United States—Economic and environmental geology and prospects for future supply" (Dec. 19, 2017) p. J1–J24, available at https://doi.org/10.3133/pp1802J.
[62] OEC, "Manganese Ore in the United States" (Mar. 2023) available at https://oec.world/en/profile/bilateral-product/manganese-ore/reporter/usa.

Expected supply from existing mines and projects under construction is estimated to meet only half of projected world demand for lithium and cobalt.[63] Establishing new mines, particularly in the United States, is not a near-term solution. Permitting and authorizing new domestic mining and smelting capacity requires a substantial amount of time and government support. According to the National Mining Association, it can take up to 10 years to obtain a permit to commence mining operations in the U.S., while permitting takes two years in Canada and Australia.[64] "[U]nless the permitting process can be improved, U.S. mining developments will continue to take longer to come online and carry more financial risks compared with the rest of the world, China's domination of battery manufacturing and critical minerals production will continue for a longer period, and the U.S. will find it increasingly difficult to acquire the metals and minerals it needs for its long-term clean-energy goals."[65]

As demand for these commodities grows, the market concentration (and ability to exert power over pricing) swings toward producers in less politically stable countries. If producer countries have market power, they have the potential to impact not only price, but the ability for consumer countries to influence other issues, such as sanctity of commercial contracts, labor and/or human rights, and environmental standards in producing jurisdictions. The significance of this issue is compounded by the fact that multiple critical minerals are needed for ZEV production, so a disruption in the supply of a single mineral can disable the entire supply chain. The operation of ICEVs, to the contrary, relies on natural resources for which there are abundant domestic supplies.

The supply chain necessary to support new technologies ACC II is uncertain and is likely to increase dependence on critical minerals from foreign sources.[66] In the event of supply disruption or pricing volatility related to geopolitical pressures, the U.S. is highly exposed as it heavily relies on imports to satisfy domestic demand in each of these critical minerals.[67] Except for copper, the U.S. does not mine significant quantities of these critical minerals. And, despite the U.S. having substantial domestic copper mining, it still relies on imports to meet 45 percent of U.S. demand.[68] China's dominance does not stop at critical mineral extraction and processing. "Two of China's largest battery companies control more than half of the global

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[63] Axios Generate, The supply crunch that could slow the climate fight, (May 5, 2021).
[64] National Mining Association, Delays in the U.S. Mine Permitting Process Impair and Discourage Mining at Home, May 31, 2021. Available at https://nma.org/2021/05/13/delays-in-the-u-s-mine-permitting-process-impair-and-discourage-mining-at-home/.
[65] Jason Lindquist, Don't Pass Me By - With Many Steps Required, Mining Projects Face Trickiest Path To Approval, RBN Energy Blog (June 30, 2023) (Attachment E).
[66] *See e.g.*, Shelley Challis, POST REGISTER, "Jervois shuts down Idaho Cobalt mine" (Apr. 7, 2023), available at https://www.postregister.com/messenger/news/jervois-shuts-down-idaho-cobaltmine/article_efd97f32-d015-11ed-9424-bfb28220210c.html.
[67] China announced it will restrict the export of two metals (gallium and germanium) used in EV production. While these metals are not particularly rare, China could limit export of processed key EV battery minerals to maintain its supply chain dominance. See Archie Hunter & Alfred Cang, China Restricts Export of Chipmaking Metals in Clash with US, July 3, 2023. Bloomberg, available at https://www.bloomberg.com/news/articles/2023-07-03/china-to-restrict-exports-of-metals-critical-to-chip-production#xj4y7vzkg.
[68] *See* AFPM LDV Comments at 38-40 for additional discussion regarding the lack of critical minerals needed for battery production.

market resulting in up to 90% of the EV battery supply chain relying solely on China."[69] Conversely, the United States plays a small role in the global electric vehicle (EV) supply chain, with only 7 percent of battery production capacity.[70] "With a heavy dependence on China, the United States is at a disadvantage in its role in the global EV supply chain."[71]

"Between January 2022 and January 2023, the cost of lithium increased by almost 45%."[72] By May 2023, "battery costs were $110.7/kWh, which was driven by China's increased lithium carbonate price during its EV market recovery."[73] Indeed, battery costs rose 7 percent in 2022, and lithium-ion battery pack prices have recently begun to rise, even before the true impacts of ACC II are felt.[74] With EPA's and other developing nations' push to electrify transportation and the concomitant need to deploy utility-scale batteries, the demand for lithium (and other critical minerals) is expected to grow exponentially. While prices for key battery metals like lithium, nickel and cobalt have moderated slightly in recent months, Bloomberg New Energy Finance (BNEF) expects average battery pack prices to remain elevated in 2023 at $151/kWh.[75] Ample research and commentary warn that critical mineral and battery component supply issues will form a major obstacle to the type of EV ramp-up the proposal assumes will happen seamlessly.

To meet the mandates set by ACC II, the original equipment manufacturers (OEMs) must secure adequate amounts of raw materials in a short time. With the projected supply and demand gap that many analysts foresee, pricing of critical minerals will remain volatile as occurred through the early 2020s. Morgan Stanley estimates EV makers will need to increase prices by 25 percent to account for rising battery prices.[76] Battery raw materials are not commodities, they are classified as specialty chemicals, so pricing should not be analyzed according to traditional commodity pricing structures, especially given that these supplies are geographically

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[69] Morgan Stanley, "Rewiring the Supply Chain for Electric Vehicle Batteries, (July 2023), https://www.morganstanley.com/ideas/ev-battery-lithium-supply.
[70] RMI, "The EV Battery Supply Chain Explained," (May 2023), https://rmi.org/the-ev-battery-supply-chain-explained/#:~:text=Today%2C%20the%20United%20States%20is,strengthen%20the%20US%20downstream%20sector.
[71] Morgan Stanley, "Rewiring the Supply Chain for Electric Vehicle Batteries,: (July 2023), https://www.morganstanley.com/ideas/ev-battery-lithium-supply
[72] International Energy Agency, "Trends In Batteries," (April 2023) https://www.iea.org/reports/global-ev-outlook-2023/trends-in-batteries.
[73] Mining.com, "EV battery prices rise for the first time in 2023," (June 2023), https://www.mining.com/ev-battery-prices-rise-for-first-time-in-2023/
[74] BloombergNEF, Lithium-ion Battery Pack Prices Rise for First Time to an Average of $151/kWh (Dec. 6, 2022); Graham Evans, A reckoning for EV battery raw materials (S&P Global Mobility Oct. 31, 2022), available at https://www.spglobal.com/mobility/en/research-analysis/a-reckoning-for-ev-battery-raw-materials.html (Accessed August 8, 2023); Mark P. Mills, The "Energy Transition" Delusion: A Reality Reset (Manhattan Institute Aug. 2022), at 8, 10, available at https://media4.manhattan-institute.org/sites/default/files/the-energy-transition-delusion_a-reality-reset.pdf (accessed August 8, 2023). *See also* AFPM LDV Comments (Attachment B) at 49-51 for detailed discussion of battery costs.
[75] BLOOMBERGNEF "Lithium-ion Battery Pack Prices Rise for First Time to an average of $151/kWh" (Dec. 6, 2022) *available at* https://about.bnef.com/blog/lithium-ion-battery-pack-prices-rise-for-first-time-to-an-average-of-151-kwh/ (Accessed August 8, 2023).
[76] *See* James Thornhill, Morgan Stanley Flags EV Demand Destruction as Lithium Soars (Bloomberg Mar. 24, 2022), available at https://www.bloomberg.com/news/articles/2022-03-25/morgan-stanley-flags-ev-demand-destruction-as-lithium-soars (last visited May 24, 2023).

concentrated in areas with geopolitical instabilities. Each OEM, cathode or anode producer, and battery manufacturer have their own specifications for the materials, and thus the raw materials must be refined and tested to meet their bespoke specification. Spot markets for battery materials are virtually non-existent and unlikely to develop in the near term. For example, most lithium contracts are written as long-term agreements, which are based on Fastmarkets' lithium index and a discount, and sometimes with a floor/ceiling mechanism to hedge against pricing volatility.

Consumers are directly affected with higher EV costs, particularly when lower cost ICEV's are no longer available. Although there are various federal and state subsidies and incentives to partially offset higher vehicle and infrastructure costs associated with ACC II, DEM does not analyze whether this state of affairs is likely to last. The potential loss of EV subsidies and incentives has implications for the cost analysis and overall viability of the regulatory program. Setting aside whether California, Rhode Island, or any state has authority to create ZEV credits, the costs of those subsidies, which are borne by gasoline vehicle buyers in other states (without their knowledge) should be evaluated by DEP.[77] The IRA is a mechanism to reduce battery prices, but this law simply extended the existing battery subsidy and even limited its applicability through domestic sourcing and income requirements. Thus, DEM and other states are relying on an existing program that has been curtailed for the proposition that it will lower battery prices in the future. However, those seeking to adopt ACC II simultaneously ignore that the increase in demand for batteries will raise their price. Moreover, DEM does not consider the market implications of an increasing percentage of vehicle sales depending on cross-subsidies from a shrinking number of gasoline vehicle buyers. As stated in a recent Wall Street Journal article, in 2023 car inventory increased yet there is a lack of buyers. High interest rates keep potential buyers at a distance while there are an increasing number of defaults on auto loans for current owners. Dealership owners grapple with getting cars off their lots with an optimal supply, but very minimal demand.[78] DEM must account for the costs and market impacts described in the following sections, which currently are ignored in its proposal.

2. DEM's cost analysis is woefully inadequate.

Rather than conduct its own analysis of the total cost of ownership for Rhode Island consumers, DEM relies exclusively on CARB's analysis, which assesses costs for California, not Rhode Island. This fact alone renders DEM's analysis deficient. Nonetheless, we offer the following comments on CARB's total cost of ownership analysis.

a. Purchase Price

While CARB and DEM acknowledge EVs have a higher purchase price than ICEVs, these states incorrectly assume that every ZEV will be eligible for the maximum federal purchase incentive. It is arbitrary and capricious for DEM to ignore the likelihood that battery raw materials will not be mined in the U.S. or available for import from credit-qualifying countries, given China's dominance in processing critical minerals needed for ZEV batteries and the

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[77] ACC II is largely funded on the backs of gasoline (and diesel) car buyers, through credit transfers and payments between automakers that hide the true costs of EVs. This scheme violates Federal (and State) laws that prohibit unfair or deceptive acts or practices in or affecting commerce.

[78] Ben Foldy, "Car Prices Might be Unsustainable for Car Buyers," Aug. 21, 2023. The Wall Street Journal at https://www.wsj.com/personal-finance/car-prices-might-be-unsustainable-for-buyers-18d7b395.

manufacture of ZEV batteries. Consequently, it is unrealistic to assume ZEV purchases will be eligible for the full incentive which is tied to domestic manufacturing requirements (and household income limits).

DEM ignores that battery prices began to rise due to limited supply of minerals.[79] While there are a few affordable EVs, these EVs typically have a range below 200 miles on a full charge.[80] If consumers want longer range EVs, they will pay a considerable purchase price as seven of the top ten, range-rated EVs cost anywhere from $74,800 to $110,295.[81] In the first calendar quarter of 2022, the average price of the top-selling light-duty ZEV in the U.S. was about $20,000 more than the average price of top-selling ICEV.[82] The price disparity has not improved, with the average price of light-duty EVs near $66,000 in August 2022 and continuing to rise.[83]

b. Cross-subsidies

Noticeably absent from CARB's and DEM's analysis is cross-subsidization. A ZEV typically costs tens of thousands of dollars more to produce than a comparable ICEV due primarily to the surging costs of critical minerals and resulting high costs of batteries.[84] ACC II will force manufacturers to sell an increasing percentage of ZEVs each year that goes far beyond the consumer demand for the product at its true cost. To ensure compliance with the ZEV mandate under ACC II, manufacturers will be forced to incentivize ZEV purchases through a practice called cross-subsidization.

Automobile cross-subsidization is a pricing strategy to spread the high cost of ZEVs across a manufacturer's other product offerings. Under this pricing convention, manufacturers set the prices of certain ICEVs higher than their production costs to generate additional profits that can then be used to offset losses incurred by selling ZEVs below their actual production costs. This

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[79] BLOOMBERGNEF "Lithium-ion Battery Pack Prices Rise for First Time to an average of $151/kWh" (Dec. 6, 2022) available at https://about.bnef.com/blog/lithium-ion-battery-pack-prices-rise-for-first-time-to-an-average-of-151-kwh/

[80] *See* Sebastian Blanco, *List of EVs Sorted by Range* (Sept. 1, 2022), http://www.jdpower.com/cars/shopping-guides/list-of-evs-sorted-by-range.

[81] *See* Nicholas Wallace, Austin Irwin, & Nick Kurczewski, Longest Range Electric Cars for 2023, Ranked (Mar. 23, 2023), https://www.caranddriver.com/features/g32634624/ev-longest-driving-range/

[82] Registration-weighted average retail price for the 20 top-selling ZEVs and ICEVs in the U.S. S&P Global, Tracking BEV prices – How competitively-priced are BEVs in the major global auto markets? May 2022.

[83] Andrew J. Hawkins, EV prices are going in the wrong direction (The Verge Aug. 24, 2022), available at https://www.theverge.com/2022/8/24/23319794/ev-price-increase-used-cars-analysis-iseecars accessed May 24, 2023; see also Justin Banner, Latest Ford F-150 Lightning Price Hike Hands Chevy Silverado EV a $20K Advantage--The least-expensive electric F-150 Lightning now costs $4,000 more than it did late last year (Motortrend Mar. 30, 2023), available at https://www.motortrend.com/news/2023-ford-f-150-lightning-pro-price-increase-msrp/ accessed May 24, 2023.

[84] *See* PCMag, Profit vs. the Planet, (Sept. 26, 2022), Profit vs. the Planet: Here's Why US Automakers Are All-In on Electric Vehicles | PCMag https://www.pcmag.com/news/profit-vs-the-planet-heres-why-us-automakers-are-all-in-on-electric-vehicles accessed July 3, 2023 ("EVs are currently more expensive to manufacture than gas-powered vehicles because of spiking battery costs. The cost of lithium, the main ingredient, has skyrocketed since demand far exceeds the number of working mines that can supply it.").

practice operates as a hidden tax on ICEVs and results in the purchasers of ICEVs subsidizing the sale of ZEVs. Without cross-subsidies, ZEV mandates would fail.

While opaque, the magnitude of ZEV cross-subsidies is significant. Ford's decision to report EV financial information separately beginning in 2023. Ford lost approximately $58,000 for each ZEV car it sold during the quarter.[85] This reported per-vehicle loss is more than an order of magnitude greater than EPA's estimates of the price differential between the two technologies. Ignoring actual ZEV production costs, including credit trading costs, is arbitrary and capricious.

c. Total cost of ownership[86]

The cost of ZEV ownership is higher than assumed by CARB and DEP. Real-world economy testing of ZEV would show they use vastly higher amounts of electricity to travel the same distance as an ICEV, with a corresponding increase in ZEV owner costs for electricity and ZEV maintenance and battery replacement. One cannot assume a new ICEV and a new ZEV will travel the same miles each year. EVs have less range, both technically and practically. As noted by J.D. Power, "the majority of EVs provide between 200 and 300 miles of range on a full charge."[87] Studies show that the average electric car is driven 9,059 miles per year, compared with 12,758 miles for ICEVs.[88]

DEM also neglects to fully account for higher insurance costs of ZEVs. Insurance premiums for PHEVs are typically higher than comparable ICEVs because of higher repair costs. According to ValuePenguin, insurance on a PHEV, depending on the model, could be 19 percent to 32 percent higher than a comparable ICEV.[89] Another estimate from an October 2022 study from Self Financial concludes PHEVs' annual insurance is $1,674, $442 more compared to an ICEV annual insurance premium of $1,232.[90]

DEM and CARB assume lower retail fuel costs for ZEVs than liquid fuels. Real-world data squarely contradicts DEM's and CARB's cost assumptions on EV charging. For example, California's ZEV mandates have contributed to the inflationary impacts on energy prices and on jobs in certain industries related to traditional fuels and vehicles. According to a 2021 California Public Advocates Office presentation to the California Public Utilities Commission, "it is already cheaper to fuel a conventional internal combustion engine (ICE) vehicle than it is to charge an

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[85] *See* Luc Olinga, TheStreet, Ford Loses Nearly $60,000 for Every Electric Vehicle Sold, (May 2, 2023) available at https://www.thestreet.com/technology/ford-loses-nearly-60000-for-every-electric-vehicle-sold accessed July 3, 2023.
[86] *See* AFPM LDV Comments (Attachment B) at 55-56 and AFPM CARB Comments (Attachment B) at B8-B13.
[87] *See* Sebastian Blanco, List of EVs Sorted by Range (Sept. 1, 2022), https://www.jdpower.com/cars/shopping-guides/list-of-evs-sorted-by-range accessed August 28, 2023.
[88] iSeeCars, The Most and Least Driven Electric Cars (May 22, 2023), https://www.iseecars.com/most-driven-evs-study accessed August 28, 2023.
[89] ValuePenguin, How Much Does Electric Car Insurance Cost? https://www.valuepenguin.com/how-having-electric-car-affects-your-auto-insurance-rates accessed August 28, 2023.
[90] Self Financial, Electric Cars vs Gas Cars Cost in Each State https://www.self.inc/info/electric-cars-vs-gas-cars-cost/ accessed Augst 28, 2023.

EV" in the San Diego Gas & Electric Co. service area.[91] This is astonishing given that gasoline prices in California are the second highest in the nation, averaging approximately $4.01 per gallon of gasoline at that time in 2021. According to an Anderson Economic Group article, entry-priced, gas-powered cars were significantly more affordable to fuel at $9.78 per 100 "purposeful miles" compared to the $12.55 at-home charging costs for an entry-priced EV. Future projections afford consumers no relief, as the California Energy Commission projects that both commercial and residential electricity prices will continue to rise, reaching nearly $7 per gasoline-gallon equivalent for the commercial sector. Similarly, many in the Boston-Cambridge-Newton area paid $0.34 per kWh in April 2023, which was nearly 107% higher than the national average.[92]

Charging pricing has been unpredictable, with some stations charging by the minute instead of charging for electricity consumed.[93] Other charging stations offer multiple subscription plans or charge different rates at various times of day, resulting in significant price increases over the past few months.[94] Boston charging companies raised charging fees in response to New England utilities increasing their rates to 39 cents per kilowatt-hour in February 2023, from 27 cents a year earlier.[95]

DEM must account for these real costs and assess these trends for Rhode Island.

d. DEM fails to consider the cost of credits.

DEM fails to evaluate how government credits are embedded in vehicle pricing. For example, neither federal or state governments, nor auto manufacturers explain how state ZEV credits, EPA GHG multiplier credits, and NHTSA CAFE EV multiplier credits are accounted for in both ZEV and ICEV vehicle price.

i. State zero-emission vehicle credits.

"ZEV credits" are currency created by the State of California to provide supplemental subsidies to achieve their EV sales mandate. DEP, which adopts the same CARB program, must disclose the cost of this incremental subsidy that manufacturers of EVs require to entice buyers to meet state EV sales mandates. If buyers wanted EVs, the ZEV credit price would be $0, but California and other states explicitly decided to not collect this data from automakers, so the public has no information about the costs of this scheme. DEM must disclose who is paying the costs of the ZEV credits. Will Rhode Island gasoline and diesel vehicle buyers cover the costs of ZEV

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[91] California Public Utilities Commission, "Utility Costs and Affordability of the Grid of the Future" (May 2021). Presentation from Mike Campbell, Public Advocates Office at 116-117 available at https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2021/senate-bill-695-report-2021-and-en-banc-whitepaper_final_04302021.pdf.

[92] U.S. Bureau of Labor Statistics, Northeast Information Office, Average Energy Prices, Boston-Cambridge-Newton — April 2023. Available at https://www.bls.gov/regions/northeast/news-release/averageenergyprices_boston.htm#:~:text=Source%3A%20U.S.%20Bureau%20of%20Labor,of%2016.5%20cents%20per%20kWh.

[93] Aaron Pressman, "Inside the crazy, mixed-up world of electric-vehicle charger pricing," The Boston Globe, March 27, 2023. Available at https://www.boston.com/news/the-boston-globe/2023/03/27/electric-vehicle-charger-pricing/.

[94] *Id.*

[95] *Id.*

credits for EV sales in the state, *i.e.*, will the MSRP of a gasoline pickup truck in Rhode Island be higher than the MSRP of a gasoline pickup truck in a state without an EV sales mandate and ACC II? If so, by how much? Or will nationwide gasoline and diesel vehicle buyers cover these costs? If so, under what authority will Rhode Island impose these costs on consumers nationwide? How much do these costs increase the price of gasoline and diesel vehicles? Also, if state EV sales mandates increase and battery minerals become scarcer, the value of ZEV credits are certain to increase significantly; however, DEM does not identify this risk or consider these costs. For example, one analyst (Joshua Linn) estimated the value of ZEV credits at $3,236 per credit.[96] Under California's rule, ZEV credits are awarded based on the size of the battery (*i.e.*, the bigger the vehicle, the bigger the subsidy) and a typical EV receives 3 or more ZEV credits. Using Linn's estimate, every EV sale mandated by the State of Rhode Island will impose a hidden cost of approximately $10,000 on ICEV buyers.[97]

ii. EPA GHG "multiplier" credits for EVs.

These credits give an extra manufacturing incentive to EV makers to meet EPA's GHG standards, despite EPA having no authority to do so, and are not based on any real-world avoided emissions. DEM does not estimate the costs of this subsidy to the extent that its proposal increases EV sales. Similarly, DEM does not consider that if EPA's GHG multiplier credits are determined to be unlawful and/or rescinded by regulation, the value of the aforementioned ZEV credits must necessarily increase to offset them. DEM should provide an estimate of the costs, which will be borne by purchasers of ICEVs.

iii. Corporate Average Fuel Economy (CAFE) "multiplier" credits.

Automakers and NHTSA are applying a long-expired incentive originally created by the Alternative Motor Fuels Act of 1988 to spur the commercial availability of alternative motor fuel vehicles (fueled with ethanol, methanol, or natural gas). This treatment allowed automakers to divide the gallon of gasoline equivalent for alternative fuel vehicles by 0.15, effectively producing a 6.67 multiplier of fuel economy credits. The Energy Policy Act of 1992 expanded the covered fuels to "alternative fuels," to also include LPG, hydrogen, coal-derived liquid fuels, other non-alcohol biofuels, and electricity. While this provision expired in either 1994 or 2004, depending upon one's interpretation, NHTSA continues to apply it to EVs.[98] In other words, EVs have been receiving credit for at least 667% of the real-world fuel economy they achieve on the road and EV manufacturers have been selling these credits to manufacturers of gasoline and diesel

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[96] *See* Joshua Linn, Balancing Equity and Effectiveness for Electric Vehicle Subsidies (Resources for the Future Jan. 2022) available at https://media.rff.org/documents/WP_22-7_January_2022.pdf (accessed August 8, 2023).

[97] This estimate is currently spread across roughly 19 gasoline car buyers for every 1 EV buyer (assuming BEVs are 5% market share of new sales); however, as EV mandates like Rhode Island's increase and the gasoline and diesel vehicle buyer pool shrinks, these costs will compound at an increasing rate.

[98] *See* National Highway Traffic Safety Administration, "Alternative Fuels in CAFE Rulemaking," presentation to SAE International (2015), available at https://www.nhtsa.gov/sites/nhtsa.gov/files/2015sae-powell-altfuels_cafe.pdf (Accessed August 8, 2023).

vehicles.[99] A NHTSA presentation suggests that its EV multiplier credits alone subsidize each EV by more than $25,000, increasing the true average cost of every EV sold to over $90,000.[100] Per the NHTSA information above, MY2017 standards were ~35mpg and MY2017 Tesla (with multipliers) was 518.7 mpg. Since Tesla sold ~46,979 MY2017 vehicles in the U.S., then Tesla in MY2017 generated 227 million excess credits. If the market-value of these credits is ~$5.50 per 0.1 mpg shortfall per vehicle under the MY2017 CAFE standard of ~35 mpg, then these credits were worth approximately $1.25 billion, or $26,600 per EV that Tesla sold.[101] We note that the U.S. Department of Energy (DOE) recently proposed to eliminate this multiplier when calculating the petroleum equivalence factor for EVs.[102] DEM should provide an estimate of the incremental costs of these subsidy payments and of the effect of a potential decision by DOE to remove the 667% multiplier.

While cross-subsidization, tax credits, emissions trading, and other EV subsidies may hide the true costs of a ZEV mandate from consumers, DEM has a duty to quantify and present those costs that are attributable to ACC II.

e. Tax Revenue Implications.

California and Rhode Island are two very different states. DEM must deploy meaningful analysis, absent in its administrative record, as to how ACC II in Rhode Island will shrink the pool of gasoline and diesel vehicles paying taxes and the corresponding shortfall in tax receipts. For example, California's geographical size is more than 150 times larger than Rhode Island, and the population of Rhode Island is only 2.8% of California's.[103] Moreover, what percentage of Rhode Island's population lives in multi-unit dwellings, which makes EV charging more difficult? What are the median salaries and cost of living in Rhode Island? What portion of the population

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[99] A 2015 NHTSA presentation to SAE, and a NHTSA CAFE Credit Model Documentation report, show how credits are being calculated for EVs despite not generating any real-world fuel savings or real-world fuel economy improvement. See also https://www.nhtsa.gov/sites/nhtsa.gov/files/2015sae-powell-altfuels_cafe.pdf; https://www.nhtsa.gov/sites/nhtsa.gov/files/2022-04/Model-Documentation_CAFE-_MY-2024-2026_v1-tag.pdf; https://one.nhtsa.gov/cafe_pic/home/ldreports/manufacturerPerformance. Per the NHTSA information above, since MY2017 standards were ~35mpg and MY2017 Tesla FE performance (with multipliers) was 518.7 mpg, and since Tesla sold ~46,979 MY2017 vehicles in the U.S., then Tesla in MY2017 generated 227 million excess credits. If the market-value of these credits is ~$5.50 per 0.1 mpg shortfall per vehicle under the MY2017 CAFE standard of ~35 mpg, then these credits were worth approximately $1.25 billion, or $26,600 per EV that Tesla sold. [Calculation of estimated value: Credits = (518.7 – 35) x 46979 x 10 x CAFE Penalty of $5.50 per 0.1 mpg shortfall per vehicle]. Tesla may have banked, traded, or sold these credits. Tesla MY2022 sales in the U.S. were 484,351 and the CAFE civil penalty is now $15 per 0.1 mpg shortfall per vehicle.

[100] *See* https://www.nhtsa.gov/sites/nhtsa.gov/files/2015sae-powellaltfuelscafe.pdf; https://www.nhtsa.gov/sites/nhtsa.gov/files/2022-04/Model-Documentation_CAFE-MY-2024-2026_v1-tag.pdf; https://one.nhtsa.gov/cafe_pic/home/ldreports/manufacturerPerformance.

[101] The calculation of estimated value: Credits = (518.7 – 35) x 46979 x 10 x CAFE Penalty of $5.50 per 0.1 mpg shortfall per vehicle]. Tesla may have banked, traded, or sold these credits. Tesla MY2022 sales in the U.S. were 484,351 and the CAFE civil penalty is now $15 per 0.1 mpg shortfall per vehicle.

[102] The Department of Energy has acknowledged that EV fuel economy is significantly overstated and has proposed certain modifications to the petroleum equivalency factor. See 88 Fed. Reg. 21,525 (April 11, 2023).

[103] Estimates as of July 1, 2022, U.S. Census Bureau, Quick Facts – Rhode Island; California, available at https://www.census.gov/quickfacts/fact/table/RI,CA/LND110220 accessed September 5, 2023.

has a low income? How do these statistics compare to California? What are current and projected electricity rates and how do differences in temperature impact EV range and purchase decisions? What EV charging infrastructure is available and what is needed to expand charging availability?[104] These factors affect EV adoption rate and, by extension, the impact on the state budget, which DEM ignored in adoption of ACC II.[105]

EVs are heavier than ICEVs, which means increased wear and tear on roadways. CARB and DEM fail to account for infrastructure impacts from increased operation of heavier ZEVs on the road including road and bridge deterioration and commensurate reduced funding for infrastructure from fuel tax collections. These excluded costs must be included in DEM's analysis—another example of the state's failure to address a major aspect of ACC II.

C. DEM's analysis of economic impacts is woefully inadequate.

DEM neglects to consider economic impacts to the public. We incorporate by reference our attached comments on CARB's ACC II proposal (Attachment A) and AFPM's LDV comments (Attachment B). We further note that Rhode Island's lack of analysis by itself makes DEM's proposal arbitrary and capricious. The state relies wholly on California's analysis. An evaluation of how adopting ACC II would harm or benefit the citizens of Rhode Island cannot be properly conducted by a wholesale reliance on an analysis of ACC II's impacts on another state, particularly one as different from Rhode Island as California.

First and foremost, without a comparison of California's (CAISO) and Rhode Island's (ISONE) electrical grids and the relative reliability and status of repairs to these grids that are underway, DEM has not meaningfully assessed whether the assumptions underlying CARB's analysis of ACC II apply to its own proposed adoption of ACC II.[106] Adopting an EV mandate will spike demand for electricity, placing further upward pressure on electric rates and threatening reliability.

Additionally, Rhode Island's climate differs from California's, with its colder weather negatively impacting charging efficiency and EV range, affecting both individual and systemic cost

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[104] *See* AFPM LDV Comments at 36-38 (discussion of EV charging infrastructure). As the study on discontinuance cited by EPA states, "[R]ange isn't correlated with discontinuance in PHEVs or ZEVs but with and access to charging[is]." Hardman, S., and Tal, G., Discontinuance Among California's Electric Vehicle Buyers: Why are Some Consumers Abandoning Electric Vehicles, April 21, 2021, Report for National Center for Sustainable Transportation at 26.

[105] *See Id.* at 30-34 (discussion of EV adoption rate).

[106] *See* AFPM LDV Comments at 34-36 and 56-58 for detailed discussions of challenges and costs associated with upgrading the electricity transmission grid.

analyses.[107] EVs are less efficient in cold weather and extremely hot weather.[108] According to New York Department of Transportations' National Electric Vehicle Infrastructure (NEVI) Plan dated August 2022:

> [v]ery cold temperatures (below 30 degrees Fahrenheit) have a significant effect on electric battery and charging performance. Charging is much slower in cold temperatures, and direct-current fast-charging (DCFC) facilities may only charge at a fraction of their rated speed in cold temperatures. Further, all-wheel drive vehicles are more popular in snowy climates. These vehicles have lower range than identical vehicles with front or rear wheel drive, which could trigger the need for additional charging.[109]

CARB neglected to adequately evaluate how climate impacts EV efficiency and electrical demand. DEM cannot rely on any evaluation performed by CARB given the vastly different climates of Rhode Island and California. DEM must do the hard work to evaluate ACC II.

There is increasing evidence that regulations like ACC II, which mandate EV sales—along with the cross-subsidies from gasoline and diesel vehicle buyers—are leading manufacturers to

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[107] *See, e.g.*, Sean Tucker, Study: All EVs Lose Range in the Cold, Some More Than Others (Kelley Blue Book Dec. 29, 2022), available at https://www.kbb.com/car-news/evs-lose-range-in-the-cold/ accessed August 8, 2023) ("Range loss is a significant concern for electric vehicle (EV) owners. Refueling an EV takes longer, and public charging stations can be hard to find in many parts of the country. That scarcity requires EV owners to plan longer trips around recharging points — and to know they'll need to stop more frequently when the mercury drops."); Paul Shepard, Quantifying the Negative Impact of Charging EVs in Cold Temperatures (EEPower Aug. 8, 2018), available at https://eepower.com/news/quantifying- the-negative-impact-of-charging-evs-in-cold-temperatures/ accessed August 8, 2023, ("[A] new study on charging in cold temperatures suggests that industry and EV drivers still face charging challenges. The reason: cold temperatures impact the electrochemical reactions within the cell, and onboard battery management systems limit the charging rate to avoid damage to the battery. [R]esearchers at Idaho National Laboratory looked at data from a fleet of EV taxis in New York City and found that charging times increased as temperatures dropped.").

[108] AAA, Electric Vehicle Range Testing, AAA proprietary research into the effect of ambient temperature and HVAC use on driving range and MPGe (February 2019), https://www.aaa.com/AAA/common/AAR/files/AAA-Electric-Vehicle-Range-Testing-Report.pdf (ambient temperature and related HVAC use can result in moderate to significant reduction in EV range); Di Wu et al., Regional Heterogeneity in the Emissions Benefits of Electrified and Lightweighted Light-Duty Vehicles, Environ. Sci. Technol. 2019, 53, 18, 10560–10570 (July 23, 2019), https://pubs.acs.org/doi/full/10.1021/acs.est.9b00648 (model-based and empirical data-driven studies agree that ambient temperature impacts EV efficiency); Jon Witt, Winter & Cold Weather EV Range Loss in 7,000 Cars (Recurrent Dec. 12, 2022), available at https://www.recurrentauto.com/research/winter-ev-range-loss accessed August 8, 2023; see also 20 popular EVs tested in Norwegian winter conditions (Norwegian Automobile Fed'n Mar. 12, 2020, available at https://www.naf.no/elbil/aktuelt/elbiltest/ev-winter-range-test-2020/ Accessed August 8, 2023.

