

State of New Jersey Department of Environmental Protection

OFFICE OF THE COMMISSIONER 401 East State Street P.O. Box 402, Mail Code 401-07 Trenton, New Jersey 08625-0402 Tel. (609) 292-2084 • Fax (609) 292-1028 https://dep.ni.gov/airquality

SHAWN M. LATOURETTE Commissioner

PHILIP D. MURPHY

Governor

TAHESHA L. WAY Lt. Governor

October 7, 2024

Via SPeCs Honorable Lisa F. Garcia, Regional Administrator United States Environmental Protection Agency (USEPA), Region 2 290 Broadway New York, NY 10007-1866

RE: New Jersey Rule Adoptions and State Implementation Plan Revision: ACT, ACC II, Low NOx Omnibus, Medium Duty Diesel Inspection and Maintenance

Dear Regional Administrator Garcia,

Enclosed for your review and approval are several rules and rule amendments that have been adopted by New Jersey for inclusion to New Jersey's State Implementation Plan (SIP) for the attainment and maintenance of the National Ambient Air Quality Standards (NAAQS) for ozone. New Jersey has adopted several new rules which reduce greenhouse gas and criteria air pollutant emissions from onroad vehicles.

This SIP revision consists of the New Jersey's adoption of N.J.A.C. 7:27-31 Advanced Clean Trucks Program (ACT), 7:27-29A Advanced Clean Cars II Program (ACC II), 7:27-28A Model Year 2027 or Later Heavy-Duty New Engine and Vehicle Standards and Requirements (Omnibus), and amendments to N.J.A.C. 7:27-14 Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles regarding medium duty vehicle inspection and maintenance. These rulemakings will enable the State to continue its efforts to mitigate the impacts of climate change by reducing greenhouse gas emissions from the transportation sector, which constitutes the largest source of climate pollution in New Jersey. Equally important, the adopted rules will reduce emissions of oxides of nitrogen (NOx) and volatile organic compounds (VOCs), which contribute to ozone non-attainment, and particulate matter (PM).

<u>ACT - 7:27-31</u>

The adopted rulemaking incorporates by reference the State of California's Advanced Clean Trucks (ACT) regulation, which requires manufacturers of vehicles over 8,500 pounds gross vehicle weight rating (GVWR) to participate in a credit/deficit program intended to increase the percentage of zeroemission vehicles (ZEVs) sold in New Jersey. This regulation is intended to accelerate a large-scale transition to zero-emission medium and heavy-duty vehicles. Manufacturers are required to sell zeroemission trucks as an increasing percentage of their annual sales from 2025-2035. In addition, the adopted rulemaking requires a one-time reporting to enable the Department to obtain information that will inform future decisions concerning further emission reductions from the transportation sector. The reporting requirement applies to all public fleets in New Jersey with at least one vehicle over 8,500 pounds Gross Vehicle Weight Rating (GVWR) and private fleets with at least 50 vehicles or that have revenue over \$50 million and have at least one vehicle over 8,500 pounds. This rulemaking will enable the State to reduce emissions of carbon dioxide (CO2) oxides of nitrogen (NOx), and fine particulate matter (PM2.5) from the transportation sector. These new rules were adopted by the NJDEP on November 1, 2021, and became effective (published in the New Jersey Register) on December 20, 2021.

The rule proposal was published in the April 19, 2021, New Jersey Register. A virtual public hearing on this rulemaking was held on May 20, 2021, through the Department's video conferencing software, Microsoft Teams. Written comments relevant to the proposal were accepted until the close of business, June 18, 2021. All comments were addressed in the adoption which was published in the New Jersey Register on December 20, 2021. Amendments to clarify and update subchapters of 7:27-31 were later proposed in the August 21, 2023, New Jersey Register. Those amendments were adopted in the December 18, 2023, New Jersey Register.

ACC II - 7:27-29A

The adopted rulemaking incorporates by reference California's Advanced Clean Cars II (ACC II) regulation, which will require manufacturers of passenger cars and light-duty trucks to meet an annual zero-emission vehicle (ZEV) requirement intended to increase the percentage of ZEVs sold in New Jersey that meet the new minimum technical requirements. The ZEV component requires vehicle manufacturers to comply with an annual ZEV requirement that culminates in a 100% ZEV requirement in 2035. Beginning in 2027 and each subsequent year, a manufacturer must deliver for sale in New Jersey an increasing percentage of new ZEVs. In addition to the annual ZEV requirement, the ACC II regulation includes more stringent multi-pollutant exhaust emission standards that manufacturers of internal combustion engine passenger cars, light-duty trucks, and medium-duty vehicles must meet. In conjunction with the incorporation of California's ACC II program, the Department amended the penalty provisions at N.J.A.C. 7:27A-3.10 that correspond to the adopted rules at N.J.A.C. 7:27-29A, as well as amendments to the Low Emission Vehicle (LEV) program at N.J.A.C. 7:27-29. These new rules were adopted by the NJDEP on November 1, 2023, and became effective (published in the New Jersey Register) on December 18, 2023.

The rule proposal was published in the August 21, 2023, New Jersey Register. A virtual public hearing on this rulemaking was held on September 21, 2023, through the Department's video conferencing software, Microsoft Teams. Written comments relevant to the proposal were accepted until the close of business, October 20, 2023. All comments were addressed in the adoption which was published in the New Jersey Register on December 18, 2023.

<u>Omnibus – Model Year 2027 or Later Heavy-Duty Engine and Vehicle Standards and Requirements -</u> N.J.A.C. 7:27-28A

The adopted rulemaking incorporates by reference California's "Amendments to the Exhaust Emissions Standards and Test Procedures for 2024 and Subsequent Model Year Heavy-Duty Engines and Vehicles, Heavy-Duty On-Board Diagnostic System Requirements, Heavy-Duty In-Use Testing Program, Emissions Warranty Period and Useful Life Requirements, Emissions Warranty Information and Reporting Requirements, and Corrective Action Procedures, In-Use Emissions Data Reporting Requirements, and Phase 2 Heavy-Duty Greenhouse Gas Regulations, and Powertrain Test Procedures" (Low NOx Omnibus rules). The primary component of this rulemaking is the incorporation by reference of California's emission standards and supporting requirements for new model year 2027 and later gasoline and diesel engines and vehicles with a gross vehicle weight rating (GVWR) greater than 8,500 pounds. The Department adopted this rulemaking to ensure that any new gasoline- and diesel-powered vehicles rated in excess of 8,500 pounds GVWR sold in New Jersey will be subject to the most stringent emission standards that are technically feasible for nitrogen oxides and particulate matter. This rulemaking will enable the State to reduce emissions, including oxides of nitrogen (NOx) and particulate matter (PM), from heavy-duty vehicles. The reduction in NOx, PM, and other emissions that results from the adopted rules is also expected to improve New Jersey's overall air quality and particularly benefit local communities that are disproportionately impacted by heavy truck traffic, including some overburdened communities. These new rules were adopted by the NJDEP on April 21, 2023, and became effective (published in the New Jersey Register) on May 15, 2023.

In addition, this rulemaking repeals N.J.A.C. 7:27-28, Heavy-Duty Diesel New Engine Standards and Requirements Program, amends certain provisions at N.J.A.C. 7:27-14, Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles, and 15, Control and Prohibition of Air Pollution from Gasoline-Powered Motor Vehicles and clarifies that certain violations of N.J.A.C. 7:27-14 and 15 may be penalized pursuant to proposed new provisions at N.J.A.C. 7:27A-3.

The rule proposal was published in the November 7, 2022, New Jersey Register. A virtual public hearing on this rulemaking was held on December 8, 2022, through the Department's video conferencing software, Microsoft Teams. Written comments relevant to the proposal were accepted until the close of business, January 6, 2023. All comments were addressed in the adoption which was published in the New Jersey Register on May 15, 2023. Amendments to clarify and update subchapters of 7:27-28A were later proposed in the August 21, 2023, New Jersey Register. Those amendments were adopted in the December 18, 2023, New Jersey Register.

Medium Duty Diesel IM Amendments 7:27-14

The amendments at N.J.A.C. 7:27-14, Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles, harmonize the inspection test procedures and standards for diesel vehicles with a GVWR greater than 8,500 and less than 18,000 pounds with the existing inspection test procedures and standards for diesel buses and those for diesel trucks with a GVWR of 18,000 pounds or more. The amendments include an onboard diagnostic (OBD) inspection or smoke opacity test, which will help to ensure that the benefits of the more stringent emission standards are fully realized by alerting owners and operators to the need for necessary emission system repairs. Requiring inspections to be completed by trained and licensed inspectors at licensed inspection facilities will help to deter and identify vehicle tampering. The Department's other amendments at N.J.A.C. 7:27-14 and 15, and 7:27A-3, are for consistency among the air rules and clarification of the penalties for violations. These rule amendments were adopted by the NJDEP on April 21, 2023.

The amendment proposal was published in the November 7, 2022, New Jersey Register. A virtual public hearing on this rulemaking was held on December 8, 2022, through the Department's video conferencing software, Microsoft Teams. Written comments relevant to the proposal were accepted until the close of business, January 6, 2023. All comments were addressed in the adoption which was published in the New Jersey Register on May 15, 2023. Amendments to clarify and update subchapters of 7:27-15 were later proposed in the August 21, 2023, New Jersey Register. Those amendments were adopted in the December 18, 2023, New Jersey Register.

The NJDEP has enclosed courtesy copies of the rule proposals and rule adoptions. To obtain official versions of the rule proposal and rule adoption the New Jersey Office of Administrative Law and LexisNexis® provide free online public access to the New Jersey Register at: <u>New Jersey Register – Free Public Access | Main Page (lexis.com)</u>. To obtain an official version of the final rule see the New Jersey Administrative Code – Free Public Access | Main Page (lexis.com).

We appreciate the assistance your staff will provide in reviewing this SIP revision. If you or your staff has any questions, please contact Peg Hanna, Director, Division of Climate Change Mitigation and Monitoring, at (609) 292-5548.

Sincerely,

Shawn M. LaTourette Commissioner

Enclosures: Rule Proposals Rule Adoptions Public Notice Documentation

C (email letter only): Rick Ruvo, Director, Air and Radiation Division, USEPA Region 2 Kirk Wieber, Chief, Air Programs Branch, USEPA Region 2 Paul Baldauf, Assistant Commissioner, NJDEP Peg Hanna, Director, Division of Climate Change Mitigation and Monitoring, NJDEP Francis C. Steitz, Director, Division of Air Quality and Radiation Protection, NJDEP Kristina Miles, NJ Deputy Attorney General

AIR, ENERGY AND MATERIALS SUSTAINABILITY

DIVISION OF CLIMATE CHANGE MITIGATION AND MONITORING

Advanced Clean Cars II Program; Low Emission Vehicles; Diesel Powered Motor Vehicles;

Gasoline Powered Motor Vehicles; Model Year 2027 or Later Heavy-Duty New Engine and

Vehicle Standards and Requirements; Advanced Clean Trucks Program

Proposed Amendments: N.J.A.C. 7:27-14.1, 14.3, 15.1, 15.7, 28A.11, 29.2, 29.3, 29.4,

29.5, 29.6, 29.8, 31.3, and 31.4; and 7:27A-3.10

Proposed New Rules: N.J.A.C. 7:27-29A

Authorized By: Shawn M. LaTourette, Commissioner, Department of Environmental Protection.

