

State of Rhode Island
Department of Environmental Management
Office of Air Resources

In re: Proposed amendment to 250-RICR-120-05-37, ‘Rhode Island’s Low-Emission and Zero-Emission Vehicle Program’

DECISION

Introduction

On August 7, 2023, a notice was posted on the websites of the Rhode Island Department of Environmental Management (RI DEM) and the Rhode Island Office of Secretary of State and was sent to interested parties announcing a public comment period to accept comments on the amendments of 250-RICR-120-05-37, “Rhode Island’s Low-Emission and Zero-emission Vehicle Program”. The notice stated that a public hearing would be held if requested by twenty-five persons, by a governmental agency or by an association having at least twenty-five members. No requests for a public hearing were received. The initial public comment period ended at 11:59 PM on September 8, 2023. Due to a technical error within the Rhode Island Code of Regulations website, a second public comment period was open beginning September 29, 2023 through 11:59 PM on October 30, 2023.

The purpose of this rule is to adopt or amend key regulations that reduce greenhouse gas and criteria pollutant emissions from new passenger cars, light-duty trucks, and medium- and heavy-duty vehicles that are delivered for sale or placed in service in Rhode Island. Rhode Island has previously adopted California’s emissions standards for passenger cars and trucks and, with this rulemaking, would further opt-in to California’s standards by amending 250-RICR-120-05-37 to include new standards for medium- and heavy-duty vehicles. This suite of rules includes the adoption of California’s Advanced Clean Trucks Rule, the Low NOx Heavy-Duty Omnibus Rule, and the Phase 2 Greenhouse Gas Rule, and amendments to California’s Advanced Clean Cars program which was previously adopted in Rhode Island and incorporates previously adopted rules to control criteria and GHG emissions. The regulation applies to light-duty, medium- and heavy-duty engine/vehicle manufacturers. The Advanced Clean Trucks Rule (ACT) requires the sale of at least 30% zero-emission trucks by 2030 (depending on vehicle classification). The Low NOx Heavy-Duty Vehicle Omnibus Rule (HD Omnibus) requires a 90% reduction in NOx emissions for model year (MY) 2027 engines. The Phase 2 Greenhouse Gas Rule (Phase 2 GHG) sets greenhouse gas emission standards for heavy-duty trucks and truck trailers. Advanced Clean Cars II (ACCII) requires that all passenger car and light-duty truck vehicles delivered for sale by 2035 meet the definition of zero emission vehicle and will further reduce smog-forming and GHG emissions from new internal combustion engine vehicles (ICEVs).

Written comments were received from:

1. Ann-Christine Duhaime
2. The Truck and Engine Manufacturers Association (EMA)
3. Susan Chakmakian
4. Joel Gates

5. Dolores Mackenzie
6. Harvey Buford
7. Amanda Babson
8. Penske
9. American Fuel and Petrochemical Manufacturers (AFPM)
10. Amanda Barker, Green Energy Consumer Alliance (GECA); 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, Environmental Council of Rhode Island
11. CERES
12. Rivian
13. Cummins Inc
14. The U.S. Department of Defense (DoD)
15. Barry Schiller
16. Kevin Shen, Union of Concerned Scientists
17. Consumer Reports
18. Nathaniel Bailey, Joel Becker, Marian Falla, Kenneth M Johnson, Ph.D., Arthur David Larson, Brad Martson, Ph.D., Richard Noto, M.D., Anup Sircar, Ph.D., Robert S. Smith, M.D., Sheila Smith, Nancy St. Germain, Ph.D. Candidate, Fran Webber, Ph.D. Candidate
19. CLF Rhode Island
20. CALSTART
21. Peter Brassard, Rhode Island Association of Railroad Passengers
22. RI Energy (RIE)
23. David Nadrowski
24. Valero
25. Richard Mulholland
26. The American Lung Association (ALA)
27. Andrew Morely
28. Gillian Kiley
29. Rick Fleeter
30. John Stevenson
31. Kyle Braveman
32. Peggy Matteson
33. D. Randolph Watts
34. Rob Hart
35. Barbara Watts
36. Bill Ibelle
37. Tenneco
38. Corinna-Barbara Francis
39. NGVAmerica (NGV)
40. Chris Maxwell, Rhode Island Trucking Association (RITA)
41. Jessie Kingston
42. Fran Webber
43. Kate Schapira