[109] New York Department of Transportation (NYDOT), New York State National Electric Vehicle Infrastructure Formula Program Plan, at 18 (Aug. 2022). Additionally, charging infrastructure reliability is an issue DEM must investigate. *See e.g.*, Julian Dnistran, InsideEvs (Feb. 2023) ("According to J.D. Power's Electric Vehicle Experience Public Charging Study, quoted by Automotive News, the number of failed charging attempts grew from 15 percent in the first quarter of 2021 to more than 21 percent by the third quarter of 2022. At worst, almost 2 in 5 visits to chargers – or 39% – were unsuccessful last year.").

abandon sales of the least expensive and higher fuel economy gasoline and diesel vehicles that do not receive similar subsidization. Cox Automotive found that "in December 2017, automobile makers produced 36 models priced at $25,000 or less. Five years later, they built just 10," pushing low-income buyers out of the new-car market and into the used-car market. Conversely, in December 2017 automobile manufacturers offered 61 models for sale with sticker prices of $60,000 or higher and in December 2022, they offered 90.[110] Regulations like ACC I and ACC II are primary drivers of this trend toward eliminating affordable vehicles and DEM must account for these market impacts to lower-income car buyers.

Dramatic investments are required to expand the electrical grid and install adequate charging. Current office buildings, parking lots, apartment buildings, municipal buildings, and town centers will need to be retrofitted with adequate charging stations.

Finally, charging downtime and range limits will likely reduce vehicle operation time. Therefore, commercial enterprises, including small businesses, using light-duty vehicles will need to deploy more vehicles to provide the same level of service currently provided by ICEVs.

D. DEM's fails to fully assess the environmental impacts of ACC II.

DEM claims ACC II will increase the number of ZEVs and reduce harmful emissions of pollutants and health impacts.[111] DEM worked with the Northeast States for Coordinated Air Use Management (NESCAUM) to calculate purported emissions benefits. NESCAUM used EPA's MOVES3 and COBRA modeling systems. However, NESCAUM's calculations cannot be validated because the analysis is not publicly available. When this analysis cannot be reviewed, the public is deprived of the opportunity to provide informed comments on ACC II's emissions and economic impacts.

CARB and DEM need to perform a lifecycle assessment to compare the GHG emissions associated with manufacturing EV's and ICEVs. Mining critical minerals for batteries is an energy- and environmentally resource-intensive activity. Lithium, required for batteries, and copper, required to expand the electrical grid, are particularly vulnerable to water stress given their high-water usage.[112] And more than 50 percent of today's lithium and copper production is concentrated in areas with high water stress levels. Several major producing regions such as Australia, China, and Africa are also subject to extreme heat or flooding, which pose greater challenges in ensuring reliable and sustainable supplies. Strong focus on environmental best practices in this sector is needed to safeguard natural lands, biodiversity, and sustainable water use. Similarly, focus on ethical best practices is needed to protect Indigenous peoples' rights,

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[110] *See* Sean Tucker, Are we witnessing the demise of the affordable car? Automobile makers have all but abandoned the budget market (MarketWatch Feb. 28, 2023), available at https://www.marketwatch.com/story/are-we-witnessing-the-demise-of-the-affordable-car-automakers-have-all-but-abandoned-the-budget-market-a68862f0 Accessed August 8, 2023.

[111] Rhode Island Government Register, Notice of Proposed Rulemaking. Rule Identifier 250-RICR-120-05-37. August 7, 2023 available at https://risos-apa-production-public.s3.amazonaws.com/DEM/13000/PBN_13000_20230807150350829.pdf accessed September 5, 2023

[112] *See* EIA 2022 Report.

and to provide better child labor protections. These challenges call for sustainable and socially responsible producers to lead the industry.

Absent a proper and thorough lifecycle assessment, DEM cannot assert that its proposal will result in reduced NOx, $PM_{2.5}$, and GHG emissions. This is because an all-EV mandate will significantly increase demand for electricity, requiring careful consideration of emissions resulting from generation of that electricity in order to determine the magnitude of overall changes in emissions. Moreover, the composition of the energy mix that will be used to generate additional electricity is unclear.

A full-scale transition to ZEVs will require continued careful coordination between state and federal leadership, utilities, energy regulators and the public to protect against increases in "upstream" emissions at power plants that threaten the health of other communities far from roadways.[113]

Rhode Island is part of a regional power market, one which has a high concentration of coal, gas and oil-fired power plants that supply most of the electricity to every customer in Rhode Island. Therefore, the in-state power mix is not representative of the GHG-related emissions associated with in- state power consumption. Without a true, robust LCA such as that conducted by Ramboll on CARB's ACC II proposal (and attached hereto), DEM cannot demonstrate that its proposal will achieve its stated objectives even directionally, let alone in terms of magnitude.

DEM did not fully consider the impact of the rule on fleet turnover. Higher purchase price of new ZEVs will keep older cars and trucks on the road longer and that new ZEVs will increase particulate matter (PM) emissions through tire and road wear. DEM ignored the fleet turnover benefit that would result from replacing older ICEVs with new, more efficient ICEVs.

The average EV weighs more than the average ICEV, resulting in increased road dust emissions. DEM and CARB ignored the National Emissions Inventory, which shows that roadway dust contributes more $PM_{2.5}$ emissions than tailpipe emissions.[114] There are also medium-duty truck weight restrictions, which could require a greater number of ZEVs to move the same tonnage of cargo, thus increasing the number of vehicles needed to haul the same amount of freight, vehicle miles traveled, and resulting PM emissions.

Finally, CARB and DEM's "environmental analysis" ignores the impacts of electric battery disposal related issues, including limited recycling. In fact, recycling ZEV batteries to recover high-value metals has not been proven to a commercial scale.[115] The majority of analysts are aligned that recycling will not become an integral supplier of raw materials until the 2030s, and

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[113] *See* AFPM LDV Comments at 42-48 for a complete discussion of how *de facto* EV mandates overstate environmental benefits.
[114] EPA, "2020 National Emissions Inventory (NEI) Data," available at https://www.epa.gov/air-emissions-inventories/2020-national-emissions-inventory-nei-data. Roadway dust emissions, including particles from tire wear, are correlated with vehicle weight, so increases in fleet average vehicle weight would be expected to increase roadway dust $PM_{2.5}$ emissions.
[115] *See* AFPM LDV Comments at 47-48 for a detailed discussion of EV battery end-of-life challenges.

at that point, recycling only will provide approximately 20 percent of demand.[116] In fact, unlike ICEVs, EPA recently stated that ZEV batteries may need to be handled as hazardous waste, further driving up the cost of such recycling efforts.[117] DEM and CARB must, therefore, conduct a full LCA to compare all environmental impacts to reasonably conclude that ACC II will decrease environmental impacts rather than merely shift them.

V. California's struggles present a cautionary tale for Rhode Island.

California policymaking is hardly an unqualified success story. Its policies—like the EV sales mandates—have had major inflationary impacts on gasoline and energy prices, as well as negative impacts on jobs in certain industries that are directly related to traditional fuels and vehicles.[118] While often lauded as a laboratory for GHG emission reduction policies, California's transportation fuel prices are now the highest in the nation, averaging approximately $5.29 per gallon of gasoline.[119] According to a 2021 Report from the California Public Utilities Commission, "it is already cheaper to fuel a conventional ICE vehicle than it is to charge an EV" in the San Diego Gas & Electric Co. service area.[120] The California Energy Commission projects that both commercial and residential electricity prices will continue to rise, reaching over $8/gasoline gallon equivalent (GGE) by 2026 for the residential sector and nearly $7/GGE for the commercial sector.[121] Rhode Island should carefully consider the criticisms of California's policies, such as those leveled by The Two Hundred for Homeownership, which point out the disproportionate impacts to working and minority communities.[122]

As California has faced rolling blackouts and historic energy prices, Governor Newsom, in his May 2022 state budget proposal, pivoted to the use of traditional fuel infrastructure to ensure system reliability to protect against outages.[123]

Moreover, unworkable EV sales mandates put Rhode Island at risk of missing the real carbon intensity reductions available through incentivizing low-carbon liquid fuels and by encouraging the development of emerging carbon removal technologies.

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[116] Benchmark Minerals Intelligence, "Battery production scrap to be main source of recyclable material this decade" (Sept. 5, 2022) at n. 105, available at https://source.benchmarkminerals.com/article/battery-production-scrap-to-be-main-source-of-recyclable-material-this-decade.
[117] Letter from Carolyn Hoskinson, Director, EPA Office of Resource Conservation and Recovery, "Lithium Battery Recycling Regulatory Status and Frequently Asked Questions," (May 24, 2023).
[118] California Legislative Analyst's Office, Assessing California's Climate Policies – An Overview (Dec. 21, 2018).
[119] AAA, California Average Gas Prices – Current Avg., available at https://gasprices.aaa.com/?state=CA (last visited August 28, 2023).
[120] CPUC, Utility Costs and Affordability of the Grid of the Future: An Evaluation of Electric Costs, Rates, and Equity issues Pursuant to P.U. Code § 913.1, at 116-117 (May 2021), available at https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2021/senate-bill-695-report-2021-and-en-banc-whitepaper_final_04302021.pdf accessed August 8, 2023.
[121] CEC, "Presentation - Transportation Energy Demand Forecast," 21-IEPR-03 (Dec. 14, 2021).
[122] *See* Plaintiffs' Complaint, The Two Hundred for Homeownership, et al. v. California Air Resources Board, et al., No. 1:22-CV-01474 (E.D. Cal. filed Nov. 14, 2022).
[123] *See*. https://ebudget.ca.gov/2022-23/pdf/Revised/BudgetSummary/ClimateChange.pdf. Accessed August 28, 2023.

VI. Conclusion

Federal law preempts DEM from adopting ACC II in multiple respects. Separate and apart from this issue, even if DEM had the authority to adopt ACC II, DEM must conduct a meaningful public notice and comment process for its complex proposal before doing so. There are significant technical, economic, and legal facts and analysis that DEM has ignored or inadequately addressed in its process, rendering its proposal arbitrary and capricious. DEM should address these procedural and analytical deficiencies by conducting technical working groups to foster stakeholder participation in scenario development and assessment.

Multi-technology pathways can help the state achieve faster and more certain emission reductions while expanding ways to reduce greenhouse gas emissions. DEM should evaluate and propose performance standards as an alternative to its proposed adoption of ACC II and its EV mandate.

Thank you for the consideration of these comments.

Patrick Kelly
Senior Director, Fuels & Vehicle Policy
American Fuels & Petrochemical Manufacturers

Attachments

Chelsea Priest **September 8th, 2023**
Department of Environmental Management
RI DEM - Office of Air Resources
235 Promenade Street
Providence, RI 02908

RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37

Dear Ms. Priest,

Thank you for the opportunity to submit comments regarding Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37. We, the undersigned climate, clean energy, and transportation groups write to you today to express our strong support for Rhode Island's adoption of the Advanced Clean Cars II (ACCII), Advanced Clean Trucks (ACT) Rule, the Low NOx Heavy-Duty Omnibus (HDO) Rule, and the Phase 2 Greenhouse Gas Rule.

The Act on Climate requires Rhode Island to reduce its greenhouse gas (GHG) emissions 45% below 1990 levels by 2030; 80% by 2040; and achieve net-zero emissions by 2050. However, the Rhode Island Executive Climate Change Coordinating Councils (RIEC4) 2022 plan to meet the Act on Climate shows that the state is not on track to meet this mandate. The modeling only projects Rhode Island will meet 40% emissions reductions by 2030, and that's only if everything in the current Greenhouse Gas (GHG) reduction plan is implemented.

Adoption of the ACCII and ACT regulations, a priority action in the EC4's 2022 climate plan, is critical in order for Rhode Island to meet the Act on Climate. These policies will function as a gradual but guaranteed way to increase the percentage of electric vehicles on Rhode Island's

roads. Without them, there is no clear path for the emission reductions needed in the transportation sector to meet the 2030 mandate or subsequent requirements for 2040 and 2050. ACCII and ACT will increase consumer choice, deliver significant public health benefits to the Ocean State, and bring Rhode Island on-par with several other states that have already adopted or are in the process of adopting these key standards – California, Colorado, Connecticut, Delaware, Massachusetts, Maryland, New Jersey, New York, Oregon, Vermont, Virginia, and Washington.[1] Europe is also phasing out petroleum-fueled vehicles by 2035.

Advanced Clean Cars II (ACCII)

ACCII requires ***automakers*** to steadily increase the percentage of vehicles they sell that are zero emission from 35% in model year 2026 to reach 100% in model year 2035, per the trajectory illustrated in this graph from the California Air Resources Board.[2] At the same time, ACCII requires smog-forming emissions from new gas-powered cars to decrease. Rhode Island must adopt ACCII this year for three reasons:

1. **Reduce greenhouse gas emissions as required by the *Act on Climate.***

Transportation is the largest source of GHG emissions in the state. Rhode Island's Executive Climate Change Coordinating Council (RIEC4)'s 2022 Update to the GHG Reduction Plan estimated that the state will need roughly 86,000 registered electric vehicles (EVs) on the road by 2030. Currently, there are fewer than 7,000 EVs registered in the state. The only state policy currently advancing vehicle electrification in Rhode Island is the DRIVE EV rebate program, which does not have a concrete long-term funding source. ACCII would steadily increase the supply of EVs in the state; without it, Rhode Island will not be able to reach 86,000 EVs by 2030 or 45% GHG reductions. By requiring automakers to steadily and gradually increase their sales of new EVs, the ACCII program is a valuable tool that Rhode Island can implement to get back on track to reach its climate goals.

2. **Increase consumer choice and support in-state business.**

Auto manufacturers are producing EVs for sale on the global market and send supply to those areas with the most supportive policies. That's why, for example, there are many EV models available for sale in Europe that aren't available in the United States, or why within the US there are more options in California than Rhode Island. Adopting ACCII will put Rhode Island on

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[1] Rhode Island Department of Environmental Management. "Advanced Clean Cars II & Advanced Clean Trucks Public Listening Session." State of Rhode Island, 18 May 2023.

[2] California Air Resources Board. "Advanced Clean Cars II | California Air Resources Board." *Ww2.Arb.ca.gov*, State of California, 2023, ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii.

the map and force automakers to send EV models to the Ocean State, benefiting *dealerships* and *consumers* by making sure the full range of choices is available to Rhode Islanders. Adopting the ACCII rule in Rhode Island will ensure that our residents can access the zero emission vehicles they want within our state. If Rhode Island does not adopt the ACCII rule, we could lose out on the clean energy economy emerging in other states and the associated economic benefits.

Further, increased EV adoption will economically benefit all Rhode Island residents, regardless of whether they are EV owners because EVs drive electricity costs down for all ratepayers. EVs present a significant opportunity to reduce electricity costs for all customers by spreading utility fixed costs over a greater quantity of kilowatt-hour sales, particularly if the additional load occurs during off-peak times.[3]

3. **Protect public health.**

The transportation sector is a major source of air pollution and disproportionately contributes to nitrogen oxide (NOx), carbon dioxide (CO2), and particulate matter (PM2.5). These pollutants harm public health, especially in low-income communities and communities of color. The American Lung Association estimates that the cumulative health benefits of electrifying transportation will amount to nearly $3.2 billion by 2050 in Rhode Island alone.[4] Additionally, by requiring 100% zero emission vehicles by 2035, Rhode Island can avoid 288 premature deaths, 5,430 asthma attacks, and 29,400 lost workdays. By adopting ACCII, Rhode Island can reduce total NOx emissions by 1,134 U.S. tons by 2040 and PM2.5 emissions by 78 U.S. tons by 2040.[5] The ACCII rule is one of Rhode Island's best available tools for delivering these much-needed public health benefits.

Advanced Clean Trucks (ACT) & Heavy Duty Omnibus Low NOx (HDO) Rules

[3] https://www.synapse-energy.com/sites/default/files/EV_Impacts_June_2020_18-122.pdf
[4] https://www.lung.org/getmedia/9e9947ea-d4a6-476c-9c78-cccf7d49ffe2/ala-driving-to-clean-air-report.pdf
[5] https://theicct.org/wp-content/uploads/2023/05/ri-acc-ii-benefits-fs-may23.pdf

ACT will require that manufacturers sell an increasing number of zero-emission medium- and heavy-duty vehicles (MHDVs), vehicles greater than 8,500 pounds, from 2024 to 2035.[6] The sales target varies according to the size of the vehicle. If adopted this year, the ACT rule will gradually increase the percentage of zero-emission medium- and heavy-duty vehicle sales to 30 to 50 percent zero-emission by 2030 and 40 to 75 percent by 2035, depending on the size of the vehicle. Zero-emission medium, and heavy-duty vehicles do not release tailpipe pollution, and will result in cleaner, healthier air, and reduced greenhouse gas emissions. Secondly, HDO will require emissions reductions from new diesel-powered MHDVs still sold during this time period. While the ACT rule works year-over-year to gradually increase the supply of zero-emission trucks and buses, diesel trucks and buses will continue to be sold in Rhode Island. The new standards proposed within the HDO regulation will cut truck emissions, including during low load conditions. Together, the ACT and HDO regulations will help to reduce adverse health impacts and improve air quality throughout the state, especially in those dense transportation corridors that are disproportionately impacted by truck emissions. Rhode Island must adopt the ACT and HDO rules for three reasons:

1. **Decrease greenhouse gas emissions.**

MHDVs make up 6% of the vehicles on the road in Rhode Island but contribute 24% of the transportation sector's greenhouse gas emissions.[7] Every new fossil-fuel powered vehicle sold locks the state into years of further climate-warming emissions. According to a recent analysis by ICCT, Rhode Island has the potential to achieve significant reductions in NOx (9,250 tons), PM 2.5 (76 tons), and carbon dioxide (CO2) (8.88 MMT) emissions between 2020 and 2050 by implementing the ACT measures.[8] The ACT and HDO rules are Rhode Island's best available tools for delivering these climate benefits.

2. **Protect public health.**

MHDVs have a disproportionate impact on public health: despite making up only 6% of the vehicles on the road in Rhode Island, they are responsible for 50% of nitrogen emissions and 44% of particulate matter (PM2.5) emissions[9] within the transportation sector. These pollutants

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[6] Massachusetts Sierra Club, et al. "Advanced Clean Truck (ACT) Rule: The Road to Electrifying Trucks in Massachusetts." *Google Docs*, 7 Dec. 2021, drive.google.com/file/d/1HL5a6B1nLJCd8fE2vCo9FdUyTBEDz0fm/view.

[7] Union of Concerned Scientists. "What the Advanced Clean Truck Rule Will Do for Rhode Island." Union of Concerned Scientists, Mar. 2023.

[8] https://theicct.org/wp-content/uploads/2022/09/HDV-fact-sheet-RI-092122.pdf

[9] (see Footnote 5)

are detrimental to human health and have been specifically linked to heart attacks, lung cancer, and the exacerbation of asthma. The Union of Concerned Scientists estimates that electric trucks come with a 83-91 percent reduction in global warming emissions and a 45-76 percent reduction in mortality, across duty cycles ranging from delivery vans to long haul tractors.[10] The American Lung Association found that by adopting ACT, Rhode Island can see $2.3 billion in cumulative health benefits from 2020-2050, avoid 208 premature deaths, 4,378 asthma attacks, and 23,430 lost workdays.[11] Adopting regulatory programs like ACT was noted as "one of the most effective tools available" to accelerate zero-emission health benefits in the Multi-State Medium- and Heavy-Duty Action Plan issued by the Northeast States Coordinated Air Use Management (NESCAUM) in July 2022.[12]

The Low NOx Heavy-Duty Omnibus Rule will significantly reduce nitrogen oxide (NOx) emissions and therefore improve public health. Nitrogen oxide is a precursor to smog, which can cause or exacerbate numerous respiratory ailments and premature death. All combustion engines produce NOx, especially mobile sources such as trucks. Communities adjacent to railyards, ports, and warehouses experience heavy truck traffic, with trucks often idling and driving slowly, with frequent stops. Today's heavy-duty trucks do not control NOx emissions effectively during such low load conditions. The new standards proposed within the Low NOx Heavy-Duty Omnibus Regulation will cut truck emissions, including during low load conditions. While recently adopted federal standards for diesel engines will provide some of these emission and health benefits, Rhode Island's adoption of ACT and HDO will ensure that the state benefits from both a transition to zero emission trucks and cleaner combustion engines. Thus, the regulation will help to reduce adverse health impacts and improve air quality throughout the state, especially in those areas that are disproportionately impacted by truck emissions.

3. **Support in-state business and attract investments.**

Zero-emission trucks and buses are increasingly cost competitive with fossil fuel alternatives due to substantial fuel and maintenance cost savings, which is why major companies, employers, and investors support the ACT rule.[13] According to a study done by Roush Industries, some trucks and buses may be on par with diesel vehicles on an upfront cost basis as soon as 2027.[14] Moreover, the rules can stimulate the creation of high-quality zero-emission manufacturing and charging installation jobs in our state. Additionally, the Union of Concerned Scientists finds that adopting ACT will deliver around $110 million in annual net societal benefits and in annual savings to commercial fleets by 2050.[15] Rhode Island must adopt these

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[10] (see Footnote 5)
[11] https://www.lung.org/getmedia/e1ff935b-a935-4f49-91e5-151f1e643124/zero-emission-truck-report
[12] https://www.nescaum.org/documents/mhdv-zev-mou-20220329.pdf
[13] https://www.ceres.org/sites/default/files/Multi-state%20ACT%20Support%20Letter%20(6.22).pdf
[14] https://www.edf.org/media/new-study-finds-rapidly-declining-costs-zero-emitting-freight-trucks-and-buses
[15] (see Footnote 5)

rules to avoid missing the associated economic benefits from the emerging clean energy economy.

Include Large Entity Reporting Requirements

We encourage RIDEM to include the large entity reporting requirements within the regulations and lower the fleet size threshold to 5 vehicles to capture accurate fleet specific data. This requirement compliments the ACT Rule and should include provisions to capture accurate data on the number of trucks on our roads, where they travel in the state, and the kinds of emissions they produce. This information is crucial for the development of other programs such as charging infrastructure, and a more tailored approach towards accelerating the MHDV market. It will also contribute to a better understanding of diesel particulate pollution. Therefore, we encourage RIDEM ***not*** to skip over this reporting requirement.

Ensuring a lower fleet size threshold would make sure that smaller fleets are included in the resulting data, which comprise a bulk of the medium- and heavy-duty vehicles on Rhode Island roads. Oregon[16] and Washington[17] have both adopted lower thresholds of 5 or more vehicles for the reporting requirement. Additionally, it will provide vital data on small fleet owners who are less likely to have the resources to meet the higher upfront costs of zero-emission vehicles and will help inform the design of targeted programs.

Phase 2 Greenhouse Gas Rule

The Phase 2 Greenhouse Gas Rule promotes a new generation of cleaner, more fuel-efficient trucks by encouraging the development and deployment of new and advanced cost-effective technologies.

The ACC II, ACT, HDO and Phase 2 GHG Standards are Feasible in Rhode Island

Incentives

Although the price of electric vehicles is becoming increasingly competitive with gas powered cars, there are also incentives available to ensure EVs are affordable for all Rhode Islanders. Rhode Island's DRIVE EV program will resume on September 18th, where residents can receive a $2,000 rebate for purchasing a fuel cell electric vehicle or battery electric vehicle, and a $1,500 rebate for plug-in hybrid electric vehicles.[18] There is an additional $1,500 DRIVE + rebate available for low-income individuals.

There are also federal incentives available through the Inflation Reduction Act (IRA). Rhode Islanders may qualify for a tax credit of up to $7,500 if they buy a new, qualified plug-in EV or

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[16] https://www.oregon.gov/deq/aq/programs/pages/mdhdreporting.aspx

[17] https://ecology.wa.gov/getattachment/f3e6d16b-e1c6-4861-b007-c0b95cbdbd3f/OTS-4007-5-For-Filing.pdf

[18] Office of Energy Resources. "DRIVE EV." *Drive.ri.gov*, 2023, drive.ri.gov/. Accessed 21 Aug. 2023.

fuel cell electric vehicle. Qualifications include battery capacity, vehicle weight, purchase from a qualified manufacturer, and final assembly in North America.[19] The IRA also created a federal tax credit for *used* electric vehicles of up to $4,000.

Additionally, electric vehicle owners see significant cost savings over the lifetime of their vehicles due to lower fuel and maintenance costs.

Charging Infrastructure

As of February 2023, there are 288 public charging locations across Rhode Island. The National Renewable Energy Laboratory (NREL) recommends that states have 40 Level 2 plugs per 1,000 EVs and 3.4 DCFC plugs per 1,000 EVs. Rhode Island currently has 84.2 Level 2 plugs per 1,000 EVs and 10.1 DCFC plugs per 1,000 EVs.[20]

While Rhode Island has adequate charging infrastructure to support the amount of EVs in the state currently, it will need to significantly expand this infrastructure to support the widespread adoption of electric vehicles. However, this should not delay the adoption of ACCII. In fact, by committing to these standards, Rhode Island would send a powerful message to the market and spur development in the state's charging network. By the time the majority of the population purchases an EV, the infrastructure will be very well established. It takes time for both adoptions to phase in and the infrastructure to be built, we must do both at the same time if we want to tackle air pollution and meet the Act on Climate.

In addition to sending this signal to the market, the federal government is also incentivizing the development of charging infrastructure. RI received around $23 million in National Electric Vehicle Infrastructure (NEVI) program funding to build DC fast charging stations along the I-95 corridor and later, Route 146. RIDOT's plan for NEVI actually assumes RI has adopted ACCII.[21]

While public charging is crucial to this transition, electric vehicles are often charged at home. With the ACCII regulation, charging a car at home can be as easy as plugging in the convenience cord that comes with an electric vehicle into a basic 120V outlet. ACCII cars will be required to come with a convenience cord that can charge at level 1 and 2.

Additionally, Rhode Island Energy's (RIE) EV programming must be a key piece of supporting ACCII and Rhode Island's approach to meeting the emissions reduction mandate of the Act on

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[19] U.S. Department of Energy. "Alternative Fuels Data Center: Qualified Plug-in Electric Vehicle (PEV) Tax Credit." *Afdc.energy.gov*, 22 Aug. 2022, afdc.energy.gov/laws/409.

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[20] U.S. Department of Energy. "Alternative Fuels Data Center: Electric Vehicle Charging Infrastructure Trends." *Afdc.energy.gov*, U.S. Department of Energy,

[21] Rhode Island Department of Transportation. "EV Charging Stations - Rhode Island Rhode Island Department of Transportation." *Www.dot.ri.gov*, RIDOT, www.dot.ri.gov/projects/EVCharging/.

Climate. RIE plans to file an EV program with the Public Utilities Commission this fall that includes make ready, off-peak charging rebates, and programs for pile-mounted chargers. While we support and very much need these programs, Green Energy Consumer's Alliance's memo[22] outlines what they must include to adequately support EVs and reduce emissions.

Encouraging a Circular Economy

While battery recycling is a concern with electric vehicles, battery recycling supply chains are continuously improving. The battery mineral requirements in the federal Clean Vehicle Credit, for example, incentivize the recycling of battery components within the US and their re-use in new vehicles. ACCII would actually *better* this situation by requiring manufacturers to label their batteries, so recycling is made easier!

Together, Advanced Clean Cars II, Advanced Clean Trucks, the Low NOx Heavy-Duty Omnibus Rule, and the Phase 2 Greenhouse Gas Rule will help Rhode Island meet the Act on Climate and create a healthier environment. For all these reasons, we strongly support the adoption of the ACCII, ACT, HDO, and Phase 2 Greenhouse Gas Rule. Please adopt these rules before the end of 2023 to clean up our local air, improve public health, bolster our economy and reduce climate-harming greenhouse gas emissions. With each year that Rhode Island delays adopting ACCII, ACT, HDO, and Phase 2 Greenhouse Gas Rule, the state misses another model year of the program and the subsequent public health, environmental, and economic benefits. We respectfully urge the Department of Environment management to adopt the regulations in full by the end of the year.

Sincerely,

Amanda Barker, Green Energy Consumers Alliance
Sarah Krame, Sierra Club
Emily Koo, Acadia Center
Chelsea Hodgkins, Public Citizen
Andrea Colomina, Green Latinos
Kathy Harris, Natural Resources Defense Council
Jeff Migneault, Climate Action Rhode Island
Kevin Shen, Union of Concerned Scientists
John Flaherty, Grow Smart RI
Barbara Sullivan-Watts, Rhode Island Citizens' Climate Lobby
Peter Trafton, Environment Council of Rhode Island

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[22] https://260434.fs1.hubspotusercontent-na1.net/hubfs/260434/Memo%20on%20Whats%20Needed%20in%20RIE%20Fall%202023%20EV%20Filing.pdf

Ceres

August 23, 2023

Dear Ms. Priest and Members of the Rhode Island Department of Environmental Management,

I am writing on behalf of Ceres – a nonprofit organization that advances leadership among investors, companies, and capital market influencers to transform the economy and create a just and sustainable future for people and the planet – **to express strong support for Rhode Island's adoption of the Advanced Clean Cars II (ACC II) and Advanced Clean Trucks (ACT) rules.**

Ceres organizes several influential business networks including the Business for Innovative Climate and Energy Policy Network (BICEP) - a coalition of over 80 major businesses who voice their support for the policies our economy needs to prevent the dire financial and material risks of climate change while unleashing new industries, jobs, and economic growth as part of the solution; the Ceres Investor Network, which includes 175 members with nearly $30 trillion in collective assets under management; and the Corporate Electric Vehicle Alliance (CEVA) - a collaboration of 30 companies looking to completely decarbonize and electrify their fleets that collectively own, lease or operate nearly 1.3 million on-road vehicles in the United States.

Businesses across our networks have decided to electrify their on-road fleet and networked vehicles to benefit from the lower total cost of ownership, meet emissions and air quality goals, and support the health of their communities, customers, and employees. The Corporate Electric Vehicle Alliance alone currently represents robust demand for zero emission vehicles (ZEVs), with members planning to procure approximately 330,000 ZEVs, under a supportive market environment, as soon as 2026.

While the availability of commercial ZEVs in the U.S. market has improved, major fleet operators still face difficulties in procuring the ZEVs —in terms of both unit volume and model configuration **As major operators of medium- and heavy-duty vehicles, Alliance members and their peers rely in large part on technology-driving policies like ACC II and ACT to close the gap between supply and demand for zero-emission commercial vehicles.**

This is why the Alliance released a letter **supporting the adoption of ACC II and ACT by additional states, including Rhode Island**. The letter notes that by adopting these regulations, state policymakers can help fleets access the volume and variety of ZEV models they need to unlock significant economic, health, and climate benefits. Additional state adoption of ACC II and ACT also enables major companies, including those in the Alliance, to plan more effectively for regional and nationwide rollouts of clean vehicles. The more states that adopt ACC II and ACT, the greater the benefits of the rules, effectively lowering costs and creating a more stable, coordinated, and self-sustaining market for ZEVs.

In addition to the letter from the Alliance, Ceres also organized letters of support that are not specific to any of our networks for the ACC II and ACT rules. The ACC II letter has been signed by more than 50 companies while the ACT letter has been signed by over 85.

Choosing not to adopt the ACC II and ACT rules could also make it increasingly difficult for companies in Rhode Island to access the electric and zero-emission medium- and heavy-duty models they need. This is because OEMs will be incentivized to sell the electric and zero-emission models they produce to states that have adopted the rule to ensure they comply with its supply requirements. If OEMs provide more vehicles than required by the rule, they receive a credit that they can sell, so there will be considerable incentives to supply ACC II and ACT adopters over non-participating states.

The ACC II and ACT rules will bring Rhode Island into the vanguard of clean transportation policy, accelerate the cost-effective deployment of zero-emission light-, medium-, and heavy-duty vehicles, drive local innovation and investment in clean technology development and manufacturing, allow our fleet owners and operators to meet their financial and greenhouse gas emissions goals, and reduce air pollution-related health impacts and costs across the state.

We encourage you to adopt these regulations and look forward to working with you to support a clean and thriving economy in Rhode Island.

Sincerely,

Dave Robba
Manager, State Policy, Transportation
Ceres

Ceres
Sustainability is the bottom line.
Corporate Electric Vehicle Alliance

Office of Governor Dan McKee
82 Smith Street
Providence, RI 02903

August 24, 2023

Re: Major Commercial Fleet Operator Support for Advanced Clean Cars II and Advanced Clean Trucks Rule Adoption

Dear Governor McKee,

I write on behalf of the Corporate Electric Vehicle Alliance (the Alliance) – a coalition of 31 major companies and fleet operators that represent over $1.2 trillion in annual revenue and collectively own, lease, or operate more than 2.7 million fleet or networked vehicles in the U.S. – to express our support for state adoption of the Advanced Clean Trucks (ACT) and Advanced Clean Cars II (ACC II) regulations.

Alliance members share a common goal to electrify their on-road fleet and networked vehicles to capture operational cost savings, meet climate goals, and support the community health of their customers and employees. In alignment with this goal, the Alliance currently represents robust demand for zero emission vehicles (ZEVs), with members planning to procure approximately 330,000 ZEVs, under a supportive market environment, as soon as 2026.

While the availability of commercial ZEVs in the U.S. market has improved, major fleet operators still face difficulties in procuring the ZEVs needed—in terms of both unit volume and model configuration—to meet their ambitious climate and sustainability goals in a timely manner.

As major operators of light-, medium-, and heavy-duty vehicles, Alliance members rely in large part on technology-driving policies like ACC II and ACT to close the gap between supply and demand for zero-emission commercial vehicles.

Corporate Support for ACC II and ACT

Market-enabling policies like ACT and ACC II will rapidly unlock the long-term savings, climate, and clean air benefits of fleet electrification, while spurring the much-needed widespread build-out of charging infrastructure to meet increased ZEV deployment. The more states that adopt ACT and ACC II, the greater the benefits of the rules, effectively lowering costs and creating a more stable, coordinated, and self-sustaining market for ZEVs.

By adopting policies like ACT and ACC II, state policymakers can help fleets access the volume and variety of ZEV models they need to unlock significant economic, health, and climate benefits. Additional state adoption of ACCII and ACT also enables major companies, including those in the Alliance, to plan more effectively for regional and nationwide rollouts of clean vehicles.

ACC II

Alliance members represent over 830,000 light-duty vehicles (LDVs) in operation across the U.S. and are looking to procure nearly 270,000 zero-emission sedans, SUVs, and pickup trucks by 2026. As major consumers and operators of LDVs across the U.S., Alliance members strongly support and encourage

state adoption of clear regulatory guideposts that enable the auto and trucking industry to reliably plan for the future. Additionally, by establishing clear regulatory standards and deadlines, companies are able to make better informed fleet procurement plans, which in turn create a predictable and supportive business environment that encourages investment and spurs job growth.