Authority: N.J.S.A. 13:1B-3.e, 13:1D-9, 26:2C-1 et seq., particularly 26:2C-37 et seq., and

48:25-1 et seq.

Calendar Reference: See Summary below for explanation of exception to calendar requirement.

DEP Docket Number: 01-23-07.

Proposal Number: PRN 2023-083.

A **public hearing** concerning this notice of proposal and an attendant proposal to revise New Jersey's Federal Clean Air Act State Implementation Plan will be held on Thursday, September 21, 2023, at 9:30 A.M. The hearing will be conducted virtually through the Department of Environmental Protection's (Department) video conferencing software, Microsoft NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. Teams. A link to the virtual public hearing and a telephone call-in option will be provided on the

Department's website at <u>https://www.nj.gov/dep/rules/notices.html</u>.

Submit comments by close of business on October 20, 2023, electronically at

www.nj.gov/dep/rules/comments. Each comment should be identified by the applicable N.J.A.C.

citation, with the commenter's name and affiliation following the comment.

The Department encourages electronic submittal of comments. In the alternative,

comments may be submitted on paper to:

Alice A. Previte, Esq.

Attention: DEP Docket No. 01-23-07.

Office of Legal Affairs

New Jersey Department of Environmental Protection

401 East State Street, 7th Floor

Mail Code 401-04L

PO Box 402

Trenton, NJ 08625-0402

If you are interested in providing oral testimony or submitting written comments at the virtual public hearing, please email the Department at <u>monica.miranda@dep.nj.gov</u> no later than 5:00 P.M., September 19, 2023, with your contact information (name, organization, telephone number, and email address). You must provide a valid email address so the Department can send

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The proposed rulemaking will become operative 60 days after adoption by the Commissioner of the Department (see N.J.S.A. 26:2C-8). This notice of proposal may be viewed or downloaded from the Department's website at <u>www.nj.gov/dep/rules</u>.

The agency proposal follows:

Summary

As the Department has provided a 60-day comment period on this notice of proposal, this notice is excepted from the rulemaking calendar requirement pursuant to N.J.A.C. 1:30-3.3(a)5.

This proposed rulemaking represents a continuation of the Department's efforts to mitigate the impacts of climate change by reducing greenhouse gas emissions and short-lived climate pollutants. Emissions from the transportation sector constitute the largest source of climate pollution in New Jersey. The proposed rules will incorporate by reference California's Advanced Clean Cars II (ACC II) regulation, which will require manufacturers of passenger cars and light-duty trucks to meet an annual zero-emission vehicle (ZEV) requirement intended to increase the percentage of ZEVs sold in New Jersey that meet the new minimum technical NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. requirements. In addition to the annual ZEV requirement, the ACC II regulation includes more stringent multi-pollutant exhaust emission standards that manufacturers of internal combustion engine passenger cars, light-duty trucks, and medium-duty vehicles must meet. By increasing ZEV sales and the stringency of the multi-pollutant exhaust emission standards, the Department will reduce emissions of carbon dioxide (CO₂) and local air pollutants, like nitrogen oxides (NO_x) and fine particulate matter (PM2.5), from the transportation sector. In conjunction with the

proposed incorporation of California's ACC II program, the Department proposes amendments to

the penalty provisions at N.J.A.C. 7:27A-3.10 that correspond to the proposed new rules at

N.J.A.C. 7:27-29A, as well as amendments to the Low Emission Vehicle (LEV) program at

N.J.A.C. 7:27-29.

The Department is also proposing amendments to clarify and update several subchapters related to motor vehicles (N.J.A.C. 7:27-14, Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles, 7:27-15, Control and Prohibition of Air Pollution from Gasoline-Fueled Motor Vehicles, 7:27-28A, Model Year 2027 or Later Heavy-Duty New Engine and Vehicle Standards and Requirements, and 7:27-31, Advanced Clean Trucks Program).

The Department held stakeholder meetings on March 7, 13, 14, 20, 22, 23, and 28, and April 10 and 12, 2023, to discuss this proposed rulemaking. The public information meeting materials are available on the Department's website at <u>https://www.nj.gov/dep/njpact/</u>.

The portions of the Summary that follow are organized by topic; consequently, some provisions of the new rules, such as the definitions, may be discussed in several places in the Summary.

Advanced Clean Cars II Program: General

Pursuant to the Clean Air Act (CAA) (42 U.S.C. §§ 7401 et seq.), the State of California may enact stricter emission control standards for certain new motor vehicles and new motor vehicle engines, so long as California receives a waiver from the United States Environmental Protection Agency (EPA). See 42 U.S.C. § 7543. The CAA also authorizes qualifying states, like New Jersey, to adopt and enforce the same emission control standards for which California has received a waiver. See 42 U.S.C. § 7507. In 2006, the Department adopted California's Low Emission Vehicle (LEV) program at N.J.A.C. 7:27-29, which incorporated by reference California's more stringent emission control standards for all model year 2009 and subsequent passenger cars and light-duty trucks. The existing rules at N.J.A.C. 7:27-29 have two main components: (1) a ZEV requirement; and (2) multi-pollutant exhaust emission standards for internal combustion engine passenger cars, light-duty trucks, and medium-duty passenger vehicles.

Recently, California adopted the next phase of their emission control standards, the ACC II program, which includes the same two main components as the initial LEV program. California's ACC II program regulations will update the minimum technical requirements a ZEV NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. must meet to be certified by the California Air Resources Board (CARB) and will increase the

annual ZEV requirement incrementally until it peaks at 100 percent in model year 2035. Additionally, the ACC II program's multi-pollutant exhaust emission standards for internal combustion engines will require manufacturers to meet stricter standards for NO_x and PM emissions. The Department proposes to adopt the ACC II program at new N.J.A.C. 7:27-29A, making the rules at N.J.A.C. 7:27-29 obsolete after model year 2025. As discussed further below, California's ACC II program will begin with model year 2026, but the Department's new rules will be delayed at least one model year to ensure New Jersey has met the two-year lead time requirement at Section 177 of the Clean Air Act, 42 U.S.C. § 7505. Hence, there will be at least a one-year gap between the enforcement of the old program and the implementation of the ACC II program.

In 2007, New Jersey's Legislature passed the Global Warming Response Act (GWRA), N.J.S.A. 26:2C-37 et seq., which recognized that climate change, primarily caused by emissions of heat-trapping greenhouse gases, poses a threat to the Earth's ecosystems and environment. See N.J.S.A. 26:2C-38. Additionally, the Legislature acknowledged that reducing emissions of greenhouse gases was necessary to prevent further detrimental impacts on human, animal, and plant life. *Id.* A dozen years later, the Legislature amended the GWRA to require the State to develop programs to reduce emissions of both greenhouse gases and short-lived climate pollutants through a comprehensive strategy. See P.L. 2019, c. 197.

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In 2020, the Department released the GWRA 80x50 Report, which analyzed New

Jersey's emissions reductions, evaluated the plans for further reducing emissions, and presented a set of strategies across seven emission sectors for policymakers to consider in formulating legislation, rules, policies, and programs to ensure that New Jersey achieves the emission reduction goals set forth in the GWRA. See New Jersey Department of Environmental Protection, *New Jersey's Global Warming Response Act 80x50 Report*, October 15, 2020, Executive Summary p. v, <u>https://www.nj.gov/dep/climatechange/docs/nj-gwra-80x50-report-2020.pdf</u> (80x50 Report). Based upon the estimates contained in the 2022 Mid-Cycle Update of the New Jersey Statewide Emissions Inventory Report, 34.6 MMT of the State's total 91.0 MMT of CO₂e emissions were attributed to the transportation sector. See New Jersey Greenhouse Gas Inventory 2022 Mid-Cycle Update Report (December 2022), p. 4, <u>https://dep.nj.gov/ghg/nj-ghg-inventory/</u>.

In 2020, the Department also released its Report on Climate Change, which observed that the public health and environmental concerns associated with ozone pollution are heightened because of the interaction between climate change and air quality. See New Jersey Department of Environmental Protection, New Jersey Scientific Report on Climate Change, June 2020, p. 61, <u>https://www.nj.gov/dep/climatechange/docs/nj-scientific-report-2020.pdf</u> (2020 Report on Climate Change). High temperatures, ample sunshine, and stagnant air masses are conducive to high ground-level ozone (ozone) levels. *Ibid*. And though precursor emissions may decrease,

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due to a warming climate. Id. at 62.

As indicated in the Department's climate reports, mitigating the impacts of climate change will require reductions in pollutants that directly contribute to climate change (such as greenhouse gases and short-lived climate pollutants), and reductions in pollutants, such as NO_x emissions (which are a precursor of ground-level ozone), as well as PM2.5. The Department is proposing to incorporate by reference California's ACC II regulation, not only because the regulation will reduce emissions of greenhouse gases by furthering the goal of increased electrification of the transportation sector, but also because it will further the goal of mitigating the impacts that climate change and pollutants, such as NO_x emissions have on air quality and public health by requiring manufacturers of new internal combustion engine passenger cars, light-duty trucks, and medium-duty vehicles to comply with the more stringent California multipollutant exhaust emission standards.

Advanced Clean Cars II: ZEV Obligations

Overview of the Annual ZEV Requirement, 13 CCR 1962.4

One of the two main components of CARB's ACC II program is an annual ZEV requirement for manufacturers of passenger cars and light-duty trucks. Generally speaking, a ZEV is any vehicle that produces zero exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas under any possible operational mode or condition. 13 CCR 1962.4. Battery electric vehicles (BEVs) and fuel cell electric vehicles (FCEVs) meet the definition of a

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can be defined as a ZEV. Rather, the ACC II program requires a manufacturer to meet its annual ZEV requirement using vehicles that meet the minimum technical requirements (qualifying ZEVs) set forth in the regulation. To calculate their annual ZEV requirement, a manufacturer of passenger cars and light-duty trucks must multiply the applicable ZEV percentage requirement by the manufacturer's production volume in a given model year, which is expressed in whole vehicles. CARB's regulation sets forth the two methods that a manufacturer may use to determine production volume, which is based on the total number of passenger cars and lightduty trucks produced and delivered for sale using either a three-year average or the given model year numbers. Once the annual ZEV requirement is determined, a manufacturer must use "vehicle values" to satisfy its obligation. Generally speaking, a single vehicle value is generated by the production and delivery for sale of a single qualifying ZEV or a qualifying plug-in hybrid electric vehicle (PHEV), which is a vehicle that uses both battery-powered electricity and another fuel, such as gasoline or diesel. A manufacturer may produce and sell its own qualifying ZEVs or PHEVs to generate the vehicle values necessary to meet its annual ZEV requirement, purchase or trade surplus vehicle values generated by another manufacturer, or use its own banked values. The percentage of production volume used to calculate a manufacturer's annual ZEV requirement increases annually through model year 2035 when the ZEV percentage requirement equals 100 percent of a manufacturer's production volume.