- 44. Allie Rosenthal
- 45. Monique Chartier

Due to the volume of comments received, and the fact that many commentors raised similar or the same arguments and considerations for or against the original proposal, RI DEM has paraphrased similar comments. The numbers following each comment correspond with the list above. The following is the Office of Air Resources' responses to the comment received:

Response to Comments

General Comments and Formatting

Comment: Twenty-one individual Rhode Islanders' support the proposed amendments to the low-emission and zero-emission vehicle program. These commentors highlighted the requirements of the Act on Climate and suggested that these amendments are necessary to meet those requirements. Additionally, these commentors suggested that these amendments will expand the options for consumers and protect public health. (1, 3, 4, 5, 6, 7, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 38, 41, 42, 43, 44)

Response: RI DEM appreciates the support on the proposed amendments.

Comment: Commentor did not oppose the proposed amendments but had several recommendations for a successful program. Commentor recommends RI DEM takes steps to align the manner in which ACT credits and ACT deficits are generated, noting a misalignment in how the regulation is currently written. 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. (2)

Response: Section 177 of the federal Clean Air Act requires that if a state adopts California's motor vehicle emission standards, the standards must be "identical to the California standards." While 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, at this time the updated amendments must stay identical to California's.

Comment: Commentor expressed strong support of the proposed amendments and feel these regulations are crucial to ensure vehicle manufacturers are offering a wide variety

of ZEV model options from class 1 through 8. The commentor stated that 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. The commentor continues, stating that 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. (11)

Response: RI DEM appreciates the support on the proposed amendments.

Comment: Commentor wrote in strong support of Advance Clean Cars II stating that the rules will provide clean, cost-saving transportation choices for consumers. Delaying adoption would deprive residents of the ZEVs they would otherwise be able to acquire, and the many important co-benefits ACC II provides. Commentor stated that this should be a top priority of the state. (17)

Response: RI DEM appreciates the support on the proposed amendments.

Comment: Commentors wrote in support of the proposed amendments to put Rhode Island on a path towards zero-emission vehicles. Stating that 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. (18)

Response: RI DEM appreciates the support on the proposed amendments.

Comment: Commentor supports adopting these regulations in Rhode Island on the basis of reducing greenhouse gas emissions as required under the Act on Climate, greatly improve Rhode Island's air quality, provide substantial health benefits to Rhode Islanders, lessen harmful and disproportionate impacts that transportation emissions have on the state's environmental justice communities, and boost Rhode Island's economy. (19)

Response: RI DEM appreciates the support on the proposed amendments.

Comment: Commentor supports Rhode Island's adoption of Advanced Clean Cars II, Advanced Clean Trucks and Heavy-Duty Omnibus rules. Commentor highlights that 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. Additionally, stating that 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. (20)

Response: RI DEM appreciates the support on the proposed amendments.

Comment: Commentor supports RI DEM's efforts in advancing vehicle electrification with strong vehicle standards. Commentor suggests that continued collaboration is necessary for the successful transition to electric vehicles (EVs). Commentor is committed to support the EV transition. Commentor highlighted that it is committed to ensure grid resiliency, energy demands and equity. (22)

Response: RI DEM appreciates the support on the proposed amendments.

Comment: Commentor states that 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. The commentor 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. (26)

Response: RI DEM appreciates the support on the proposed amendments.

Comment: Commentors highlighted that adoption of these amendments is critical for Rhode Island to meet the Act on Climate. Commentors highlighted reductions in greenhouse gas emissions, an increase in consumer choice to support in-state business, and the benefits to public health with the adoption of these amendments. Commentors did encourage RI DEM to include large entity reporting requirements within the regulations. Also highlighted that while Rhode Island has adequate charging infrastructure currently, it will need to significantly expand to support the widespread adoption of electric vehicles. (10)

Response: RI DEM appreciates the support on the proposed amendments. Additionally, while RI DEM considered adding a fleet reporting requirement, as other jurisdictions have done, the RI DEM does not plan to adopt the annual reporting requirement for large entities and fleets because it lacks the staff capacity and resources to facilitate data collection and then process the volume of data and information this requirement will generate. The RI DEM intends to adopt this requirement at a later date as resources allow.

Comment: Commentor strongly supports the proposed amendments. Commentor highlighted that the ACCII and ACT regulations are feasible and that establishing the ACCII requirements 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. Commentor highlighted a drafting error in proposed regulatory language regarding manufacturers earning and banking ZEV values

towards the Advanced Clean Cars II requirements. Commentor also urges RI DEM to consider complimentary language by implementing a Clean Fuels Standard. (12)

Response: RI DEM appreciates the support on the proposed amendments. 250-RICR-120-05-37, Section 37.8.10 will to be edited due to the drafting error.