An ambitious ACC II program that drives additional automaker investment and produces greater model availability throughout the U.S. is both necessary and feasible. States that have adopted ACC (ACCII's predecessor) represent a third of U.S. car sales, and this has had a significant impact on the market, sending clear signals to fleets considering electrification and providing regulatory certainty to manufacturers. As more states adopt ACC II, the benefits to the market will only expand, which will lead to further reduced costs and increased availability of clean cars.

As businesses, Alliance members are making significant commitments to reduce GHG emissions and protect the health and economic well-being of the communities in which they live and operate. However, these commitments alone will not be enough to meet shared climate goals. With no equivalent federal policy expected, expeditious and ambitious state action is imperative.

Accordingly, the Alliance supports state adoption of the ACC II rule to ensure increased availability of ZEVs year-over-year until 100% of new light-duty vehicles sold are zero-emission in 2035.

ACT

Furthermore, Alliance members represent over 300,000 class 3-8 medium- and heavy-duty vehicles (MHDV) in operation across the U.S. and plan to procure more than 60,000 zero-emission MHDVs by 2026. While several manufacturers have made commitments to reach 50-67% medium- and heavy-duty ZEV sales by 2030 and 100% by 2040 or sooner, major fleet operators still face difficulties in procuring zero emission MHDVs at the volumes and price points, and with the specifications (e.g., electric range, payload, towing capacity, etc.) they require to meet their operational needs and ambitious sustainability goals.

The ACT rule will both increase the availability of critical zero-emission MHDV models and help lower their upfront cost. Currently, the upfront purchase price for a zero-emission MHDV is approximately two to three times higher than the upfront purchase price for a comparable diesel model.[1] By requiring manufacturers to increase ZEV sales and by driving additional manufacturer investment in clean vehicles, additional state adoption of ACT will accelerate the economies of scale that drive down costs and enable cost-effective electrification of commercial vehicles. Increased access to affordable zero-emission commercial vehicles across states and regions will allow Alliance members to remain competitive in a market where customers, investors, and employees increasingly expect companies to lead on sustainability.

Accordingly, the Alliance supports state adoption of the ACT rule to ensure increased availability of zero emission trucks year-over-year until 2035 when zero-emission models comprise 55% of new MHDV sales for Class 2b – 3 trucks, 75% for Class 4 – 8 trucks, and 40% for truck tractors.

ZEV Model Suitability

In addition to adopting the ACT and ACC II rules to increase the volume of ZEV production and improve manufacturer release timing transparency, **it is crucial that state policymakers support action to ensure**

[1] https://californiahvip.org/tco/

vehicle manufacturers offer a wide variety of ZEV model options from class 1 to class 8 vehicles capable of meeting the needs of diverse fleets and use cases.

To support production of diverse EV models, the Alliance also encourages state policymakers to consider providing a forum for businesses and vehicle manufacturers to engage in critical conversations on key issues (e.g., ZEV configurations, model release timing, technology management, and financing).

Adopting ACT and ACC II to accelerate the electrification of commercial transportation will support a cleaner, more energy-efficient economy through local innovation and investment in clean technology manufacturing. In addition, ACT and ACCII will help create new jobs, cut costs for our value chains, mitigate climate risk, and reduce health care costs by improving public health.

Thank you for your consideration of our comments.

Sincerely,

Sara Forni
Director of Clean Vehicles, Ceres

On behalf of the Corporate Electric Vehicle Alliance (CEVA), led by Ceres

RIVIAN

September 8, 2023

Chelsea Priest
Department of Environmental Management
Office of Air Resources
235 Promenade Street
Providence, RI 02908

SUBMITTED ELECTRONICALLY TO: Chelsea.Priest@dem.ri.gov

Re: Comments in Support of Proposed Amendments to Rhode Island's Low-Emission and Zero-Emission Vehicle Programs (250-RICR-120-05-37) to Implement the Advanced Clean Cars II ("ACCII") and Advanced Clean Trucks ("ACT") Rules

Rivian Automotive, LLC, ("Rivian") thanks the Department of Environmental Management ("DEM") for the opportunity to comment on the proposed adoption by Rhode Island of the ACCII and ACT regulations by amendments to 250 RICR-120-05-37. Rivian strongly supports Rhode Island's proposed actions as part of a comprehensive strategy for addressing climate change and improving air quality, and consistent with the state's emissions reduction mandate prescribed by statute.[1] Rhode Island continues to demonstrate impressive leadership in these areas with benefits for the state's transition to a clean technology economy, the climate, and public health.

Keep the World Adventurous Forever

Founded in 2009, Rivian is an independent U.S. company headquartered in California. With over 14,000 employees across the globe, Rivian's mission is to Keep the World Adventurous Forever. Rivian's focus is the design, development, manufacture, and distribution of all-electric adventure vehicles, specifically pickups, sport utility vehicles ("SUVs"), and commercial vans. Key to the success of our mission, these vehicles will displace some of the most polluting conventional vehicles on the road today.

Rivian brought the first modern electric pickup to market in 2021 when we launched the R1T from our manufacturing facility in Normal, Illinois, followed shortly thereafter by the R1S SUV and the EDV commercial van for Amazon. The R1T and R1S—both medium-duty passenger vehicles ("MDPVs")—provide all-electric options in segments where added utility is a necessity. The R1T and R1S both have an EPA-certified range of up to 352 miles. The truck also features 11,000lbs of towing capacity, while the R1S is a seven-passenger full-sized SUV. Both are well-equipped for off-roading in a range of climates. Separately, our Class 2b and 3 commercial vans eliminate tailpipe emissions from last-mile delivery. Rivian is committed to producing 100,000 vans for our launch customer, Amazon. They currently operate the first 5,000-plus EDVs in more than 500 U.S. cities where they have delivered tens of millions of packages emissions-free.

In addition to our vehicle lineup, Rivian is also building a network of DC fast chargers across the country.

[1] R.I. Gen. Laws §42-6.2-9.

Rivian Strongly Supports Adopting the Most Stringent Vehicle Emissions Regulations in Rhode Island

Rivian's mission to Keep the World Adventurous Forever is made manifest in our commitment to the environment and addressing climate change. We strongly support programs of ambitious emissions regulation and zero-emission vehicle ("ZEV") sales requirements as core to our values and vision for the world. Implementation of the amendments to 250-RICR-120-05-37 will drive critical reductions in GHG emissions and air pollution in Rhode Island, while rapidly growing the state's ZEV market. ACCII will fully transition Rhode Island's passenger vehicle market to 100 percent new ZEV sales by 2035, while the ACT rule will require manufacturers to ensure that more than half of their Class 2b-3 sales, 75 percent of Class 4-8 sales, and 40 percent of Class 7-8 tractor sales, are ZEVs on the same timeline. Rivian's vehicles meet the requirements of both the ACCII and ACT standards and are proof that these regulations are achievable.

The ACCII and ACT Regulations are Feasible

Both rules were thoughtfully designed with feasibility in mind. For example, ACCII includes certain flexibilities such as allowances for credit pooling by obligated automakers. Both ACCII and ACT use averaging, banking, and trading frameworks to facilitate manufacturer compliance, a tried-and-tested approach that allows for the strictest possible rules and the lowest overall compliance costs for industry.

Establishing the ACCII requirements in the state will ensure Rhode Islanders are at the front of the line for new ZEVs in the years to come. Moreover, the sales requirements bring certainty to the market, supporting investments in charging infrastructure and allowing for long-term grid planning by utilities.

In the MHD sector, we see the ACT rule as a critical precondition for the market's success. With its strong yet achievable standards, vehicle class-specific sales targets, and provisions for credit trading, the regulation is thoughtfully designed to support industry's compliance efforts while driving accelerated deployment of ZEVs by manufacturers. Adoption of ACT will help industry grow ZEV market share more quickly, which is crucial for the long-term success of the industry as well as Rhode Island's transportation electrification efforts.

Ample evidence demonstrates the achievability of the ACT requirements in Rhode Island.

- According to CALSTART, as of the first quarter of 2023 manufacturers offered 208 MHD ZEV models for sale in the United States and Canada.[2]
- In California, the first ACT state to begin credit reporting, vehicle makers earned more than 500 early credits in Model Year ("MY") 2021 alone, fully six model years ahead of Rhode Island's likely implementation year. This reveals the emergence of a robust manufacturing infrastructure and product pipeline in the MHD industry that will only grow as more ZEV manufacturers, responding to customer demand and regulatory signals from rules like ACT, hit their manufacturing stride in

[2] Owen MacDonnell, Yin Qiu, Shuhan Song, and Xiaoyue Wang, CALSTART, *Zero-Emissions Truck and Bus Market Update*, June 2023, available at www.globaldrivetozero.org/site/wp-content/uploads/2023/06/Final_ZETI-Report-June-2023_Final.pdf.

the coming years.[3]

- The regulations would nominally require the sale of just a few hundred Class 2b3 ZEVs in Rhode Island in MY2027, the first compliance year of the program.[4] The vehicles to meet this requirement already exist in the market today. In 2022, Rivian alone delivered almost 25,000 vehicles to customers nationwide and we expect to more than double production this year, with our official production guidance now at 52,000—all of which will be medium-duty vehicles that meet the requirements of the ACT standards. Amazon already operates more than 5,000 Class 2b EDVs across the country, while a diverse array of fleets—from fire departments to utilities to construction contractors—find that the R1T and R1S can also meet their work needs.

Early Action Credit Provisions Will Accelerate the Benefits of the ACT Rule

As a vehicle manufacturer, Rivian wishes to stress the value of "early credits" under the ACT. Early credits allow EV makers to begin earning compliance credits ahead of the formal regulatory obligation and incentivize accelerated deployment of EVs in the state. Not only does this deliver critical air pollution and greenhouse gas emissions reductions sooner, with important benefits for public health and Rhode Island's climate goals, but it can help industry grow more quickly to large-scale production and thus move component costs down the cost curve. This is crucial for the long-term success of the industry as well as Rhode Island's transportation electrification efforts. Rivian welcomes Rhode Island's intent to allow MHD ZEV manufacturers to earn early credits beginning in MY2024, as detailed in Section 37.8.11 as drafted. MHD ZEVs are available today and Rhode Island should use every available tool to establish itself as a priority market for those products as early as possible.

DEM Should Review the Proposed Regulatory Language to Ensure the Rules will Take Effect as Intended

The proposed regulation incorporates by reference certain sections of the California Code of Regulations. DEM also proposes certain conforming edits to those regulations. Federal law requires that states adopting California's vehicle emission standards do so in a manner "identical to the California standards for which a waiver has been granted..."[5] Rivian is concerned that at least one of the edits proposed in Rhode Island's regulation could be inconsistent with this identicality requirement.

Section 37.8.10 states that manufacturers may earn and bank ZEV value toward the ACCII requirements, which will come into force with MY2027, "starting with 2024 model year vehicles." This provision seems intended to allow manufacturers to earn early compliance values ("ECVs"), which ACCII allows. However, the original California regulation limits manufacturers' ability to earn ECVs to "the two model years prior to the commencement of the Annual ZEV Requirements."[6] In Rhode Island's case, this would be MY2025, not MY2024 as written into the proposed regulation. Other states moving to adopt ACCII for MY2027 have proposed regulations that would implement their ECV period in MY2025, in accordance with the California

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[3] California Air Resources Board, *Advanced Clean Trucks Credits Summary*, March 31, 2022, available at: www.arb.ca.gov/sites/default/files/2023-02/ACTCreditMemo.pdf.

[4] Rivian estimate based on estimates of Rhode Island's Class 2b3 vehicle population, average annual turnover rates, and the ACT MY2027 sales requirement.

[5] 42 U.S.C. §7507(1).

[6] 13 C.C.R. §1962.4(e)(3)(A).

program and the federal requirement for identicality. **Rivian recommends that DEM review this provision carefully and make any necessary amendments to ensure the rules can be enforced as intended.**

To Further Accelerate Transportation Electrification in Rhode Island, the State Should Consider Complementary Policymaking

While not the subject of this rulemaking, Rivian respectfully urges DEM and its policymaking partners in Rhode Island to consider complementary actions that will help deliver on the goals of the proposed vehicle regulations. The recommendations below reiterate similar points made in our feedback on the state's listening session regarding the proposed rules earlier this year.

Implement a Clean Fuels Standard (CFS)

CFS policies, also known as low carbon fuels standards (LCFS), are powerful enablers of transportation electrification in support of the requirements of the ACCII and ACT regulations.

Several states already establish carbon intensity standards for transportation fuels and many more are actively considering legislation to develop their own. This is a testament to the tremendous value clean fuels policies can deliver, and not just in terms of job creation and economic activity as fuel providers innovate and invest in producing and supplying clean fuels to the market. Just as important, they reduce emissions and are responsible for tens of millions of tons of avoided GHGs and co-pollutants in the states where they are already in force, supporting climate goals as well as improving air quality and public health.[7] Because communities that border major highways and roadways are disproportionately affected by local air pollution caused by vehicles burning fossil fuels, they stand to benefit directly from the use of increasingly clean fuels on those same road networks.

CFS policies also serve to catalyze growth in the EV market. Designed correctly, CFS policies can establish incentive frameworks that encourage automakers to accelerate the development and sale of highly utilized EVs in the policy's territory while also creating new revenues via the trading of compliance credits that can be used to fund EV purchase rebates or other investments. These policies also typically reward investments in public charging infrastructure.

In the MHD sector, CFS policies create revenue streams that directly support fleet investments in electric vans, trucks, and buses. Under a CFS, when fleets charge vehicles centrally at a depot or dispatching center where they own the charger, they can capture the credits generated by the charging events. Selling those credits in turn generates revenue with direct benefits for total cost of ownership. In this way, CFS programs inherently incentivize MHD fleet-switching and the accompanying charger installation.

In the interest of cost-effective program administration and achieving greater scale, Rhode Island could consider partnering with neighbor states to develop a regional CFS. The Transportation and Climate

[7] Oregon Department of Environmental Quality, Oregon Clean Fuels Program, available at www.oregon.gov/deq/ghgp/cfp/Pages/default.aspx; Casey Kelley and Nikita Pavlenko, The International Council on Clean Transportation, *Working Paper 2020-29: Assessing the potential for low-carbon fuel standards as a mode of electric vehicle support* (December 2020), available at theicct.org/sites/default/files/publications/LCFS-and-EVs-dec2020.pdf.

Initiative established clear precedent for this kind of cross-state collaboration.

Establish Durable and Effective EV Purchase Incentive Programs

Simple and reliable purchase incentives are key to supporting the EV transition in both the LD and MHD sectors. Unfortunately, Rhode Island's existing ZEV rebates, for both individual and fleet purchasers, sets a restrictive vehicle purchase price cap of $60,000.[8]

Highly capable EVs like Rivian's R1T do come at a price premium. Our truck features a large battery pack designed to deliver the range customers expect across a variety of demanding applications such as towing and off-road driving in both personal and commercial use. (Fleets of various sizes, including utilities and small businesses, have purchased the R1T to serve their work functions.) At 135kWh, the battery pack is more than twice the size of those found in typical passenger car offerings such as the Chevrolet Bolt, and 35 percent larger than even SUV-style products like the Tesla Model X. This represents significant added cost. Indeed, both the International Council for Clean Transportation ("ICCT") and California's Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project ("HVIP") estimate significant incremental cost increases—approximately 50 percent or more—for battery-electric pickups versus conventional alternatives.[9] Accordingly, if a state decides to impose purchase price caps, Rivian advocates for a tiered approach with a dedicated category for vehicles like the R1T. Policymakers should set price caps appropriately for this category—at least 50 percent higher than those imposed for sedans given the relatively larger battery packs and incremental costs compared to conventional powertrains. In Rhode Island's case, this would translate to a price cap of $90,000. The state should also consider the need for an MHD ZEV incentive program that expressly focuses on fleet operators and covers the full range of Class 2b-8 ZEVs.

Rivian recommends that Rhode Island reform its rebate program and consider a dedicated MHD ZEV incentive. In our experience, the most effective incentives are simple to understand, available at the point of sale, and broadly accessible to all buyers and for the full cross-section of vehicles drivers want and need. Leading examples include Illinois' LD ZEV rebate and Massachusetts' MOR-EV Trucks Program targeting MHD fleets.

Conclusion

Rivian applauds Rhode Island's drive to reduce emissions and improve the environment by adopting the ACCII and ACT rules. Our products are proof that now is the time to adopt these regulations. We urge the state to act with urgency and complete the rulemaking this calendar year to ensure timely implementation of the standards as soon as possible. In doing so, DEM should carefully review the proposed regulatory language for consistency with the original California regulation and federal law governing state adoption of vehicle emission standards. Rhode Island should also take steps to implement important complementary

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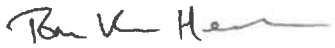
[8] Driving Rhode Island to Vehicle Electrification, *DRIVE EV*, available at www.drive.ri.gov.

[9] For example, HVIP's total cost of ownership calculator estimates a purchase cost of roughly $59,000 for a Class 2b battery-electric truck as opposed to roughly $37,500 for a gasoline truck in the same weight class. The calculator is available at www.californiahvip.org/tco/. See also, Eamonn Mulholland, ICCT, *Cost of Electric Commercial Vans and Pickup Trucks in the United States through 2040*, January 2022, available at www.theicct.org/sites/default/files/publications/cost-ev-vans-pickups-us-2040-jan22.pdf.

policies—including implementing a clean fuels standard and improved ZEV rebates—to maximize the impact of the state's efforts to electrify transportation.

Please contact me with any questions. Rivian looks forward to working with you to accelerate transportation electrification in Rhode Island.

Sincerely,



Tom Van Heeke
Senior Policy Advisor
Rivian Automotive, LLC
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(Submitted via email and online)

Chelsea Priest
Department of Environmental Management
RI DEM – Office of Air Resources
235 Promenade Street
Providence, RI 02908

August 31, 2023

Re: Comments in Response to Proposed Amendments to Rhode Island's Low-Emission Vehicle Program (250-RICR-120-05-37)

Dear Ms. Priest:

Cummins Inc. appreciates the opportunity to provide comments regarding Rhode Island Department of Environmental Management's (RI DEM's) proposed amendments to Rhode Island's Low-Emission Vehicle Program at 250-RICR-120-05-37. Cummins is a proponent of tough, clear, and enforceable regulations around the world in order to improve the environment while delivering what our customers need and shares Rhode Island's goal to improve real-world emissions from the medium-duty vehicles (MDV) which are part of the Advanced Clean Cars (ACC II) regulation.

Cummins actively engaged in the California Air Resources Board's (CARB's) rulemaking process for ACC II. Proposed provisions in Part 37 would adopt by reference CARB's Low-Emission Vehicle IV (LEV IV) requirements in 13 CCR 1961.4 for chassis-certified MDV and associated in-use testing requirements. Those Class 2b and 3 MDV (i.e., vehicles with 8,500-14,000 lbs Gross Vehicle Weight Rating (GVWR)), are manufactured as complete vans and pickup trucks. MDV pickup trucks can have significant towing capability and are often used in applications going beyond personal use such as construction and agriculture, and as such, do vital work for owners across the nation, including in Rhode Island. In our May 2022 written comments[1] to CARB's ACC II rulemaking, Cummins expressed technical concerns with adopting in-use testing requirements

[1] See https://www.arb.ca.gov/lists/com-attach/396-accii2022-UDMBcl0xVWsAbwNt.pdf.

Cummins Inc.
500 Jackson Street
Columbus, IN 47201 USA
cummins.com

and standards which CARB had developed for their Heavy-Duty (HD) Omnibus Low Oxides of Nitrogen (NOx) rule for HD engine certification and compliance and applying them directly to chassis-certified MDV in LEV IV. Those concerns remain and apply similarly for RI DEM's adoption of CARB's LEV IV rule.

More recently, the U.S. Environmental Protection Agency (EPA) proposed Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles[2] which include new NOx certification and in-use standards for MDV. CARB and HD manufacturers including Cummins also recently entered into an agreement[3] which includes a commitment by CARB to align their 2027 HD Omnibus Low NOx regulation with EPA's 2027 HD NOx regulation recently finalized as part of the Clean Trucks Plan. While the agreement for alignment on 2027 HD standards does not directly address Cummins' MDV ACC II concerns noted above, it does offer insight into possible additional alignment paths which could address those concerns. Cummins looks forward to working with RI DEM, other states, CARB, and EPA to explore those paths in the future.

For any questions, please contact me via email at: jackie.m.yeager@cummins.com.

Sincerely,

Jackie M. Yeager

Jackie M. Yeager
Director – Emissions and Fuel Efficiency Policy
Product Compliance & Regulatory Affairs
Cummins Inc.

[2] See https://www.govinfo.gov/content/pkg/FR-2023-05-05/pdf/2023-07974.pdf.
[3] See https://ww2.arb.ca.gov/news/carb-and-truck-and-engine-manufacturers-announce-unprecedented-partnership-meet-clean-air.

DEPARTMENT OF THE NAVY
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NAVY REGION MID-ATLANTIC
1510 GILBERT STREET
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IN REPLY REFER TO
5090
N45R/00/RE14
September 7, 2023

Chelsea Priest
Department of Environmental Management
RI DEM – Office of Air Resources
235 Promenade Street
Providence, RI 02908

Dear Ms. Priest:

SUBJECT: DEPARTMENT OF DEFENSE COMMENT ON RHODE ISLAND'S LOW-EMISSION AND ZERO-EMISSION VEHICLE PROGRAM REGULATIONS

As the Navy Region Mid-Atlantic Environmental Program Director, along with Commander, Navy Region Mid-Atlantic, my team is responsible for coordinating responses on state environmental legislative and regulatory matters of interest on behalf of the military services for the U.S. Environmental Protection Agency Region I. The Department of Defense (DoD) takes very seriously its dual responsibility to carry out its military mission while protecting the environment. The DoD appreciates the opportunity to provide comments for your consideration in response to Rhode Island's Low-Emission and Zero-Emission Vehicle Program regulations.

Rhode Island's Low-Emission and Zero-Emission Vehicle Program regulations propose to adopt or amend key regulations that reduce greenhouse gas and criteria pollutant emissions from passenger cars, light-duty trucks, and medium- and heavy-duty vehicles that are delivered for sale or placed in service in Rhode Island. The rulemaking includes, in part, incorporation by reference a number of rules contained in California Code of Regulations (CCR) that were adopted in recent years to accomplish the same objective. The DoD acknowledges that the intent of the proposal is to further reduce air pollution; however, the DoD is concerned that the proposal could unintentionally infringe on the ability of the military to fully and effectively use military tactical vehicles and equipment, and ultimately adversely impact military training and readiness activities, as well as national security.

In reviewing the proposed regulation, DoD noticed that a list of exemptions was included, as well as a general reference to "any exceptions or exemptions in 13 and 17 CCR;" however, there is no express exemption for military tactical vehicles and equipment. Also, a review of the sections of the CCR, Title 13 proposed for incorporation by reference within Table 1 showed that Section 1905 is not included, which specifically allows an exemption for military tactical vehicles and equipment. The Clean Air Act § 177 (42 U.S.C. § 7507) and § 209 (42 U.S.C. § 7543) pertain to states' adoption and enforcement of motor vehicle emission control standards, stating that those standards must be identical to the California standards.

Accordingly, DoD respectfully requests that an express exemption for military tactical vehicles and equipment, as well as an incorporation by reference of CCR, Title 13, Section 1905, be added to Rhode Island's Low-Emission and Zero-Emission Vehicle Programs rulemaking.

SUBJECT: DEPARTMENT OF DEFENSE COMMENT ON RHODE ISLAND'S LOW-EMISSION AND ZERO-EMISSION VEHICLE PROGRAM REGULATIONS

Including both the express and by reference exemptions would make Rhode Island's regulations consistent with California's rules governing vehicle emission control standards.

Thank you in advance for your support on this matter. If you have any questions, you may contact Mr. Blake Waller at blake.e.waller.civ@us.navy.mil or Commander Cara Hoy at cara.a.hoy.mil@us.navy.mil.

Sincerely,

KNIGHT.KELLY.KATHLYN.1229658618 Digitally signed by KNIGHT.KELLY.KATHLYN.1229658618 Date: 2023.09.07 14:57:38 -04'00'

KELLY K. KNIGHT
Environmental Program Director
By direction of the Commander

Copy to:
DoD and Department of Navy REC Director, Region I (Mr. Blake Waller)
U.S. Army Regional Program Coordinator, Region I (Mr. Kevin Kennedy)
U.S. Air Force REC, Region I (Ms. Amanda Sherman)

Dear Ms Chelsea Priest

As I apparently had trouble submitting a comment on the DEM web-site, please accept this comment with regard to the RI Low Emission Vehicle Program Rule.

I do fully support the concept of mandating eventually all new cars and trucks sold in RI be electric.. This is clearly necessary to reduce both carbon emissions and tailpipe pollutants, especially along busy congested roads and streets where people live, work, travel.

However I do have two concerns which I hope can be either incorporated in the rule or as a condition in other DEM documents.

As the proposed rule now stands it makes no provision for replacing the gas tax that is essential for RIPTA operations, as well as for RIDOT maintenance; The gas tax is already in decline with the increasing use of electric and hybrid vehicles. That is already affecting RIPTA's budget for which gas tax revenues as originally projected in 2022 were revised downward by about $4.7 million for FY 2024, $5.1 million for FY25, $6.9 million for FY 26. This should be addressed as soon as possible.

While replacing the gas tax is beyond the scope of the proposed Rule, reality is that as more and more own EVs, and they get used to not paying for the roads and for transit, it will become politically harder and harder to impose any fee. Thus I feel the rule should be revised to signal now to EV interests that they should expect there will have to be some kind of fee structure so that they actually pay their share. Otherwise the transit system is at risk.

This is no small matter to decarbonizing transportation both by its potential for lower per ride emission (for example a German study estimated life-cycle carbon emissions in gms per psg-km for electric cars at 92, much better than a gas car at 208, but an electric bus is even better at 25) and because transit supports more energy efficient compact walkable neighborhoods. Transit is also used disproportionately by folks who cannot afford a new car, especially an EV that has higher up front costs. So it is important that the EV rulemaking does not inadvertently undermine transit.

Secondly the rule seems to treat all EVs as equal when they are not. Larger, heavier EVs will do more damage to roads and bridges, will use more materials which we know will be mined in destructive ways (even if elsewhere,) will have more impacts from manufacture and disposal, will cause more tire pollution, and most importantly, will male more demands on the grid, and, because of their weight, will be more dangerous to other road users.

Thus for many environmental reasons it is important to signal now to the EV industry, either by modifying the rule or in related documents, that there needs to be measures taken to incentivize lighter, more efficient EVs such as with some kind of weight-based fee. This should be done now before expectations of ever heavier EVs get locked in.

Thank you for considering this points.

Barry Schiller
(formerly a member of the Transportation Advisory Committee and the Rhode Island Public Transit Authority Board of Directors

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September 8, 2023

Chelsea Priest
Rhode Island Department of Environmental Management (RIDEM)
RIDEM - Office of Air Resources
235 Promenade Street
Providence, RI 02908
Email: Chelsea.Priest@dem.ri.gov

RE: Comment on Rhode Island Low-Emission Vehicle Program Rule 250-RICR-120-05-37

On behalf of The Union of Concerned Scientists (UCS) and our over 1,590 supporters, activists, and Science Network members in Rhode Island, we urge RIDEM to fully adopt the Advanced Clean Cars II (ACCII), Advanced Clean Trucks (ACT), and Heavy-Duty Low-NOx Omnibus ("Omnibus") rules without delay. These rules are some of the most important air and climate pollution regulations to be considered by the state. RIDEM should also include the large entity reporting requirements into this rulemaking to address the lack of data available on fleet characteristics and medium- and heavy-duty vehicle use.

Adoption of the ACCII and ACT standards is an important step towards cleaner air and lower climate changing emissions in Rhode Island. The transportation sector is the largest source of greenhouse gas emissions in the state, contributing 40% of economy-wide emissions in 2019 and primarily coming from on-road vehicles.[1] In order to meet the state's climate goals of an 45% reduction from 1990 greenhouse gas emission levels by 2030, an 80% reduction by 2040, and net-zero by 2050, adopting the ACCII, ACT, and Omnibus standards without delay is necessary. These rules were also recommended as priority actions in Executive Climate Change Coordinating Council's (EC4) 2025 Climate Action Strategy.[2]

Advanced Clean Cars II

There are drastic benefits of electric vehicles (including plug-in hybrids) compared to gasoline fueled ones and conventional hybrids. Consumer Reports has found that owning an electric vehicle will save the typical driver $6,000 to $12,000 over the life-time of a vehicle, attributed to the lower fuel and maintenance costs.[3] Coupled with significant federal funding for vehicles and charging infrastructure

[1] RIDEM, *2019 Rhode Island Greenhouse Gas Emissions Inventory*, December 2022. https://dem.ri.gov/sites/g/files/xkgbur861/files/2022-12/ridem-ghg-inventory-2019.pdf at 9.
[2] Rhode Island EC4, *Rhode Island 2022 Climate Update*, December 2022. https://climatechange.ri.gov/act-climate/2025-climate-update at 7.
[3] Consumer Reports, *Electric Vehicles Save Consumers Money*, June 2023. https://advocacy.consumerreports.org/wp-content/uploads/2023/06/CR_EVSavings_FACTSHEET_6.2023.pdf

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from the Inflation Reduction Act[4], as well as the DRIVE EV rebate program and Rhode Island Energy's charging infrastructure programs[5], these vehicles stand to bring major financial benefits to Rhode Island.

Additionally, according to a UCS analysis we conducted last year called *Driving Cleaner*, which took into account the full vehicle life-cycle as well as different electricity grid composition across the country, an average EV in Rhode Island runs at 111 miles per gallon, with an average US hybrid at 51 mpg and average gasoline vehicle at 25 mpg. As the grid gets cleaner, electric vehicles will become even more efficient.[6]

Adopting the rule would allow for the longer term planning necessary for the transition, including utility planning for charging and grid infrastructure investments. There are significant benefits to the grid as well, including downward pressure on rates and the usage of electric vehicles for grid resiliency.[7] Rhode Island's recently approved National Electric Vehicle Infrastructure program plan makes use of $22.9 million in dedicated federal funding to build out Direct Current Fast Charging (DCFC) stations along high traffic corridors in the state.

The ACCII standard will also address the steadily increasing demand for electric vehicles. Looking at the recent over 38% increase in EV registrations in 2022[8], it is clear that there is the demand for more availability of electric vehicles in the state. This rule would provide just that—by putting Rhode Island on a steady, gradual, predictable timeline and require manufacturers to ensure that these vehicles are increasingly available. There is also significant flexibility through the compliance credits that attain the same goals while giving manufacturers more routes towards meeting the sales requirements.

Advanced Clean Trucks and Heavy-Duty Low-NOx Omnibus

Though they make up only around 6% of the vehicles on the roads in the state, medium- and heavy-duty trucks and buses contribute about disproportionate 24% of greenhouse gas emissions, 50% of nitrogen oxide emissions, and 44% of fine particulate matter emissions from on-road vehicles.[9] Given that, these vehicles have an outsized contribution to the climate and public health impacts of the transportation sector.

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[4] Electrification Coalition, "Inflation Reduction Act Impacts on Electric Vehicles", n.d. https://electrificationcoalition.org/work/federal-ev-policy/inflation-reduction-act/

[5] Rhode Island Office of Energy Resources, *Driving Rhode Island to Vehicle Electrification (DRIVE) Program.* https://drive.ri.gov/; Rhode Island Energy, *Electric Transportation and Charging Programs*, https://www.rienergy.com/RI-Business/Energy-Saving-Programs/Electric-Vehicle-Charging-Station-Program.

[6] Dave Reichmuth, Jessica Dunn, and Don Anair. 2022. *Driving Cleaner: Electric Cars and Pickups Beat Gasoline on Lifetime Global Warming Emissions*. Cambridge, MA: Union of Concerned Scientists. https://www.ucsusa.org/resources/driving-cleaner

[7] Samantha Houston, "Can the Electric Grid Handle EV Charging?", *The Equation* (UCS blog), 12 September 2022, https://blog.ucsusa.org/samantha-houston/can-the-electric-grid-handle-ev-charging/.

[8] Rhode Island 2022 Climate Update at 6 and Rhode Island Department of Transportation, Department of Motor Vehicles, and Office of Energy Resources, *Electrifying Transportation: A Strategic Policy Guide for Improving Public Access to Electric Vehicle Charging Infrastructure in Rhode Island*, December 2021, https://energy.ri.gov/sites/g/files/xkgbur741/files/2022-02/electrifying-transportation-guide-dec-2021.pdf at 17.

[9] M.J. Bradley & Associates, *Southern New England Clean Trucks Program,* ("Southern New England Report") January 2022. https://www.ucsusa.org/sites/default/files/2022-01/southern-ne-clean-trucks-report.pdf at 45.

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Electric trucks perform better than their diesel counterparts. UCS has conducted analysis to show that in Rhode Island, from smaller delivery vans to long-haul tractor trailers, electric trucks emit 83-91% less greenhouse gas emissions over their life cycles compared to their diesel counterparts, as well as contributing to 45-76% reduction in mortality from air quality.[10] UCS analysis has also shown that adopting the ACT would reduce medium- and heavy-duty emissions of nitrogen oxides by over 6,200 tons, particular matter emissions by 32 tons, and well-to-wheel CO2e emissions by over 2.5 million metric tons by 2050. This adds up to over $912 million in public health, climate, and fleet benefits.[11] While recently adopted federal standards for diesel engines will provide some of these emission and health benefits, Rhode Island's adoption of ACT and Omnibus rules will ensure that the state benefits from both a transition to zero emission trucks and cleaner combustion.