The annual ZEV requirement of California's ACC II program begins with model year

2026 for most manufacturers, but small volume manufacturers are not required to comply with the annual ZEV requirement until model year 2035. The ACC II program has a number of flexibilities built into the regulation. Broadly speaking, there are seven primary flexibility options. First, a manufacturer may use banked ZEV values to satisfy its annual ZEV requirement. Pursuant to the ACC II program, banking may include "credits" that were earned under prior versions of the ZEV requirement, since the ACC II program allows the conversion of some historical credits to values or partial values, as well as excess credits earned during the model years covered by ACC II. Second, a manufacturer may pool its values by over-complying with its annual ZEV requirement in one state and using the excess values to satisfy its annual ZEV requirement in another state. Third, a manufacturer that produces fuel cell electric vehicles (FCEV) for sale in California, or in a state that has adopted California's ACC II program, can receive extra values based on percentage of sales volume of the manufacturer's FCEV sales in the state where they sell the most FCEVs (known as the "annual proportional FCEV allowance"). There are, however, limits on these first three options: (1) each option is capped in terms of the number of values a manufacturer may use to satisfy its annual ZEV requirement; and (2) the pooled, proportional, and historical credits that are converted to values are available to be used only through model year 2030.

Fourth, a manufacturer may earn a partial vehicle value for the manufacture and sale of a PHEV that does not meet the minimum standards for a full ZEV value. Fifth, a manufacturer

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environmental justice program options. Though the PHEV and environmental justice value options are available to manufacturers, the regulation caps the total number of values a manufacturer may earn in this manner, and limits the option to certain model years specified at 13 CCR 1962.4. Sixth, a manufacturer may earn early compliance vehicle values. Like the partial vehicle value opportunities, the early compliance vehicle values are capped and may only be used during specified model years. Finally, a manufacturer participating in the ACC II program in more than one state may trade ZEV values with other manufacturers who are subject to the annual ZEV requirement in those states.

Pursuant to the ACC II program, a manufacturer's annual percentage requirement begins at 35 percent of that manufacturer's production volume in model year 2026 and increases each year until it peaks at 100 percent of the manufacturer's production volume for model year 2035 and later. The ACC II program's annual ZEV requirement for model years 2026 through 2035 or later is shown in Table 1 below:

Model Year	Percentage Requirement
2026	35%
2027	43%
2028	51%
2029	59%

2030	68%
2031	76%
2032	82%
2033	88%
2034	94%
2035 or later	100%

ZEV: N.J.A.C. 7:27-29A.2, Purpose and Applicability

Pursuant to 13 CCR 1962.4, the ACC II program's annual ZEV requirements apply to any vehicle manufacturer that produces and delivers for sale passenger cars and light-duty trucks in California in 2026 and subsequent model years. Proposed N.J.A.C. 7:27-29A.2, Purpose and applicability, indicates the Department's intent to establish California's ACC II program in New Jersey by incorporating the California regulations by reference. However, the Department proposes to delay the applicability of the rules to ensure that the rules comply with the two-year lead time requirement at Section 177 of the Clean Air Act, 42 U.S.C. § 7505. Therefore, proposed N.J.A.C. 7:27-29A.2, establishes applicability for model year 2027 or later passenger cars and light-duty trucks delivered for sale in New Jersey on or after January 1, 2027. The percentage requirement used to calculate a manufacturer's annual ZEV requirement in New Jersey will begin at 43 percent in model year 2027 (see Table 1 above). In the event that the proposed rules are not adopted in time to be operative on or before January 1, 2024 (and,

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apply beginning with model year 2028 when the annual percentage requirement is 51 percent. Even though the operative date of the annual ZEV requirement in New Jersey will be delayed, the model years applicable to the flexibilities described above will remain unchanged with the exception of the early compliance flexibility, which is not tied to a particular year, but provides that manufacturers may earn early compliance values for two model years prior to commencement of the annual ZEV sales requirements. In New Jersey, the two model years prior to commencement of the ZEV requirement are expected to be 2025 and 2026. The proposed rules will not be enforceable in New Jersey unless or until such time as California receives a waiver from the EPA, pursuant to 42 U.S.C. § 7543, as published in the Federal Register, for the applicable engine standard, vehicle standard, or other emission requirement.

The proposed rules also incorporate by reference CARB's exemptions for emergency vehicles and military tactical vehicles. In order to emphasize that these vehicles are not subject to the rules, the Department proposes to repeat the exemption at N.J.A.C. 7:27-29A.2(d). *ZEV: Fees, N.J.A.C.* 7:27-29A.4

The Department proposes to charge each intermediate volume and large volume manufacturer an annual fee of \$0.50 per vehicle for each passenger car, light-duty truck, and medium-duty vehicle delivered for sale in New Jersey on and after January 1, 2026. The fee will cover the Department's anticipated costs associated with verifying vehicle values that

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In order that the Department can determine the number of vehicles to which the fee applies, the proposed rules require each intermediate and large volume vehicle manufacturer to report to the Department their production volume for each calendar year. The report is due by March of the succeeding year. The Department will notify each manufacturer how much it is

required to pay. Payment is due 30 days after the manufacturer receives the Department's notice. If a manufacturer does not comply with the proposed fee rules for payment, the manufacture will not be eligible to earn, deposit, use, or acquire vehicle equivalent or values until it fully complies. Vehicle equivalent values are discussed below.

ZEV: N.J.A.C. 7:27-29A.7 Incorporation by Reference

As noted above, the Department is incorporating California's ACC II regulation by reference. Proposed N.J.A.C. 7:27-29A.7, Incorporation by reference, identifies the specific provisions of the CCR and California vehicle code that are to be incorporated by reference into this new subchapter, as well as the minor language changes necessary to effectively implement the program in New Jersey. To maintain consistency with the relevant provisions of the CCR, proposed N.J.A.C. 7:27-29A.7 dictates prospective incorporation by reference of the provisions of the CCR and California vehicle code. This means that all amendments, supplements, repeals, or other changes to those provisions that California makes to the incorporated rule shall also be

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intends that when an applicable provision of the CCR or California vehicle code is incorporated by reference, the incorporation includes all documents and notes associated with that provision, unless specifically excluded by the Department's rules. Equally important, proposed N.J.A.C. 7:27-29A.7 provides that if there is an inconsistency between the New Jersey rules and the California rules or code incorporated by reference, the California rules or code control. Of course, the incorporation by reference of the provisions of the California regulation or code does not affect the Department's authority to enforce any other State requirements.

As set forth at proposed N.J.A.C. 7:27-29A.7(f) and (g), the Department proposes to replace certain California-specific terms in the CCR and California Vehicle Code with New Jersey-specific terms, unless the context clearly indicates it would be inappropriate or this subchapter specifies otherwise. Additionally, at N.J.A.C. 7:27-29A.7(g), the Department proposes to eliminate the references to the California Health and Safety sections pertaining to the community-based mobility programs. As will be described in greater detail below, the Department proposes to use New Jersey-specific criteria to determine whether to approve a community-based mobility program.

The Minimum Technical Requirements a Vehicle Model Must Meet to be Certified for One Vehicle Value, 13 CCR 1962.2 through 1962.8, 1968.1, 1968.2, 1968.5, and 1969

The Department proposes to incorporate by reference 13 CCR 1962.2 through 1962.8, 1968.1, 1968.2, 1968.5, and 1969. These sections describe the minimum technical requirements

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can be counted as a single vehicle value, a manufacturer may use PHEV sales to satisfy only 20

percent of its annual ZEV requirement.

Each of the minimum requirements a ZEV or PHEV must meet to be certified by CARB as satisfying a single vehicle value are described below:

Range Value and Durability for ZEVs, 13 CCR 1962.4

Generally speaking, range value is the number of miles a battery or plug-in hybrid electric vehicle can travel on a single battery charge. The minimum certification range value of a ZEV must be greater than or equal to 200 miles if it is to qualify as one vehicle value, as provided at 13 CCR 1962.4. Additionally, 13 CCR 1962.4 outlines the minimum durability requirements for a ZEV to qualify as one vehicle value. For model years 2026 through 2029, a ZEV must maintain 70 percent of its range value for a useful life of 10 years or 150,000 miles, whichever occurs first. As an example, a new model year 2026 vehicle with a CARB-certified range value of 200 miles must maintain a range value of 140 miles during its useful life. For model years 2030 or later, a ZEV must maintain 80 percent of its range value for a useful life of 10 years or 150,000 miles,

Range Value and Useful Life for PHEV, 13 CCR 1962.4

ACC II requires a PHEV to have a certified range value of greater than or equal to 70 miles and a minimum all-electric range value greater than or equal to 40 miles using the US06

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hybrid can run on battery or an internal combustion engine, a PHEV's internal combustion engine must be certified to full useful life for super ultra-low-emission-vehicle 30 (SULEV30) or lower exhaust emission standards for passenger cars and light-duty trucks to qualify as a single vehicle value.

Battery Labeling Requirements for ZEV and PHEV, 13 CCR 1962.6

Both ZEVs and PHEVs must meet the battery labeling requirements at 13 CCR 1962.6 to qualify as a single vehicle value. The labeling requirements for the batteries are intended to better facilitate battery reuse and recycling by specifying the information that must be included on a battery's label, the location of the label, and the format of the label. This provision also includes data reporting requirements that will assist in the reuse and recycling of batteries.

Warranty and recall requirements for ZEV and PHEV, 13 CCR 1962.7 and 1962.8

To qualify as a single vehicle value, ZEVs and PHEVs must meet the warranty and recall requirements at 13 CCR 1962.7 and 1962.8. These provisions require manufacturers of ZEVs and PHEVs to provide warranties and ensure that those manufacturers will be subject to mandatory recalls. Warranty and recall requirements have been imposed on manufacturers of internal combustion engine vehicles for decades, but this is the first time CARB has required minimum warranty requirements for ZEVs. Although the Department is incorporating the warranty provisions by reference through proposed N.J.A.C. 7:27-29A.7, proposed N.J.A.C. 7:27-29A.5 clarifies that when a covered vehicle is sold to a purchaser in New Jersey, the

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CARB.

Service Information Requirements for ZEV and PHEV, 13 CCR 1969

For a ZEV or PHEV to qualify as a single vehicle value, manufacturers are required to provide the service information specified at 13 CCR 1969. Vehicle and engine manufacturers must make available for purchase all emission-related motor vehicle information and emissionrelated engine information that is provided to the motor vehicle manufacturer's or engine manufacturer's franchised dealerships or authorized service networks for the engine or vehicle models they have certified in the California. The manufacturers must make available for purchase all emission-related motor vehicle information and emission-related engine information that is provided to the motor vehicle manufacturer's franchised dealerships or authorized service networks for the engine information that is provided to the motor vehicle manufacturer's or engine manufacturer's franchised dealerships or authorized service networks for the engine or vehicle for sale to New Jersey.

Charging Requirements for ZEV and PHEV, 13 CCR 1962.3

To qualify as a single vehicle value, ZEVs and PHEVs must meet the minimum charging requirements at 13 CCR 1962.3. This provision sets forth minimum requirements for charging

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requirements, and charging capabilities.

Data Standardization, and Malfunction and Diagnostic System Requirements for

ZEVs and PHEVs, 13 CCR 1962.5, 1968.1, 1968.2, and 1968.5

To qualify as a single vehicle value, ZEVs and PHEVs must meet certain data standardization and malfunction and diagnostic system requirements specified at 13 CCR 1962.5, 1968.1, 1968.2, and 1968.5. These sections describe the technical requirements for electronic interface (that is, on board diagnostics or OBD) with internal combustion engine vehicles and zero emission vehicles, as well as standards for indicating a malfunction (for example, check engine light).