37.8.10. Effective for model year 2027 and subsequent model years, each manufacturer shall comply with the Zero Emission Vehicle sales requirements and, starting with ~~2024~~ 2025 model year vehicles, may earn and bank ZEV value, both in accordance with 13 CCR § 1962.4.

Additionally, adopting a Clean Fuel Standard is outside of the scope of this regulation.

Comment: Commentor highlighted concerns in the proposed amendments regarding exemptions for military tactical equipment, by referencing, the California Code of Regulations, Title 13, Section 1905. (14)

Response: RI DEM acknowledges the need to reference the exemption for military tactical equipment and by referencing 13 and 17 CCR, military tactical equipment is included in the exemption. For clarity, Section 37.9 will be edited to specify the exemption of military tactical equipment as follows:

37.9.9 Military tactical vehicles and military tactical facilities owned or operated by the United States Department of Defense or any of the United States military services.

Comment: Commentor wrote letter of support, stating that these rules are some of the most important air and climate pollution regulations to be considered by the state. Commentor also said 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. 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. Commentor also urged The RI DEM to adopt the large entity reporting requirements. (16)

Response: DEM appreciates the support on the proposed amendments. Additionally, while DEM considered adding a fleet reporting requirement, as other jurisdictions have done, The RI DEM does not plan to adopt the annual reporting requirement for large entities and fleets because it lacks the staff capacity and resources to facilitate data collection and then process the volume of data and information this requirement will generate. The RI DEM intends to adopt this requirement at a later date as resources allow.

Comment: Commentor recommends that Rhode Island must consider what the implications will be if the pace of ambitions of the proposed amendments cannot be met. (24)

Response: RI DEM acknowledges the concerns of this commentor and will monitor the implementation of the programs closely in the coming years. Additionally, these regulations have built-in flexibilities to help manufacturers manage the new requirements. For example, the ACT rule accounts for the fact that electric truck

technology is progressing faster for some vehicle classes than for others. Manufacturers can count extra sales from one vehicle type toward meeting the standards for another that might not be immediately suitable for electrification.

Technology, Infrastructure, Charging and Grid

Comment: Commentors recommend that the RI DEM takes steps to ensure that the necessary zero-emission truck recharging and hydrogen-refueling infrastructure is put in place in Rhode Island in advance of implementation of the ACT regulations. (2, 40)

Response: RI DEM acknowledges the need to establish charging infrastructure and is engaged with other state agencies to address the charging infrastructure plans in Rhode Island. RI DEM and state agencies are also active in leveraging funding from federal programs for charging that may help in this area such as the National Electric Vehicle Infrastructure (NEVI) program, the Diesel Emission Reduction Act (DERA), and the Charging and Fueling Infrastructure Grant Program (CFI). Additionally, The Northeast Medium- Heavy-Duty Vehicle (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. 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.

Comment: Commentors wrote that RI DEM failed to adequately investigate whether the electric grid can handle the significant increase in demand for electricity. (9, 24)

Response: RI DEM appreciates the concerns regarding grid reliability. Over the next decade, zero emission vehicles (ZEVs) are expected to add only a small amount of electricity demand to Rhode Island's grid. Our utilities are planning for the transition to electric vehicle charging. Right now, the electrical grid can handle the current electric vehicle charging demand and can continue to support it for at least the next five years. As we look to future years, the utilities are incorporating planning and building to ensure enough capacity is available to deliver energy to Rhode Island for all of our uses, including charging a growing fleet of electric vehicles. In addition, Rhode Island is committed to sourcing 100% of our energy from renewable sources by 2033, and these facilities, along with the greater power system in New England, are expected to generate the electricity that will need to be delivered on the grid. State agencies, along with policymakers are working collectively with utilities on implementing policies to encourage grid-friendly load growth.