This rule also provides market certainty with a gradual and technically feasible timeline for increasing sales of zero-emissions vehicles. In particular, it provides certainty for proactive utility planning to take advantage of the many grid benefits of zero-emissions vehicles, which include being able to use their batteries for grid resilience, as well as downward pressure on utility rates which will benefit everyone who pays an electricity bill. Most medium- and heavy-duty vehicles will be able to charge at a depot when not in use, and there are encouraging financing models, high-powered technological improvements such as the Megawatt Charging System, and potential for vehicle-grid integration.[12] With this, fleets will rely on a steady supply of these zero-emissions vehicles in order to take advantage of their lower fuel and maintenance costs that give them a lower total cost of ownership.[13]

This rule prepares Rhode Island to take advantage of the over $2.8 billion in federal funding from the Inflation Reduction Act geared for medium and heavy-duty trucks and buses.[14] In addition, there are significant incentives for charging infrastructure, including an announcement in February about a freight corridor study by National Grid that would forecast traffic demand in the Northeast, including Rhode Island.[15] This rule would provide the certainty and timeline that would allow Rhode Island to take advantage of more of these investments.

Lastly, given the severe lack of data on medium- and heavy-duty vehicle fleets and operations in the state, **we also recommend that RIDEM adopt the large entity reporting requirements during this rulemaking.** This is meant to complement the ACT and provide crucial information for the development of other programs such as for charging infrastructure or for specific fleet support. This will also allow for

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[10] Forthcoming UCS analysis.
[11] Southern New England Report at 41.
[12] Samantha Houston, "Where Do Electric Trucks Charge?", *The Equation* (UCS Blog), 29 August 2023, https://blog.ucsusa.org/samantha-houston/where-do-electric-trucks-charge/.
[13] Jimmy O'Dea. 2019. *Ready for Work: Now Is the Time for Heavy-Duty Electric Vehicles*. Cambridge, MA: Union of Concerned Scientists. https://www.ucsusa.org/resources/ready-work
[14] Environmental Resources Management, "Technical Memo--Inflation Reduction Act Supplemental Assessment: Analysis of Alternative Medium- and Heavy-Duty Zero-Emission Vehicle Business-As-Usual Scenarios", August 19, 2022, https://www.erm.com/contentassets/154d08e0d0674752925cd82c66b3e2b1/edf-zev-baseline-technical-memo-addendum.pdf at 2.
[15] US Department of Energy, "Biden-Harris Administration Announces Funding for Zero-Emission Medium- and Heavy-Duty Vehicle Corridors, Expansion of EV Charging in Underserved Communities", February 15, 2023, https://www.energy.gov/articles/biden-harris-administration-announces-funding-zero-emission-medium-and-heavy-duty-vehicle.

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more detailed understanding of the contributions of trucks and buses to diesel particulate pollution, which is incredibly important given the large hotspots in already overburdened communities in Rhode Island.[16] We recommend that this requirement:

- Lower the fleet size threshold to 5 vehicles, as done in Oregon[17] and Washington[18], in order to capture information on a majority of fleets operating in Rhode Island
- Require regular fleet reporting rather than a one-time requirement, as done in Colorado[19], to track progress and collect data to determine how best to support the state's fleets.

While these rules are significant and feasible, they should be just one step of many, and must come with taking the lead from frontline communities on additional policies needed to expedite air pollution reductions in hotspots, and also policies to make efficient use of minerals and supporting equitable mining practices.[20] Thank you for your work on this vital regulation, and we urge you to adopt the ACCII, ACT, and Omnibus standards without delay, and include the large entity reporting requirements into this rulemaking.

Sincerely,

Kevin X. Shen
Northeast Transportation Policy Analyst/Advocate
Clean Transportation Program
Union of Concerned Scientists

[16] Kevin X. Shen, 2022. Exposure to Diesel Particulate Pollution in Rhode Island. Cambridge, MA: Union of Concerned Scientists. https://ucsusa.org/resources/diesel-pollution-ri
[17] Oregon Department of Environmental Quality, *Medium and Heavy-Duty One-Time Fleet Reporting*, https://www.oregon.gov/deq/aq/programs/pages/mdhdreporting.aspx.
[18] Washington Department of Ecology, *Adopted Rule Language: Chapter 173-423 WAC, Clean Vehicles Program*, Jan 2023, https://ecology.wa.gov/getattachment/f3e6d16b-e1c6-4861-b007-c0b95cbdbd3f/OTS-4007-5-For-Filing.pdf at 8.
[19] Colorado Department of Public Health and Environment, *Colorado Low Emission Automobile Regulations 5 CCR 1001-24*, April 2023, https://drive.google.com/file/d/11E_N_sk63pfQ30Ivu-2y_bNXhA6SToCc/view at 14.
[20] Jessica Dunn, "Transforming Transportation: Opportunity for a Sustainable and Equitable Electric Future", *The Equation* (UCS blog), 8 May 2023, https://blog.ucsusa.org/jessica-dunn/transforming-transportation-opportunity-for-a-sustainable-and-equitable-electric-future/.

September 8, 2023

Chelsea Priest
Department of Environmental Management
RI DEM - Office of Air Resources
235 Promenade Street
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Chelsea.Priest@dem.ri.gov

RE: Support for Rhode Island's adoption of the Advanced Clean Cars II regulation

Dear Chelsea Priest:

Consumer Reports (CR) thanks you and your department for commencing rulemaking proceedings on Rhode Island's adoption of the Advanced Clean Cars II (ACC II) regulation. The ACC II rules will provide clean, cost-saving transportation choices for consumers, and we write to you today to express our strong support for Rhode Island's adoption of these critical rules before the end of 2023.

Founded in 1936, CR is an independent, nonprofit and nonpartisan organization that works with consumers to create a fair and just marketplace. Known for its rigorous testing and ratings of products, CR also advocates for laws and corporate practices that are beneficial for consumers. CR is dedicated to amplifying the voices of consumers to promote safety, digital rights, financial fairness, and sustainability. The organization surveys millions of Americans every year, reports extensively on the challenges and opportunities facing today's consumers, and provides ad-free content and tools to 6 million members across the United States.

Electric vehicles (EVs) provide significant cost savings for consumers, and a strong Zero-Emission Vehicle (ZEV) program will help maximize the number of Rhode Island constituents who can realize this benefit. Our analysis[1] shows that today's mainstream EVs significantly lower the total cost of ownership for consumers, which allows consumers to save money:

[1] Consumer Reports, Electric Vehicle Ownership Costs: Today's Electric Vehicles Offer Big Savings for Consumers, Chris Harto, October 2020.

- Owning an EV will save the typical driver $6,000 to $10,000 over the life of the vehicle, compared to owning a comparable gas-powered vehicle.
    - The average EV driver will spend 60% less to power their vehicle than the owner of a similar gas-powered vehicle.
    - EVs cost half as much to repair and maintain as similar gas-powered vehicles.

Under ACC II, we expect to see a rapid and sustainable deployment of new ZEV and Plug-In Hybrid Electric Vehicle (PHEV) models, increasing affordable consumer options for clean vehicles in the marketplace. This program will encourage the sale of ZEVs which will lead to significant emission reductions and provide consumers with wide-ranging choices from a broad mix of ZEV and PHEV technologies across all passenger vehicle categories. By setting strong targets for auto manufacturers to sell clean vehicles in the state, these rules will continue to encourage ongoing innovation in the transportation sector that will offer consumers options that will save them money, reduce air pollution and greenhouse gas emissions, and improve public health, which is why it is imperative that Rhode Island act swiftly to adopt the ACC II rule.

Rhode Island's adoption of the ACC II rule will ensure that consumers can access the ZEVs they want in their own state. This is a critical moment for Rhode Island to join the wave of states moving towards a clean transportation future, and ensure that constituents can access the full range of economic and health benefits of the transition.

Failure to adopt ACC II in 2023 would mean that by 2030, there would be fewer ZEVs on Rhode Island roads as the rule would not begin implementation in the state until 2028, at minimum. Delaying adoption would deprive residents of the ZEVs they would otherwise be able to acquire and the many important co-benefits ACC II provides. Furthermore, these rules provide strong consumer protections to ensure that vehicle manufacturers are providing reliable ZEVs and PHEVs, which is critical for consumers purchasing these vehicles on the secondary market. Since many Rhode Islanders – particularly low-income drivers – purchase used vehicles, a delay in the rule means there would be fewer clean, affordable vehicles available for drivers in the secondary market.

Given the many benefits ACC II will bring to Rhode Island, and because of the importance of proposing and adopting ACC II this calendar year, adopting ACC II should be a top priority for the state in 2023. We strongly urge Rhode Island to adopt ACC II rules swiftly, ensuring consumers in the state have greater access to clean, cost-effective mobility options.

Sincerely,

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September 8, 2023

Chelsea Priest
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Email: Chelsea.Priest@dem.ri.gov

RE: Rhode Island Low-Emission Vehicle Program Rule 250-RICR-120-05-37

We, the 12 undersigned scientists, researchers, health professionals, and engineers respectfully submit this comment in support of the adoption of the Advanced Clean Cars II (ACCII), Advanced Clean Trucks (ACT), and Heavy-Duty Low-NOx Omnibus ("Omnibus") rules to put Rhode Island on path towards zero-emission vehicles.

Transportation is responsible for 40 percent of Rhode Island's annual greenhouse gas (GHG) emissions. The state's more than 823,000 light-duty cars and trucks and more than 49,000 medium- and heavy-duty vehicles make up around 84 percent of transportation sector emissions. The rules are essential for Rhode Island's compliance with the 2021 Act on Climate, which requires the state to be on track for net-zero emissions by 2050.

By adopting the ACCII rule, Rhode Island could avoid a cumulative 10.4 MMT of well-to-wheel GHG emissions, as well as 1,134 tons of nitrogen oxides (NOx) and 78 tons of fine particulate matter (PM2.5) by 2040. Meanwhile, the ACT rule would help Rhode Island avoid a cumulative 15.9 MMT of GHG emissions as well as 6,232 tons of NOx and 32 tons of PM2.5 by 2050 from the state's trucks and buses, bringing a total of $221 million in benefits in that timeframe. Adopting the Omnibus rule will also ensure that the state sees the benefits of cleaner combustion beyond the adopted federal standards.

Not only are cars, trucks, and buses a drastic climate problem, but tailpipe emissions also contribute dangerous levels of NOx and PM2.5 that increases the risk of severe respiratory illnesses and other health problems. In Rhode Island, diesel pollution exposure is especially high along I-95, from the Southwest corner of the state through Providence on its way to Boston. Much of the pollution is concentrated within the I-295 Beltway, and around Warwick.

The good news is that zero-emission cars and trucks are already becoming readily available in a wide variety of models and sizes. A recent analysis by the Union of Concerned Scientists showed that an average electric car in Rhode Island had a 71 percent reduction in total lifetime emissions. Battery-electric trucks do not release tailpipe emissions, and when charged on the Northeast regional electric grid, they have around 66-87 percent lower lifecycle global warming emissions compared to diesel trucks.

The urgency of the issue demands a strong response. For far too long, transportation pollution has been devastating the health of communities across the country. The solutions are here – and we urge the Rhode Island Department of Environmental Management to meet the moment and enact the strongest vehicle standards.

(signatures on the next page)

Sincerely,

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September 8, 2023

Via Electronic Mail

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RE: Proposed Rule – Rhode Island's Low-Emission Vehicle Program

Dear Ms. Priest:

Conservation Law Foundation ("CLF") respectfully submits the following comments regarding the Department of Environmental Management's ("DEM") proposed adoption of amendments to Rhode Island's Low-Emission Vehicle Program.[1] The proposed rule would amend Rhode Island's vehicle emissions control regulations to adopt California's Advanced Clean Cars II Rule, including the Low Emissions Vehicle IV regulations (collectively, "ACC II"), California's Advanced Clean Trucks Rule ("ACT"), the Low NO_x Heavy-Duty Omnibus ("HDO") Rule, and the Phase 2 Greenhouse Gas Rule. CLF appreciates the opportunity to comment on this critically important proposal.[2]

Several compelling policy reasons support adopting these regulations in Rhode Island. The regulations will: (1) Reduce greenhouse gas ("GHG") emissions as required under the Act on Climate; (2) greatly improve Rhode Island's air quality, providing substantial health benefits to Rhode Islanders; (3) lessen the harmful, disproportionate impact that transportation emissions have on the state's environmental justice communities; and (4) boost Rhode Island's economy. To reap this suite of benefits as soon as possible, CLF strongly urges DEM to adopt the proposed regulations before the end of 2023.

The ACC II regulations require motor vehicle manufacturers to sell an increasing percentage of new zero-emission and plug-in hybrid light-duty vehicles ("LDVs") each year, reaching 100% of new sales by 2035. Since California adopted the ACC II regulations in 2022,

[1] 250-120 R.I. Code R. § 37.1–37.12.

[2] Founded in 1966, CLF is a regional environmental nonprofit organization with offices in all six New England states, including Rhode Island. CLF uses science-based legal advocacy to conserve natural resources, promote safe and healthy communities, and foster a just transition to a clean energy economy in New England.

half a dozen states have done the same, including Massachusetts, New York, and Vermont, and other states are in the process of doing so, including Maine, New Jersey, and Connecticut.[3]

Due to a two-model year lead time requirement,[4] it is too late for Rhode Island to impact MY 2026 vehicles. The soonest model year the state can impact is 2027. CLF urges DEM to adopt the ACC II regulations by the end of 2023 so they will apply starting with model year ("MY") 2027 vehicles. Failure to adopt ACC II by the end of the calendar year would needlessly delay the benefits associated with these regulations.

The ACT rule requires manufacturers to sell an increasing percentage of new zero-emission medium- and heavy-duty ("MHD") trucks, beginning in MY 2026. The HDO rule updates nitrogen oxide ("NO_x") and particulate matter ("PM") emissions limits for heavy-duty vehicles starting in MY 2024 and updates them again for MYs 2027 and 2031, ultimately reducing the NO_x emissions limit by 90% and cutting PM emissions in half.

I. Rhode Island is Statutorily Authorized to Adopt the Proposed Rule

Rhode Island lacks independent authority to set standards for mobile sources[5] of air pollution. The state must follow standards set by the federal government or adopt standards identical to California's standards, as authorized by section 177 of the federal Clean Air Act.[6]

DEM is empowered by state law to adopt the proposed rule.[7] Rhode Island has a long history and familiarity with California vehicle emission standards. This includes adoption of California's zero-emission vehicle program (Advanced Clean Cars I, or "ACC I") regulations, which required manufacturers to produce and deliver for sale an increasing number of low-emitting and zero-emitting vehicles, gradually increasing the percentage of electric vehicles. As of 2023, fourteen other states, including Rhode Island, have adopted the ACC I program.

Adopting the proposed regulations is also consistent with state climate policy, as Rhode Island's Executive Climate Change Coordinating Council ("EC4") has recommended that Rhode Island maintain adherence to California low-emission and zero-emission vehicle requirements,

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[3] CALSTART, *Companies applaud as five states take action to bring more clean cars and trucks to their roads* (July 28, 2023), https://calstart.org/companies-applaud-five-states-for-acc-act-rules-action/.

[4] The Clean Air Act, 42 U.S.C. § 7401 *et seq.*, requires California to provide vehicle manufacturers two full model years of lead time.

[5] Mobile sources are the most significant source of harmful emissions linked to ozone formation and climate change.

[6] Clean Air Act, 42 U.S.C. § 7401. States are generally preempted by the Clean Air Act from adopting new vehicle emission standards; however, section 209 authorizes California to obtain a preemption waiver for new vehicle emission standards, and section 177 allows other states to adopt and implement California regulations, as Rhode Island has done.

[7] *See* R.I. Gen. Laws § 42-17.1-2(19); R.I. Gen. Laws § 23-23-5

including amending existing rules to incorporate ACC II, and adopting ACT, the HDO rule, and Phase 2 GHG emission standards for trucks and trailers.[8]

II. Adoption of the Proposed Rule Would Significantly Reduce Rhode Island's Greenhouse Gas Emissions as Required Under the Act on Climate

We are in a climate crisis. This year, "the planet experienced its hottest June since records began in 1850."[9] Furthermore, "the eight warmest years on the books are the past eight."[10] The secretary general of the World Meteorological Organization recently acknowledged that "extreme weather which has affected many millions of people in July is unfortunately the reality of climate change," and "[t]he need to reduce greenhouse-gas emissions is more urgent than ever before."[11] Earlier this year, the United Nations Intergovernmental Panel on Climate Change recognized the urgency of the moment, stating that "The cumulative scientific evidence is unequivocal: Climate change is a threat to human well-being and planetary health. Any further delay in concerted anticipatory global action on adaptation and mitigation will miss a brief and rapidly closing window of opportunity to secure a liveable and sustainable future for all."[12]

In Rhode Island, temperatures have risen almost 4 degrees Fahrenheit since the beginning of the twentieth century.[13] The National Oceanic and Atmospheric Administration ("NOAA") predicts that if GHG emissions continue to increase, "historically unprecedented warming is projected to continue through this century."[14] Even if GHG emissions increase at a slower rate, "annual average temperatures are projected to most likely exceed historical record levels by the middle of the century."[15] NOAA also predicts that the global average sea level will rise between one and eight feet by 2100 and that Rhode Island's average precipitation and the number of extreme precipitation events will increase, thereby increasing coastal and inland flooding risks.[16] Likewise, a state report focused on addressing the impacts of climate change in Rhode Island has

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[8] R.I. Exec. Climate Change Coordinating Council, *Rhode Island 2022 Climate Update* 72-74 (2022), *available at* https://climatechange.ri.gov/media/1261/download?language=en.

[9] Raymond Zhong, *This Looks Like Earth's Warmest Month. Hotter Ones Appear to Be in Store.*, N.Y. Times, July 27, 2023, *available at* https://www.nytimes.com/2023/07/27/climate/july-heat-hottest-month.html.

[10] *Id.*

[11] *Id.*

[12] Hans-O. Pörtner, et al., United Nations Intergovernmental Panel on Climate Change, *Climate Change 2022: Impacts, Adaptation and Vulnerability - Summary for Policymakers* 33 (2022), *available at* https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf.

[13] Nat'l Oceanic and Atmospheric Admin. and N.C. Inst. for Climate Studies, *State Climate Summaries 2022: Rhode Island*, https://statesummaries.ncics.org/chapter/ri/ (last visited Sep. 8, 2023).

[14] *Id.*

[15] *Id.*

[16] *Id.*

found that, as the climate continues to warm, Rhode Island is likely to experience greater sea level rise and increased chances of flooding, more frequent and intense high-temperature events, and increased storm intensity and precipitation.[17]

To combat the climate crisis, Rhode Island must rapidly reduce GHG emissions, including transportation sector emissions. In the state's most recent GHG Emissions Inventory, DEM found that transportation accounted for 4.29 million metric tons ("MMT") of carbon dioxide equivalent ("CO_2e") in 2019 and that this sector accounts for 39.7% of the state's total emissions—more than any other sector.[18] Although transportation sector emissions may be expected to decrease in forthcoming emissions inventories due to the COVID-19 pandemic, this will be a reflection of a temporary decrease before a return to pre-pandemic levels.[19]

Rhode Island's EC4 has acknowledged that the state is not on track to meet its 2030 emissions reduction mandate[20] and that sharp reductions are needed to meet the 2030 and later mandates. To achieve the state's 2030 climate mandate,[21] the EC4 has recommended that Rhode Island maintain adherence to California low-emission and zero-emission vehicle requirements, including amending existing rules to incorporate ACC II, and adopting ACT, the HDO rule, and Phase 2 GHG emission standards for trucks and trailers.[22] The EC4 estimates that the state will need roughly 43,000 registered electric vehicles ("EVs") on the road by 2030 to meet its climate mandate.[23] Currently, there are fewer than 7,000 EVs registered in the state. ACC II would steadily increase the supply of EVs in the state.

According to the International Council on Clean Transportation ("ICCT"), the ACC II regulations could reduce Rhode Island's well-to-wheels GHG emissions by .9 MMT by 2030, and 10.4 MMT by 2040.[24] A 2021 report found that Rhode Island's MHD vehicles make up just 6% of the state's on-road vehicles but are responsible for 24% of GHG emissions from the

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[17] R.I. Office of the Governor, *Resilient Rhody* 12-17 (2018), https://climatechange.ri.gov/media/191/download?language=en.

[18] R.I. Dep't of Envtl. Mgmt., *2019 Rhode Island Greenhouse Gas Emissions Inventory 8-9* (2022), *available at* https://dem.ri.gov/sites/g/files/xkgbur861/files/2022-12/ridem-ghg-inventory-2019.pdf.

[19] *See* U.S. Envtl. Prot. Agency, *Why We Need to Decarbonize Transportation* (last visited Sep. 8, 2023), https://www.epa.gov/greenvehicles/why-we-need-decarbonize-transportation.

[20] *Rhode Island 2022 Climate Update*, *supra* note 8, at 9.

[21] *See* R.I. Gen. Laws § 42-6.2-2(a)(2)(i).

[22] *Rhode Island 2022 Climate Update*, *supra* note 8, at 72-74.

[23] *Id.* at 71.

[24] Jeff Houk et al., *Benefits of Adopting California's Advanced Clean Cars II Standards in Sixteen U.S. States* 18 (Apr. 26, 2023), *available at* https://theicct.org/wp-content/uploads/2023/05/ACC-II-project-report-final-042623.pdf.

transportation sector.[25] By adopting the ACT and HDO rules before the end of this year, Rhode Island will achieve approximately 2.5 MMT of GHG emissions reductions by 2050.[26]

CLF urges DEM to adopt the proposed regulations before the end of 2023 to reduce GHG emissions from the transportation sector in line with the state's GHG emissions reduction mandates under the Act on Climate.

III. Adoption of the Proposed Rule Would Greatly Improve Rhode Island's Air Quality and Provide Substantial Health Benefits to Rhode Islanders

Rhode Island's air quality has improved in recent years, but the state still struggles with hazardous levels of ozone pollution. In the American Lung Association's 2023 State of the Air Report, Providence and Kent Counties received a grade of C, and Washington County received a grade of D, due to the number of high ozone days from 2019 to 2021.[27]

Motor vehicles with combustion engines emit chemicals like NO_x and volatile organic compounds that contribute to the formation of ground-level ozone (smog) and PM.[28] Reducing tailpipe emissions from vehicles would lead to less ozone and PM pollution in the state. According to the ICCT, the ACC II regulations would remove 114 tons of NO_x and 7 tons of PM from Rhode Island's air by 2030.[29] The state would then see a reduction of 1,134 tons of NO_x and 78 tons of PM by 2040.[30] Furthermore, now that New York, Massachusetts, and Vermont have adopted ACC II, and Maine, Connecticut, and New Jersey are poised to do the same, the Northeast could significantly reduce these air pollutants. The region could see a reduction of at least 5,295 tons of NO_x and 326 tons of PM by 2030, and even greater reductions—41,228 tons of NO_x and 3,426 tons of PM—by 2040.[31] According to another study, the ACT and HDO rules would reduce Rhode Island's NO_x and PM emissions by an additional 17,316 tons and 32 tons

[25] David Seamonds et al., *Southern New England Clean Trucks Program: An Analysis of the Impacts of Zero-Emission Medium- and Heavy-Duty Trucks on the Environment, Public Health, Industry, and the Economy* 45 (2021), *available at* https://www.ucsusa.org/sites/default/files/2021-11/southern-ne-clean-trucks-report.pdf.

[26] *Id.* at 48.

[27] American Lung Association, *State of the Air 2023 Report* 134 (2023), *available at* https://www.lung.org/getmedia/338b0c3c-6bf8-480f-9e6e-b93868c6c476/SOTA-2023.pdf.

[28] *See* U.S. Envtl. Prot. Agency, *Ground-level Ozone Basics*, https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics - formation (last updated June 2, 2023); U.S. Envtl. Prot. Agency, *Particulate Matter (PM) Basics,* https://www.epa.gov/pm-pollution/particulate-matter-pm-basics - PM (last updated July 11, 2023).

[29] Houk et al., *supra* note 24, at 18.

[30] *Id.*

[31] *Id.*

respectively by 2050.[32] Because NO_x is a key component of ground-level ozone,[33] and PM worsens air quality, reductions of this magnitude would also reduce ground-level ozone.

Rhode Island residents are exposed to air pollutants like ozone and PM daily, and it is well known that these air pollutants and others negatively impact human health. Indeed, short-term exposure to high ozone levels can cause people to experience breathing problems, like chest tightness, coughing, and shortness of breath.[34] For older adults, short-term exposure to low levels of ozone may increase the risk of premature death.[35] Long-term exposure to ozone may harm respiratory health, causing asthma to develop in children, damage to the airways, or increased allergic response.[36] Both short- and long-term exposure to ozone can also damage tissues, DNA, and proteins in the human body, which can cause or worsen other health issues over time.[37] Ozone exposure can harm the central nervous system, increase the risk of metabolic disorders, increase the likelihood of reproductive and developmental harm, and possibly increase the risk of death from cardiovascular and respiratory diseases, such as asthma and chronic obstructive pulmonary disease.[38]

Additionally, exposure to PM in the short- or long-term increases the risk of premature death.[39] Year-round exposure to particle pollution can cause serious health effects, such as increased risk of preterm birth and low birth weight, increased fetal and infant mortality, impaired neurological development and cognition, reduced lung development, and a higher likelihood of children developing asthma.[40] For adults, long-term PM exposure is linked to the worsening of cardiovascular and respiratory diseases, an increased likelihood of developing diabetes or getting lung cancer and dying from it, and impaired cognitive functioning.[41]

Many Rhode Islanders suffer from asthma and receive medical care for the disease. The most recent data shows that 9.5% of children and 10.5% of adults had asthma in 2020—both above the national average.[42] Rhode Island incurs millions in costs from healthcare charges and

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[32] Seamonds et al., *supra* note 25, at 48.

[33] *See* U.S. Envtl. Prot. Agency, *Ground-level Ozone Basics*, *supra* note 28.

[34] American Lung Association, *supra* note 27, at 26.

[35] *Id.* at 27.

[36] *Id.*

[37] *Id.*

[38] *Id.*

[39] *Id.* at 24–25.

[40] *Id.* at 2.

[41] *Id.* at 25.

[42] R.I. Dep't of Health, *Asthma Data*, https://health.ri.gov/data/asthma/ (last visited Sep. 8, 2023).

hospitalizations due to asthma each year. Because "[c]hildren are particularly vulnerable to the effects of air pollution," child asthma cases and emergency department visits are projected to increase by thousands per year as the climate continues to warm.[43]

Adoption of ACC II would result in extensive air quality and health benefits for Rhode Islanders. The American Lung Association predicts that, by 2050, Rhode Island would avoid 288 premature deaths, 5,430 asthma attacks, and 29,400 lost workdays.[44] This would translate to $3.2 billion in public health benefits for the state.[45] Adopting the ACT and HDO rules would provide further substantial health benefits to Rhode Islanders. According to a 2021 study, Rhode Island would additionally avoid 13 premature deaths, 12 hospital visits, and 6,551 minor health cases (such as acute bronchitis, exacerbated asthma, and other respiratory symptoms, and reduced restricted activity days and lost workdays) by 2050.[46] Such benefits would amount to $148 million in savings.[47]

CLF strongly encourages DEM to adopt the proposed rule to ensure the removal of tons of harmful pollutants from Rhode Island's air, which would substantially improve public health outcomes for Rhode Island residents.

IV. Adoption of the Proposed Rule Would Lessen the Harmful, Disparate Impact of Transportation Emissions on Environmental Justice Communities

Air pollution does not affect everyone equally. People of color and those with low incomes are more likely to live near pollution sources, including motor vehicle emissions. As a result of this higher exposure, these environmental justice populations are more likely to suffer health impacts from air pollution than white and wealthy individuals.[48] And the risk of harm is greatest for people of color.[49] According to the American Lung Association, although people of

[43] U.S. Envtl. Prot. Agency, *Climate Change and Children's Health and Well-Being in the United States* 36, 39 (April 2023), *available at* https://www.epa.gov/system/files/documents/2023-04/CLiME_Final Report.pdf.

[44] American Lung Association, *Driving to Clean Air: Health Benefits of Zero-Emission Cars and Electricity* 5 (June 2023), available at https://www.lung.org/getmedia/9e9947ea-d4a6-476c-9c78-cccf7d49ffe2/ala-driving-to-clean-air-report.pdf. American Lung Association modeling makes certain assumptions about grid mix, energy efficiency, and rate of vehicle electrification in this report. Specifics about these assumptions can be found in its accompanying technical report: American Lung Association, *Updated Evaluation of the National Health Benefits from the Transition to Zero-Emission Transportation Technologies* (March 4, 2022), *available at* https://www.lung.org/getmedia/9b396179-40ff-4b3b-9426-9ceea288575d/prior-research-zero-emission-technologies-2022.pdf.

[45] American Lung Association, *Driving to Clean Air: Health Benefits of Zero-Emission Cars and Electricity*, *supra* note 44, at 5.

[46] Seamonds et al., *supra* note 25, at 47.

[47] *Id.*

[48] American Lung Association, *supra* note 27, at 28.

[49] *Id.*

color constitute 41% of the U.S. population, they make up 54% of people living in counties with at least one failing grade for pollution measures.[50] In the counties with the worst air quality—those which received failing grades for all pollution measures—72% of residents are people of color.[51]

The elevated, unequal exposure to air pollution suffered by communities of color and low-income communities leads to disparate health impacts. People of color experience high rates of emergency department visits for asthma and other diseases.[52] Additionally, people of color are more likely than white people to develop chronic conditions that make them more susceptible to the health impacts of air pollution, including asthma, diabetes, and heart disease.[53] In Rhode Island, resident of low-income areas in communities like Providence, Pawtucket, Central Falls and Woonsocket experience higher rates of asthma.[54]

On average, residents of color in the Northeast region are exposed to concentrations of particulate matter from vehicle emissions that are 61-75 % higher than the exposure of white residents.[55] While communities of color disproportionately bear the impacts of air pollution, that same pollution is predominately caused by the consumption of goods and services by white residents.[56] As temperatures rise due to climate change, so will rates of asthma and respiratory disease in neighborhoods throughout the state as increased heat exacerbates the health impacts of air pollution.[57]

In addition to lowering air pollution, adopting the ACC II regulations in Rhode Island will increase access to EVs, including for low-income communities, rural communities, and communities of color. Growing supply and demand will not only drive down the cost of EVs, it will also contribute to more diversified model availability (including more affordable models)

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[50] *Id.* at 12.

[51] *Id.*

[52] *Id.* at 28.

[53] *Id.*

[54] *See* Jack Perry, *What to know about asthma rates in RI and why Providence is an asthma 'hot spot'*, Providence J., June 6, 2023, *available at* https://www.providencejournal.com/story/news/healthcare/2023/06/06/asthma-in-rhode-island-what-to-know-and-why-asthma-rates-are-high/70288362007/.

[55] Union of Concerned Scientists, *Inequitable Exposure to Air Pollution from Vehicles in the Northeast and Mid-Atlantic* 2 (June 2019), *available at* https://www.ucsusa.org/sites/default/files/attach/2019/06/Inequitable-Exposure-to-Vehicle-Pollution-Northeast-Mid-Atlantic-Region.pdf.

[56] *See generally* Christopher W. Tessum et al., *Inequity in Consumption of Goods and Services Adds to Racial–Ethnic Disparities in Air Pollution Exposure,* 116 Proceedings of the Nat'l Acad. of Sci. of the U.S. 6001 (2019).

[57] *See* H. Orru et al., *The Interplay of Climate Change and Air Pollution on Health*, 4 Current Envtl. Health Report 504, 504 (2017) ("In general, climate change is expected to worsen air quality in several densely populated regions by changing atmospheric ventilation and dilution, precipitation and other removal processes and atmospheric chemistry.").

and will boost the burgeoning used EV market.[58] ACC II regulations will increase the availability of EVs for community car share programs or related incentives to encourage sales to low-income residents.

Enhanced incentives are already available for qualifying individuals to purchase new or used EVs under Rhode Island's DRIVE rebate program.[59] However, this program has had limited success so far in expanding EV ownership. The Office of Energy Resources should directly consult with equity and environmental justice groups on ways to improve DRIVE and develop complementary policies, programs, and incentives so disadvantaged communities can easily access EVs and experience the full benefits of these vehicles.

Finally, the ACC II regulations will increase access to EVs by offering automakers compliance opportunities for actions targeting overburdened and lower-income communities. The proposed ACC II regulations would allow manufacturers to fulfill 5% of their total annual ZEV requirement by earning "environmental justice" credits.[60] Manufacturers can earn these credits by selling lower priced EVs, placing EVs at a 25% discount in qualifying "community-based clean mobility programs," reselling EVs at the end of their lease to participating dealerships, and by offering financial assistance for low-income consumers.[61]

While these credits are voluntary for automakers, DEM should maximize equity benefits by ensuring that these programs are in place before automakers can start earning credits. We urge DEM to work with all interested stakeholders, including rural communities, low-income communities, and communities of color, to develop and implement programs that qualify for these credits.

The impacts of climate change and air pollution affect all Rhode Islanders, but low-income people and people of color are especially vulnerable and often face the most severe impacts. Swift adoption of the proposed rule will help Rhode Island communities that have been historically overburdened with transportation pollution realize the benefits of electric vehicles.

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[58] *See* Alexander Tankou et al., Int'l Council on Clean Transp., *Understanding and Supporting the Used Zero-Emission Vehicle Market* (2021), https://theicct.org/wp-content/uploads/2021/12/ZEVA-used-EVs-white-paper-v2.pdf (In the United States, five-year-old plug-in electric vehicles could save 11% to 17% in annual ownership costs relative to a comparable conventional car, and the savings increase to 17% to 22% for seven-year-old vehicles.)

[59] See R.I. Office of Energy Res., *EV Programs* (last visited Sep. 8, 2023), https://drive.ri.gov/ev-programs.

[60] Cal. Code Regs. tit. 13, § 1962.4(e)(2).