Additional Allowances that May Count Toward an Annual ZEV Requirement, 13 CCR 1962.4

As described above, the ACC II program includes an annual ZEV requirement for manufacturers of passenger cars and light-duty trucks. Generally, a manufacturer's annual ZEV requirement must be satisfied using vehicle values where the sale of one qualifying ZEV or PHEV is equal to one vehicle value. However, CARB included some flexibilities in the ACC II program to help manufacturers meet their obligations with partial credits. Though the annual ZEV requirements in New Jersey are expected to be implemented in New Jersey one year later than the annual ZEV requirements in California, the model years tied to the flexibilities set forth in California's regulation will be the same in New Jersey, with the exception of the early compliance flexibility option, as further described below.

A model year 2026 through 2028 PHEV that does not qualify for a whole vehicle value may qualify for partial vehicle value pursuant to 13 CCR 1962.4. The amount of the partial vehicle value is calculated in proportion to the certification range value of the PHEV. Only 20 percent of a manufacturer's ZEV requirement may be met by a manufacturer selling PHEVs. The 20 percent includes PHEVs that qualify as a whole vehicle value, as described above, as well as those PHEVs that qualify as a partial vehicle value.

Environmental Justice Vehicle Values

For qualifying 2024 through 2031 model year ZEVs and PHEVs, vehicle manufacturers may earn additional vehicle values by participating in one or more environmental justice flexibilities. These flexibilities include three options: community-based clean mobility programs, new ZEVs and PHEVs offered at low MSRP, and vehicles sold at the end of lease to participating dealerships.

Community-Based Clean Mobility Programs

Manufacturers may earn an additional 0.50 vehicle value for a ZEV or an additional 0.40 vehicle value for a PHEV sold to a qualifying community-based clean mobility program, as long as the vehicle is sold at a minimum 25 percent discount from the manufacturer's suggested retail price (MSRP).

The CCR provisions incorporated by reference define a community-based clean mobility program as a program that: 1) provides access to clean mobility solutions other than vehicle

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mile/last-mile services; 2) serves a community in which at least 75 percent of the census tracts in the project area (where community residents live and services operate) are a disadvantaged community, as defined in California by Health and Safety Code section 39711, a low-income community as defined in California by Health and Safety Code section 39713, or a tribal community regardless of Federal recognition; and 3) is implemented by a community-based organization, Native American Tribal government regardless of Federal recognition, or a public agency or nonprofit organization that has received a letter of support from a project-related community-based organization or local community group that represents community members that will be impacted by the project or has a service background related to the type of project. 13 CCR 1962.4(l).

California's definitions for "disadvantaged community" and "low-income community" are based on provisions in the California Health and Safety Code. The Department proposes to replace the references to the California Health and Safety Code provisions in order to apply New Jersey-specific determinations based on the State's unique socio-economic and environmental conditions. Pursuant to N.J.A.C. 7:27-29A.7(g), Incorporation by reference, the Department proposes to replace the "disadvantaged community" language in the CCR with "overburdened community subject to adverse cumulative stressors, as determined by the Department pursuant to N.J.A.C. 7:1C." Similarly, the Department proposes to replace the "low-income community" language with "a low-income community where at least 35 percent of the households qualify as

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replacement language refers to the Department's recently adopted Environmental Justice rules.

Vehicles Sold at the End of Lease to Participating Dealerships

For each model year 2026 through model year 2031 ZEV or PHEV with an MSRP less than or equal to \$40,000 that was originally leased in New Jersey and sold at end of the lease to a dealership participating in a financial assistance program, a manufacturer may earn a total 0.25 partial vehicle value. When a PHEV or ZEV is sold to a participating dealership, an initial 0.10 vehicle value is earned. If, and when, that ZEV or PHEV is subsequently purchased by a financial assistance program participant during the calendar years 2026 through 2031, the manufacturer earns an additional 0.15 vehicle value.

California defines a financial assistance program as "a vehicle purchase incentive program where approved dealerships accept a point-of-sale incentive for used ZEVs and PHEVs for lower-income consumers." 13 CCR 1962.4(l). As yet there are no approved dealerships; however, the State will need to develop a process to approve New Jersey dealerships that wish to participate in a financial assistance program pursuant to ACC II.

New ZEVs and PHEVs Offered at Low MSRP

Manufacturers of ZEVs and PHEVs may earn an additional 0.10 vehicle value for 2026 through 2028 model year vehicles that have an MSRP of \$20,275 or less for passenger cars and \$26,670 or less for light-duty trucks. The dollar amount of the maximum MSRP is adjusted annually based on the Consumer Price Index (CPI).

Limitations Applicable to All Three Environmental Justice Flexibility Options

In order to ensure that emission reductions take place in environmental justice communities, any additional vehicle values secured using environmental justice flexibilities must be applied in the state in which they were earned and may not be transferred to another state that has adopted California's emission standards pursuant to Section 177 of the CAA (a "Section 177 state"). Manufacturers may use environmental justice flexibilities to offset no more than five percent of their annual ZEV requirement.

Early Compliance Vehicle Values

Pursuant to the ACC II program, manufacturers may earn additional vehicle values by selling qualifying vehicles ahead of the required California schedule. California allows early value generation for two model years prior to commencement of the annual ZEV requirements. If New Jersey's annual ZEV requirement begins in model year 2027, manufacturers would be able to earn and bank early compliance values for model years 2025 and 2026. Manufacturers may apply early compliance values against their annual ZEV requirement for the first three model years of the requirement. For New Jersey, this would mean manufacturers could use the early compliance values they banked to satisfy their annual ZEV requirements for model years 2027, 2028, and 2029.

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As discussed above, the ACC II regulation has a number of flexibilities built in to allow a manufacturer to meet a potential shortfall based on annual variability in sales while still making progress on overall sales. Specifically, in any model year a manufacturer may bank excess values earned by exceeding the annual ZEV sales requirement in one model year and apply those values to a future model year's annual ZEV requirement.

In the ACC II regulation, California has chosen to use the term "vehicle value" when discussing a manufacturer's obligation to satisfy its annual ZEV requirement, whereas previous California regulations (including LEV) referred to "credits" when describing a manufacturer's ZEV requirement. Pursuant to ACC II, a manufacturer may convert its historical "credits" to "values" and bank those credits to satisfy its annual ZEV requirement in model years 2026 through 2030. In addition, through model year 2030 manufacturers will also be permitted to pool their credits by transferring excess values earned in California, or a Section 177 state to satisfy value deficits in California or a Section 177 state. These early model year flexibilities will be important as manufacturers work to deploy a greater number of qualifying ZEV models and increase the number of ZEV sales pursuant to the ACC II program requirements.

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Combustion Engine Passenger Car, Light-Duty Truck, and Medium-Duty Vehicles

Overview of the Multi-pollutant Exhaust Emission Standards for Internal Combustion Engine Passenger Car, Light-duty Truck, and Medium-duty Vehicles, 13 CCR 1956.8, 1960.1, 1961, 1961.1, 1961.2, 1961.3, 1961.4

The second of the two main components of CARB's ACC II program is the development of more stringent multi-pollutant exhaust emission standards for internal combustion engine passenger cars, light-duty trucks, and medium-duty vehicles. For instance, the ACC II program does not allow manufacturers to use a fleet average that includes ZEVs or PHEVs to meet the NO_x emission standard, and manufacturers must be able to meet a lower particulate matter emission standard. Further, the ACC II program requires these more stringent standards be met under a more aggressive driving cycle for some vehicle types. By increasing the stringency, the ACC II program ensures that the internal combustion engine passenger cars, light-duty trucks, and medium-duty vehicles sold in model year 2026 or later (model year 2027 or later in New Jersey) will meet the most stringent but technologically feasible exhaust emission standards. *Multi-pollutant Exhaust Emission Standards: N.J.A.C.* 7:27-29A.2, Purpose and Applicability, and 29A.3, Requirements for Vehicle Transactions, 13 CCR 1956.8, 1960.1, 1961, 1961.1, 1961.2, 1961.3, and 1961.4

Pursuant to 13 CCR 1962.4, the ACC II program's multi-pollutant exhaust emission standards apply to any vehicle manufacturer who produces and delivers for sale model year 2026

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discussed above, the Department proposes to delay the applicability of the rules. Thus, the multi-pollutant exhaust emission standards would apply to model year 2027 or later internal combustion engine passenger cars, light-duty trucks, and medium-duty vehicles delivered for sale in New Jersey on or after January 1, 2027. In the event that the adoption of these rules is not finalized in order to be operative by January 1, 2027, the Department will modify the rules upon adoption to commence with model year 2028.

Pursuant to proposed N.J.A.C. 7:27-29A.3, Requirements for vehicle transactions, individuals and businesses would generally be prohibited from selling, leasing, importing, delivering, purchasing, acquiring, registering, receiving, or otherwise transferring new, 2027 or later model year passenger cars, light-duty trucks, or medium-duty vehicles unless the vehicles have been certified to meet the standards proposed to be incorporated by reference. This requirement affects only new vehicles and does not impact the sale, trade, ownership, or operation of used vehicles in New Jersey. A vehicle with an odometer reading of 7,500 miles or more is presumed to have been transferred to an ultimate purchaser. This provision is included because the Department does not consider a vehicle with more than 7,500 miles on the odometer to be "new," and such vehicles, therefore, would not be subject to the proposed subchapter. Unless it is covered by one of the exclusions or exemptions, a vehicle with fewer than 7,500 miles on the odometer and that transferred into New Jersey for sale would be subject to the proposed subchapter.

Although new 2027 or later model year passenger cars, light-duty trucks, or medium-duty

vehicles must meet California certification requirements, the Department is proposing a list of exceptions to allow for the acquisition or transfer of vehicles in limited situations that are beyond vehicle owners' control or to which the certification requirements do not apply. Examples of the exemptions include, but are not limited to, vehicles sold for the purpose of being dismantled, vehicles transferred by court decree, and vehicles that are leased to the general public but are operated primarily outside of New Jersey. As discussed previously, emergency vehicles and military tactical vehicles are exempt from California emission requirements.

Finally, the Department is proposing, at N.J.A.C. 7:27-29A.3, to make it clear that new model year 2026 vehicles produced and delivered for sale in New Jersey after December 31, 2025, and before January 1, 2027, do not need to be certified to meet the ACC II program's standards. Although the vehicles would be required to be certified in order to be produced and delivered for sale in California, the proposed rules would apply in New Jersey to model year 2027 or later motor vehicles produced and delivered for sale in New Jersey on or after January 1, 2027. In the event that the adoption of these rules is not finalized in order to be operative by January 1, 2027, the Department will modify the rules upon adoption to commence with model year 2028. All vehicles sold in New Jersey must be certified to meet the Federal emission standards.