Comment: Commentors wrote in strong opposition to the proposed amendments. Commentors suggest that the proposed regulations overlook the limitations of electric vehicles and the supporting infrastructure. Barriers these commentors highlighted are range anxiety, limited charging infrastructure, and higher upfront costs. Commentors also highlighted alternative technologies that the state should allow like hydrogen, new synthetic fuels, alternative fuels, and improvements to the internal combustion engine. (23, 25)

Response: RI DEM appreciates the feedback provided on the proposed amendments and recognizes concerns about charging infrastructure. The improvement of battery

technology is expected to mitigate range concerns in the near future, and with the phased-in approach, beginning with the 2027 model year, offers a gradual transition to electric vehicles to allow for infrastructure build-out. Regarding alternative technologies, RI DEM acknowledges and appreciates the perspective of citizens who advocate for a broader technological landscape in vehicle emissions regulations. The goal of introducing new regulations is not to replace the existing emissions controls but to further refine and enhance them considering recent technological advancements and environmental insights on the increased benefits of advanced technology vehicles. The regulation leaves open the possibility of additional technologies qualifying for ZEV credit and allows OEMs to provide testing and apply for certification for those vehicles. The proposed regulation is technology agnostic and leaves open the possibility that many technologies may fill the need for ZEVs.

Comment: Commentor suggests that Rhode Island should support and foster technological innovations in the transportation sector by embracing technology-neutral approaches to decarbonization and not limit its transportation sector planning to zero-emission vehicle technologies. (24)

Response: Regarding alternative technologies, RI DEM acknowledges and appreciates the perspective of organizations who advocate for a broader technological landscape in vehicle emissions regulations. The goal of introducing new regulations is not to replace the existing emissions controls but to further refine and enhance them considering recent technological advancements and environmental insights on the increased benefits of advanced technology vehicles. The regulation leaves open the possibility of additional technologies qualifying for ZEV credit and allows OEMs to provide testing and apply for certification for those vehicles. The proposed regulation is technology agnostic and leaves open the possibility that many technologies may fill the need for ZEVs.

Comment: Commentor expressed concerns regarding hydrogen fueling, stating that there are no hydrogen fueling stations in Rhode Island. The commentor suggests that major hydrogen production and distribution infrastructure would need to be put in place before fuel-cell electric vehicles (FCEV) would even be serviceable. (24)

Response: RI DEM acknowledges these comments regarding hydrogen fueling stations. A hydrogen fueling station was built in Providence but to RI DEM's knowledge is not currently operating. RI DEM is in full support of establishing hydrogen fueling infrastructure and promoting use of FCEVs. However, without the combined efforts of vehicle manufacturers, regional hydrogen suppliers, and increased availability of fuel cell vehicles in the New England area, it will be difficult to introduce these stations to Rhode Island.

Comment: Commentor expressed that Renewable Natural Gas (RNG) vehicles should be promoted in Rhode Island if emissions reductions are to occur in any reasonable timeframe. Stating that there is no one solution to the pressing environmental issues facing the transportation sector and highlighting the benefits of natural gas. Commentor suggests 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 and other clean fuels to be Rhode Island's immediate pathway to a zero-emission future. (39)

Response: RI DEM acknowledges and appreciates the perspective of organizations who advocate for a broader technological landscape in vehicle emissions regulations, but adopting a Clean Fuel Standard is outside of the scope of this regulation. RI DEM also recognizes the importance of low-carbon fuels within Rhode Island's strategies to decarbonize our transportation sector and meet state climate goals. However, these fuels are outside the scope of these proposed amendments. Section 177 of the federal Clean Air Act requires that if a state adopts California's motor vehicle emission standards, the standards must be "identical to the California standards." While vehicles using low-carbon fuels generally produce fewer harmful emissions, they still produce tailpipe pollution and are therefore not considered ZEVs.

Comment: Commentor expressed concerns regarding battery-electric vehicles (BEV) and fuel cell electric vehicles (FCEV) stating that neither is suitable for long-haul trucks. Stating that due to federal weight constraints for tractor trailers, that long-haul BEV trucks would lose 20% of payload capacity compared to a diesel truck and would need to stop multiple times to recharge, thus needing more workers to ensure MHD fleets charging needs are satisfied while complying with hours-of-service regulations. (24)

Response: RI DEM appreciates the concerns regarding long-haul BEV trucks. The proposed amendments to the regulation imposes requirements on vehicle manufacturers to produce and sell on-road ZEVs in Rhode Island and does not impose requirements on fleets to make EV purchases. Under the ACT regulation, new diesel heavy-duty trucks will continue to be available for sale in Rhode Island before and after 2035 while providing an increased choice for fleets when making decisions about what vehicle will best suit their needs. The ACT regulation includes flexibility for manufacturers to produce and sell new ZEVs into the market segments they deem to be most suitable for the products they manufacture, ensuring that manufacturers develop competitive ZEV products at price points that will meet fleet needs. Additionally, a recent study by the National Renewable Energy Laboratory (NREL) shows comparable load weight and range capacities for emerging BEV class 8 models, delivering a cost parity compared to ICE vehicles utilized for Freight or cargo hauling. The NREL study also suggests that total cost of ownership, (TCO) and hauling capacity will continue progressing as the technology improves. These studies suggest costs should decrease for shipped products.