[61] *Id.*

V. Adoption of the Proposed Rule Will Boost Rhode Island's Economy

In addition to cleaning up the environment and protecting public health—and the associated significant, quantifiable value[62]—adoption of the proposed regulations will drive economic growth and development throughout Rhode Island. Transitioning to EVs will enable significant fuel and maintenance cost savings, attract large charging infrastructure investments, create new clean energy jobs,[63] and put downward pressure on electricity rates.[64]

EVs offer cost savings over the lives of the vehicles. Although the purchase prices of EVs today are higher than most comparable gas vehicles, up-front EV costs are rapidly declining and are expected to continue falling thanks to economies of scale and lower battery prices. Battery costs have already fallen by 89% over the past decade and continue to drop.[65] In addition, EVs cost less to service, maintain, and fuel, providing significant long-term cost savings to Rhode Island drivers. Lifetime ownership costs of the most popular EVs on the market below $50,000 were "many thousands of dollars lower than all comparable [internal combustion engine] vehicles' costs, with most EVs offering savings of between $5,000 and $10,000."[66] Adoption of ACC II will make the total cost of car ownership lower and more predictable.

Accelerating the transition to EVs will support local jobs, including the installation and maintenance of charging infrastructure. This transition is already creating new opportunities for workforce development and entrepreneurship, such as ChargerHelp!, a national EVSE operations and maintenance service provider co-founded by two Black women.[67] By adopting ACC II in 2023, Rhode Island can attract both public and private investment in charging infrastructure. In

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[62] *See* Int'l Council on Clean Transp., *Benefits of Adopting California's Advanced Clean Cars II Standards in Rhode Island* 13 (May 2023), *available at* https://theicct.org/wp-content/uploads/2023/05/ri-acc-ii-benefits-fs-may23.pdf.

[63] In 2021, clean energy and clean transportation jobs grew by more than 5%, in stark contrast to job declines in the fossil fuel industry. E2, *Clean Jobs American 2022* (August 2022), *available at* https://e2.org/wp-content/uploads/2022/08/E2-FS-2022-Clean-Jobs-America.pdf.

[64] If utility revenues from electric vehicle use exceed utility system costs, EV adoption can reduce electricity rates for all customers. In a Synapse study evaluating the utility system revenues and costs associated with EVs in investor-owned utility service territories across the United States, specifically comparing electricity rates that EV owners pay compared to the marginal cost of providing that electricity, the study concluded that EVs increased utility revenues more than they have increased utility costs, leading to downward pressure on electricity rates for EV-owners and non-EV owners alike across all U.S. regions. Synapse Energy Economics Inc., *Electric Vehicles Are Driving Rates Down* 3 (June 2023), *available at* https://www.synapse-energy.com/sites/default/files/Electric%20Vehicles%20Are%20Driving%20Rates%20Down%20Factsheet.pdf.

[65] James Frith, *Battery Price Declines Slow Down in Latest Pricing Survey, Bloomberg* (Nov. 30, 2021), https://www.bloomberg.com/news/articles/2021-11-30/battery-price-declines-slow-down-in-latest-pricing-survey?leadSource=uverify%20wall.

[66] Chris Harto, Consumer Reports, *Electric Vehicle Ownership Costs: Today's Electric Vehicles Offer Big Savings for Consumers* (2020), https://advocacy.consumerreports.org/wp-content/uploads/2020/10/EV-Ownership-Cost-Final-Report-1.pdf.

[67] *Our Mission* (last visited Sep. 8, 2023), ChargerHelp, https://www.chargerhelp.com/our-mission.

the third quarter of 2022, the Northeast had the largest increase in public charging infrastructure (11.7%).[68] The Infrastructure Investment and Jobs Act appropriated $7.5 billion in alternative fuel infrastructure and the National Electric Vehicle Infrastructure Formula program injected $5 billion in EV charging infrastructure nationwide.[69] Coupled with the incentives and funding of the Inflation Reduction Act of 2022, continued utility investments, private investments, and action by Rhode Island's state government, the amount of reliable and fast electric charging infrastructure along Rhode Island highways and in local communities will only increase.[70]

Rhode Island drivers who purchase a new plug-in electric vehicle or fuel cell vehicle in 2023 or after may qualify for a federal clean vehicle tax credit of up to $7,500 through 2032, and buyers of used EVs can save up to $4,000 upfront.[71] These federal incentives are additional to state-level rebates for EVs available through DRIVE. Collectively, the state and federal incentives can substantially reduce the cost of purchasing an EV.

Swift adoption of the ACT and HDO regulations will further benefit Rhode Island's economy, strengthening economic growth and development throughout the state. Transitioning Rhode Island's MHD fleet toward electrification will enable significant fuel savings, attract large charging infrastructure investments around the state, create clean energy jobs, and put downward pressure on electricity rates for all residents. The deployment of electric trucks and low-NO_x diesel engines in Rhode Island would achieve $110 million in net cumulative societal savings by 2050, including air quality benefits, climate benefits, utility revenue, and incremental fleet costs.[72]

According to the U.S. Department of Energy, zero-emission MHD trucks will be cheaper to buy, operate, and maintain than traditional diesel-powered combustion engine vehicles.[73] This analysis found that continued improvements with zero-emission vehicle and fuel technologies

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[68] *Electric Vehicle Charging Infrastructure Trends*, U.S. Dep't of Energy, https://afdc.energy.gov/fuels/electricity_infrastructure_trends.html (last visited August 8, 2023).

[69] Abby Brown et al., *Electric Vehicle Charging Infrastructure Trends from the Alternative Fueling Station Locator: Third Quarter 2022*, Nat'l Renewable Energy Lab., U.S. Dep't of Energy, *available at* https://afdc.energy.gov/files/u/publication/electric_vehicle_charging_infrastructure_trends_third_quarter_2022.pdf.

[70] *Id.* at 14-15 (demonstrating that the Northeast region experienced 12.8% Level 2 EVSE port growth and 7.7% DC fast EVSE port growth during Q3 2022).

[71] *Credits for New Clean Vehicles Purchased in 2023 or After*, Internal Revenue Serv., https://www.irs.gov/credits-deductions/credits-for-new-clean-vehicles-purchased-in-2023-or-after (last visited Sep. 8, 2023); *Used Clean Vehicle Credit*, Internal Rev. Serv., https://www.irs.gov/credits-deductions/used-clean-vehicle-credit (last visited August 8, 2023); *see also* I.R.C. §§ 25E, 30D.

[72] Seamonds et al., *supra* note 25, at 51.

[73] *DOE Projects Zero Emissions Medium- and Heavy-Duty Electric Trucks Will Be Cheaper than Diesel-Powered Trucks by 2035*, Dep't of Energy (Mar. 7, 2022), https://www.energy.gov/articles/doe-projects-zero-emissions-medium-and-heavy-duty-electric-trucks-will-be-cheaper-diesel.

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will make clean trucks cheaper and more readily available over the next decade.[74] Battery electric trucks are expected to become cost-competitive for smaller trucks before 2030, while heavy trucks with less than 500 miles of range are projected to be cost competitive by 2035.[75] These lower total ownership costs will result in significant net fleet savings in Rhode Island by 2050.

By 2035, the ACT and HDO regulations alone have the potential to increase the state's GDP by $27 million and add 114 jobs, where the average annual compensation is $100,345 for added jobs and $45,388 for replaced jobs.[76] Additionally, by 2050 the implementation of ACT and HDO regulations in Rhode Island can decrease the average electric customer bill by $28 annually for residential customers and $107 for commercial customers.[77]

CLF urges DEM to adopt the proposed regulations by the end of 2023 to ensure that Rhode Island maximizes these economic benefits, including state and local government revenue and investment opportunities.

VI. Conclusion

The incredible suite of public health, climate, and economic benefits associated with Rhode Island's adoption of the proposed rule cannot be ignored. The adoption of ACC II and ACT in Rhode Island will align with the state's obligation to reduce GHG emissions under the Act on Climate, greatly improve Rhode Island's air quality, thereby providing substantial health benefits to Rhode Islanders, lessen the harmful and disproportionate impact that transportation emissions have on the state's environmental justice communities, and boost Rhode Island's economy. To reap these benefits as soon as possible and ensure that ACC II requirements apply to MY 2027 vehicles, we urge DEM to adopt the proposed regulations in 2023.

Respectfully submitted,

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[74] *Id.*

[75] *Id.*

[76] Seamonds et al., *supra* note 25, at 49.

[77] This is based on the average annual electricity use of 6,760 kWh per household and 26,170 kWh per commercial customer in Rhode Island. Seamonds et al., *supra* note 25, at 53.

Clean Transportation Technologies and Solutions

www.calstart.org

September 8, 2023

Director Terrence Gray
Rhode Island Department of Environmental Management
Office of Air Resources
235 Promenade Street
Providence, RI 02908

Dear Director Gray,

CALSTART is pleased to support Rhode Island's adoption of Advanced Clean Cars II (ACC II). CALSTART works with industry to bring about conducive conditions for zero-emission transportation to flourish and it is our view that zero-emission vehicle (ZEV) sales requirements, supported by purchase incentives and robust infrastructure programs such as exist in Rhode Island, are critical to bring about a smooth and cost-efficient transition to 100% ZEV sales by 2035. Rhode Island continues to lead by example in the fight against climate change and in the regulation of harmful tailpipe emissions. By adopting the ACC II regulations, Rhode Island is taking an important step to achieve an ambitious net-zero transformation of on-road transportation.

CALSTART is a nonprofit organization working nationally and internationally with businesses and governments to develop clean, efficient transportation solutions. CALSTART has offices in New York, Michigan, Colorado, and California, as well as industry partners worldwide, and has more than 300 member companies and agency innovators working to build a prosperous, efficient, and clean high-tech transportation industry. CALSTART is a recognized authority with respect to workplace electric vehicle (EV) charging programs and the commercialization of zero- and near-zero-emission technologies for medium- and heavy-duty vehicles (MHDVs). CALSTART members include Ford Motor Company, General Motors, Tesla Motors, Rivian, Audi of America, VinFast, ChargePoint, EVGo, Shell ReCharge Solutions, bp pulse, Blink Charging, ABB, and Siemens, among others.[1]

CALSTART has maintained a Northeast regional office in Brooklyn, NY, since 2013 and has established itself as a trusted broker in the Northeast between government agencies and the clean transportation industry, including through its leadership role in Clean Air Northeast (formerly the Northeast Diesel Collaborative) convened by United States Environmental Protection Agency Regions 1 and 2 and the air agencies of states in those regions.

This regulation represents a historic step in transitioning the automotive industry toward 100% sales of ZEVs. The effort to implement ACC II will result in Rhode Island communities seeing reductions in tailpipe emissions and increasing the number and quality of light-duty ZEVs and plug-in hybrid electric vehicles (PHEVs) on the road. Transitioning light-duty vehicles to electric power will dramatically improve air quality as well as substantially reduce greenhouse gas emissions due to the cleaner energy generation portfolio of the New England electrical grid.

[1] Our comments are informed not only by the technical expertise of our staff, but also the insights of many of our members and partners in the light-duty vehicle industry. Our comments, however, reflect the views of CALSTART alone and do not represent consensus across these listed members or our broader membership.

The adoption of the ACC II regulation is not happening in isolation. The automotive industry has committed to expanding ZEV offerings and many automakers are already on a roadmap to transitioning to 100% ZEVs by 2035. Providing market certainty through a sales requirement unlocks greater deployment of capital, as evidenced by the $100+ billion worth of announced sector investments within the past two years. Commensurately, as battery and vehicle production achieve greater economies of scale, ZEV cost declines are expected. Projections show ZEVs reaching purchase cost parity with internal combustion engine (ICE) vehicles by the mid to late 2020's, after which they are projected to further decline in cost, saving money for all consumers, with particular benefit for low-income consumers.

Most importantly, this regulation presents an opportunity for growth. A ZEV sales requirement would increase the stock of used ZEVs in Rhode Island more quickly, expanding more equitable access to clean transportation options, particularly to communities disproportionately burdened by transportation pollution.

CALSTART acknowledges that for regulations like ACC II and others to be effective, industry needs incentives and support for implementing policy. CALSTART will continue pursuing opportunities to address the entire ecosystem of policies and programs required to transition to zero emissions. Many of these critical programs and policies were identified in the 2021 Electrifying Transportation strategic policy guide, including sustainable funding for the DRIVE EV program. CALSTART looks forward to working with agency staff on additional efforts to support the successful transition of the industry to ZEVs.

Thank you for the opportunity to provide comments on this important regulation. If you have any questions or comments, please contact me at aburger@calstart.org.

Sincerely,

Alissa Burger
Regional Policy Director
CALSTART

Jordan Stutt
Senior Director, Northeast Region
CALSTART

September 8, 2023

Director Terrence Gray
Rhode Island Department of Environmental Management
Office of Air Resources
235 Promenade Street
Providence, RI 02908

Clean Transportation Technologies and Solutions

www.calstart.org

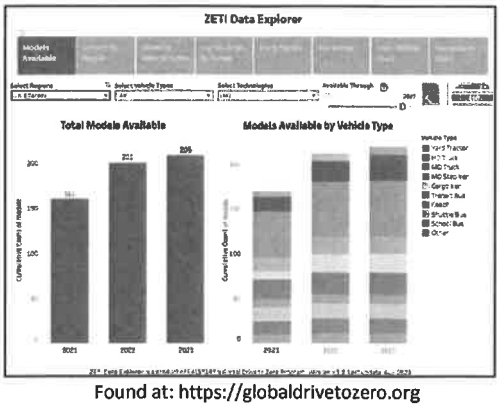
RE: Amending 250-RICR-120-05-37 to include new standards for medium- and heavy-duty vehicles to adopt the Advanced Clean Trucks (ACT) and Heavy-Duty Omnibus rules

Dear Director Gray,

CALSTART is pleased to support Rhode Island's proposed adoption of California's Advanced Clean Trucks (ACT) and Heavy-Duty Omnibus rules, regulations CALSTART sees as catalysts for the transition of commercial vehicles to be zero-emission. For more than 30 years, it's been CALSTART's mission to develop, assess, and implement large-scale zero-emission transportation solutions to mitigate climate change and support economic growth. CALSTART works with businesses, organizations, governments, and communities to create real-life impacts towards clean air and equitable access to clean transportation for all. CALSTART provides scientific, technical, and policy support for governments on all levels for regulatory development and clean technology and infrastructure acceleration.

While CALSTART is equally supportive of the Heavy-Duty Omnibus rule, this written testimony will focus primarily on the benefits of ACT. The ACT rule will help bring down costs for zero-emission medium- and heavy-duty vehicles by requiring manufacturers to increase model availability to meet the needs of fleet operators and driving investment in clean transportation research and development. This will enable cost-effective electrification of commercial vehicles at the pace and scale needed to meet climate and air quality goals, while delivering public health and economic benefits for communities and businesses alike.

This is a unique point in history as rapid technological innovation in the zero-emission truck industry provides a critical opportunity to transition the heavy-duty transportation sector to zero emission vehicles. Globally, there are 843 different models of zero-emission vans, trucks and buses commercially available, and 209 available in the U.S. and Canada, with new models being introduced at an unprecedented rate.[1] This regularly updated list of commercially available medium- and



Found at: https://globaldrivetozero.org

[1] https://globaldrivetozero.org/tools/zeti-data-explorer/ (accessed August 28, 2023)

heavy-duty electric vehicles can be found via CALSTART's Zero-Emission Technology Inventory (ZETI) Data Explorer, which can be used to identify available vehicles by applying various filters including vehicle class, manufacturer, and range.

As battery prices fall and technology continues to improve, the total cost of ownership is expected to result in vehicle economics that surpass combustion-based alternatives for a rapidly growing range of use cases. A recent analysis found new tax incentives adopted in the historic IRA will enable purchase price parity for a wide range of heavy-duty zero-emission vehicles (ZEVs) at least 5 years, and as much as 12 years earlier, than would occur without the credit.[2] To ensure that electric trucks have convenient access to fast charging along their routes, CALSTART is working with industry partners, charging providers and utilities on a commercial charging corridor along I-95 from Rhode Island to Georgia.[3]

Should Rhode Island move forward with the adoptions of these rules, CALSTART also encourages Rhode Island to consider creating, in parallel, voucher incentive programs, e.g. "cash on the hood" for MHDV vehicles, and even infrastructure.[4] As Rhode Island knows from their experience running the CHEAPR program[5], robust purchase incentives are critical to offset the initial cost differences of zero emission vehicles, particularly the larger classes of vehicles, through at least the early compliance years. Rhode Island could fund such a program with funding now available from the Infrastructure Investment and Jobs Act (IIJA) to support the purchase of electric trucks as the market develops in the state. Incentives should be structured with straightforward requirements that avoid limitations that have limited program accessibility in other jurisdictions, such as scrappage requirements; while requiring removal of older and higher polluting diesel engines is a worthy goal, this often provides a barrier to adoption. Existing programs in the region include: the New York Truck Voucher Incentive Program, Massachusetts's Massachusetts Offers Rebates for Electric Vehicles (MOR-EV Trucks), and New Jersey's Zero-Emission Incentive Program. CALSTART also recommends the creation of a technical assistance program to inform and educate fleets about electrification and ease the burden of transition planning. Technical assistance programs are proven to be helpful tools for fleet education and acceleration of electrification goals; a best practice includes tying technical assistance programs to available vehicle incentives. An innovative approach to technical assistance and incentives may be to structure incentives such that fleets who participate in a technical assistance program receive a higher percentage of available incentives.

The ACT rule will go a long way toward making sure all Rhode Island residents can breathe clean air, especially those in disadvantaged communities. Market transformation requires an "ecosystem" of regulations, incentives, infrastructure support, and other policy

[2] https://www.erm.com/public-information-sites/analysis-of-zev-bau-scenarios-for-edf/
[3] https://content.govdelivery.com/accounts/USEERE/bulletins/348f531
[4] https://calstart.org/voucher-incentive-programs-2023/
[5] https://portal.ct.gov/DEEP/Air/Mobile-Sources/CHEAPR/CHEAPR---Home

direction. CALSTART strongly supports the adoption of the Advanced Clean Trucks (ACT) and Heavy-Duty Omnibus rules and applauds the State's leadership to curb dirty gas and diesel emissions.

Sincerely,

Alissa Burger
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Chelsea Priest
Department of Environmental Management RI DEM - Office of Air Resources
235 Promenade Street
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Chelsea.Priest@dem.ri.gov

Dear Ms. Chelsea Priest:

With regard to the Rhode Island Low Emission Vehicle Program Rule please consider these comments.

The Rhode Island Association of Railroad Passengers does fully support the concept mandating future new car and truck sales in Rhode Island to all be electric or other non internal combustion power source. This is clearly necessary to reduce both carbon emissions and tailpipe pollutants, especially along congested roads and streets in high density areas.

However, we have concerns, which we hope can be either incorporated in the rule or be conditions in other DEM documents.

As the proposed rule now stands it makes no provision for replacing the gas tax that is essential for RIPTA operations and for RIDOT road maintenance. The gas tax is already in decline with the increasing use of electric and hybrid vehicles. This should be addressed as soon as possible.

While replacing the gas tax is not in the scope of the proposed Rule, the reality is that as more people own Electric Vehicles (EV), they will become accustomed to not paying for road maintenance and transit. Over time it will become politically more difficult, if not impossible, to impose fees on EVs. This rule should be revised now to signal to EV interests that they should expect they will have a future fee structure. Also a scale should be developed on EV vehicle weight and size, incentivizing smaller lighter vehicles.

The adoption of EVs is not the only approach to decarbonizing the ground transportation system and won't be the fastest. It likely will take several decades to get the current internal combustion fleet off the roads. A more immediate approach is to get a larger percentage of Rhode Islander's to use public transit. Even prior to full electrification of the bus system or electrification of commuter rail, more people using transit instead of private vehicles would lower overall per capita emissions. Electrification of the commuter rail system and increasing all rail service within Rhode Island integrated with the bus system would offer a quicker path to higher transit system use and faster reduction in emissions. The Rhode Island Transit Master Plan (TMP) needs to be fully financed to make bus and rail transit a feasible alternative to private vehicle transportation in reducing emissions. This proposed EV Rule should not inadvertently harm the transit system.

Thank you for considering these points.

Sincerely,

Peter Brassard
Chair, Rhode Island Association of Railroad Passengers
PO Box 8645
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Chelsea Priest
Rhode Island Department of Environmental Management
RI DEM – Office of Air Resources
235 Promenade St
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September 8, 2023

Dear Ms. Priest,

Rhode Island Energy respectfully submits these comments on 250-RICR-120-05-37- Rhode Island's Low Emission and Zero-Emission Vehicle Programs. Our mission is to deliver safe, affordable, reliable, sustainable energy to our over 770,000 customers in Rhode Island. We stand by DEM as a productive partner and trusted expert to advance efforts in achieving the State of Rhode Island's ambitious climate mandates. The theme of our comments below is to support DEM's efforts in advancing vehicle electrification with strong vehicle standards and to highlight the Company's efforts underway to plan for the impacts of transportation electrification on the electric grid.

Support of Rhode Island Department of Environmental Management's rulemaking. Continued collaboration is necessary for the successful transition to electric vehicles.
While the rulemaking is one piece to the vehicle electrification puzzle which requires auto OEMs to deliver a certain annual percentage of ZEVs to Rhode Island, addressing issues such as grid resiliency, energy demands, and equity need to occur side-by-side. The continued expansion of the EV market in Rhode Island and across the U.S. will make coordinated collaboration among all EV charging stakeholders, including policy makers, charging service providers, automakers, and electric companies, critical for ensuring a rapid, efficient buildout of necessary charging infrastructure.

Rhode Island Energy is committed to support the EV transition, we look forwarding to continuing our partnership and collaborating with public and private sector stakeholders to expand charging infrastructure necessary to meet the ambitious targets for electrification in the coming years.

Rhode Island Energy is committed to ensure grid resiliency, energy demands, and equity.
Upon successful promulgation of this rule, electric vehicle adoption rates will increase over time. In turn, increasing the electric load on our electric system. Rhode Island Energy is committed to maintaining a safe and reliable electric distribution system to support the growing number of EVs on Rhode Island roads. To protect electric distribution systems' safety and reliability and keep pace with this transformation, Rhode Island Energy must invest in the development of a safer and modernized electric distribution system. Accordingly, Rhode Island Energy has evaluated the options available to adapt to these changed circumstances and developed a plan to: (i) make the necessary Foundational Investments now that will provide the

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necessary control capabilities to mitigate these risks; and (ii) facilitate future investments that further enhance the safety and reliability of the electric distribution system while delivering increased benefits.

The Foundational Investments are described in the company's filed docket No. 22-56-EL- Grid Modernization Plan (GMP). The GMP is an informational guidance document that supports the Foundational Investments[1] proposed in the Company's Fiscal Year ("FY") 2024 Electric Infrastructure, Safety, and Reliability ("ISR") Plan (the "FY 2024 Electric ISR Plan") filed in Docket No. 22-53-EL and will support additional grid modernization investments to be proposed in future electric ISR plans.

Rhode Island Energy's Expanded Electric Transportation Initiative Offerings
We are in the process of developing a second phase of our Electric Transportation Initiative (to be filed for regulatory review by the end of the year) and anticipate close collaboration with the public and private partners to encourage electric transportation.

Northeast MHDV Electric Highway Study & Electric Highway Coalition
The Northeast MHDV Electric Highway Study is a $1.2M 2-year long study and Regional MHDV Charging Plan funded by the Department of Energy Vehicle Technologies Office. Rhode Island Energy collaborates through the Electric Highway Coalition. The coalition is a growing partnership of U.S. utilities established to support the development of a seamless network of EV rapid-charging stations connecting major highway systems. The two-year study will pinpoint future critical charging locations along highways in the Northeast and advise as to where major transmission upgrades will be needed. This will be a crucial step forward in supporting the expected MHD EV growth outlined in the Advanced Clean Truck Rule.

Upon successful promulgation of this rule, electric vehicle adoption rates and electricity demands will increase. When EVs are efficiently added to the energy grid they can provide a wide array of benefits to all Rhode Islanders. Our team of experts looks forward to continued engagement on these important standards and for Rhode Island to adopt the rulemaking as soon as possible.

Sincerely,

Allison Archambault

[1] The Foundational Investments refer to "near term investments," as described in the GMP, which encompass six years of proposed investments in a portfolio of software, communication and advanced field devices that work together and are enhanced with advanced metering functionality. The Foundational Investments are distinct from and build upon the initial, limited suite of grid modernization investments that the PUC approved in the Company's last general rate case in Docket No. 4770 to start grid modernization.

Dear Air Quality Specialist Chelsea Priest,

I am writing to express my strong opposition to the proposed regulation to adopt California's Advanced Clean Cars II regulation, which seeks to ban the sale of new gas- and diesel-powered vehicles starting in 2035. While I understand the importance of reducing greenhouse gas emissions and transitioning to cleaner transportation options, this proposed regulation is premature and will negatively impact consumers and the economy.

The proposed regulation overlooks the current limitations of electric vehicles (EVs) and the supporting infrastructure. While EV technology has shown promising advancements in recent years, challenges must be addressed before completely phasing out internal combustion engine vehicles. Range anxiety, limited charging infrastructure, and higher upfront costs remain significant barriers to widespread EV adoption. Implementing a ban on traditional vehicles without adequately addressing these concerns will result in transportation limitations for residents, particularly those in rural areas or with longer commutes.

Furthermore, the automotive industry is embracing new technology to make vehicles cleaner and more efficient, which includes hydrogen, new synthetic fuels, alternative fuels, and improvements to the internal-combustion engine. Simply put, the government should allow the market to continue to innovate all forms of technology that significantly reduce vehicle emissions, not just battery electric vehicles.

Moreover, the proposed regulation fails to consider the economic impact on consumers and the automotive industry. Many Rhode Islanders rely on affordable and accessible transportation options to meet their daily needs. A sudden shift towards electric vehicles will increase vehicle prices, making it unaffordable for low- and middle-income households to purchase new cars. This would disproportionately affect those who cannot afford the upfront costs of EVs or lack access to charging infrastructure at their residences.

Additionally, the proposed regulation neglects the potential consequences for the automotive industry and related businesses. Rhode Island's automotive sector, including dealerships, repair shops, and service providers, contributes significantly to the local economy. The ban on gas- and diesel-powered vehicles will lead to job losses and financial hardships for these businesses, ultimately impacting the state's overall economic stability.

In conclusion, I request that the Department of Environmental Management's Office of Air Resources reject the proposed regulation to adopt California's Advanced Clean Cars II regulation. Balancing environmental goals and the practicality of implementing such measures is crucial. I believe a collaborative effort that involves stakeholders from various sectors will yield better results for Rhode Island's environment, economy, and residents.

Thank you for your time and consideration. I trust that you will consider these concerns when making decisions that will shape the future of transportation in Rhode Island.

Regards,
David Nadrowski
10 Lima St
Warwick, RI 02889

Valero

September 8, 2023

Via Electronic Submission through https://rules.sos.ri.gov/promulgations/part/250-120-05-37

Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908

Re: Public Comments—Rhode Island's Proposed Adoption of Advanced Clean Cars II.

To Whom It May Concern:

Please find below the comments from Valero on Rhode Island Department of Environmental Management's ("DEM's") proposed adoption of California's Advanced Clean Cars II program ("ACC II"). Valero appreciates the opportunity to provide feedback on the proposal.

Introduction

Valero Energy Corporation and its subsidiaries (collectively, "Valero") submit these comments as part of DEM's stakeholder engagement regarding ACC II. In addition to being the nation's largest independent refiner of petroleum fuels, Valero is one of the top producers of domestic biofuels. Valero was the first traditional petroleum refiner to enter large-scale ethanol production and is now the second largest ethanol producer in the U.S. Through our Diamond Green Diesel joint venture with Darling Ingredients, and following a recent expansion project to construct a new plant in Port Arthur, Texas, we are currently the leading renewable diesel producer in the world. Our Board recently approved a project to commission production of sustainable aviation fuel, and we are actively pursuing carbon sequestration opportunities in the United States that will substantially lower the carbon intensity of the ethanol we produce.

Comments

a. Transportation sector decarbonization should embrace all technologies fit for purpose.

Valero recognizes DEM's desire to expediently lower GHG emissions from the transportation sector. As a proud producer of the low-carbon liquid fuels that have been and will continue to be essential to the decarbonization of the transportation sector, Valero encourages DEM to not limit its transportation sector planning to zero-emission vehicle ("ZEV") technologies.

An exclusive reliance on those technologies ignores both the full lifecycle GHG emissions of ZEVs and the benefits of low-carbon liquid fuels and other emerging technologies. DEM should

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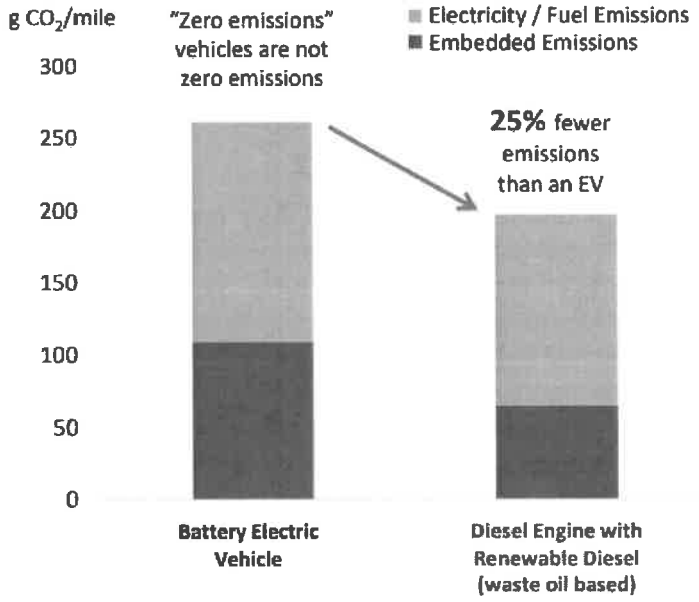
evaluate the merits of all fuels and vehicle technologies on a full lifecycle basis. The National Bureau of Economic Research has acknowledged that "...despite being treated by regulators as 'zero emission vehicles', EVs are not necessarily emissions free."[1] In fact, the Hummer EV using U.S. average grid electricity is reported as generating higher carbon dioxide emissions per mile than many smaller, more efficient gasoline-powered cars.[2]

A lifecycle analysis conducted by Southwest Research Institute finds that a light-duty internal combustion engine vehicle ("ICEV") that runs on renewable diesel with a carbon intensity of 25 g/MJ results in 25% fewer lifecycle GHG emissions when compared to a battery electric vehicle ("BEV") using U.S. average grid electricity, as illustrated in Figure 1.

Figure 1: U.S. Light-Duty Vehicle Lifecycle Emissions (Sept. 2023 Valero Investor Relations Presentation)



DEM should remain open to emerging innovative approaches and new technologies for reducing GHG emissions from ICEV, such as on-board carbon dioxide capture and subsequent sequestration.

[1] *See* http://www.nber.org/papers/w21291.
[2] *See* https://qz.com/2154558/big-electric-trucks-and-suvs-are-the-new-gas-guzzlers.

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There are other complexities associated with a singular transition to ZEVs that DEM should also consider, including:

- Significant environmental impacts arise from other aspects of the ZEV lifecycle, including raw material acquisition and processing, and battery production, transport, disposal, and recycling.[3]

- ZEVs are more expensive on average than their ICEV counterparts and unaffordable for many households. According to Consumer Reports, "[m]ost new EVs are luxury models with an average sale price of over $61,000—about $12,000 more than the industry average."[4] By contrast, the median per capita and household incomes in Rhode Island are approximately $39,603 and $74,489, respectively.[5]

- A transition to ZEVs would expose Rhode Islanders to supply chain vulnerabilities largely beyond the control of regulators. For instance, by 2030, Wells Fargo projects a risk of shortages across all of the key components of EV batteries, except manganese,[6] which is underscored by long lead times for the EV battery supply chains,[7] and a reliance on geopolitical rivals who control those supply chains.[8]

- Cold climate conditions like those experienced in Rhode Island have been shown to significantly reduce the battery range and efficiency of BEVs.[9]

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[3] *See* Perry Gottesfeld, *Electric cars have a dirty little recycling problem–batteries*, CANADA'S NATIONAL OBSERVER, Jan. 22, 2021, https://www.nationalobserver.com/2021/01/21/opinion/electric-cars-have-dirty-little-recycling-problem-their-batteries.

[4] Keith Marry, Anita Lam, *Will an Electric Car Save you Money?*, Consumer Reports (February 16, 2023) https://www.consumerreports.org/cars/hybrids-evs/will-an-electric-car-save-you-money-a9436870083/. *See also* Shivansh Tiwary and Paul Lienert, Ford CEO says EV cost parity may not come until after 2030, Reuters (May 31, 2023) https://www.reuters.com/business/autos-transportation/ford-ceo-says-ev-cost-parity-may-not-come-until-after-2030-2023-05-31/.

[5] Estimates as of July 1, 2021, representing the income over the past 12 months, in 2021 dollars. U.S. Census Bureau, *Quick Facts – Rhode Island*, https://www.census.gov/quickfacts/RI.

[6] Colin M. Langan, et al., *BEV Teardown Series: The Untold Electric Vehicle Crisis, Part 1: Tesla Model Y–The Pace Car*, WELLS FARGO, May 11, 2022.

[7] IEA 2022 Global EV Outlook.

[8] *Id.*

[9] *See* Jon Witt, *Winter & Cold Weather EV Range Loss in 7,000 Cars*; RECURRENT, Dec. 12, 2022, https://www.recurrentauto.com/research/winter-ev-range-loss; *see also 20 popular EVs tested in Norwegian winter conditions*, NORWEGIAN AUTOMOBILE FEDERATION, Mar. 12, 2020, https://www.naf.no/elbil/aktuelt/elbiltest/ev-winter-range-test-2020/.

b. DEM lacks the legal and legislative authority to adopt a transportation electrification mandate like California's ACC II standards.