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As discussed above in the section on ZEVs, proposed N.J.A.C. 7:27-29A.7, Incorporation by reference, identifies the specific provisions of the CCR and California vehicle code that the Department proposes to incorporate by reference into this new subchapter, as well as the minor language changes necessary to effectively implement the program in New Jersey. The discussion of proposed N.J.A.C. 7:27-29A.7 above related to those provisions that applied to ZEVs. Below is a description of the sections of CCR and California Vehicle Code incorporated by reference that pertain to the multi-pollutant exhaust emission standard provisions of the ACC II program:

- 13 CCR 1956.8(g) and (h), 1960.1, 1961, 1961.1 through 1961.4, which prescribe exhaust emission standards and test procedures for passenger cars, light-duty trucks, and medium-duty vehicles, generally. California updated sections 1961.2 and 1961.3 and added section 1961.4 as part of the ACC II program;
- 13 CCR 1962.5, 1968.1, 1968.2, 1968.5, which describe the technical requirements for electronic interface (that is, OBD) with both internal combustion engine vehicles and zero emission vehicles, as well as standards for indicating a malfunction (for example, "check engine light"). California added section 1962.5 and updated section 1968.2 as part of the ACC II program;
- 13 CCR 1965, which prescribes emission control labels applied to vehicles, detailing what emission control devices are present and the vehicle's emissions

certification category. California updated section 1965 as part of the ACC II

program;

- 13 CCR 1969, which requires vehicle and engine manufacturers to make available for purchase all emission-related motor vehicle information and emission-related engine information that is provided to the motor vehicle manufacturer's or engine manufacturer's franchised dealerships or authorized service networks for the engine or vehicle models they have certified in California. Section 1969 has been updated by California as part of the ACC II program;
- 13 CCR 1976 and 1978, which revise the evaporative and refueling emission standards for new, model year 2027 or later passenger cars, light-duty trucks, and medium-duty vehicles. California updated sections 1976 and 1978 as part of the ACC II program;
- 13 CCR 2035 through 2041, and 2046, which describe the warranty requirements for emission control systems on internal combustion engine vehicles. California updated sections 2037 and 2038 as part of the ACC II program;
- 13 CCR 2062, which specifies test procedures manufacturers must apply during vehicle production;
- 13 CCR 2101, 2109, and 2110, which describe how California may require vehicles be provided to them by the manufacturer for compliance testing and how recalls and remedial actions are processed if defects are discovered;

• 13 CCR 2111 through 2121, which detail procedures for voluntary and influenced

vehicle recalls. California updated Section 2112 as part of the ACC II program;

- 13 CCR 2122 through 2133, and 2135, which detail procedures for ordered vehicle recalls;
- 13 CCR 2136 through 2140, which describe in-use vehicle enforcement test procedures. California updated sections 2139 and 2140 as part of the ACC II program;
- 13 CCR 2141 through 2149, which detail how manufacturers may report failures of emission-related controls and components. California updated section 2147 as part of the ACC II program;
- 13 CCR 2150 and 2151, which give California the right to observe vehicle assembly lines and inspect new vehicles at dealerships to ascertain compliance with emission requirements;
- 13 CCR 2221 and 2222, which require that emission-related replacement parts used to repair vehicles perform in compliance with emissions standards and that aftermarket, add-on, or modified parts be certified by CARB for their application. This section has specific requirements for catalytic converters and diesel particulate filters and prohibits used, recycled, remanufactured, refurbished, or salvaged catalytic converters and diesel particulate filters from use;

- 13 CCR 2235, which requires that vehicles comply with California's requirements for fuel tank fill pipes; and
- California Vehicle Code Sections 27156.2 and 27156.3, which define emergency vehicles that are exempt from vehicle emission standards.

As discussed above in the discussion of incorporation by reference related to ZEVs, in order to implement the ACC II program in New Jersey, the Department proposes to replace certain California-specific terms in the CCR and California Vehicle Code with New Jerseyspecific terms, unless the context clearly indicates it would be inappropriate or this subchapter specifies otherwise.

ACC II: Provisions at N.J.A.C. 7:27-29A Applicable to the ZEV and Multi-pollutant Exhaust Emission Standards

N.J.A.C. 7:27-29A.1, Definitions

The Department proposes to incorporate by reference the definitions contained in the ACC II regulation, the majority of which are found at 13 CCR 1900, 1905, and 1962.4, as well as in the model year 2026 and newer ZEV and PHEV Test Procedures. In addition to the California definitions being incorporated by reference, the proposed rules include a definitions section at N.J.A.C. 7:27-29A.1, that provides definitions of terms specific to New Jersey. The proposed definitions of acronyms "CARB," "CCR," "PHEV," "USEPA," and "ZEV" are provided in order that the Department's proposed rules can refer to acronyms throughout.

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"Commissioner," "Department," and "State" since those terms do not appear in the California regulation, but are necessary to distinguish between California and New Jersey provisions. The Department proposes to include "intermediate volume manufacturer," "large volume manufacturer," "light-duty truck," "manufacturer," "medium-duty vehicle," and "passenger car" by referencing the definitions in the CCR. Though these terms are defined in the provisions of the CCR that the Department proposes to incorporate by reference, the Department is including the terms at N.J.A.C. 7:27-29A for reference because these terms appear in the New Jerseyspecific text of the rules. The proposed definition of "nitrogen oxides" or "NO_x" is consistent with its definition in other mobile source provisions of the Air Pollution Control rules at N.J.A.C. 7:27.

The Department has also proposed definitions of terms that are specific to the interpretation and enforcement at N.J.A.C. 7:27-29A. The proposed definition of "ultimate purchaser" defines the vehicle owner and excludes dealers or other entities whose only interest in the vehicle is for resale. "Person" is defined because it appears in the proposed definition of ultimate purchaser. The Department's proposed definitions of "business," "dealer," and "delivered for sale" are identical to the definitions of the same terms in the LEV Program rules at N.J.A.C. 7:27-29.1. The Department's proposed definitions of "sale" or "sell" are consistent with the same terms in the LEV Program rules at N.J.A.C. 7:27-29.1, except to the extent that the definitions in ACC II exclude engines from those definitions. The proposed definition of "lease"
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and Vehicle Standards and Requirements at N.J.A.C. 7:27-28A.1. The proposed definition of "motor vehicle" is consistent with the definition in multiple Department mobile source rules, such as N.J.A.C. 7:27-14.1, 15.1, and 29.1. The proposed definition of "new motor vehicle" delineates applicability, as the proposed ACC II rules generally apply only to new motor vehicle transactions, and is consistent with the definition of the term at N.J.A.C. 7:27-28A-1. "Certification" or "certified" is proposed to be defined consistent with similar terms used in other mobile source rules, such as N.J.A.C. 7:27-14.1, 15.1, and 29.1. The proposed definition of "model year" references the Federal definition at 40 CFR 85.2302.

N.J.A.C. 7:27-29A.5, Manufacturer Compliance with California Warranty

As discussed above, the Department proposes to incorporate by reference the provisions of California's ACC II program that impose minimum warranty requirements for ZEVs for the first time and impose more substantial warranty requirements for MY 2027 or later internal combustion engine passenger cars, light-duty trucks, and medium-duty vehicles. To emphasize that those provisions are enforceable in New Jersey, proposed N.J.A.C. 7:27-29A.5 provides that when a covered vehicle is sold to a purchaser in New Jersey, the manufacturer must comply with the provisions pursuant to the California warranty requirements being incorporated by reference. *N.J.A.C.* 7:27-29A.6, *Enforcement*

The Department proposes enforcement provisions at N.J.A.C. 7:27-29A.6 for the ACC II program that are similar to the enforcement provisions contained in the existing LEV program

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that conduct transactions involving model year 2027 or later passenger cars and light-duty trucks; (2) the scope of the Department's authority to enter, inspect, test, and sample vehicles; and (3) the Department's authority to enforce CARB orders, enforcement actions, or recall campaigns. The enforcement provisions are different to the extent that the Department has streamlined the New Jersey-specific rule provisions and relies on the provisions of the CCR as incorporated by reference for purposes of identifying the violations.

N.J.A.C. 7:27A-3.10, Civil Administrative Penalties for Violations

At N.J.A.C. 7:27A-3.10, the Department proposes new civil administrative penalties for violations of proposed new N.J.A.C. 7:27-29A. Existing N.J.A.C. 7:27A-3.5 authorizes the Department to impose a civil administrative penalty for a violation of any provision at N.J.A.C. 7:27, the Air Pollution Control Act (Act), or any rule promulgated, or administrative order, operating certificate, registration requirement, or permit issued pursuant to the Act, even if the violation is not otherwise included at N.J.A.C. 7:27A. The proposed penalties at N.J.A.C. 7:27A-3.10(m)29A are similar to the existing penalties for similar violations of provisions in the existing LEV program at N.J.A.C. 7:27-29.

Pursuant to the Grace Period Law, N.J.S.A. 13:1D-125 through 133, a person responsible for a minor violation is afforded a period of time by the Department to correct the violation in order to avoid being subject to a penalty. Based upon the criteria set forth at N.J.S.A. 13:1D-129, the Department has determined which of the proposed penalties at N.J.A.C. 7:27A-3.10(m) are NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. minor, and, thus, subject to a grace period, and which are non-minor, and, thus, not subject to a grace period. Generally, the Department has determined that those violations that do not result in excess emissions (and, therefore, pose minimal risk to the public health, safety, and the

environment), and do not materially and substantially undermine or impair the goals of the regulatory program, are classified as "minor." Pursuant to the existing rules, a minor violation can be ineligible for a grace period if the conditions at N.J.A.C. 7:27A-3.10(s) are not met.

Amendments to the Low Emission Vehicle (LEV) Program at N.J.A.C. 7:27-29

As stated above, the ACC II program is the next phase in California's emission standards. California's prior emission standards, which are incorporated by reference at N.J.A.C. 7:27-29, end with vehicles produced and sold through model year 2025. As the Department's ACC II program is set forth at N.J.A.C. 7:27-29A, the Department proposes amendments throughout the rules at N.J.A.C. 7:27-29 to insert an end date of calendar year 2025.

Importantly, the Department is not proposing to amend N.J.A.C. 7:27-29.10, Warranty, or 29.12, Enforcement, which contain warranty and recall provisions that apply to internal combustion engine passenger cars, light-duty trucks, and medium-duty vehicles. It is imperative that these requirements remain intact so that if any model year 2009 through model year 2025 passenger car, light-duty truck, or medium-duty vehicle purchased pursuant to N.J.A.C. 7:27-29 is subject to recall by California, the vehicle manufacturer must still recall that vehicle in New Jersey. Likewise, for consumer protection, a California-certified model year 2009 through model

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provisions.

Clarifications and Updates of Miscellaneous Provisions

N.J.A.C. 7:27-14, Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles, and 15, Control and Prohibition of Air Pollution from Gasoline-Fueled Motor Vehicles <u>N.J.A.C. 7:27-14.1, Definitions, 14.3, General Prohibitions, 15.1, Definitions, and 15.7,</u> Prohibition of Tampering with Emission Control Apparatus

The Department is proposing to amend N.J.A.C. 7:27-14.1, 14.3(e), 15.1, and 15.7(a), to the extent that these provisions identify, define, and refer to "EPA Memorandum 1A." On November 23, 2020, the EPA's Office of Enforcement and Compliance Assurance issued "EPA Tampering Policy: The EPA Enforcement Policy on Vehicle and Engine Tampering and Aftermarket Defeat Devices" (EPA Tampering Policy), which superseded and replaced EPA Memorandum 1A. Though EPA Memorandum 1A is defined to include any subsequent revisions to the policy, which would include a replacement memorandum, the Department is proposing to update the term and definition at N.J.A.C. 7:27-14.1 and 15.1, as well as the references at N.J.A.C. 7:27-14.3(e) and 15.7(a) to identify the more recent EPA document, which provides guidance on enforcement concerning modifications to diesel and gasoline vehicle emission controls. The proposed amendments have no substantive impact since the existing rules incorporate supplements and amendments to the original document. The proposed amendment is for clarity only.