Comment: Commentor expressed concerns on the length of charging time for long-haul battery electric trucks compared to re-fueling clean diesel trucks. (40)

Response: The RI DEM acknowledges the concerns surrounding length of time to charge electric trucks and recognizes that currently this is a barrier in electric truck adoption. As technology continues to improve for battery-electric vehicles, the range of travel between charges continues to lengthen. Additionally, fast chargers are becoming widely available throughout Rhode Island and the United States.

Fast chargers cut the length of charging time down significantly. Also, under the ACT regulation, new diesel heavy-duty trucks will continue to be available for sale in Rhode Island before and after 2035 while providing an increased choice for fleets when making decisions about what vehicle will best suit their needs. The ACT regulation includes flexibility for manufacturers to produce and sell new ZEVs into the market segments they deem to be most suitable for the products they manufacture, ensuring that manufacturers develop competitive ZEV products at price points that will meet fleet needs.

Additionally, The Northeast Medium- Heavy-Duty Vehicle (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. 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.

Incentives, Credits, and Affordability

Comment: Commentor did not oppose the proposed amendments but had several recommendations for a successful program. Association recommends the RI DEM needs to establish a coordinated and pooled ACT credit and banking program. (2)

Response: RI DEM acknowledges the need to establish a coordinated and pooled ACT credit banks and trading program and is already in the process of designing a such program, similar to that of light-duty vehicles with Northeast States for Coordinated Air Use Management (NESCAUM), California Air Resources Board (CARB), and other Section 177 States.

Comment: Commentors wrote on the need for incentives for the medium-heavy duty category of electric vehicles. (2, 12, 20, 40)

Response: RI DEM recognizes and appreciates the concerns regarding incentive programs. The RI DEM, other State agencies, and other Section 177 states are currently discussing potential incentive opportunities to minimize the additional costs associated with both the initial purchase of MHD ZEVs, as well as the necessary infrastructure. Federal programs addressing infrastructure and incentives would provide an optimal environment for ZEV deployment. To that end, RI DEM will monitor, participate, and coordinate with any Federal efforts to incentivize electric vehicle purchases and infrastructure in the MHD sector and the incorporation by reference of California's ACT regulation will not serve as a barrier to participation in future Federal funding opportunities.

Comment: Commentor highlighted their commitment to zero emission transportation technology but also commented with concerns for the short-term rental suppliers and how these amendments would impact rental truck owners. This company expressed concerns with the limited amount of grant opportunities and recommended the possibility of public funds to be counted towards compliance in the early years of the regulation. (8)

Response: RI DEM appreciates the concerns regarding the importance of grants and incentives. Many states see grant and incentive programs as an integral part of the clean transportation future. To remain competitive with these states, RI DEM will

continue to discuss, develop, and seek additional funding for these programs going forward. Additionally, RI DEM will continue to seek additional federal funding where possible including but not limited to the National Electric Vehicle Infrastructure (NEVI) program, the Diesel Emission Reduction Act (DERA), the Charging and Fueling Infrastructure Grant Program (CFI), the Climate Pollution Reduction Grants (CPRG), and other Inflation Reduction Grant (IRA) opportunities.

Comment: Commentor raised concerns on the cost of credits and how credit multipliers are factored in. (9)

Response: ACC II establishes emission standards for new vehicles. The price of ZEV credits is beyond the scope of this rulemaking and is determined largely by the vehicle manufacturers involved in the transaction and market factors. The price of ZEV credits may be obtained from vehicle manufacturer's public filings with the federal Security and Exchange Commission or through online searches. Also, the price of ZEV credits is independent of the retail price of vehicles. The purchase of ZEV credits is a compliance mechanism used by manufacturers at their option. Multiple factors impact the price of vehicles including the price and availability of raw materials and components, supply chain disruptions, labor contracts, taxes, and trade tariffs.