It is crucial that the policy guiding DEM's rulemaking actions be supported by law in order to avoid inefficient expenditures of time and resources, or worse, misleading the public by setting expectations regarding outcomes that are not within DEM's authority to mandate. Section 177 of the Clean Air Act ("CAA") provides that a state may only adopt "such standards [that] are identical to the California standards for which a waiver has been granted for such model year".[10] As of the date of this letter, the U.S. Environmental Protection Agency ("EPA") has not granted a preemption waiver under the CAA for California's ACC II rules. Unless and until EPA grants such a preemption waiver, any state's adoption of these rules is premature and inconsistent with the express terms of § 177.[11]

The measures contemplated by California's ACC II program are extraordinary. In considering their adoption in Rhode Island, there is little to no legal analysis to confirm that the novel approaches and requirements mandated under the regulations are within the authority of DEM and do not offend principles of state or federal law. DEM should consider whether the measures called for in the California ACC II rule conflict with or are otherwise preempted by the statutory mandates of federal legislation such as the Energy Policy and Conservation Act ("EPCA"); the federal CAA; the Energy Independence and Security Act ("EISA"), including the Renewable Fuel Standard ("RFS").

ACC II will have vast nationwide political and economic significance. Requirements that mandate a shift from ICEV to ZEV sales will significantly impact supply chains, consumer costs, electric power infrastructure, domestic energy security, and interstate commerce.

Additionally, ACC II includes measures that may violate other constitutional provisions and principles. These include, but likely are not limited to, the Dormant Commerce Clause, which prohibits state regulations that improperly discriminate against out-of-state commercial interests or that unduly burden interstate commerce; the dormant foreign affairs preemption doctrine under the Supremacy Clause, which preempts state laws that intrude on the exclusive federal power to conduct foreign affairs; the Takings Clause of the Fifth Amendment, which precludes the taking of private property (or the elimination of entire industries) for public use without just compensation; and the equal sovereignty doctrine, which constrains the federal government from treating states disparately.

Because the measures called for under ACC II are unprecedented in their scope and reach, Rhode Island should conduct sufficient legal review to confirm that the recommended actions are authorized under applicable law and that they are not preempted or precluded as a matter of law before establishing a recommendation for rulemaking.

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[10] 42 U.S.C. § 7507(2).
[11] 42 U.S.C. § 7507.

c. Limitations of CAA § 177.

The early stages of California's ZEV program were mired by low consumer acceptance, slow technological advancement, missed goals, and backtracking. While California's goals remained aspirational, it always maintained (and several times applied) the ability to re-write the rules when the program proved infeasible for automakers.[12, 13, 14] The limitations in § 177 of the CAA do not provide states (other than California) with the flexibilities to adjust ambitious targets to accommodate the realities of record inflation, extraordinary supply chain disruptions, global uncertainty due to the war in Ukraine, and critical concerns about the availability, cost and foreign dependence of minerals needed for ZEV batteries. Rather, states may adopt and enforce standards to control emissions from new motor vehicles only if "such standards are identical to the California standards".[15]

Rhode Island must carefully consider what the implications will be if reality cannot keep pace with its ambitions – e.g., if automakers cannot supply ZEVs in the numbers needed to meet the DEM's proposed ZEV sales mandates, if consumers choose not to or cannot afford to purchase the ZEVs, and if the electrical grid and ZEV charging infrastructure cannot keep pace with the growth in ZEV fleet. Without the option of modifying the rules to accommodate ZEV realities, states adopting California's standards via § 177 risk creating for themselves a quagmire in which automakers are unable to sell and consumers unable to purchase the new vehicles.

d. California's struggles present a cautionary tale for Rhode Island.

DEM should consider the implications that a strategy focused on a singular technology may have on community decision-making, consumer choice, and the unintended consequences that reliance on electrification may present, including foreign supply chain disruptions and forced labor in the production of the raw materials needed to manufacture batteries.[16] If environmental justice is truly a commitment for Rhode Island, it should carefully consider the criticisms of

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[12] California Air Resources Board ("CARB" or "ARB"), *ARB Modified Zero-Emission Vehicle (ZEV) Regulation* (April 24, 2003) https://ww2.arb.ca.gov/news/arb-modifies-zero-emission-vehicle-zev-regulation (providing that ARB voted to modify California's ZEV rule in order to allow automakers to meet part of their ZEV requirement).
[13] CARB, *Notice of Public Hearing to Consider Proposed Amendments to the California Zero-Emission Vehicle Regulations Regarding Treatment of Majority Owned Small or Intermediate Volume Manufacturers and Infrastructure Standardization* (May 1, 2001) https://ww3.arb.ca.gov/regact/charger/notice.htm (stating that "[a]t a January 25, 2001, hearing, the Board approved major changes to the ZEV regulations that will significantly reduce the number of ZEVs required during the near term").
[14] CARB, *Proposed 2014 Amendments to the Zero Emission Vehicle Regulation* (September 2, 2014) https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2014/zev2014/zev14isor.pdf?viewType=Print&viewClass=Print (stating that "California could see about 26,000 fewer ZEVs and TZEVs delivered in the 2018 through 2025 model years than would be delivered under the existing regulation").
[15] *See* 42 U.S.C § 7507.
[16] *See* U.S. Department of Energy, *2022 List of Goods Produced By Child Labor or Forced Labor*, at 50-51, https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2021/2022-TVPRA-List-of-Goods-v3.pdf.

California's climate approach, such as those leveled by The Two Hundred for Homeownership, which point out the disproportionate impacts to working and minority communities.[17]

As California has faced rolling blackouts and historic energy prices, Governor Newsom has pivoted to the use of traditional fuel infrastructure to ensure system reliability to protect against outages.[18] Moreover, unworkable ZEV sales mandates put Rhode Island at risk of missing out on real GHG emission reductions available through incentivizing low-carbon liquid fuels and by encouraging the development of emerging carbon removal technologies.

e. DEM must provide for a transparent and reasoned economic analysis.

DEM has failed to prepare a comprehensive costs model with respect to its ACC II proposal. Without doing so, DEM cannot adequately consider alternatives that emphasize affordability alongside emissions reductions. DEM has also failed to convey the consequences and difficulties associated with the major technology transformation required under the proposed rulemaking. For example, DEM has not estimated what Rhode Island's total costs of compliance would be under ACC II. Neither has DEM provided any discussion quantifying impacts to Rhode Island's job market.

Moreover, DEM cannot merely rely on and extrapolate from CARB's data and analysis without adequately considering differences in scale, climate, population density, and state economies that will have profound impacts on Rhode Island's experience implementing ACC II. State specific and regional factors are material and must be considered to ensure the regulations are properly and thoroughly vetted for application in Rhode Island.

As discussed above, as California has felt the real-world implications of its climate policy with rolling blackouts and sky-high energy prices, it is now implementing a broader approach to GHG reductions that includes investment in carbon capture and fossil fuel infrastructure to ensure future system reliability. DEM can and should present a transparent, technology-neutral approach that allows for innovation that would better serve Rhode Island's most vulnerable communities. For example, Rhode Island Department of Transportation ("RIDOT") highlighted known risks and challenges inherent to EV adoption in its State Plan for Electric Vehicle Infrastructure Deployment ("NEVI Plan") approved in September 2022:

- "Based on feedback, [] existing [ZEV] fast station reliability and uptime have been consumer issues."[19]

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[17] *See* Plaintiffs' Complaint, *The Two Hundred for Homeownership, et al. v. California Air Resources Board, et al.*, No. 1:22-CV-01474.

[18] *See* https://www.ebudget.ca.gov/2022-23/pdf/Revised/BudgetSummary/ClimateChange.pdf.

[19] RIDOT NEVI Plan at Executive Summary, https://www.dot.ri.gov/projects/EVCharging/docs/Rhode%20Island%20Electric%20Vehicle%20Infrastructure%20Deployment%20State%20Plan_Draft%20for%20Review-Rev%2003.pdf

Valero

- "The [Rhode Island] public is car-centric, and although RIDOT has successfully provided Park 'n Ride facilities to facilitate shared transport, none exist on the northern portion of Interstate 95, where most of Rhode Island's population and almost all of [its] Justice40 communities are located. Ideally, RIDOT would have access to large areas around Providence to help build new dedicated fast EV charging stations, but the impacts, cost, and grid constraints will create issues in the near term."[20]

- "There are risks and challenges in the market and infrastructure to deliver our Plan in completion. EV availability has been a known issue, with many of the newest and most affordable EVs on backlog."[21]

- "Based on our discussions with Rhode Island Energy, increasing the EV load can present uncertainty for planning and grid operations."[22]

DEM falls short in communicating such challenges and representing the concerns of stakeholders associated with singular reliance on electrified transport in its assessment of ACC II. Rhode Island stakeholders should be afforded an opportunity to evaluate the data, costs, and assumptions underlying ACC II before DEM proceeds with its rulemaking.

Conclusion

Rhode Island should support and foster technological innovations in the transportation sector by embracing technology-neutral approaches to decarbonization. Decarbonizing the transportation sector will require multiple technologies competing in an open market that rewards technologies based on emissions reductions and costs. Valero is prepared to work with DEM to help ensure its GHG reduction goals are achieved.

* * *

Valero appreciates the opportunity to comment and would welcome the opportunity to have additional discussions on these issues. Please do not hesitate to contact me with any questions or if Valero or I can otherwise be of assistance.

Sincerely,

Mandy Garrahan
Executive Director Strategic Planning & Public Policy

[20] *Id.*
[21] *Id.* at 6.5.
[22] *Id.*

Valero

September 8, 2023

Via Electronic Submission through https://rules.sos.ri.gov/Promulgations/part/250-120-05-37

Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908

Re: Public Comments—Rhode Island's Proposed Adoption of Advanced Clean Trucks.

To Whom It May Concern:

Please find below the comments from Valero on Rhode Island Department of Environmental Management's ("DEM's") proposed adoption of California's Advanced Clean Trucks program ("ACT"). Valero appreciates the opportunity to provide feedback on the proposal.

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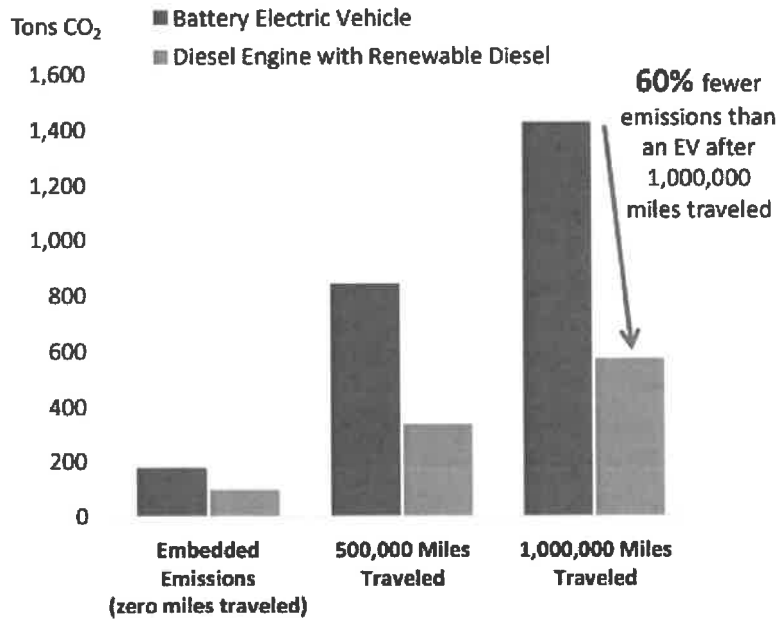
An exclusive reliance on ZEV technologies ignores both the full lifecycle GHG emissions of ZEVs and the benefits of low-carbon liquid fuels and other emerging technologies. DEM should evaluate the merits of all fuels and vehicle technologies on a full lifecycle basis. Despite being treated by regulators as zero-emission vehicles, electric vehicles are not emissions free – in fact,

when it comes to medium- and heavy-duty vehicles ("MHDV"), they are not even the most effective technology available today to reduce GHG emissions.

A lifecycle analysis conducted by Southwest Research Institute finds that a heavy-duty internal combustion engine vehicle ("ICEV") that runs on renewable diesel with a carbon intensity of 25 g/MJ results in 60% fewer lifecycle GHG emissions when compared to a battery electric vehicle ("BEV") using U.S. average grid electricity, as illustrated in Figure 1.

Figure 1: U.S. Heavy-Duty Long-Haul Vehicle Lifecycle Emissions (Sept. 2023 Valero Investor Relations Presentation)



Regarding "fitness for purpose," while ZEVs may provide options to help reduce GHG emissions, neither BEV nor fuel cell electric vehicle ("FCEV") technology is compatible with the full range of use, duty and demand posed by the medium- and heavy-duty ("MHD") transportation sector, and therefore neither one is suitable to replace the ICEV and adequately serve the state's freight and transit needs.

- Current BEV technology is not suitable for long-haul trucks. Considering the present lithium-ion battery technology, to achieve a range of 600 miles, a battery pack on a long-haul truck would need to store 1,200 kilowatt-hours (kWh) of energy, weigh 6,300 kilograms (13,900 pounds), have a volume of 2,700 liters (95 cubic feet), and cost about $180,000.[1]

[1] Based on a battery pack energy density of 170 Wh/kg. Burke, Andrew, *Assessment of Requirements, Costs, and Benefits of Providing Charging Facilities for Battery-Electric Heavy-Duty Trucks at Safety Roadside Rest Areas: A*

- Due to federal weight constraints for tractor trailers, a long-haul BEV truck would lose 20% of payload capacity compared with a diesel truck, reducing the available revenue per mile and increasing the number of trucks needed to avoid delay or interruption of Rhode Island's freight services.[2]

- At a range of 150 miles, a long-haul BEV truck would need to stop three times to recharge over a 600-mile day. Even if a network of 350-kilowatt (kW) fast-chargers was widely available, charging time would reduce a driver's effective work day by over 2 hours, further requiring an increase in the number of trucks to maintain the pace and demand of freight services.[3]

- ACT will not only require an increase in the number of trucks to accommodate MHD EV charging, but an increase in the number of truck drivers as well in order to comply with federal hours-of-service regulations. The United States Department of Transportation's Federal Motor Carrier Safety Administration ("FMCSA") regulates the number of hours commercial drivers may drive and work per day and week. According to the 11-hour driving limit, a property-carrying driver may drive a maximum of 11 hours after 10 consecutive hours off duty.[4] And per the 14-hour rule, a property-carrying driver may not drive beyond the 14th consecutive hour after coming on duty, following 10 consecutive hours off duty.[5] Given the time intensity of EV charging, additional workers will be needed to ensure MHD fleets charging needs are satisfied while complying with the applicable hours-of-service regulations.

- Current FCEV technology facilitates larger and heavier vehicles than BEVs due to its higher energy storage capacity, and it offers drivers a refueling experience much like conventional vehicles, with the fuel tank capable of being refilled in a matter of minutes. However, adoption of the technology and particularly commitment to developing fueling infrastructure has been limited within the U.S.—currently the U.S. has 58 active public and private FCEV hydrogen fueling stations, none of which are located in Rhode Island.[6]

Research Report from the National Center for Sustainable Transportation, at page I (Feb. 2022) https://ncst.ucdavis.edu/research-product/assessment-requirements-costs-and-benefits-providing-charging-facilities-battery.

[2] Based on a federal maximum loaded weight of 36,000 kg, on a tractor weighing 8,600 kg and compared to a tractor carrying 965 kilograms (300 gallons) of diesel fuel. *Id.* at 4 and 15.

[3] Based on the Volvo Class 8 Box truck, having a range of 150 miles and an energy capacity of 1.75 kWh/mi. *Id* at 3.

[4] *See* https://www.fmcsa.dot.gov/regulations/hours-service/summary-hours-service-regulations.

[5] *Id.*

[6] U.S. DOE Alternative Fuels Data Center, Hydrogen Fueling Station Locations, https://afdc.energy.gov/fuels/hydrogen_locations.html#/analyze?region=US-CA&fuel=HY&country=US, accessed August 7, 2023.

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- Major hydrogen production and distribution infrastructure would need to be put in place before FCEV would even be serviceable. "[A]nalysis [also] suggests that the infrastructure for the hydrogen pathway is generally costlier than battery electric," with hydrogen transport facing "the largest cost-penalty in the near-term."[7] It is estimated that the capital cost for a single hydrogen filling station is $1.5 to $2.0 million.[8] Moreover, there are currently no hydrogen fuel cell tractor-trucks commercially available in North America or Europe to confirm their true cost or economic viability.[9]

The transition of a large and complex transportation system to a BEV or FCEV technology is a massive undertaking, requiring the establishment of new manufacturing, assembly and supply chains; build-out of new charging/fueling infrastructure; interface with public utilities; re-conception of fuel distribution logistics; and ultimate design of end-of-life resource recovery strategies. Renewable diesel, on the other hand, can utilize existing infrastructure (*i.e.*, pipelines, terminals, and retail distribution supply chains), requiring far less investment when compared against BEV charging and FCEV hydrogen fueling build-out. Renewable diesel can even be used as a petroleum diesel substitute to address a number of hard to decarbonize market segments where BEV and FCEV technologies are similarly challenged (*i.e.*, rail, marine, construction/mining equipment, etc.).

DEM should remain open to emerging innovative approaches and new technologies for reducing GHG emissions from ICEV, such as on-board carbon dioxide capture and subsequent sequestration. Analysis from a Northwestern University research team has shown that cost-effective diesel tractor trucks combined with well-developed on-board carbon capture technologies offer a practical way to make large freight vehicles carbon neutral when running on fossil fuels and even carbon negative when running on biofuels.[10] Given existing liquid fuel infrastructure, "rapid adoption of such vehicles should be possible and CO_2 emissions can be continuously decreased."[11]

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[7] Hall, Dale and Lutsey, Nic, ICCT White Paper, "Estimating the Infrastructure Needs and Costs for the Launch of Zero-Emission Trucks" at 18 (August 2019). https://theicct.org/sites/default/files/publications/ICCT_EV_HDVs_Infrastructure_20190809.pdf

[8] For stations built between 2015 and 2017 for 400-500 kg/day. California Hydrogen Business Council, "Hydrogen FAQs," https://californiahydrogen.org/resources/hydrogen-faq/#:~:text=Capital%20costs%20in%20California%2C%20where,early%20(2013)%20market%20fueling., accessed June 23, 2022.

[9] Sharpe, Ben & Basama, Hussein, ICCT Working Paper 2022-09, "A meta-study of purchase costs for zero-emission trucks" at 12 (February 2022), https://theicct.org/wp-content/uploads/2022/02/purchase-cost-ze-trucks-feb22-1.pdf.

[10] Schmauss, Travis A. & Barnett, Scott A, "Viability of Vehicles Utilizing On-Board CO_2 Capture," ACS Energy Letters 2021, 6, 8, 3180-3184 (August 18, 2021) https://doi.org/10.1021/acsenergylett.1c01426.

[11] *Id.*

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There are other complexities associated with a singular transition to MHD ZEVs that DEM should also consider, including:

- Significant environmental impacts arise from other aspects of the ZEV lifecycle, including raw material acquisition and processing, and battery production, transport, disposal, and recycling.[12]

- MHD ZEVs are more expensive than their ICEV counterparts. The International Council on Clean Transportation's ("ICCT's") literature survey of purchase costs for zero-emission trucks found the cost to purchase new battery-electric tractor trucks ranged from $200,000 to $800,000, and similarly, the cost of new hydrogen fuel cell trucks ranged from $200,000 to $600,000.[13,14] Even considering tax credits established under the Inflation Reduction Act for new commercial vehicles (26 U.S.C. 45W), there is a significant cost difference between ICEV and their ZEV counterparts.

    - In addition, vehicle costs are often too high for the MHD payback period (the length of time required for an investment to recover its upfront costs).[15] Battery packs for MHDVs must be specifically suited for high lifetime mileage, deeper discharges per cycle, overall ruggedness, resistance to temperature extremes, and for production at low sales volumes. These characteristics push costs for MHDV battery packs toward the uppermost end of cost-range. The relatively high daily range needed by commercial vehicles results in battery costs that drive vehicle incremental costs as high as 50%–100% of the price of a conventional truck.[16]

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[12] *See* UC Davis, *Achieving Zero Emissions with More Mobility and Less Mining*, at 10 (January 2023) https://www.climateandcommunity.org/_files/ugd/d6378b_3b79520a747948618034a2b19b9481a0.pdf ("Under prevailing technologies, lithium is an essential ingredient in the batteries that power EVs, as well as other consumer electronics and forms of electric mobility such as e-buses, e-trucks, and e-bikes. Lithium mining—currently concentrated in Australia, Chile, China, and Argentina—is, like all mining, environmentally and socially harmful"). *See also* Perry Gottesfeld, *Electric cars have a dirty little recycling problem–batteries*, CANADA'S NATIONAL OBSERVER, Jan. 22, 2021, https://www.nationalobserver.com/2021/01/21/opinion/electric-cars-have-dirty-little-recycling-problem-their-batteries.

[13] ICCT Working Paper 2022-09, *A Meta-Study of Purchase Costs for Zero-Emission Trucks*, at 4 (February 2022) https://theicct.org/publication/purchase-cost-ze-trucks-feb22/.

[14] Per CARB's own estimate, final capital costs for a hydrogen fuel cell Class 8, day cab tractor used in regional operation were $629,189 in 2018 compared with $134,000 for an analogous diesel vehicle. In 2024, CARB estimates that a hydrogen fuel cell tractor truck will cost $431,480 compared to $144,101 for a new diesel tractor. CARB, Appendix H: Draft Advanced Clean Trucks Total Cost of Ownership Discussion Document at 1 (October 22, 2019) https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2019/act2019/apph.pdf. Consistent with CARB's estimates, the ICCT recently forecast that composition costs for a hydrogen fuel cell tractor-truck in 2025 will exceed $400,000. CARB has also recognized that operating costs for a regional-hydrogen tractor in 2024 will exceed those for tractor trucks powered by diesel or battery electric. Sharpe, Ben & Basama, Hussein, ICCT Working Paper 2022-09, "*A meta-study of purchase costs for zero-emission trucks*" at 12 (February 2022), https://theicct.org/wp-content/uploads/2022/02/purchase-cost-ze-trucks-feb22-1.pdf.

[15] U.S. DOE, *Medium- and Heavy-Duty Vehicle Electrification: An Assessment of Technology and Knowledge Gaps*, at 35 (December 2019), https://www.osti.gov/biblio/1615213.

[16] *Id.* at 24.

- Cold climate conditions like those experienced in Rhode Island have been shown to significantly reduce the battery range and efficiency of BEVs.[17]

b. DEM must consider the availability of charging infrastructure and grid reliability impacts.

As part of its evaluation of potential economic impacts to the welfare of Rhode Island residents and in-state businesses, DEM must assess grid reliability impacts stemming from ACT's forced electrification of its MHD transportation sector. Reliance on BEVs for freight transport may have unintended, negative consequences, especially in relation to the electricity generating sector. In addition, DEM needs to accurately predict the number of additional chargers that will be needed to support Rhode Island's anticipated MHD BEV population, which will require DC fast chargers ("DCFC"). Rhode Island currently has approximately 77 operational public and private DCFCs,[18] of which roughly 52% are exclusive to Tesla vehicles.[19] Additionally, of Rhode Island's 37 non-Tesla DCFCs, approximately 46% are not realistically available for servicing commercial MHDVs, being located at car dealerships, restaurants, shopping centers, and/or garages.[20] This leaves approximately 26% of Rhode Island's statewide DCFCs (approximately 20 chargers total) potentially available for use by MHDVs.[21] Moreover, most of Rhode Island's existing DCFC and prospective installations, such as those planned under Rhode Island Department of Transportation's ("RIDOT's") State Plan for Electric Vehicle Infrastructure Deployment ("NEVI Plan"), are first and foremost intended to service light-duty passenger vehicles and do not include the commercial depot charging systems necessary to support electric MHDV fleets.[22]

ZEV mandates like ACT also present significant risks to grid reliability and the stability of the transportation sector. Transitioning truck stops into BEV charging hubs will require massive power, on a scale that has been likened to the power required by a small town[23, 24] or sports arena.[25] A reliance on BEVs for the replacement of damaged electrical poles, emergency assistance, storm recovery and personal mobility for necessities like food and medicine would exponentially increase the magnitude of weather-related disasters and the hardship to local communities.

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[17] *See* Jon Witt, *Winter & Cold Weather EV Range Loss in 7,000 Cars*; RECURRENT, Dec. 12, 2022, https://www.recurrentauto.com/research/winter-ev-range-loss; *see also 20 popular EVs tested in Norwegian winter conditions*, NORWEGIAN AUTOMOBILE FEDERATION, Mar. 12, 2020, https://www.naf.no/elbil/aktuelt/elbiltest/ev-winter-range-test-2020/.

[18] *See* https://afdc.energy.gov/stations/#/analyze (accessed on August 28, 2023).

[19] *See* https://afdc.energy.gov/stations/#/analyze (accessed on August 28, 2023).

[20] *See* https://afdc.energy.gov/stations/#/analyze (accessed on August 28, 2023).

[21] *See* https://afdc.energy.gov/stations/#/analyze (accessed on August 28, 2023).

[22] *See, i.e.,* https://www.nature.com/articles/s41560-021-00855-0.

[23] *See* https://www.autoblog.com/2022/11/26/electric-vehicle-charging-stations-could-use-as-much-power-as-a-small-town-by-2035-and-the-grid-isn-t-ready/.

[24] *See* https://www.caranddriver.com/news/a41970523/truck-stops-energy-cost-electric-vehicles/.

[25] *See* https://www.bloomberg.com/news/articles/2022-11-14/tesla-s-electric-semis-are-coming-and-trucks-stops-aren-t-ready.

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c. A rapid transition to BEVs and FCEVs risks raw material shortages and supply chain vulnerabilities.

A transition to ZEVs would expose Rhode Island to supply chain vulnerabilities largely beyond the control of regulators. For instance, by 2030, Wells Fargo projects a risk of shortages across all of the key components of EV batteries, except manganese,[26] which is underscored by long lead times for the EV battery supply chains,[27] and a reliance on geopolitical rivals who control those supply chains.[28] As such, there is a mismatch between ACT and the availability of critical minerals essential to realizing its target.[29] Results have shown that "mass electrification of the heavy-duty segment on top of the light-duty segment would substantially increase the lithium demand and impose further strain on the global lithium supply."[30] The significant impact is attributed to the large single-vehicle battery capacity required by HDVs and the expected battery replacement needed within the lifetime of HDVs.[31] Specifically, "[t]he results suggest that global lithium resources will not be able to sustain simultaneous mass electrification of both the LDV and HDV segments."[32] Because the electrification in the LDV segment has already imposed significant strains on the global lithium supply, further mass electrification in the HDV segment, which is expected to increase the accumulated net demand by 29% to 53%, would come with risks.[33] Even if electric HDVs gain a technoeconomic advantage over other powertrain technologies and achieve market success in the short term, their long-term development is likely to face resource constraints with a reflected surge in lithium prices.[34] It is therefore "recommended that both the government and vehicle manufacturers should carefully consider the ambitious promotion of vehicle electrification in the heavy-duty segment."[35]

d. DEM's proposal will impact both intrastate and interstate transport.

By imposing restriction on freight vehicles travelling both within and across state lines, ACT would restrict the movement of goods in Rhode Island and in the United States. One in twenty-two jobs in the state of Rhode Island is a trucking industry job,[36] and trucking companies

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[26] Colin M. Langan, et al., *BEV Teardown Series: The Untold Electric Vehicle Crisis, Part 1: Tesla Model Y–The Pace Car*, WELLS FARGO (May 11, 2022).
[27] IEA 2022 Global EV Outlook, at 179, https://www.iea.org/reports/global-ev-outlook-2022.
[28] *Id.* at 154-58.
[29] IEA, *World Energy Outlook Special Report – The Role of Critical Minerals in Clean Energy Transitions* (Revised March 2022), https://iea.blob.core.windows.net/assets/ffd2a83b-8c30-4e9d-980a-52b6d9a86fdc/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf.
[30] Hao, H., Geng, Y., Tate, J.E. et al., *Impact of transport electrification on critical metal sustainability with a focus on the heavy-duty segment*, NAT COMMUN 10, 5398 (2019) https://www.nature.com/articles/s41467-019-13400-1
[31] *Id.*
[32] *Id.*
[33] *Id.*
[34] *Id.*
[35] *Id.*
[36] *See* http://nebula.wsimg.com/bc1160a0db64dfc8ad76a9294a1cec18?AccessKeyId=55B02AB9FA8544534472&disposition=0&alloworigin=1.

located in Rhode Island are also "[p]rimarily small, locally owned businesses" that will be burdened with increased costs and acutely impacted by ACT.[37] DEM should quantify the economic impact of supply-chain disruptions and bottlenecks likely to occur if fleet owners are forced to acquire ZEVs that are not supported by adequate infrastructure outside Rhode Island.

In addition to the Rhode Island trucking industry, "87.7% of Rhode Island communities depend exclusively on trucks to move their goods."[38] DEM should address how consumers will be impacted by higher costs of food and goods as the costs of replacing existing vehicles with ZEVs are passed through to customers.

Road freight also plays a vital role in the economic growth of our country and is an important and ongoing component of the transportation planning processes in the United States as the interstate transport of goods impacts the national economy and quality-of-life standards. For example, the availability of out-of-state charging infrastructure and support for electric and fuel cell MHDVs outside of Rhode Island is beyond DEM's control or influence. DEM should assess impacts to its own economy, as well as the national economy, as a result of one state potentially accelerating ZEV freight transport that would cease to be reliable or functional outside its geographically confined network of charging/fueling infrastructure and support systems.

e. DEM lacks the legal and legislative authority to adopt a transportation electrification mandate like California's ACT standard.

The measures contemplated by California's ACT program are extraordinary. In considering their adoption in Rhode Island, there is little to no legal analysis to confirm that the novel approaches and requirements mandated under the regulations are within the authority of DEM and do not offend principles of state or federal law. DEM should consider whether the measures called for in the California ACT rule conflict with or are otherwise preempted by the statutory mandates of federal legislation such as the Energy Policy and Conservation Act ("EPCA"); the federal CAA; the Energy Independence and Security Act ("EISA"), including the Renewable Fuel Standard ("RFS").

ACT will have vast nationwide political and economic significance. Requirements that mandate a shift from ICEV to ZEV sales will significantly impact supply chains, consumer costs, electric power infrastructure, domestic energy security, and interstate commerce.

Additionally, ACT includes measures that may violate other constitutional provisions and principles. These include, but likely are not limited to, the Dormant Commerce Clause, which prohibits state regulations that improperly discriminate against out-of-state commercial interests or that unduly burden interstate commerce; the dormant foreign affairs preemption doctrine under the Supremacy Clause, which preempts state laws that intrude on the exclusive federal power to conduct foreign affairs; the Takings Clause of the Fifth Amendment, which precludes the taking

[37] *Id.*
[38] *Id.*

of private property (or the elimination of entire industries) for public use without just compensation; and the equal sovereignty doctrine, which constrains the federal government from treating states disparately.

f. Limitations of CAA § 177.

The early stages of California's ZEV program were mired by low consumer acceptance, slow technological advancement, missed goals, and backtracking. While California's goals remained aspirational, it always maintained (and several times applied) the ability to re-write the rules when the program proved infeasible for automakers.[39, 40, 41] The limitations in § 177 of the CAA do not provide states (other than California) with the flexibilities to adjust ambitious targets to accommodate the realities of record inflation, extraordinary supply chain disruptions, global uncertainty due to the war in Ukraine, and critical concerns about the availability, cost and foreign dependence of minerals needed for ZEV batteries. Rather, states may adopt and enforce standards to control emissions from new motor vehicles only if "such standards are identical to the California standards".[42]

Rhode Island must carefully consider what the implications will be if reality cannot keep pace with its ambitions – e.g., if automakers cannot supply ZEVs in the numbers needed to meet DEM's proposed MHD sales mandates, if trucking companies choose not to or cannot afford to purchase the ZEVs, and if the electrical grid and ZEV charging infrastructure cannot keep pace with the growth in MHD ZEV fleet. Without the option of modifying the rules to accommodate ZEV realities, states adopting California's standards via § 177 risk creating for themselves a quagmire in which manufacturers are unable to sell and consumers unable to purchase the new trucks.

g. California's struggles present a cautionary tale for Rhode Island.

DEM should consider the implications that a strategy focused on a singular technology may have on community decision-making, consumer choice, and the unintended consequences

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[39] California Air Resources Board ("CARB" or "ARB"), *ARB Modified Zero-Emission Vehicle (ZEV) Regulation* (April 24, 2003) https://ww2.arb.ca.gov/news/arb-modifies-zero-emission-vehicle-zev-regulation (providing that ARB voted to modify California's ZEV rule in order to allow automakers to meet part of their ZEV requirement).
[40] CARB, *Notice of Public Hearing to Consider Proposed Amendments to the California Zero-Emission Vehicle Regulations Regarding Treatment of Majority Owned Small or Intermediate Volume Manufacturers and Infrastructure Standardization* (May 1, 2001) https://ww3.arb.ca.gov/regact/charger/notice.htm (stating that "[a]t a January 25, 2001, hearing, the Board approved major changes to the ZEV regulations that will significantly reduce the number of ZEVs required during the near term").
[41] CARB, *Proposed 2014 Amendments to the Zero Emission Vehicle Regulation* (September 2, 2014) https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2014/zev2014/zev14isor.pdf?viewType=Print&viewClass=Print (stating that "California could see about 26,000 fewer ZEVs and TZEVs delivered in the 2018 through 2025 model years than would be delivered under the existing regulation").
[42] *See* 42 U.S.C § 7507.

that reliance on electrification may present, including foreign supply chain disruptions and forced labor in the production of the raw materials needed to manufacture batteries.[43]

As California has faced rolling blackouts and historic energy prices, Governor Newsom has pivoted to the use of traditional fuel infrastructure to ensure system reliability to protect against outages.[44] The California Energy Commission (CEC) has projected that an additional 157,000 chargers will be needed to support California's anticipated electric MHD population in 2030—all of these will be DCFC, representing 9,100 additional job-years of dedicated workforce requirements,[45,46] compounding timeline feasibility challenges. CEC further projects that the MHDV charging network will see loads "in excess of 2,000 MW around 5 p.m. on a typical workday," further exacerbating the existing gap between net peak energy demand and existing generation.[47]

Moreover, unworkable ZEV sales mandates put Rhode Island at risk of missing out on real GHG emission reductions available through incentivizing low-carbon liquid fuels and by encouraging the development of emerging carbon removal technologies.