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N.J.A.C. 7:27-28A

N.J.A.C. 7:27-28A.11 Incorporation by Reference

As part of its adoption of the Model Year 2027 or Later Heavy-Duty New Engine and Vehicle Standards and Requirements, the Department noted its intention to establish a New Jersey-specific averaging, banking, and trading (ABT) program in a future rulemaking. The delayed establishment of a New Jersey-specific program has allowed the Department time to review the ABT provisions and requirements of other states that have adopted California's Heavy-Duty New Engine and Vehicle Standards and Requirements pursuant to Section 177 of the CAA. After review, the Department is proposing to amend N.J.A.C. 7:27-28A.11, Incorporation by reference, to establish a New Jersey-specific ABT program consistent with the programs in other states.

While the Department adopted the California-specific ABT program regulatory provisions of the CCR earlier this year, it did not make the revisions necessary for the program to be operated in New Jersey. These proposed amendments will make the necessary replacements to the provisions the Department already incorporated by reference, for New Jersey to operate its own ABT program. Specifically, certain California-specific terms in the CCR are proposed to be replaced with New Jersey-specific terms, unless the context clearly indicates it would be inappropriate or this subchapter specifies otherwise. Thus, the Department proposes to replace "California" with "New Jersey," except where California certified vehicles are discussed. NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. Likewise, "CA-ABT" is proposed to be replaced with "NJ-ABT." There are several other minor

replacements to adjust the program to New Jersey.

In order to maintain consistency with California and other states that have adopted this program, the Department is not proposing any changes to the calculations or model year applicability. However, the Department acknowledges that this rulemaking comes after California's model year 2022 cutoff for the conversion of Federal credits into state-specific ABT program credits. Accordingly, the Department proposes to allow manufacturers until model year 2025 to opt into the New Jersey ABT program, convert historical Federal credits, and report newly earned credits in accordance with California's procedures.

N.J.A.C. 7:27-31 Advanced Clean Trucks Program

N.J.A.C. 7:27-31.3, Applicability

The Department is proposing to amend N.J.A.C. 7:27-31.3 to clarify that military tactical vehicles and emergency vehicles are exempt from California's Advanced Clean Trucks regulation. Since these vehicle categories are excluded from emission standard regulations in California, New Jersey is mirroring the same exclusion. When the Department adopted the Advanced Clean Trucks Program in 2021, it intended to establish a program identical to California's Advanced Clean Trucks program; thus, these provisions were not intentionally omitted. The Department's proposed amendment corrects this omission and clarifies the Department's intent to regulate the same vehicle categories as the California program.

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The Department is proposing to amend N.J.A.C. 7:27-31.4 to incorporate by reference the California definitions of military tactical vehicle and emergency vehicle for the purpose described above.

Social Impact

By decarbonizing the light-duty vehicle population in New Jersey, the Department anticipates that the proposed rulemaking will have a positive social impact on the State's residents; reducing emissions from fossil fuel combustion will positively influence health outcomes, protect water quality, and safeguard ecosystems in New Jersey's forests and wetlands by mitigating future clime change impacts compared to a business as usual scenario. As explained in the Environmental Impact statement, the largest sector of greenhouse gas emissions in the State is transportation. The largest share of transportation sector emissions, in turn, are onroad gasoline-powered passenger vehicles and light-duty trucks, such as pickup trucks and SUVs, with 86 percent of vehicle miles traveled in 2018 coming from these types of vehicles. See 80x50 Report at page 12. Therefore, to mitigate the impacts and effects of climate change, it is important to reduce greenhouse gas emissions from the passenger vehicles and light-duty trucks that are subject to California's ACC II program. In addition to greenhouse gas reductions, the proposed rulemaking will also reduce pollutants that have an adverse impact on air quality and human health.

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The ACC II program would not force a vehicle owner to replace an internal combustion engine vehicle with a ZEV; the purpose of ACC II is to transition the State's light-duty vehicles from internal combustion engine vehicles to ZEVs. The Department recognizes the sweeping and transformative effect this will have on the State. Indeed, for the proposed ACC II program to succeed, consumers in New Jersey will need to embrace ZEVs on a much larger scale than they have to date and at an accelerated pace. This will require, for example, affordable and reliable ZEVs and sufficient charging infrastructure throughout the State, which could mean upgraded distribution lines and other utility infrastructure. In the absence of consumer acceptance of the proposed ACC II program, an unintended consequence could be vehicle owners retaining their fossil-fuel powered vehicles for longer, meaning older, more polluting vehicles remain on the road. To avoid this situation and to achieve the significant climate change and public health benefits of a large-scale transition to ZEVs, the State has put in place multiple complementary measures, policies, laws, and funding mechanisms to increase consumer acceptance and uptake of electric vehicles. Under the direction of Governor Murphy, the Department and other State agencies continue to actively evaluate opportunities and strategies and develop programs to support ZEV adoption in the State that would further complement this proposed rulemaking, with a particular emphasis on addressing barriers to ZEV access for overburdened communities and low- and moderate-income residents.

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The proposed rulemaking will assist in transitioning the transportation sector from gasoline and diesel combustion engines to zero emission engines. Not only will this transition reduce emissions of CO₂, but it will also reduce emissions of NO_x, and PM2.5, which will benefit public health especially in overburdened communities that have a high traffic volume.

The effects of NO_x and PM2.5 on public health have been widely and extensively studied by the EPA and others. For instance, elevated levels of NO_x cause damage to the mechanisms that protect the human respiratory tract and can increase a person's susceptibility to, and the severity of, respiratory infections and asthma. Long-term exposure to high levels of NO_x can cause chronic lung disease. Other health effects from exposure to NO_x include shortness of breath and chest pains. Further, long-term exposure to low concentrations of nitrogen dioxide (NO₂), a component of NO_x, also causes adverse health effects, including lung irritation and aggravate lung diseases, such as asthma. See USEPA, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, Regulatory Impact Analysis (August 2016), pp. 6-2 to 6-6, at

https://nepis.epa.gov/Exe/ZyPDF.cgi/P100P7NS.PDF?Dockey=P100P7NS.PDF.

Studies have also shown that reducing PM2.5 may lead to reduced incidence of premature mortality and morbidity Integrated Science Assessment (ISA) for Sulfur Oxides-Health Criteria (Final Report, Sep 2008), USEPA, Washington, DC, EPA/600/R-08/047F; USEPA. Integrated Science Assessment for Oxides of Nitrogen-Health Criteria (Final Report, NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. July 2008), USEPA, National Center for Environmental Assessment Washington, DC,

EPA/600/R-08/071; and USEPA. Integrated Science Assessment (ISA) for Particulate Matter (Final Report, Dec 2009), USEPA, Washington, DC, EPA/600/R-08/139F.

Impacts of Climate Change

The Department's 2020 New Jersey Scientific Report on Climate Change compiles scientific material in a comprehensive report detailing both the effects and the impacts of climate change. See New Jersey Department of Environmental Protection. 2020. New Jersey Scientific Report on Climate Change, Version 1.0 (Eds. R. Hill, M.M. Rutkowski, L.A. Lester, H. Genievich, N.A. Procopio) Trenton, NJ 184 pp. While the report examines climate change at the global and regional level, its purpose is to explain the current and anticipated effects and impacts in New Jersey. See *Id.* at 3. One of the report's findings is that New Jersey is uniquely vulnerable to climate change due to multiple factors, including its coastal location, population density, and geography. See *Id.*, Executive Summary. The effects of climate change on the environment have a multitude of social costs, economic impacts, and environmental damages. Below are a few of the impacts that are predicted to occur under low-, moderate-, and high-emissions scenarios set forth in the 2020 Report on Climate Change.

Air Quality

The EPA sets national ambient air quality standards (NAAQS) for six criteria pollutants. One of these health-based standards is for ground level ozone. New Jersey is classified as nonattainment for the ozone standard, which means the level of ozone measured at designated NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. monitors around the State exceeds the Federal standards. See 2020 Report on Climate Change, p.

61. "The primary climate change impacts on ozone formation are expected to result from changes to meteorological conditions, often referred to as the ozone-climate penalty." *Id.* at 62. The ozone-climate penalty refers to a phenomenon in which the level of ozone precursors in the atmosphere may remain stable or even decrease, but warming temperatures offset those improvements, such that ozone formation remains unchanged. Thus, the work New Jersey has done, and continues to do, to reduce ozone precursors may be less effective at reducing ground-level ozone as temperatures continue to rise due to greenhouse gas emissions, like CO₂, and short-lived climate pollutants, like black carbon. See *Id.* at pp. 61-62 and 25-26.

Increased concentrations of ground level ozone have been linked to a number of health impacts, including, but not limited to, eye irritation, aggravated asthma and other respiratory distress, and premature death. See *Id.* at 63-64. Additionally, there is some evidence that the health impacts of increased ozone may be elevated when combined with other climate-related impacts, such as the higher temperatures that occur during heat waves. See *Id.* at 66. This is particularly significant for New Jersey's urban areas where high temperatures are often accompanied by high levels of other local air pollutants. See *Id.* at 66.

In short, climate change will result in increased respiratory and cardiovascular health problems, particularly among vulnerable populations, such as the very young, very old, and those suffering from asthma or allergic illness. See *Id.* at 61-69.

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The effects of climate change (temperature, precipitation, sea-level rise) may impact water quality and supply in New Jersey. See 2020 Report on Climate Change, p. 71. The quality of groundwater sources in New Jersey may also suffer adverse impacts from climate change as increased periods of precipitation can lead to contamination of groundwater supplies. Similarly, sea-level rise can lead to saltwater intrusion of coastal groundwater supplies, causing increased levels of salinity. See *Id.* at 73-75. Water quality concerns extend beyond groundwater supplies. New Jersey's surface water resources may also be threatened by rising air and water temperatures, increased extreme weather events, and sea-level rise, all of which could result in increased salinity, which existing water treatment plants are not designed to handle. See *Id.* at 75. For example, increased precipitation can lead to an increase in surface water nutrient loading, which poses the potential to stimulate rapid and excessive growth of harmful algal blooms, particularly in surface waters in proximity to agricultural practices. See *Id.* at 78.

In sum, climate change may result in a reduction in the amount of water necessary to meet the State's needs and require more extensive resources to treat the remaining water supply.

Agriculture

The effects of climate change, particularly changes in precipitation levels, temperature, and the concentration of CO_2 in the atmosphere, will impact crop and animal farming. See 2020 Report on Climate Change, p. 81. As discussed in greater detail in the Agriculture Industry Impact, insects, weeds, and pathogens are expected to thrive in warmer, wetter weather, which is

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livestock, which may be unable to adapt to the environmental effects of climate change. See *Id.* at 81-83. On the whole, climate change is anticipated to have a negative impact on New Jersey's agricultural industry as it may diminish the variety of crops and livestock that are cultivated in New Jersey for sale and consumption both locally and regionally.