Comment: Commentors wrote in strong opposition to the proposed amendments suggesting that a shift towards electric vehicles will increase vehicle prices, making it unaffordable for low- and middle-income households to purchase new cars. Additionally pointing out that 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. (23, 25, 45)

Response: RI DEM acknowledges the feedback provided on the proposed amendments to the low-and zero-emission vehicle program and recognizes concerns about affordability. The proposed amendments to the regulations do not ban gas- and diesel-powered vehicles in Rhode Island, and gas- and diesel-powered vehicles can and still will be driven in Rhode Island beyond 2035. As for the affordability of electric vehicles, there are federal and state incentives and rebates available for purchasing electric vehicles to help with the upfront cost. Additionally, as seen in full benefit-cost analysis included in the notice of the proposed amendments, individual vehicle consumers, for most ZEVs in the program will see cost savings when considering the total cost of ownership when factoring in the reduced fuel/energy costs and repair and maintenance costs.

The proposed amendments aim to increase affordable access to ZEVs by providing an incentive for manufacturers to offer lower priced vehicles. This is especially important in the earlier years of the ACC II program when battery costs are higher. Incremental vehicle costs of ZEVs are anticipated to remain above the cost of conventional vehicle technology in the near term and through the first few years of the ACCII program. These higher costs are likely to be passed onto consumers and reflected in part or in whole in the price of new vehicles. Affordability of ZEVs, particularly the upfront vehicle price, is one of the biggest

barriers for consumers deciding on whether to purchase an electric vehicle over a traditionally gas-powered one. The ACCII program therefore includes a provision that a 2026 through 2028 model-year ZEV delivered for sale with an MSRP less than or equal to \$20,275 for passenger cars and less than or equal to \$26,670 for light-duty trucks can earn an additional 0.10 vehicle value under the ZEV regulation. The requirement for increasing new electric car sales will also increase the supply of used electric cars, which will also help to lower prices of used electric cars. Lower-income families will continue to have access to used vehicles that are both electric and conventional vehicles from which they can choose based on their driving needs and budget constraints.

Regarding the state's overall economic stability, RI DEM notes that significant steps were taken to measure the effect on state business as seen in the full benefit-cost analysis included in the notice of the proposed amendments.

Comment: Commentor expressed concerns with the cost of electric MHD vehicles, stating that they are more expensive than their internal combustion engine vehicles counterparts. (24)

Response: RI DEM acknowledges that a significant barrier to EV adoption *today* is the increased upfront cost of an EV compared to a conventional fossil-fuel powered vehicle. The proposed regulation itself doesn't require fleet operators or truck operators to purchase the vehicles, only manufacturers to sell an increasing percentage of them. Manufacturers sell trucks to trucking fleets who operate the vehicles and incur costs following the point of sale including taxes, fueling, maintenance, midlife costs, and registration fees. Adding electric trucks to their fleet will also cause fleets to incur costs relating to electric vehicle charging equipment, infrastructure, maintenance bay upgrades, workforce training, and other transitional costs.

Businesses are not required to purchase zero-emission trucks but may independently decide to do so. If a small business decides their operations are well suited for using zero-emission vehicles, they will likely be able to lower their total cost of ownership by taking advantage of the operational cost savings.

Operational cost savings are forecasted to outweigh the potential infrastructure and vehicle prices. Amortizing the vehicle and infrastructure investments will help with these companies' cash flow to realize positive cash flow shortly after purchase. Additionally, there are also several incentive programs available from the federal government that help to bring the upfront costs of EVs down to be comparable to conventional vehicles.

Comment: Commentor wrote that ZEVs are more expensive on average with concerns for the affordability for residents. (24)

Response: RI DEM appreciates the feedback provided on the proposed amendments and recognizes concerns about affordability. The proposed amendments to the low-and zero-emission vehicle program aims to increase affordable access to ZEVs by providing an incentive for manufacturers to offer lower priced vehicles. This is especially important in the earlier years of the ACC II program when battery costs are higher. Incremental vehicle costs of ZEVs are anticipated to remain above the

cost of conventional vehicle technology in the near term and through the first few years of the ACCII program. These higher costs are likely to be passed onto consumers and reflected in part or in whole in the price of new vehicles. Affordability of ZEVs, particularly the upfront vehicle price, is one of the biggest barriers for consumers deciding on whether to purchase an electric vehicle over a traditionally gas-powered one. The ACCII program therefore includes a provision that a 2026 through 2028 model-year ZEV delivered for sale with an MSRP less than or equal to \$20,275 for passenger cars and less than or equal to \$26,670 for light-duty trucks can earn an additional 0.10 vehicle value under the ZEV regulation. The requirement for increasing new electric car sales will also increase the supply of used electric cars, which will also help to lower prices of used electric cars. Lower-income families will continue to have access to used vehicles that are both electric and conventional vehicles from which they can choose based on their driving needs and budget constraints.