If buyers of MHDV are unwilling or unable to buy these significantly more expensive vehicles, they are likely to postpone replacement of their fleets, which in turn will keep higher-emitting and inefficient vehicles on the road beyond their normal useful life. Therefore, the rule is likely to forego opportunities for earlier emissions reductions and to incentivize delay of investment.

h. DEM should prepare a transparent and reasoned economic analysis.

DEM has failed to prepare a comprehensive costs model with respect to its ACT proposal. Without doing so, DEM cannot adequately consider alternatives that emphasize affordability alongside emissions reductions. DEM's analysis should transparently convey the consequences and difficulties associated with the major technology transformation required under the proposed rulemaking. For example, DEM has not estimated what Rhode Island's total costs of compliance would be under ACT. Neither has DEM provided any discussion quantifying impacts to Rhode Island's job market.

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[43] *See* U.S. Department of Energy, *2022 List of Goods Produced By Child Labor or Forced Labor*, at 50-51, https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2021/2022-TVPRA-List-of-Goods-v3.pdf.
[44] *See* https://www.ebudget.ca.gov/2022-23/pdf/Revised/BudgetSummary/ClimateChange.pdf.
[45] CEC, Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment Analyzing Charging Needs to Support ZEVs in 2030, 19-AB-2127 at 1 and 6 (July 14, 2021), https://www.energy.ca.gov/programs-and-topics/programs/electric-vehicle-charging-infrastructure-assessment-ab-2127.
[46] Carr, Edward; Winebrake, James; Winebrake, Samuel, *Workforce Projections to Support Battery Electric Vehicle Charging Infrastructure Installation* (June 8, 2021) https://etcommunity.org/assets/files/Workforce-ProjectionstoSupportBatteryElectricVehicleChargingInfrastructureInstallation-Final202106082.pdf.
[47] *Id.*

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Moreover, DEM should not merely rely on and extrapolate from CARB's data and analysis without adequately considering differences in scale, climate, population density, and state economies that will have profound impacts on Rhode Island's experience implementing ACT. State specific and regional factors are material and must be considered to ensure the regulations are properly and thoroughly vetted for application in Rhode Island.

As discussed above, as California has felt the real-world implications of its climate policy with rolling blackouts and sky-high energy prices, it is now implementing a broader approach to GHG reductions that includes investment in carbon capture and fossil fuel infrastructure to ensure future system reliability. DEM can and should present a transparent, technology-neutral approach that allows for innovation that would better serve Rhode Island's most vulnerable communities. For example, RIDOT highlighted known risks and challenges inherent to EV adoption in its NEVI Plan approved in September 2022:

- "Based on feedback, [] existing [ZEV] fast station reliability and uptime have been consumer issues."[48]

- "The [Rhode Island] public is car-centric, and although RIDOT has successfully provided Park 'n Ride facilities to facilitate shared transport, none exist on the northern portion of Interstate 95, where most of Rhode Island's population and almost all of [its] Justice40 communities are located. Ideally, RIDOT would have access to large areas around Providence to help build new dedicated fast EV charging stations, but the impacts, cost, and grid constraints will create issues in the near term."[49]

- "There are risks and challenges in the market and infrastructure to deliver our Plan in completion. EV availability has been a known issue, with many of the newest and most affordable EVs on backlog."[50]

- "Based on our discussions with Rhode Island Energy, increasing the EV load can present uncertainty for planning and grid operations."[51]

DEM falls short in communicating such challenges and representing the concerns of stakeholders associated with singular reliance on electrified transport in its assessment of ACT. Rhode Island stakeholders should be afforded an opportunity to evaluate the data, costs, and assumptions underlying ACT before DEM proceeds with its rulemaking.

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[48] RIDOT NEVI Plan at Executive Summary, https://www.dot.ri.gov/projects/EVCharging/docs/Rhode%20Island%20Electric%20Vehicle%20Infrastructure%20Deployment%20State%20Plan_Draft%20for%20Review-Rev%2003.pdf

[49] *Id.*

[50] *Id.* at 6.5.

[51] *Id.*

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Conclusion

Rhode Island should support and foster technological innovations in the transportation sector by embracing technology-neutral approaches to decarbonization. Decarbonizing the transportation sector will require multiple technologies competing in an open market that rewards technologies based on emissions reductions and costs. Valero is prepared to work with DEM to help ensure its GHG reduction goals are achieved.

* * *

Valero appreciates the opportunity to comment and would welcome the opportunity to have additional discussions on these issues. Please do not hesitate to contact me with any questions or if Valero or I can otherwise be of assistance.

Sincerely,

Mandy Garrahan
Executive Director Strategic Planning & Public Policy

Dear Air Quality Specialist Chelsea Priest,

I am writing to express my strong opposition to the proposed regulation to adopt California's Advanced Clean Cars II regulation, which seeks to ban the sale of new gas- and diesel-powered vehicles starting in 2035. While I understand the importance of reducing greenhouse gas emissions and transitioning to cleaner transportation options, this proposed regulation is premature and will negatively impact consumers and the economy.

The proposed regulation overlooks the current limitations of electric vehicles (EVs) and the supporting infrastructure. While EV technology has shown promising advancements in recent years, challenges must be addressed before completely phasing out internal combustion engine vehicles. Range anxiety, limited charging infrastructure, and higher upfront costs remain significant barriers to widespread EV adoption. Implementing a ban on traditional vehicles without adequately addressing these concerns will result in transportation limitations for residents, particularly those in rural areas or with longer commutes.

Furthermore, the automotive industry is embracing new technology to make vehicles cleaner and more efficient, which includes hydrogen, new synthetic fuels, alternative fuels, and improvements to the internal-combustion engine. Simply put, the government should allow the market to continue to innovate all forms of technology that significantly reduce vehicle emissions, not just battery electric vehicles.

Moreover, the proposed regulation fails to consider the economic impact on consumers and the automotive industry. Many Rhode Islanders rely on affordable and accessible transportation options to meet their daily needs. A sudden shift towards electric vehicles will increase vehicle prices, making it unaffordable for low- and middle-income households to purchase new cars. This would disproportionately affect those who cannot afford the upfront costs of EVs or lack access to charging infrastructure at their residences.

Additionally, the proposed regulation neglects the potential consequences for the automotive industry and related businesses. Rhode Island's automotive sector, including dealerships, repair shops, and service providers, contributes significantly to the local economy. The ban on gas- and diesel-powered vehicles will lead to job losses and financial hardships for these businesses, ultimately impacting the state's overall economic stability.

In conclusion, I request that the Department of Environmental Management's Office of Air Resources reject the proposed regulation to adopt California's Advanced Clean Cars II regulation. Balancing environmental goals and the practicality of implementing such measures is crucial. I believe a collaborative effort that involves stakeholders from various sectors will yield better results for Rhode Island's environment, economy, and residents.

Thank you for your time and consideration. I trust that you will consider these concerns when making decisions that will shape the future of transportation in Rhode Island.

Regards,
Richard Mulholland
39 Grimshaw Pl
Warwick, RI 02889

American Lung Association.
Rhode Island

September 7, 2023

Chelsea Priest
Department of Environmental Management
RI DEM - Office of Air Resources
235 Promenade Street
Providence, RI 02908

Subject: Adopt Advanced Clean Cars II and Advanced Clean Trucks Standards

Dear Ms. Priest,

The American Lung Association in Rhode Island calls on the State of Rhode Island to join the growing list of states adopting the Advanced Clean Cars II (ACC II) and Advanced Clean Trucks (ACT) standards to reduce harmful emissions from transportation sources. Because transportation continues to be a leading source of harmful air and climate pollutants, these zero-emission standards are critical to improving and protecting lung health. Rhode Island has previously used its Clean Air Act authority to implement more health-protective vehicle emission standards, and must enact the ACC II, ACT and additional clean transportation programs without delay.

Continuing this clean air leadership through the ACC II and ACT rules will provide critical emission reductions in support of healthier air for all residents, and especially those most impacted by transportation pollution. Our *State of the Air 2023* report found that over 126,000 Rhode Islanders live with asthma, including more than 13,000 kids. Air pollution contributes to a wide range of negative health impacts including as asthma attacks, heart attacks and strokes, and other lung and cardiovascular diseases. This is especially true for lower-income communities and communities of color which often bear greater transportation pollution burdens.

The United States Environmental Protection Agency estimates that 72 million Americans live near major freight routes, noting that those residents are more likely to be exposed to harmful air pollution impacts, tend to have lower incomes, and tend to be people of color. Rhode Island communities near the Port of Providence and the 95 corridor are likely to have significantly higher rates of asthma due to increased levels of air pollution. For these residents, the adoption of the ACT and ACC II programs will provide critical relief locally, support healthier air across the state, and reduce climate pollution to meet Rhode Island's 2021 Act on Climate emission reduction standards.

The Lung Association calls on Rhode Island to adopt the ACC II and ACT programs to reduce air pollutants, health disparities and greenhouse gas emissions in support of a healthier future for all:

Advanced Clean Cars II Standards
Adopting the ACC II standards will clean up harmful emissions from new combustion-powered passenger vehicles while also charting a course to 100 percent of new vehicle sales being zero-emission by 2035. As a leading source of transportation emissions that harm our health and climate, cleaning up and transitioning the passenger vehicle fleet to zero-emissions is a critical public health intervention and a necessary step to achieving our climate mandates.

Advanced Clean Trucks Standards
Adopting ACT will address the harms of trucking pollution by increasing sales of zero-emission medium- and heavy-duty vehicles over the coming decades. Rhode Island has shown leadership as a signatory to the 2020 Multi-State Memorandum of Understanding in support of Zero-Emission trucking and the 2022 Multi-State zero-emission action plan for medium- and heavy-duty vehicles which noted the ACT rule as "one of the most effective tools available to rapidly advance" the zero-emissions market. Adopting ACT will ensure that 40 to 75 percent of new vehicle sales in Rhode Island are zero-emissions by 2035, depending on weight classification. This program will save lives and reduce local exposures to diesel exhaust and fine particle emissions known to cause lung cancer and a host of other negative health consequences.

The Lung Association's *Zeroing in on Healthy Air* report found that the transition to zero-emission transportation and clean, non-combustion electricity generation could yield over $1.2 trillion in avoided health costs and $1.7 trillion in avoided climate change impacts between 2020 and 2050. In Rhode Island, healthier air due to zero-emission technologies could translate to:

For Rhode Island this transition could mean significant public health benefits, including:	
$3.8 Billion in public health benefits	**348 avoided deaths**
6,570 avoided asthma attacks	**35,600 avoided lost work days**

Achieving these public health benefits requires strong policies to spur the transition to zero-emission technologies. The Lung Association supports adoption of the proposed suite of rules, including the ACC II and ACT standards (along with Heavy Duty NOx Omnibus and Phase 2 Greenhouse Gas rules), to reduce the harms of traffic pollution and save lives in the Ocean State. Please contact me at Daniel.Fitzgerald@Lung.org with any questions.

Sincerely,

Daniel Fitzgerald, MPH, ICPS
Director of Advocacy in RI & MA
American Lung Association
260 W. Exchange Street, Suite 102B, Providence, RI 02903
Daniel.Fitzgerald@Lung.org | 401-533-5176

September 8, 2023

Chelsea Priest
Department of Environmental Management
RI DEM - Office of Air Resources
235 Promenade Street
Providence, RI 02908
RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37

Dear Ms. Priest,

My name is Andrew Morley and I am a farmer in Little Compton, RI. I am writing in support of the Advanced Clean Cars II and Advanced Clean Trucks regulations the state has proposed.

Reducing greenhouse gas emissions and limiting the scope of catastrophic climate change is critical to ensuring that farmers like me will be able to profitably and predictably grow for our fellow Rhode Islanders in the future. The transportation sector is one of the easier sectors to achieve emissions reductions over the next 10-30 years, but we have to – and can - start now.

EV's have a lower total cost of ownership than new gas and diesel powered vehicles and are rapidly approaching upfront cost parity with gas and diesel vehicles. Because more and more Rhode Islanders understand that, the switch to EV's is happening quickly. But to buy an EV in Rhode Island there have to be EV's for sale in Rhode Island. Adopting these regulations will put automakers on notice that Rhode Island consumers need access to the latest and greatest non-polluting models in the short term.

As someone who was in the market for a new family vehicle 2 years ago, it was disheartening to research all the latest EV models and find that the best and most affordable cars on the market were not for sale here. I would have had to buy our top choices in California and ship it to the east coast. We ended up buying a Nissan Leaf here in Rhode Island and have loved driving it ever since. But that car wasn't even in our top 3 choices, and was more expensive than the alternatives we preferred. Unless Rhode Island adopts these two regulations, other states will have the best options presented to their consumers, while we in Rhode Island will be forced to keep buying more expensive gas and diesel vehicles.

As a parent of two young children, it brings me great hope that we can make big leaps in reducing harmful air pollution in my children's lifetime. If we do the right thing here, we can ensure that our children's children aren't subjected to all the devastating consequences of vehicle caused air pollution. That reason alone is enough to move forward with these regulations.

Sincerely,

Andrew Morley
68 Shaw Road
Little Compton, RI 02837

Chelsea Priest
Department of Environmental Management
RI DEM - Office of Air Resources
235 Promenade Street
Providence, RI 02908

October 17, 2023

RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37

Dear Ms. Priest,

My name is Gillian Kiley and I am a resident of Cranston, RI.

I have been trying to buy an electric vehicle (EV) from a Rhode Island dealer for 16 months. To cope with the lack of available EVs, I've gone out of state, entered into an expensive "green" car subscription while waiting for more stock to come online, and simply gone without driving, when possible. There are many consumers like me who would opt for a zero-emission vehicle, but because Rhode Island is slow-moving on EV issues, buyers are turning to out-of-state car dealers, which hurts in-state businesses, or purchasing internal combustion engine vehicles out of frustration.

I am writing in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations because they will:

1. **Reduce greenhouse gas emissions as required by the Act on Climate.**

Transportation is the largest source of GHGs in the state. Rhode Island's Executive Climate Change Coordinating Councils (RIEC4) 2022 Update to the GHG Reduction Plan estimated that the state will need roughly 43,000 registered electric vehicles (EVs) on the road by 2030. Currently, there are fewer than 7,000 EVs registered in the state. The only state policy currently advancing vehicle electrification in Rhode Island is the DRIVE rebate program, which does not have long-term funding. ACCII would steadily increase the supply of EVs in the state; without it, Rhode Island will not be able to reach 86,000 EVs by 2030 or 45% GHG reductions.

Additionally, medium and heavy duty vehicles make up 6% of the vehicles on the road in Rhode Island but contribute 24% [ucsusa.org] of the transportation sector's greenhouse gas emissions. Every new fossil-fuel powered vehicle locks the state into years of further climate-warming emissions.

2. **Increase consumer choice.**

Auto manufacturers are producing EVs for sale on the global market and send supply to those areas with the most supportive policies. That's why, for example, there are many EV models available for sale in Europe that aren't available in the United States, or why within the US there are more options in California than Rhode Island. Adopting ACCII will put Rhode Island on the map and force automakers to send EV models to the Ocean State, benefiting dealerships and consumers by making sure the full range of choices is available to Rhode Islanders.

3. **Protect public health.**

Gas-powered cars cause a huge amount of public health harm by releasing particulate matter and other localized air pollution. The American Lung Association estimates that the cumulative health benefits of electrifying transportation will amount to nearly $4 billion by 2050 in Rhode Island alone.

Additionally, MHDVs have a disproportionate impact on public health: despite making up only 6% of the vehicles on the road in Rhode Island, they are responsible for 50% of nitrogen emissions and 44% of particulate matter [ucsusa.org] (PM2.5) emissions within the transportation sector. These pollutants are detrimental to human health and have been specifically linked to heart attacks, lung cancer, and the exacerbation of asthma. The Union of Concerned Scientists estimates that adopting ACT will lead to $150 million in health savings [ucsusa.org] for the state.

Please Personalize your comments! Below are some ideas:

- *How you would benefit (or would have benefited) from more model choices when shopping*
- *How you're never going back to a gas-powered car*
- *Why mitigating climate change is so important to you*
- *How you wish more people had access to the maintenance and fuel savings that come with an EV*

Thank you for this opportunity to provide comments.

Sincerely,

Gillian Kiley
Cranston, RI

Ms. Priest,
as a new owner of an electric car, I have realized that resistance is more about resisting change in general. The EV is wonderful to drive, very inexpensive to use, and I wonder now why I hesitated. i think a firm schedule sends the right message - to me it's way too slow, but I realize there are political realities, though I regret them.
Thanks for considering my opinion in favor of the ACC-2
Rick Fleeter
27 Coronado St
Jamestown RI 02835
401 225 7397
(i am an adjunct professor at the school of engineering at Brown University and have lived in Rhode Island, with some breaks while living other places, since 1972)

Dear Ms. Priest,

My name is John Stevenson, and I reside at 145 Modena Ave in Providence, RI 02908. I own one plug-in hybrid car (2020 Subaru Crosstrek), and my wife Gwenyth Edwards leases an electric vehicle (2022 Hyundai Kona). We also have a solar roof and heat/cool with an air-source heat pump.

I am writing in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Trucks regulations because they will reduce greenhouse gas emissions, increase consumer choice, and protect public health. I wrote a lengthy support letter previously, which has apparently been lost.

I believe RI in particular can be a proud leader in the effort to slow climate change, and reduce the incredible risks we face as a state. I have grandchildren whom I hope will be able to enjoy Block Island as I have, and have lives without the current anxiety-provoking situation of ever-increasing storms, fires, flooding, coastal erosion, and species decimation. I love those wind turbines off the coast of Block Island and want to see RI continue to be in the vanguard, with new jobs and a national reputation for taking action on this issue. These regulations can be one important part of that essential mission.

And I love both of our cars! What a charming experience to drive by the gas station and not feel compelled to look at the latest price. This is not a sacrifice, it's a delight.

Sincerely,
John F. Stevenson

Department of Environmental Management
RI DEM - Office of Air Resources
235 Promenade Street
Providence, RI 02908

RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37

Dear Ms. Priest,
My name is _____Kyle Braveman_____, and I am a resident of __Providence_____city/town, RI_____.
(If applicable) I own an electric vehicle, the ___Hyundai Ionic_____model/year___2022I_____.

I am writing in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations because they will:
1. Reduce greenhouse gas emissions as required by the Act on Climate.
Transportation is the largest source of GHGs in the state. Rhode Island's Executive Climate Change Coordinating Councils (RIEC4) 2022 Update to the GHG Reduction Plan estimated that the state will need roughly 43,000 registered electric vehicles (EVs) on the road by 2030. Currently, there are fewer than 7,000 EVs registered in the state. The only state policy currently advancing vehicle electrification in Rhode Island is the DRIVE rebate program, which does not have long-term funding. ACCII would steadily increase the supply of EVs in the state; without it, Rhode Island will not be able to reach 86,000 EVs by 2030 or 45% GHG reductions.
Additionally, MHDVs make up 6% of the vehicles on the road in Rhode Island but contribute 24% of the transportation sector's greenhouse gas emissions. Every new fossil-fuel powered vehicle locks the state into years of further climate-warming emissions.
2. Increase consumer choice.
Auto manufacturers are producing EVs for sale on the global market and send supply to those areas with the most supportive policies. That's why, for example, there are many EV models available for sale in Europe that aren't available in the United States, or why within the US there are more options in California than Rhode Island. Adopting ACCII will put Rhode Island on the map and force automakers to send EV models to the Ocean State, benefiting dealerships and consumers by making sure the full range of choices is available to Rhode Islanders.
3. Protect public health.
Gas-powered cars cause a huge amount of public health harm by releasing particulate matter and other localized air pollution. The American Lung Association estimates that the cumulative health benefits of electrifying transportation will amount to nearly $4 billion by 2050 in Rhode Island alone.
Additionally, MHDVs have a disproportionate impact on public health: despite making up only 6% of the vehicles on the road in Rhode Island, they are responsible for 50% of nitrogen emissions and

44% of particulate matter (PM2.5) emissions within the transportation sector. These pollutants are detrimental to human health and have been specifically linked to heart attacks, lung cancer, and the exacerbation of asthma. The Union of Concerned Scientists estimates that adopting ACT will lead to $150 million in health savings for the state.
Please Personalize your comments! Below are some ideas:
· How you would benefit (or would have benefited) from more model choices when shopping
· How you're never going back to a gas-powered car
· Why mitigating climate change is so important to you

· How you wish more people had access to the maintenance and fuel savings that come with an EV
Thank you for this opportunity to provide comments.
Sincerely, Kyle Braveman
Name Providence Rhode Island
City/Town, RI

October 17, 2023

Department of Environmental Management

RI DEM - Office of Air Resources

235 Promenade Street

Providence, RI 02908

RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37

Dear Ms. Priest,

My name is Peggy Matteson, and I am a resident of Portsmouth, RI.

I am a doctorally prepared nurse and work closely with others who strive for a healthier environment that supports the health of humans (especially the future for my grandchildren) and other living things.

I own a hybrid vehicle, the Ford Escape hybrid 2023.

I am writing in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations because they will:

1. Reduce greenhouse gas emissions as required by the Act on Climate.

Transportation is the largest source of GHGs in the state. Rhode Island's Executive Climate Change Coordinating Councils (RIEC4) 2022 Update to the GHG Reduction Plan estimated that the state will need roughly 43,000 registered electric vehicles (EVs) on the road by 2030. Currently, there are fewer than 7,000 EVs registered in the state. The only state policy currently advancing vehicle electrification in Rhode Island is the DRIVE rebate program, which does not have long-term funding. ACCII would steadily increase the supply of EVs in the state; without it, Rhode Island will not be able to reach 86,000 EVs by 2030 or 45% GHG reductions. Additionally, MHDVs make up 6% of the vehicles on the road in Rhode Island but contribute 24% of the transportation sector's greenhouse gas emissions. Every new fossil-fuel powered vehicle locks the state into years of further climate-warming emissions.

2. Increase consumer choice.

Auto manufacturers are producing EVs for sale on the global market and send supply to those areas with the most supportive policies. That's why, for example, there are many EV models available for sale in Europe that aren't available in the United States, or why within the US there are more options in California than Rhode Island. Adopting ACCII will put Rhode Island on the map and force automakers to send EV models to the Ocean State, benefiting dealerships and consumers by making sure the full range of choices is available to Rhode Islanders.

3. Protect public health.

Gas-powered cars cause a huge amount of public health harm by releasing particulate matter and other localized air pollution. The American Lung Association estimates that the cumulative health benefits of electrifying transportation will amount to nearly $4 billion by 2050 in Rhode Island alone.

Additionally, MHDVs have a disproportionate impact on public health: despite making up only 6% of the vehicles on the road in Rhode Island, they are responsible for 50% of nitrogen emissions and 44% of particulate matter (PM2.5) emissions within the transportation sector. These pollutants are detrimental to human health and have been specifically linked to heart attacks, lung cancer, and the exacerbation of asthma. The Union of Concerned Scientists estimates that adopting ACT will lead to $150 million in health savings for the state.

As a tall woman in her mid 70s I require a car that gives me comfortable seating, ease of driving relatively long distances, and a sense that I am improving the future lives of my grandchildren. What better legacy could leave?

If I had the ability I would build my own home based charging station. However, in my situation that is not possible. So I do the best I can with my Escape hybrid which at times gets as high as 90 miles per gallon. I am never going back to a full gas powered vehicle.

I wish that more people had the means to at least purchase hybrid cars or even better purchase totally EVs. The prices must come down and charging stations must be as easily available as gasoline stations.

Thank you for this opportunity to provide comments.

Sincerely,

Peggy Matteson

Portsmouth, RI

October 17, 2023

Ms. Chelsea Priest
Department of Environmental Management
RI DEM - Office of Air Resources
235 Promenade Street.
Providence, RI 02908

RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37

Dear Ms. Priest,

I am Dennis Randolph Watts, a resident of Kingston, RI. I am writing in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations because these regulations will:

1. Reduce greenhouse gas emissions as required by the Act on Climate.

Transportation is the largest source of GHGs in the state. Rhode Island's Executive Climate Change Coordinating Councils (RIEC4) 2022 Update to the GHG Reduction Plan estimated that the state will need roughly 43,000 registered electric vehicles (EVs) on the road by 2030. Currently, there are fewer than 7,000 EVs registered in the state. The only state policy currently advancing vehicle electrification in Rhode Island is the DRIVE rebate program, which does not have long-term funding. ACCII would steadily increase the supply of EVs in the state; without it, Rhode Island will not be able to reach 86,000 EVs by 2030 or 45% GHG reductions. Additionally, MHDVs make up 6% of the vehicles on the road in Rhode Island but contribute 24% of the transportation sector's greenhouse gas emissions. Every new fossil-fuel powered vehicle contributes toward locking the state into years of further climate-warming emissions.

2. Increase consumer choice.

Auto manufacturers are producing EVs for sale on the global market and send supply to those areas with the most supportive policies. That's why, for example, there are many EV models available for sale in Europe that aren't available in the United States, or why within the US there are more options in California than Rhode Island. Adopting ACCII will put Rhode Island on the map and force automakers to send EV models to the Ocean State, benefiting dealerships and consumers by making sure the full range of choices is available to Rhode Islanders.

3. Protect public health.

Gas-powered cars cause a huge amount of public health harm by releasing particulate matter and other localized air pollution. The American Lung Association estimates that the cumulative health benefits of electrifying transportation will amount to nearly $4 billion by 2050 in Rhode Island alone.

Additionally, MHDVs have a disproportionate impact on public health: despite making up only 6% of the vehicles on the road in Rhode Island, they are responsible for pollution from 50% of nitrogen emissions and 44% of particulate matter (PM2.5) emissions within the transportation sector. These pollutants are detrimental to human health and have been specifically linked to heart attacks, lung cancer, and the exacerbation of asthma. The Union of Concerned Scientists estimates that adopting ACT will lead to $150 million in health savings for the state.

I own an electric vehicle, the Toyota BZ4x 2023 model and love how it drives and everything about it. Our 2nd car is a 2016 RAV4 hybrid, and we will replace it with and EV in a couple of years. We are ready to go entirely electric within two years. We wish more people had access to the savings that come on fuel and maintenance.

Climate change is happening so fast that the developments are scary, risking floods and droughts, agricultural global food production, starvation in poor countries, migration and conflict – to such an extent that America will be seriously impacted before 2050 unless we act now. It is absolutely urgent to slow down Americans' and Rhode Islanders' contributions of greenhouse gasses. And action and investment now will save huge amounts in the future.

Thank you for this opportunity to provide comments.

Sincerely,

D. Randolph Watts
Kingston, RI 02881

Chelsea Priest October 18, 2023

Department of Environmental Management

RI DEM - Office of Air Resources

235 Promenade Street

Providence, RI 02908

RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37

Dear Ms. Priest,

My name is Robert Hart, and I am a resident of Barrington, RI.

I am writing in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations because they will:

1. Reduce greenhouse gas emissions as required by the Act on Climate.

Transportation is the largest source of GHGs in the state. Rhode Island's Executive Climate Change Coordinating Councils (RIEC4) 2022 Update to the GHG Reduction Plan estimated that the state will need roughly 43,000 registered electric vehicles (EVs) on the road by 2030. Currently, there are fewer than 7,000 EVs registered in the state. The only state policy currently advancing vehicle electrification in Rhode Island is the DRIVE rebate program, which does not have long-term funding. ACCII would steadily increase the supply of EVs in the state; without it, Rhode Island will not be able to reach 86,000 EVs by 2030 or 45% GHG reductions. Additionally, MHDVs make up 6% of the vehicles on the road in Rhode Island but contribute 24% of the transportation sector's greenhouse gas emissions. Every new fossil-fuel powered vehicle locks the state into years of further climate-warming emissions.

2. Increase consumer choice.

Auto manufacturers are producing EVs for sale on the global market and send supply to those areas with the most supportive policies. That's why, for example, there are many EV models available for sale in Europe that aren't available in the United States, or why within the US there are more options in California than Rhode Island. Adopting ACCII will put Rhode Island on the map and force automakers to send EV models to the Ocean State, benefiting dealerships and consumers by making sure the full range of choices is available to Rhode Islanders.

3. Protect public health.

Gas-powered cars cause a huge amount of public health harm by releasing particulate matter and other localized air pollution. The American Lung Association estimates that the cumulative health benefits of electrifying transportation will amount to nearly $4 billion by 2050 in Rhode Island alone.

Additionally, MHDVs have a disproportionate impact on public health: despite making up only 6% of the vehicles on the road in Rhode Island, they are responsible for 50% of nitrogen emissions and

44% of particulate matter (PM2.5) emissions within the transportation sector. These pollutants are detrimental to human health and have been specifically linked to heart attacks, lung cancer, and the exacerbation of asthma. The Union of Concerned Scientists estimates that adopting ACT will lead to $150 million in health savings for the state.

My wife and I are planning to purchase PHEV or Battery Electric vehicles for our next vehicles, and the growing market for these vehicles has a lot more to offer compared to when we purchased our current ICE vehicles in 2015. However, supply is still limited in the region. This regulation will help to nudge the industry to increase support in Rhode Island, and encourage the buildout of charging networks in our State to ensure equitable access to clean transportation.

Thank you for this opportunity to provide comments.

Sincerely,

Robert Hart

Barrington, RI

Chelsea Priest October 18, 2023

Department of Environmental Management

RI DEM - Office of Air Resources

235 Promenade Street

Providence, RI 02908

RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37

Dear Ms. Priest,

My name is Barbara K. Watts, and I am a resident of Kingston, RI. I own an electric vehicle, a Toyota BZ4X 2023. Now that I am owner I am even more in favor of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations.

I bought the car because I wanted to drive around without creating pollution of any sort – fine particulates, greenhouse gas emissions, etc. I feel good about that but little did I realize how much I would love this car. It drives so smoothly and silently I feel like I amon a magic carpet. Everyone should have a chance to try one out! They would be convinced. I have not had to visit a gas station since May when I bought it and I charge at home where I get 100% renewable energy from the South Kingstown Community Energy Program.

Electric cars benefit everyone – either with clear air or a better ride. And despite information to the contrary there are new jobs that will come out of the electric vehicle boom:

https://heatmap.news/electric-vehicles/evs-trump-uaw-jobs-evidence

Rather the evidence is that electric vehicles could actually require *more labor* to build than gas-powered cars in the U.S., at least for the foreseeable future as documented in this article.

Thank you for this opportunity to provide comments,

Barbara Watts

2 Locust Drive, Kingston, RI

Chelsea Priest

Oct. 19, 2023

Department of Environmental Management

RI DEM - Office of Air Resources

235 Promenade Street

Providence, RI 02908

RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37

Dear Ms. Priest,

My name is Bill Ibelle and, as a resident of Providence RI, I am writing in strong support of the Advanced Clean Cars II and Advanced Clean Trucks regulations.

When my Toyota Prius caught fire and exploded as part of the Mattapoisett Boatyard fire last summer, I found it exceedingly difficult to replace the car, in part, because of regulations that limit this supply and variety of electric and hybrid vehicles in the U.S. I eventually purchased at 2014 Hybrid Honda Accord, but it wasn't easy. This is one of the reasons I support this program which will:

1) Increase availability and consumer choice

Auto manufacturers are producing EVs for sale on the global market and send supply to those areas with the most supportive policies. That's why, for example, there are many EV models available for sale in Europe that aren't available in the United States, or why within the US there are more options in California than Rhode Island. Adopting ACCII will put Rhode Island on the map and force automakers to send EV models to the Ocean State, benefiting dealerships and consumers by making sure the full range of choices is available to Rhode Islanders.

2) Reduce greenhouse gas emissions as required by the Act on Climate.

Transportation is the largest source of GHGs in the state. Rhode Island's Executive Climate Change Coordinating Councils (RIEC4) 2022 Update to the GHG Reduction Plan estimated that the state

will need roughly 43,000 registered electric vehicles (EVs) on the road by 2030. Currently, there are fewer than 7,000 EVs registered in the state. The only state policy currently advancing vehicle electrification in Rhode Island is the DRIVE rebate program, which does not have long-term funding. ACCII would steadily increase the supply of EVs in the state; without it, Rhode Island will not be able to reach 86,000 EVs by 2030 or 45% GHG reductions. Additionally, MHDVs make up 6% of the vehicles on the road in Rhode Island but contribute 24% of the transportation sector's greenhouse gas emissions. Every new fossil-fuel powered vehicle locks the state into years of further climate-warming emissions.

3) Protect public health.

Gas-powered cars cause a huge amount of public health harm by releasing particulate matter and other localized air pollution. The American Lung Association estimates that the cumulative health benefits of electrifying transportation will amount to nearly $4 billion by 2050 in Rhode Island alone.

Additionally, MHDVs have a disproportionate impact on public health: despite making up only 6% of the vehicles on the road in Rhode Island, they are responsible for 50% of nitrogen emissions and 44% of particulate matter (PM2.5) emissions within the transportation sector. These pollutants are detrimental to human health and have been specifically linked to heart attacks, lung cancer, and the exacerbation of asthma. The Union of Concerned Scientists estimates that adopting ACT will lead to $150 million in health savings for the state.

I am committed to improving our environment and am spending money and research time to do my part. In the past year I have replaced spent extra money to replace my car with a hybrid vehicle, added solar panels to my home, added a heat pump system to reduce my heating oil consumption and am in the process of doing a RISE housing insulation program.