Forests, Wetlands, and Carbon Sequestration

The effects of climate change, including changes in precipitation levels, temperature, and the concentration of CO₂ in the Earth's atmosphere, have already begun to impact ecosystems in New Jersey's forests and wetlands. See 2020 Report on Climate Change, pp. 85-113. Warmer temperatures mean that some pest species will grow faster, travel further, and live well into warmer winters, all the while putting pressure on tree species unprepared for the onslaught. See *Id.* at 90-91. Likewise, warmer temperatures and the potential for prolonged periods of drought may affect the composition of the tree species in New Jersey's forests. These conditions favor species that are more tolerant of drought and sandy soils, while existing hardwood trees will become stressed. See *Id.* at 85-90. Moreover, "[i]ncreases in temperature, and the hot, dry periods that result, may intensify the danger of wildfires by drying out vegetation and soil" in New Jersey forests. *Id.* at 93.

Some of New Jersey's freshwater wetlands are under threat because of climate change impacts, such as changes in precipitation, sea-level rise, and increased temperatures. See 2020 Report on Climate Change, p. 95-98. Tidal wetlands in New Jersey face similar threats to their NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. existing ecosystems due to the effects of climate change. See *Id.* at 98-108. Sea-level rise

contributes to the erosion of existing tidal wetlands and an increase in marsh migration. Increased frequency, severity, and duration of precipitation events will also contribute to the erosion of some tidal wetlands. See *Id.* at 104-107. The erosion and diminishing of New Jersey's freshwater and tidal wetlands will result in the loss of plant and animal habitats, loss of natural flood control resources, and depletion of the State's natural buffers that help to protect coastal communities from storms. See *Id.* at pp. 95 and 99.

New Jersey's forests and wetlands serve as carbon sinks. See 2020 Report on Climate Change, p. 111. Specifically, these resources work as natural carbon capture systems, removing CO₂ from the atmosphere and helping New Jersey lower its net emissions. See *Ibid.* As explained above, the loss of forests and wetlands due to climate change will hinder New Jersey's ability to offset carbon emissions through these carbon sinks, and in the case of forests destroyed by pests, such as the pine beetle or wildfires, forests could become net carbon emitters. See *Id.* at 112.

In summary, climate change will have a negative impact on the State's plant and animal life, reducing habitats and diminishing the quality of recreational and cultural endeavors available within the State. Though the proposed new rules, standing alone, will not eradicate climate change, they are an important step in a larger strategy intended to mitigate the impacts of climate change. NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. 100 Percent ZEV Requirement by 2035

Impact on New Jersey's Light Duty Population

As explained in the Summary, the proposed ACC II program would transform a large portion of the State's transportation sector – passenger cars and light duty trucks such as SUVs, pickup trucks, and vans (collectively, light-duty vehicles)- from predominantly internal combustion engines and vehicles to zero emission engines and vehicles, including battery electric vehicles and plug-in hybrid electric vehicles. As of December 2019, the Department estimates that there were just over 30,000 registered ZEVs in the State. See 80x50 Report, p. 15. As of December 31, 2022, the Department estimates that there were 91,515 registered ZEVs, of a total 6.7 million registered (light-, medium-, and heavy-duty) vehicles in the State. Pursuant to ACC II, the ZEV requirement for manufacturers selling light-duty vehicles in this State will start at 43 percent with model year 2027 and increase to 100 percent in 2035. Manufacturers must meet the ZEV requirement using vehicle values. However, the ZEV program includes a number of flexibilities for a manufacturer, such as purchasing surplus vehicle values generated by another manufacturer or using its own banked values. Therefore, the annual ZEV percentage requirement does not necessarily translate directly to the percentage of electric vehicles delivered by a particular manufacturer for sale in the State. For example, pursuant to the existing ZEV requirements, the annual ZEV requirement for model year 2022 was 14.5 percent of new lightduty vehicle sales. However, as a result of the flexibilities in the previous ZEV program

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which represents approximately five percent of new vehicle sales.

Because of the program framework, the Department is unable to predict exactly how manufacturers will meet their requirements, since compliance may be through actual sales, purchase of values, utilization of banked values, or some combination of these methods. Nevertheless, the Department participated in an analysis of the benefits of adopting ACC II in New Jersey compared with a business-as-usual (BAU) scenario. The analysis was conducted by Sonoma Technology, Inc. (Sonoma), with technical input on the data and methodologies from the Department, the International Council on Clean Transportation, and the Northeast States for Coordinated Air Use Management (NESCAUM). See Benefits of Adopting California's Advanced Clean Cars II Standards in Sixteen U.S. States, https://theicct.org/wpcontent/uploads/2023/05/ACC-II-project-report-final-042623.pdf (Sonoma: Final Benefits Report). As part of that analysis, Sonoma included estimates for the number of ZEVs that were expected to be registered in New Jersey under the BAU and ACC II scenarios. See Sonoma: Final Benefits Report, p. 22, Table 5 New Jersey (MY 2027 Implementation). For the study, the BAU scenario projected the number of ZEVs in New Jersey assuming manufacturers' compliance with the Department's existing rules at N.J.A.C. 7:27-29, which include a ZEV requirement of 22 percent for model year 2025. The Department notes that the BAU scenario does not include the EPA's recently proposed rules to impose more stringent multi-pollutant exhaust emissions standards for light-duty vehicles and Class 2b and 3 (medium-duty) vehicles

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29184 (May 5, 2023).

Pursuant to the BAU scenario, Sonoma estimated that 822,000 total ZEVs will be registered in New Jersey in 2035. See Sonoma: Final Benefits Report, p. 22, Table 5 New Jersey (MY 2027 Implementation). In contrast, pursuant to the ACC II scenario, Sonoma estimated that 2.5 million light-duty ZEVs (out of an estimated total of 6.4 million registered light-duty vehicles) will be registered in New Jersey in 2035. *Ibid.* By 2050, the Department expects the majority of internal combustion engine vehicles presently in use, or sold between now and 2035, to have reached the end of their useful lives and the number of ZEVs registered to comprise almost 90 percent of the entire light-duty vehicle population, as manufacturers will be required to meet a 100 percent ZEV requirement for model year 2035, which will likely need to be met by direct sales.

Although there are uncertainties as to the manner in which manufacturers will comply with the annual ZEV requirements, the proposed rulemaking would clearly force the accelerated transition to ZEV passenger vehicles, pickups, and SUVs by model year 2035. As explained in CARB's Initial Statement of Reasons (ISOR), "[t]ransforming to a zero-emission transportation system equitably requires a coordinated, collaborative, and cross-cutting approach," with the ACC II regulation being one piece of a larger strategy. CARB, Initial Statement of Reasons April 12, 2022, https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/accii/isor.pdf.

NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. Impact on Vehicle Manufacturers, Dealers, and Service Industry

The ZEV regulation directly regulates manufacturers. Manufacturers have stated that "the future is electric" and set their own targets for ZEV sales. See generally Alliance for Automotive Innovation, 2022 Industry Report, The Driving Force, Merging Innovation and Policy, page 13, at https://www.autosinnovate.org/resources/papers-

reports/Driving%20Force%20Annual%20Report.pdf. Thus, manufacturers are already committed to producing and delivering for sale increasing numbers of electric vehicles and electric vehicle models to dealerships in the State. However, as noted above, the scale and pace at which they must produce and deliver ZEVs to New Jersey, California, and other states that have adopted or will adopt ACC II, will be a challenge. Additionally, manufacturers will have to produce a range of ZEV types to meet various consumer needs, including affordability, and demonstrate quality that is comparable to internal combustion engines or vehicles. ZEVs also require batteries, which require critical minerals, or fuel cells for power. Batteries that reach the end of warranty or end of useful life must be properly managed through repurposing, reuse, recycling, and ultimately disposal.

New car and truck dealers will also be impacted as manufacturers determine how to meet their ZEV requirements. The number and types of ZEVs and internal combustion engine vehicles for each model year that are offered for sale or lease in the State will depend on manufacturer production and delivery. The impact on car dealers, in turn, will depend on consumer demand for and affordability of those vehicles. Although car dealerships have been preparing for a shift to NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. ZEVs, the ACC II ZEV requirement is a sweeping and ambitious requirement. To keep pace, car

dealerships may need to remodel their service areas, and will need sufficient charging infrastructure at their locations, which could require new or upgraded transformers and distribution lines, as well as equipment, such as heavier capacity vehicle lifts, forklifts, lift trays for battery packs, and insulated tools. Dealership sales representatives may also need training to be able to convey accurate information to consumers about the proper use and maintenance of each new ZEV model. Sales representatives will be expected to answer customer questions regarding electric vehicle range, charging opportunities, and warranty and service provisions.

As ZEVs become increasingly common in New Jersey, the automotive service industry will have to transition as well. The National Institute for Automotive Service Excellence offers a certification path for hybrid/electric vehicle specialists and many vehicle manufacturers offer similar programs for the service technicians at their dealerships. Service garages may require some upgrades to work on electric vehicles, such as heavier capacity lifts and charging stations. Auto repair shops and technicians would also be affected by decreased repair volumes for internal combustion engine vehicles.

Consumer Considerations and Charging Infrastructure Needs

The ultimate success of the ACC II program, however, depends on consumers. As CARB noted, "[a]chieving 100 percent ZEV and PHEV sales by 2035 will require mainstream consumers to embrace electric drive technologies in their purchasing. This consumer change will require continued improvements in electric technology, owner support, and conveniences, as well

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California's ACC II program includes a number of battery requirements, including increased minimum range, durability, and warranty provisions, "to ensure that ZEVs are attractive to consumers and actually replace internal combustion engine vehicles, securing the resulting air quality benefits by ensuring the efficacy of the lowest-cost vehicle option in meeting basic transportation needs...." See ISOR at p. 46. For the same reason, California's ACC II program also includes various requirements related to charging, such as charging cords, minimum on-board charging speed, and standard DC fast charging capability. See ISOR pp. 46-56.

A successful transition will depend on adequate access to charging and sufficient charging points across the State. This includes home charging, which is "the most convenient and usually the least-cost source of electricity for charging." ISOR at p. 28. As in California, the Department expects that in New Jersey, most drivers will charge their vehicles at home. However, while the reliance on home charging, supplemented by occasional public charging, is expected to continue, CARB also expects a "growing share of drivers using public charging infrastructure as more and more drivers reside in apartments and rental properties without access to home charging." ISOR at p. 28.

Responding to concerns about charging access, recent New Jersey law requires that developers of new multi-unit dwellings with five or more units of dwelling space pre-wire electrical infrastructure (make ready) at 15 percent of the parking spaces to facilitate easy and cost-efficient future installation of charging stations and also install charging stations in one-third

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an additional one-third of the 15 percent, and within six years, the final one third. *Ibid*. Similarly, developers of new parking lots and garages must install a minimum number of makeready parking spaces in proportion to the total number of off-street parking spaces. For example, a new parking lot or garage must include at least one make-ready space if there are 50 or fewer off-street parking spaces. The minimum number of make-ready spaces increases incrementally from there. At the top end, if there will be more than 150 off street parking spaces, the developer must install at least four percent of the total parking spaces as make-ready parking spaces, at least five percent of which shall be accessible for people with disabilities.