Legality

Comment: Commentors suggested that potential legal conflicts between the proposed amendments to the standards and federal statutes such as the Energy Policy Conservation Act (EPCA), the Clean Air Act (CAA), and the Energy Independence and Security Act (EISA) are present. These comments argue that California is preempted from adopting these rules because authority to regulate fuel economy is expressly given to the National Highway Traffic and Safety Administration (NHTSA) and not U.S. Environmental Protection Agency (EPA). Additionally stating that RI DEM's ACT rule is legally deficient because the EPA has not issued California a preemption waiver and thus Rhode Island may not lawfully adopt the ACT rule under the CAA. (9, 24)

Response: The California emission standards were adopted according to that state's administrative requirements and were analyzed to determine there is no conflict with federal statutes concerning the regulation of fuel economy, which is an authority reserved to NHTSA. The GHG provisions of the proposed emission standards expressly apply to parts of the vehicle for which both EPA and California have well established authority to regulate and for which EPA has previously granted waivers under section 209(b) of the CAA to California for the LEV II and LEV III standards. Also, RI DEM will not enforce the standards until California receives a waiver of preemption from EPA to implement the standards.

Comment: Commentors wrote that RI DEM failed to fully analyze the various options for reducing truck emission, choosing to simply adopt standards designed specifically for California without analyzing how the updates would impact Rhode Island residents. (9, 24)

Response: RI DEM acknowledges the concerns regarding accurately measuring the effect on state business and the economy. RI DEM notes that significant steps were taken to analyze the impact on Rhode Island as a result of these proposed amendments, and further that Rhode Island specific inputs were calculated, as seen in the full benefit-cost analysis included in the notice of the proposed amendments, which show

significant and positive economy wide effects as a result of adoption of the regulation.

Comment: Commentor wrote that RI DEM may not overlook Rhode Island’s administrative requirements for enacting new regulations, stating the RI DEM does not actually demonstrate that adopting these proposed amendments will control, i.e. reduce carbon dioxide emissions in total. (9)

Response: RI DEM notes that significant steps were taken to analyze the impact on Rhode Island by adopting the proposed amendments. The accompanying economic and scientific analysis evaluates, as required by law, the anticipated impacts (both environmental and economic) of the proposed regulation against a series of alternatives. In the case of this regulatory package, RI DEM evaluated the proposed regulatory amendments against the EPA’s current federal standards (which RI would adopt absent the decision to accept the proposed ACCII provisions), as well as against the proposed new federal EPA standards beginning with model year 2027. These comparisons speak directly to carbon dioxide reductions as part of the benefits calculations. Please refer to the RI DEM analysis for citations to the scientific and economic studies underpinning both the federal and RI-specific findings.

Minerals and Supply Chain

Comment: Commentors wrote that RI DEM has not considered the broader geopolitical context regarding a dependency on China and other foreign countries for minerals and metals to produce batteries. Stating that this risk is exacerbated by long supply chains and a reliance on geopolitical rivals who control those supply chains. (9, 24)

Response: RI DEM recognizes the concerns regarding mineral sourcing and potential supply chain issues. These specific issues are outside the scope of this rulemaking which adopts California’s updated motor vehicle emissions standards. For transparency and to address public interest in this topic, here is some information regarding mineral sourcing and the supply chain. Mining and processing operations are scaling up domestically in California and Idaho, and in nations and parties such as Canada, the EU, Australia, and elsewhere. Deep sea mining offers another source of key minerals for EV batteries that is less dependent on foreign nations. While China currently leads on processing raw metals and manufacturing battery cathodes and anodes, investments are being made globally to diversify supply chains.