As individuals, we can do our part to reduce our carbon footprint, but this will only be effective with regulations that encourage large numbers of people and the largest polluters (trucks) to make the same commitment.

Thank you

Bill Ibelle

Providence, RI

TENNECO
3901 Willis Road
Grass Lake, MI 49240

October 27, 2023

Chelsea Priest
Air Quality Specialist, Climate Change and Mobile Sources Program
Department of Environmental Management
DEM - Office of Air Resources
235 Promenade St.
Providence, RI 02908

Dear Ms. Priest,

Tenneco is pleased to submit comments regarding the proposed amendments to regulation 250-RICR-120-05-37.

Tenneco is one of the world's leading designers, manufacturers, and marketers of automotive products for original equipment and aftermarket customers. Headquartered in the United States and with facilities across the globe, it is committed to providing best-in-class products to its customers.

That commitment extends to minimizing our impact on the planet and limiting environmental effects of our products. Our emissions control products, including catalytic converters, are industry-leading and aimed at protecting the environment while providing the experience our customers have grown to expect from our brands.

That is why Tenneco supports the Rhode Island Department of Environmental Management (RI DEM) and the people of Rhode Island in their desire to move forward with adoption of California's Advanced Clean Cars II program (ACC II). In response to this rulemaking, we would like to submit comments addressing areas relating to the aftermarket parts, specifically catalytic converters that are not clearly addressed in the RI DEM proposed regulations incorporating by reference of California Title 13 CCR Section 2222.

Tenneco has specific concerns about the timing for effectuating the standards of Title 13 CCR Section 2222 in Rhode Island. It appears from the language of the RI DEM proposed regulations 250-RICR-120-05-37.4.B_Table 1 that California Title 13 Section 2222 provisions would become effective 20 days after filing the proposed regulation amendments with the Secretary of State. California Title 13 CCR Section 2222(h)(2) incorporates the *"California Evaluation Procedures for New Aftermarket Catalytic Converters,"* which limits installations to CARB-certified vehicles and applies to all model years. The RI DEM proposed regulations, by applying to all model years only 20 days after adoption, would create extreme challenges not only for manufacturers but repair shops, distribution centers and consumers.

For an effective transition of the aftermarket parts and repair industry in the State of Rhode Island to California Title 13 CCR section 2222-compliant aftermarket catalytic converters, there are several tasks that must be managed:

1. A public awareness campaign for parts distributors, parts retailers, repair shops, order writers and consumers to explain the change to aftermarket catalytic converter requirements from the current EPA enforcement policy to the California Title 13 CCR Section

2222 provisions, including the responsibility for each entity under these proposed regulations.

2. Implementation of a revised parts data management system/catalogs will be needed to select the correct part for a particular vehicle, which is much more complex for California Title 13 CCR Section 2222-compliant aftermarket catalytic converters.

3. Repair shops, parts retailers and distributors will need to sell down their current parts inventory which is compliant with the EPA enforcement policy and replace this inventory with parts that are compliant with California Title 13 CCR section 2222.

4. Many vehicles registered in the State of Rhode Island do not have California emissions certification. California Title 13 CCR section 2222 Executive Orders issued by the California Air Resources Board only apply to California emissions vehicles. There is a need for RI DEM guidance regarding how to determine the appropriate California Title 13 CCR Section 2222 aftermarket catalytic converter for installation on "Federal-only" certified vehicles.

5. Rhode Island should address the reporting requirements of California Title 13 CCR Section 2222, which include reporting on the warranty and quality control (QC) of parts, along with sales data. This information would not benefit the State or people of Rhode Island.

6. There is a need to clarify the responsibilities for aftermarket parts distributors located in the State of Rhode Island who sell aftermarket catalytic converters to businesses located outside the State of Rhode Island. Some businesses have a significant portion of their sales in this category of customer, and need objective confirmation of the RI DEM policy regarding aftermarket catalytic converters that are compliant with the EPA enforcement policy being held in inventory in the State of Rhode Island for sale to locations outside of the state.

The aftermarket parts industry, especially the manufacturers of catalytic converters, will need a minimum of two years after adoption to properly manage the tasks outlined above. We propose that the RI DEM modify the regulatory language regarding the adoption by reference of California Title 13 CCR Section 2222 to clarify that its provisions related to aftermarket parts will become effective at the same time as the other provisions of ACC II, i.e., January 1, 2026, or later depending on the adoption date of the proposed regulations.

Additionally, Tenneco recommends that the RI DEM request only state-specific sales data as part of the California Title 13 CCR Section 2222 reporting requirements. California Air Resources Board staff is already monitoring the efficacy of aftermarket parts via QC and warranty reports, and CARB management benefit carries over to all the products sold nationwide. Implementing the QC and warranty reporting requirements specific to the State of Rhode Island is an excessive burden for manufacturers and RI DEM staff to manage these reports without providing any benefit to the state.

In addition to these necessary alterations to the proposed regulations, we recommend that RI DEM hold meetings specifically with aftermarket stakeholders to discuss how to facilitate the RI DEM

administration of this section and to streamline the transition in commerce to aftermarket catalytic converters that are compliant with California Title 13 CCR Section 2222. As a result of these discussions, RI DEM should provide published guidance documents that will outline the proper methodology to address common scenarios that could arise within the aftermarket arena in Rhode Island that may not exist in California. These guidance documents would address the problems outlined below, that will be concerning to parts manufacturers, sellers, installers, and consumers of aftermarket catalytic converters. Tenneco participated in similar stakeholder meetings with both the New York State Department of Environmental Conservation and Colorado State Department of Public Health and Environment when they adopted and implemented California Title 13 CCR Section 2222. For reference, New York State DEC aftermarket catalytic converter guidelines are available at https://www.dec.ny.gov/docs/air_pdf/amccguide.pdf and Colorado State DPHE aftermarket catalytic converter guidelines are available at https://drive.google.com/file/d/1wfmScucmVJny3TeqHtpPsGPl_CTjLdLe/view?usp=sharing .

At a minimum, an aftermarket catalytic converter guidance document from RI DEM should include:

1. Provisions to address "Federal-only" certified vehicles. Rhode Island has only been a Section 177 state since the 2008MY (model year) and will therefore have many "Federal-only" certified vehicles registered in the state.

2. Streamlined reporting requirements for manufacturers of aftermarket catalytic converters, limited to sales to locations in the State of Rhode Island, only once per year, with extended reporting deadlines relative to the deadlines in California Title 13 CCR Section 2222.

3. Rhode Island DEM should designate specific staff as a point of contact to handle the exemption process to specify the appropriate repair part in situations that were not anticipated by the RI DEM proposed regulations. For example, when no aftermarket part is listed for a vehicle in manufacturers' catalogs or on a CARB EO, and no OEM service part is available.

Tenneco expresses its thanks to the RI DEM for addressing this important issue and giving Tenneco the opportunity to share these comments. We look forward to working with the department to help ensure a successful implementation.

Sincerely,

Patrick J Haynes

Patrick J. Haynes
Engineering Manager
Tenneco

Chelsea Priest
October 29, 2023
Department of Environmental Management
RI DEM - Office of Air Resources
235 Promenade Street
Providence, RI 02908

RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37

Dear Ms. Priest,

My name is Corinna-Barbara Francis. I am a resident of Providence. RI. I am writing to urge Rhode Island to adopt the Advanced Clean Cars II and Advanced Clean Trucks regulations

As we all know -- our environmental situation is DIRE and URGENT. I'm sure you don't need to be told that we are quickly catapulting towards huge damage to the world as we know it. Animals and species are going extinct every day; people suffer through terrible catastrophes where they lose their homes, all their memorabilia, and loved ones die. And it is only going to get worse.

We are all responsible for doing everything we can to help the situtation.

But honestly, since having moved to RI last year I have been dismayed at the lack of action and sense of urgency on the part of local leaders. RI state regulatory standards seem to lack ambition, and RI is far from being in the lead in taking real, concrete steps in pushing the emissions reductions and energy transition we all know are needed.

I would like the state I am living in to lead in what we all know needs to be done --not to be a laggard. RI absolutely has the resources to push these changes forward.

While my main motivation for urging you to adopt the clean car and truck regulations is to push the reduction of greenhouse gas emissions, I also have a personal interest in RI doing more to increase the choice and variety of electric vehicles in the state -- and to increase financial support for people who may not be able to afford it.
I moved to Providence from London last year -- and I've been really shocked to see how few EVs there are in the state. I've seen statistics that there are less than 7,000 EVs registered in the state. Could that be true ? It is quite shocking ! I have found that to be true even on the East Side of Providence, where I would have expected a much higher saturation of EVs. Does the fact that there is just so little choice in models and prices -- and so little financial support for people wanting to switch -- help explain that ?
So as a person who would like to switch to an electric vehicle, it's frustrating that there is so little choice, and very little actual support for individuals wanting to purchase an EV.

Apparently, the only RI state policy advancing vehicle electrification in Rhode Island is the DRIVE rebate program, but this apparently does not have long-term funding? At least ACCII would help increase the supply of EVs in the state. Not adopting these regulations

would make it even harder for Rhode Island to reach the 86,000 EVs by 2030 that is said to be needed -- at a minimum to bring down emissions and GHGs..

I feel it is honestly pretty shameful that here in RI -- as well as elsewhere in the US -- that we are not doing more to bring down our emissions. As a nation, and in RI as well -- there is plenty of wealth, and it is something that our local government should be taking the lead on. Having lived in Europe I can see the huge difference between what we, as Americans, are doing and what is being done in Europe.

We are a really wealthy nation -- let's do our part !!

Thank you for us the opportunity to provide comments on this important matter.

Wishing you the best,

Corinna-Barbara Francis

Providence, RI 02906

NGVAMERICA
Natural Gas Vehicles for America

400 North Capitol Street, N.W.
Suite 450
Washington, D.C. 20001
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October 27, 2023

Ms. Chelsea Priest
Rhode Island Department of Environmental Management
Office of Air Resources
235 Promenade Street
Providence, RI 02908

RE: NGVAmerica Comments on the California Advanced Clean Truck Rule for Rhode Island

Dear Ms. Priest:

Natural Gas Vehicles for America (NGVAmerica), the national trade association for the natural gas vehicle industry, respectfully submits the following comments to the Rhode Island Department of Environmental Management on its proposed adoption of the California Advanced Clean Truck Rule.

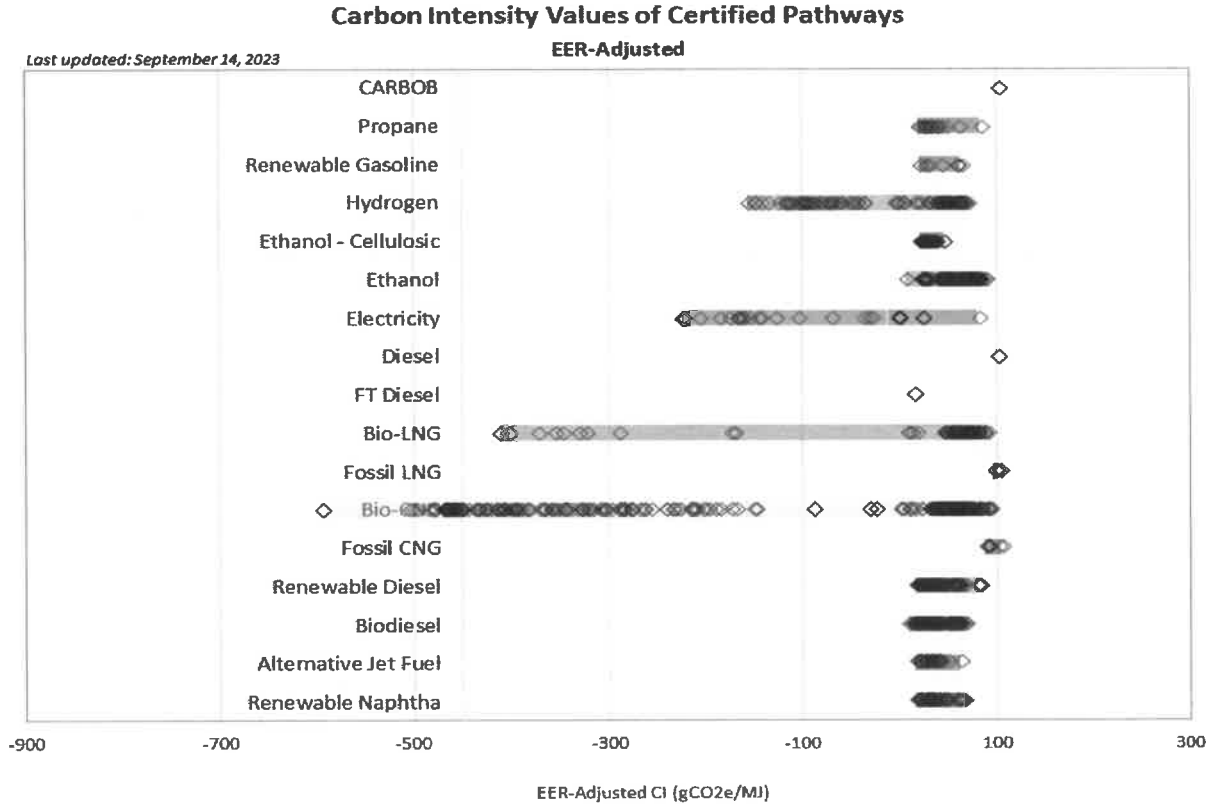
NGVAmerica endorses strategies that support the use of zero emission vehicles (ZEV), near-zero emission vehicles and a transition to low-carbon transportation fuels such as conventional natural gas and renewable natural gas (RNG or biomethane), and hydrogen. There is **no one solution** to the pressing environmental issues facing the transportations sector. Policy makers should move quickly to deploy those technologies and solutions that are readily available, maximize cost-effective emission reductions, and provide a real pathway to carbon neutral or carbon-negative emissions.

The California (CA) Advanced Clean Truck (ACT) Rule chooses technology winners regardless of the availability and maturity of the product or appropriateness for the transportation purpose. It is a "tailpipe" only approach to emissions reductions, ignoring emissions throughout the life cycle of a transportation fuel/technology. Adopting the CA ACT Rule as that program currently exists would undermine Rhode Island's ability to use the best fuel for the appropriate purpose and reduce the most emissions.

Converting medium and heavy-duty vehicle transportation networks to natural gas provides a readily available, proven, and cost-effective solution to accelerate the transition to a low-carbon transportation future. Further, dedicating program resources to cleaner alternative fuel technologies that are available now will significantly and immediately benefit all communities by maximizing the displacement of older, higher emitting trucks and buses, including those higher emitting vehicles that operate in communities that are underserved by clean transportation options. Adopting the CA ACT Rule eliminates this and other important and available sources of emission reducing technology because it ignores the contribution of biofuels such as biomethane to reducing greenhouse gas emissions.

Natural gas near-zero engines produce at least 90% *less* NOx than the cleanest diesel engines by operating at virtually zero NOx emissions (0.02 g/bhp-hr or less). When renewable natural gas or RNG is used, there are reduced life cycle emissions of greenhouse gases that in some cases can be net zero or even carbon negative. According to the California Air Resources Board, RNG vehicles are the cleanest vehicles available on a life cycle emissions basis and they already support all duty cycles. ***It is critical to understand that NGVs already have lower NOx levels than the impending U.S. EPA Heavy Duty Truck NOx Rule requiring trucks to operate at* 0.035 g/bhp-hr by 2027.**

Using California as an example, their 2022 annual data shows that NGV fuel usage was 97% RNG and confirms the energy weighted carbon intensity (CI) value of California's RNG vehicle fuel portfolio is below zero at -111.7 gCO2e/MJ. Renewable CNG (dairy gas) pathways have been approved at levels as low as -600 gCO2e/MJ. Additional information may be found at this link, LCFS Pathway Certified Carbon Intensities | California Air Resources Board and the CA Carbon Intensity Values Chart follows:



Amazon is using thousands of Classes 6 through 8 trucks, choosing natural gas vehicles because they would not buy diesel trucks and could not buy electric trucks now or in a reasonable timeframe. UPS, PepsiCo, WM, Republic Services, Piedmont Natural Gas, City of Raleigh, Los Angeles World Airports Buses, City of Los Angeles, City of Fresno Transit, LA Metro Transit, fleets operating at New York's Hunts Point , Denver International Airport Buses and equipment and many other fleets have chosen NGVs as the only available non-diesel heavy-duty truck that outperforms other alternative technologies in all aspects of vehicle operation.

To support NGV and RNGV markets in Asia, Europe, South America the U.S. and elsewhere, Cummins is growing its worldwide natural gas engine division to fulfill the demands for immediate diesel alternatives across the world. They have introduced a new heavy-duty 15L natural gas engine that provides the power and performance of diesel and that is 500 pounds lighter and more efficient. This new engine is the final piece in producing a full line of diesel equivalent MD/HD natural gas engines.

Investments in RNG-fueled trucks and transit buses accessing ports, cities, and densely-populated neighborhoods are the most immediate and fiscally-responsible investment to clean our air and combat climate change. Communities get more clean vehicles having greater clean air and climate impact for the money with natural gas than with any other alternative fuel option, especially electric. No other transportation fuel is as sustainable, adaptive, and competitive across all applications and vehicle classes. And heavy-duty natural gas trucks are not demonstration science projects; they are proven, scalable, and on U.S. roads today. We will not meet emissions reductions goals or timeframes without using natural gas.

The urgency of emissions reduction is the reason the ACT Rule is being considered and NGVAmerica strongly believes that RNG natural gas vehicles must be **promoted** in Rhode Island today if emissions reductions are to occur in any reasonable timeframe. The RNG carbon negative opportunity was not fully understood when California created their Advanced Clean Truck Rule that focuses only on tailpipe emissions solutions, and this rule now does not represent the best way to reduce emissions. Therefore, Rhode Island should not make the same mistake as California by copying their Advanced Clean Truck Rule.

A Clean Fuel Standard program is a positive, technology neutral and highly effective emissions reduction program that would accelerate emissions reduction even more with the infrastructure and NGVs that are in place today. We suggest that Rhode Island reconsider any plans to adopt the ACT Rule, but rather focus on creating a Clean Fuel Standard program that would allow RNG NGVs and other clean fuels to be Rhode Island's immediate pathway to a zero-emission future.

Thank you for your consideration, and please contact me at smerrow@ngvamerica.org or 303.883.5121 with any comments or questions.

Sincerely,

Sherrie Merrow

Sherrie Merrow
Director, NGVAmerica State Government Affairs

TRUCKING ASSOCIATION: Trucking has been and remains a critical partner in the quest for a greener climate. In fact, today's Class 8 trucks have evolved to a such a point of clean air efficiency that one single truck of 20 years ago emitted the equivalent of 60 trucks of today. That remarkable achievement did not occur overnight, but through steady and attainable strides brought by achievable standards and mandates. It also took great collaboration between government, equipment manufacturers, or OEM's, and most importantly, the end user tasked with moving billions of tons of freight each year. In Rhode Island, where trucking moves 38,330 tons per day and where communities rely upon trucks to deliver 87.7% of their goods, 48% of commercial trucks are now powered by the aforementioned, newest generation, near-zero emissions diesel technology. That's progress made possible by realistic goals and quantifiable metrics.

The ACT Rule, as recently proposed by the McKee Administration, lacks a depth of detail on the specifics of how to reach its goals and, more importantly, what will actually occur over the next decade in what is a highly aggressive transformation. The regulation sets lofty, speculative end goals, but falls short of detailing the actual game plan that needs to be executed for it to be successful. Accordingly, our industry feels that levels of due diligence and feasibility analysis must be conducted to ensure that the commercial vehicle sector can continue to operate efficiently without excess costs, charging/refueling interruptions, and equipment uncertainty.

Accordingly, on behalf of the 500 members companies of the Rhode Island Trucking Association comprised of mostly our state's small businesses, we respectfully request consideration of the following measures prior to adoption:

1) Review all purchase incentives and other mechanisms recommended for successful implementation of the regulations, including incentives for recharging/refueling stations and related infrastructure, and the existing and potential sources of funding for those incentives and mechanisms,

2) Review of the vehicle purchasing incentives funding grants being offered that will allow business owners to transition to EV commercial vehicles that often cost two times the amount of equivalent vehicles powered by fossil/carbon-emitting fuels

3) Conduct a needs assessment of the additional electric capacity, transmission distribution demands, that will result from implementation of the regulations, and the ability of the state's electric utilities and grid to meet those demands

4) Assess the number of zero-emission medium duty and heavy-duty vehicle recharging/refueling stations recommended for implementation of the regulations, and the costs, permitting processes, and timelines for installing those stations.

5) If, upon carrying out this level of due diligence, the assessment determines that implementation on of the regulations is not yet feasible, give authority to

the Rhode Island Department of Environmental Management to delay implementation.

The current proposed plan rhetorically alludes to these measures, however, no concrete steps or safeguards are codified. If this plan is to be taken seriously by stakeholders, it must past this level of scrutiny. This can only occur through incorporating these safeguards rather than taking it on faith or throwing caution into the wind that ACT will succeed. This is not a 'plug and play' proposition as it is wrought with unknowns.

In closing, we call attention to perhaps one of the most compelling, yet profound, statements of testimony on this matter, offered by seasoned trucking company owner Andrew Boyle of Boyle Transportation in Massachusetts, who espoused the realities of a failed program.

Boyle contended that if the product, charging infrastructure, and power is not available to comply with these unrealistic timelines, then regulators are setting trucking&#65533;and the American consumer&#65533;up for failure.

"Remember, we deliver food, medicine, and baby formula...failure is not merely inconvenient; it's catastrophic", Boyle recently stated before the US Senate Environmental and Public Works Committee.

"Trucking is not averse to challenges, but we cannot overcome the challenges that lawmakers choose to ignore" he added.

Today, a clean diesel truck can spend 15 minutes fueling anywhere in the country and then travel about 1,200 miles before fueling again. In contrast, today's long-haul battery electric trucks have a range of about 150-330 miles and can take up to 10 hours to charge - and that is if they even available.

There is a wide gap between where we are and where we are going. The McKee Administration and agency leaders need to heed these warnings and ensure proper due diligence and assessment of needs related to freight movement as an integral, "baked in" element of the implementation of this rule. We implore you not to ignore our industry's perspective.

We urge you to review recent measures adopted by the state of Maryland(https://mgaleg.maryland.gov/2023RS/chapters_noln/Ch_96_sb0224E.pdf) and consider similar safeguards for the Rhode Island ACT Rule. If followed and if commercial vehicle tolerance for transformation is found to be sufficient and sound, the trucking industry as a whole and the membership of the Rhode Island Trucking Association will commit to lending its support toward attainable and successful outcomes. We submit that anything short of this could result in the ultimate failure of EV transformation and, moreover, have catastrophic consequences for our business community who manufacture and deliver goods and, more critically, our citizens who consume.

Rhode Island has a well-documented history of expediting policy and ignoring the need for oversight and due diligence on matters of critical and universal importance to our state. Failure has resulted and, in the case of the proposed policy before us, is not an option. Let us take these lessons learned from past failures and deploy them toward achieving a fully vetted, transparent and attainable outcome.

Thank you for your attention to and consideration of these comments and our industry's perspective. We again look forward to playing an integral role in the success this policy provided that proper due diligence is exercised from the outset.

Chelsea Priest

Department of Environmental Management

RI DEM - Office of Air Resources

235 Promenade Street

Providence, RI 02908

RE: Rhode Island's Low-Emission Vehicle Program Rule 250-RICR-120-05-37

Dear Ms. Priest,

My name is Jessie Kingston, and I am a resident of Providence, RI 02906.

I own an electric vehicle, the 2017 Prius Prime Hatchback plug-in.

I am writing in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations because they will:

1. Reduce greenhouse gas emissions as required by the Act on Climate.

Transportation is the largest source of GHGs in the state. Rhode Island's Executive Climate Change Coordinating Councils (RIEC4) 2022 Update to the GHG Reduction Plan estimated that the state will need roughly 43,000 registered electric vehicles (EVs) on the road by 2030. Currently, there are fewer than 7,000 EVs registered in the state. The only state policy currently advancing vehicle electrification in Rhode Island is the DRIVE rebate program, which does not have long-term funding. ACCII would steadily increase the supply of EVs in the state; without it, Rhode Island will not be able to reach 86,000 EVs by 2030 or 45% GHG reductions. Additionally, MHDVs make up 6% of the vehicles on the road in Rhode Island but contribute 24% of the transportation sector's greenhouse gas emissions. Every new fossil-fuel powered vehicle locks the state into years of further climate-warming emissions.

2. Increase consumer choice.

Auto manufacturers are producing EVs for sale on the global market and send supply to those areas with the most supportive policies. That's why, for example, there are many EV models available for sale in Europe that aren't available in the United States, or why within the US there are more options in California than Rhode Island. Adopting ACCII will put Rhode Island on the map and force automakers to send EV models to the Ocean State, benefiting dealerships and consumers by making sure the full range of choices is available to Rhode Islanders.

3. Protect public health.

Gas-powered cars cause a huge amount of public health harm by releasing particulate matter and other localized air pollution. The American Lung Association estimates that the cumulative health benefits of electrifying transportation will amount to nearly $4 billion by 2050 in Rhode Island alone.

Additionally, MHDVs have a disproportionate impact on public health: despite making up only 6% of the vehicles on the road in Rhode Island, they are responsible for 50% of nitrogen emissions and 44% of particulate matter (PM2.5) emissions within the transportation sector. These pollutants are detrimental to human health and have been specifically linked to heart attacks, lung cancer, and the exacerbation of asthma. The Union of Concerned Scientists estimates that adopting ACT will lead to $150 million in health savings for the state.

Please Personalize your comments! Below are some ideas:

· How you would benefit (or would have benefited) from more model choices when shopping

· How you're never going back to a gas-powered car

· Why mitigating climate change is so important to you

· How you wish more people had access to the maintenance and fuel savings that come with an EV

Thank you for this opportunity to provide comments.

Dear Ms. Priest,

My name is Fran Webber, and I am a resident of Newport, RI. I firmly believe that reduction of greenhouse gases in our state and nation will require a dramatic reduction in driving, which can only be accomplished through a drastic increase in public transit and cycling options for the people of Rhode Island. That being said, we must also transition our vehicles away from fossil fuels and toward electric vehicles. To that end, I'm writing in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations because they will:

1. Reduce greenhouse gas emissions as required by the Act on Climate.

Transportation is the largest source of GHGs in the state. Rhode Island's Executive Climate Change Coordinating Councils (RIEC4) 2022 Update to the GHG Reduction Plan estimated that the state will need roughly 43,000 registered electric vehicles (EVs) on the road by 2030. Currently, there are fewer than 7,000 EVs registered in the state. The only state policy currently advancing vehicle electrification in Rhode Island is the DRIVE rebate program, which does not have long-term funding. ACCII would steadily increase the supply of EVs in the state; without it, Rhode Island will not be able to reach 86,000 EVs by 2030 or 45% GHG reductions.

Additionally, MHDVs make up 6% of the vehicles on the road in Rhode Island but contribute 24% [ucsusa.org] of the transportation sector's greenhouse gas emissions. Every new fossil-fuel powered vehicle locks the state into years of further climate-warming emissions.

2. Increase consumer choice.

Auto manufacturers are producing EVs for sale on the global market and send supply to those areas with the most supportive policies. That's why, for example, there are many EV models available for sale in Europe that aren't available in the United States, or why within the US there are more options in California than Rhode Island. Adopting ACCII will put Rhode Island on the map and force automakers to send EV models to the Ocean State, benefiting dealerships and consumers by making sure the full range of choices is available to Rhode Islanders.

3. Protect public health.

Gas-powered cars cause a huge amount of public health harm by releasing particulate matter and other localized air pollution. The American Lung Association estimates that the cumulative health benefits of electrifying transportation will amount to nearly $4 billion by 2050 in Rhode Island alone.

Additionally, MHDVs have a disproportionate impact on public health: despite making up only 6% of the vehicles on the road in Rhode Island, they are responsible for 50% of nitrogen emissions and 44% of particulate matter [ucsusa.org] (PM2.5) emissions within the transportation sector. These pollutants are detrimental to human health and have been specifically linked to heart attacks, lung cancer, and the exacerbation of asthma. The Union of Concerned Scientists estimates that adopting ACT will lead to $150 million in health savings [ucsusa.org] for the state.

I would love to never buy another car and dream of living in an ocean state totally connected by transit, but this will not be workable for all Rhode Islanders, and residents deserve choices that work

for them while also getting us to our Act on Climate goals. Please adopt advanced Clean Cars II and Advanced Clean Trucks regulations!

Thank you for this opportunity to provide comments.

Sincerely,

Fran
Newport, RI

Dear Ms. Priest,

My name is Kate Schapira, and I am a resident of Providence, RI. I am writing in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations because they will:

1. Reduce greenhouse gas emissions as required by the Act on Climate. Transportation is the largest source of greenhouse gases in the state. ACCII would steadily increase the supply of EVs in the state and help us meet our commitment to greenhouse gas reduction. Every new fossil-fuel powered vehicle locks the state into years of further climate-warming emissions.
2. Protect public health. Gas-powered cars cause a huge amount of public health harm by releasing particulate matter and other localized air pollution. The American Lung Association estimates that the cumulative health benefits of electrifying transportation will amount to nearly $4 billion by 2050 in Rhode Island alone. Asthma among RI children is above the national average and is a major driver of emergency room visits.The Union of Concerned Scientists estimates that adopting ACT regulations will lead to $150 million in health savings [ucsusa.org] for the state.

I have been listening to Rhode Islanders' climate fears for over 10 of my 20 years in our little coastal state, and hearing them intensify with each passing year of inadequate emissions reduction. I have visited friends' children hospitalized with asthma because they live in areas with high car and truck traffic. I will buy an EV as soon as I can afford a new car (which the ACCII would make it easier for me to do) but in the meantime, I'm asking you to adopt these regulations, which will benefit our state and its people.

Thank you for this opportunity to provide comments.

Sincerely,

Kate Schapira

Providence, RI

Dear Ms. Priest,

My name is Allison Rosenthal, and I am a resident of Pawtucket, RI 02860.

I am writing in strong support of Rhode Island adopting the Advanced Clean Cars II and Advanced Clean Trucks regulations because they will:

1. **Reduce greenhouse gas emissions as required by the Act on Climate.**

Transportation is the largest source of GHGs in the state. Rhode Island's Executive Climate Change Coordinating Councils (RIEC4) 2022 Update to the GHG Reduction Plan estimated that the state will need roughly 43,000 registered electric vehicles (EVs) on the road by 2030. Currently, there are fewer than 7,000 EVs registered in the state. The only state policy currently advancing vehicle electrification in Rhode Island is the DRIVE rebate program, which does not have long-term funding. ACCII would steadily increase the supply of EVs in the state; without it, Rhode Island will not be able to reach 86,000 EVs by 2030 or 45% GHG reductions.

Additionally, MHDVs make up 6% of the vehicles on the road in Rhode Island but contribute 24% [ucsusa.org] of the transportation sector's greenhouse gas emissions. Every new fossil-fuel powered vehicle locks the state into years of further climate-warming emissions.

2. **Increase consumer choice.**

Auto manufacturers are producing EVs for sale on the global market and send supply to those areas with the most supportive policies. That's why, for example, there are many EV models available for sale in Europe that aren't available in the United States, or why within the US there are more options in California than Rhode Island. Adopting ACCII will put Rhode Island on the map and force automakers to send EV models to the Ocean State, benefiting dealerships and consumers by making sure the full range of choices is available to Rhode Islanders.

3. **Protect public health.**

Gas-powered cars cause a huge amount of public health harm by releasing particulate matter and other localized air pollution. The American Lung Association estimates that the cumulative health benefits of electrifying transportation will amount to nearly $4 billion by 2050 in Rhode Island alone.

Additionally, MHDVs have a disproportionate impact on public health: despite making up only 6% of the vehicles on the road in Rhode Island, they are responsible for 50% of nitrogen emissions and 44% of particulate matter [ucsusa.org] (PM2.5) emissions within the transportation sector. These pollutants are detrimental to human health and have been specifically linked to heart attacks, lung cancer, and the exacerbation of asthma. The Union of Concerned Scientists estimates that adopting ACT will lead to $150 million in health savings [ucsusa.org] for the state.

Mitigating climate change is extremely important to me as I look toward the future. Thank you for this opportunity to provide comments.

Sincerely,

Allison Rosenthal
Pawtucket, RI 02860

> ADEQUACY OF ELECTRIC GRID: The proposed rule change would effectively mandate an eventual switch over to electric vehicles as that would be the only way to comply. Has an analysis been requested of R.I. Energy that Rhode Island's electric grid would have adequate generating power to accommodate the increase in demand that would correspond to the proposed switch-over to electric vehicles? If so, what did it indicate?

> AFFORDABILITY: The proposed amendment would phase in a mandate for the sale of only low emission vehicles in Rhode Island. The only vehicles that would be compliant would be electric ones, as noted above. However, these are more expensive to purchase and operate than fossil fuel vehicles. Has an analysis, especially by income demographic, been done that Rhode Islanders can afford these vehicles?

> ANNUAL STATE SALES TAX REVENUE ON NEW VEHICLES: The proposed amendment would phase in a mandate for the sale of only low emission vehicles in Rhode Island. However, car manufacturers do not have an obligation to make these vehicles nor Rhode Islanders to purchase them. This brings into question the continued viability of annual state sales tax revenue on the sale of new vehicles. Governor Dan McKee's proposed 2024 budget, Page 158, projects sales tax revenue from "Motor Vehicles" for 2024 at $117,200,000 and modestly reduces to $103,404,368 for FY 2028. Has the General Assembly, particularly Leader Shekarchi and Senate President Ruggerio, been advised of the amount of annual sales tax revenue currently received on the sale of new vehicles and that this proposed rule would jeopardize much, potentially most, of this revenue if manufacturers and Rhode Islanders cannot or do not comply with their end of the proposed rule?

Monique Chartier
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