Comment: Commentor wrote that significant environmental impacts arise from other aspects for the ZEV lifestyle including raw material acquisition and processing, battery production, transport, disposal and recycling. (24)

Response: RI DEM recognizes and acknowledges these concerns. The concerns surrounding battery mineral acquisition is outside of the scope of this rulemaking. Regarding battery recycling, there are several efforts underway to address this concern. Effective policies for EV battery recycling play a crucial role in ensuring the sustainability of the EV industry by managing the end-of-life disposal and recycling

of lithium-ion batteries. The landscape of EV battery recycling is evolving, and new companies and initiatives continue to emerge. Companies and policymakers are increasingly recognizing the importance of responsible battery disposal and recycling to reduce environmental impacts, conserve resources, and support the growth of the EV industry. Additionally, RI DEM notes that OEMs are responsible for sourcing materials for their vehicles and must meet all applicable federal standards regarding trade and material sourcing. Overall, the use of batteries and electric vehicles reduces emissions of criteria pollutants and GHGs when compared to conventional gasoline extraction and combustion.

Vehicle Specifics and Parts

Comment: Commentor expressed technical concerns with adopting in-use testing requirements 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. (13)

Response: Section 177 of the Clean Air Act requires that states must adopt standards identical to California's for a given weight class. Rhode Island is preempted from making certain modifications to California's rule. CARB determined it was technically feasible for all MDVs to meet this standard since Class 2b-3 chassis-certified MDVs often utilize the same engine as Class 3 engine-certified MDVs. Therefore, the same emission control technology package demonstrated in the Heavy-Duty (HD) Omnibus Low NOx rulemaking may be scaled for a medium-duty engine. Since the feasibility and applicability to engine-certified MDVs was previously demonstrated, CARB concluded that the same assessment of feasibility for chassis-certified MDVs was appropriate.

Comment: Commentor highlighted concerns regarding cold climate conditions significantly reducing battery range and efficiency of BEVs. (24)

Response: RI DEM acknowledges the concerns about Rhode Island's transition to electric vehicles and temperature extremes. According to the [NOAA state climate summary for RI](#), Rhode Island's average yearly temperatures is 50.8°. In Providence, average temperatures in July are around 74°F and in January about 29°F. Based on these temperature measures, an acceptable BEV performance of 80% or above can be expected for most of the year. Owner strategies to mitigate temperature extremes, such as keeping an EV plugged in or stored in a temperature-controlled garage during these events, can be one solution to addressing this concern. OEM advancements in EV battery performance are also expected to improve BEV performance in various temperatures in the coming years.

Comment: A commentor that supports moving forward with the proposed amendments, did want to address an area of concern related to the aftermarket parts, specifically catalytic converters. The company recommends that incorporating by reference California Title 13 CCR Section 2222 should be modified to clarify that its provisions related to aftermarket parts will become effective at the same time of the other provisions. Stating that 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. Additionally, commentor recommends that RI DEM hold meeting specifically with aftermarket stakeholders to discuss how to best facilitate this transition. (37)

Response: RI DEM appreciates the comments and notes that the proposed amendments only apply to new model year 2027 vehicles and beyond. Additionally, federally certified vehicles are not subject to this requirement. It appears the commentor mistakenly seems to think the regulation applies to earlier model years when it does not.

Revenue

Comment: Commentor was in support of the proposed amendments but did express concerns regarding a provision to replace the gas tax and expressed concerns for the weight of electric vehicles on the roadways. (15)

Response: RI DEM appreciates the support on the proposed amendments. Regarding the gas tax, RI DEM is working with other state agencies and engaging with peers across the nation as the state continues to navigate the lessening gas tax revenue. RI DEM acknowledges the higher weights of electric vehicles on the roadways.

Comment: Commentor was in support of the proposed amendments but did express concerns regarding a provision to replace the gas tax and expressed the need for a more robust push for public transit in Rhode Island. (21)

Response: RI DEM appreciates the support on the proposed amendments. Regarding the gas tax, RI DEM is working with other state agencies and engaging with peers across the nation as the state continues to navigate the lessening gas tax revenue. Urging Rhode Islanders to use public transit is beneficial but also outside the scope of this regulation.

Comment: Commentor wrote in opposition of proposed amendments. Commentor highlights concerns regarding the annual state sales tax revenue on new vehicles. (45)

Response: Regarding annual sales tax revenue, RI DEM appreciates the commentors consideration of the issue. The discussion of tax revenue is outside the scope of this rulemaking. The RI DEM did provide an estimate of revenue expectations in the fiscal note.

Decision

It is the decision of the Department to adopt the amended 250-RICR-120-05-37, “Rhode Island’s Low-Emission and Zero-Emission Vehicles Program” as indicated in response to the comments above. The final amended rule is appended to this Decision.

11/27/2023

Date

Laurie A. Grandchamp, P.E.
Administrator, Environmental Protection