The same law required a Statewide municipal electric vehicle ordinance that ensures consistent permitting practices for EV charging stations across all 566 municipalities. See P.L. 2021, c. 171. Within the State, efforts have been underway since 2016 to build out the necessary charging infrastructure for ZEVs. The State has awarded more than \$240 million since 2019 for 2,980 charging stations with 5,271 ports at 680 locations. The State also developed a toolkit to encourage and support the installation of electric vehicle charging in existing multifamily dwellings. https://dep.nj.gov/drivegreen/multi-unit-dwelling-toolkit/. Utilities have committed \$215 million for make-ready infrastructure for public, multi-unit dwelling and workplace charging stations and residential chargers. https://dep.nj.gov/wp-

content/uploads/drivegreen/pdf/nj-ev-success-flyer.pdf.

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As ZEVs increase in number, electricity demand will also increase. The State will need to ensure that distribution lines and electricity supply meet the increased electricity demand, while monitoring potential ratepayer impact for any upgrades or buildout needed. The New Jersey Board of Public Utilities (BPU), in late 2022, released a report on the modernization of New Jersey's electric grid and is advancing regulatory changes and working with stakeholders to further develop regulatory and policy proposals based on the report's recommendations. https://nj.gov/bpu/newsroom/2022/approved/20221110a.html. Additionally, to meet the anticipated demand, many agencies, including, but not limited to, the Department, the BPU, and the New Jersey Economic Development Authority (NJEDA), will continue to collaborate to ensure the development and expansion of wind, solar, battery, and other clean energy technology in the State.

Comparison with EPA Proposed Rules for Model Years 2027 through 2032

As mentioned above, the EPA recently proposed rules to impose more stringent multipollutant exhaust emissions standards for light-duty and medium-duty vehicles that would phasein over model years 2027 through 2032. See 88 FR 29184 (May 5, 2023). CARB conducted a preliminary comparison of the ACC II requirements with the proposed Federal rule. See Comparison of Advanced Clean Cars and EPA Light-Duty/Medium-Duty Multipollutant Proposal (4cleanair.org), https://www.4cleanair.org/wpcontent/uploads/CARB_Presentation_to_NACAA-ACCII_and_Fed_LMDV_Proposal-2023-05-

<u>15.pdf</u>.

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While there is a benefit to national standards for internal combustion engine vehicles during the transition to a full ZEV population, the California ACC II program has a number of requirements that will benefit consumers, particularly related to batteries and charging, that are not included in the proposed EPA rules. For example, the ACC II requirements on battery durability are more comprehensive and user friendly and also include more robust warranties than the proposed EPA rule. In addition, the ACC II requirements include charging requirements, which are not included in the EPA's proposed rule. The ACC II program also requires standardized battery labeling, which will assist with proper battery management, whether it is reusing, repurposing, recycling, or disposing of the battery. These elements of the California ACC II program will benefit consumers and the environment.

A direct comparison of the emissions reductions from the California ACC II program and the proposed EPA standards is difficult because of the different regulatory approaches of the two programs. The ACC II program requires manufacturers to comply with an annual ZEV requirement that continues to increase. In contrast, the EPA's proposed regulations would allow manufacturers to meet an emission standard that does not prescribe ZEVs, but assumes that a manufacturer's fleet would include ZEVs along with internal combustion engine vehicles. By model year 2032, the EPA estimates that its proposed standard would result in a ZEV sales rate of approximately 67 percent in order for manufacturers to meet the emission standards. However, the EPA's proposed rule does not increase stringency of emission standards beyond model year 2032. In contrast, the ACC II regulation includes a 100 percent ZEV requirement by NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. 2035 that will remain in place for 2035 and all later model years. Though a direct comparison of

the emission benefits is difficult, the Department has determined that the ACC II regulation will provide greater consumer benefits for ZEV-purchasers than the EPA's proposal.

Amendments to the LEV Program at N.J.A.C. 7:27-29

The Department's rulemaking to amend the existing LEV program at N.J.A.C. 7:27-29 at the conclusion of calendar year 2025 is not expected to have a substantial social impact. As noted above, California has adopted the next phase of their emission control standards, the ACC II program, which is proposed to begin with model year 2027 in New Jersey. The amendments simply clarify the end date of the existing program so there is no confusion about the applicable subchapter.

Clarifications and updates of Miscellaneous Provisions at N.J.A.C. 7:27-14, 15, 28A, and 31

The Department's proposed amendments to miscellaneous provisions at N.J.A.C. 7:27-14, 15, 28A, and 31 are not expected to have a substantial social impact. The amendments at N.J.A.C. 7:27-14 and 15 merely update a reference to a memorandum; the amendments at N.J.A.C. 7:27-31 clarify that exemptions to California's ACT program should have been incorporated by reference; and the amendments at N.J.A.C. 7:27-28A update the CCR provisions, which were previously incorporated by reference, to establish a New Jersey-specific ABT program consistent with the programs in other states.

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As discussed in the Social Impact, implementation of the proposed ACC II program would result in a large portion of the State's transportation sector transitioning from internal combustion engines, which have been in mass production since the early 1900s, to zero-emission vehicles, which involve rapidly evolving technology such as battery electric, plug-in hybrid, and fuel-cell electric vehicles. As such, the ACC II program will drive a paradigm shift for the lightduty vehicle sector that will have direct economic impacts on manufacturers and indirect impacts on other areas of the economy, such as consumers and automotive-related businesses. Further, there may be ripple effects on the economy at large. The transition to zero-emission vehicles will have a positive direct impact on the economy as a result of health benefits and climate mitigation.

Direct Economic Impacts

Manufacturers

The Department has reviewed the economic analysis performed by CARB as part of its ACC II rulemaking process. CARB's initial analysis was set forth in the Standardized Regulatory Impact Assessment (SRIA) published in January 2022, but was subsequently refined and updated in its ISOR and Final Statement of Reasons (FSOR). See Standardized Regulatory Impact Analysis, January 26, 2022,

https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/accii/appc1.pdf, ISOR, https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/accii/isor.pdf, and Final Statement of NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. Reasons August 25, 2022,

https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/accii/fsor.pdf. CARB's analysis recognizes that the ACC II regulation will require manufacturers to produce new vehicles to comply with the ZEV requirements as well as the more stringent multi-pollutant exhaust emission standards. See SRIA, p. 49. Further, the cost to produce these new vehicles will be higher than the cost to continue producing their existing vehicles in most vehicle classifications. *Ibid.*

To estimate the costs of compliance for a typical vehicle manufacturer, CARB considered the direct costs associated with every requirement of the regulation for each model year, and for each type of vehicle, including internal combustion engine, battery electric, plug-in hybrid (PHEV), and fuel cell electric vehicles. See SRIA, pp. 49-86. In the most recent update to its economic analysis, CARB estimated the average incremental cost of compliance to be \$440.00 per vehicle in MY 2026 and increasing to \$1,119 per vehicle in MY 2035. See FSOR, Appendix F, p. 14, Table VI-1. Since this is an average, CARB recognized that "[s]ome vehicle segments and technology combinations may experience [higher] incremental manufacturing costs than their conventional ICEV counterparts." FSOR, Appendix A pp.125-126.

Though most vehicle manufacturers will have to adapt their fleets to meet California's ACC II standards, the Department does not anticipate any additional cost to manufacturers in order to comply with the ACC II requirements in New Jersey; manufacturers will incur costs to adapt their fleets to comply with the ACC II program in California and would not incur those

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reference. Manufacturers' costs to initially adapt their fleets to ACC II standards would include research, development, design, retooling factories, and retraining employees. These costs are independent of New Jersey's participation in the ACC II program. As additional states adopt California's ACC II program, manufacturers will have to produce more compliant vehicles. The increased production volume tends to drive down the additional incremental per vehicle cost, and gives manufacturers more flexibility in recovering their initial costs to adapt to California standards.

The Department proposes to charge intermediate and large volume manufacturers in New Jersey an annual fee of \$0.50 per vehicle for each passenger car, light-duty truck, and mediumduty vehicle delivered for sale in New Jersey on and after January 1, 2026. The fee will offset the Department's anticipated costs associated with verifying vehicle values that manufacturers can earn and bank beginning in model year 2026, such as environmental justice values and converted historical credits. See 13 CCR 1962.4. Pursuant to the existing LEV program, these manufacturers have been charged a \$0.25 per vehicle fee since 2009. The Department has determined that the fee should be adjusted to account for inflation, as well as the increase in work that will need to be done to verify ZEV sales.

CARB found that a minority of vehicle manufacturers, those that are already ZEV-only manufacturers, are likely to experience a positive economic impact if the ACC II program is implemented. See SRIA, p. 39. Specifically, as the annual ZEV requirement increases, ZEV-only

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transitioning their fleets. Ibid.

Indirect Economic Impacts

Consumers

As noted above, CARB projects that the ACC II regulations will increase costs to manufacturers. However, CARB explained that there is a great deal of uncertainty about how and whether the increased costs would be passed on to consumers. See SRIA, p. 85. If manufacturers pass on the costs, each individual manufacturer may use a different strategy. *Ibid*. While some may pass the cost onto the consumer directly through the pricing of individual ZEVs, other manufacturers may spread the increased costs equally over all new vehicles in their fleet. *Ibid*. No matter the particular strategy chosen by an individual manufacturer, it is likely that some or all of the increased costs to manufacturers will be passed on to consumers in the form of higher prices. Though not mentioned in CARB's analysis, it is also possible that consumers will be faced with additional price increases as a result of larger market forces, including, but not limited to, individual dealer mark-ups and corporate decision making by manufacturers.

CARB's SRIA estimated the total cost of ownership (TCO) for vehicle owners in California based on a statewide average for all vehicles sold as a result of the regulation. See SRIA, pp. 94-97. As CARB summarized in its ISOR, "[i]ndividual vehicle consumers, for most ZEVs in the program, will see cost-savings when considering [TCO]. The results show that for [battery electric vehicles], operational savings will offset any incremental costs over the 10-year

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vehicle purchased in 2026 is expected to result in a \$1,732 cost-savings as compared to an internal combustion engine vehicle; a battery electric vehicle purchased in 2035 is expected to result in a \$6,683 cost-savings as compared to an internal combustion engine vehicle. See SRIA, pp. 104-107. However, CARB also found that over the 10-year period evaluated, owners of fuel cell electric vehicles and plug-in hybrid electric vehicles will not have a net savings. See ISOR, pp. 143-44. CARB's estimates did not incorporate any financial incentives, such as rebates or tax credits. Therefore, it is possible that Federal, state, or other incentives would mean the TCO is even more favorable for battery electric vehicles and could potentially result in a favorable TCO for plug-in hybrid electric vehicles and fuel cell electric vehicles. Additionally, CARB's assessment did not account for a New Jersey-specific variable: the Petroleum Products Gross Receipts (PPGR) tax. Pursuant to P.L. 2016, c. 57, a statutory formula determines how much the PPGR tax rate is to be adjusted annually in order to meet the Highway Fuels Revenue Target. Unless the funding model for the PPGR changes, decreased demand for gasoline and diesel fuel will cause an increase in the price per gallon paid by consumers, so that the revenue target can be met, thus increasing the cost of ownership for drivers continuing to operate internal combustion engine vehicles.

State Government

State and local governments are also consumers of vehicles. As with private consumers, the Department expects that State and local governments will pay a greater upfront cost for

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decreased maintenance costs over the life of the vehicles. Additionally, charging infrastructure will need to be installed or expanded at State and local government offices to support increased battery electric or plug-in hybrid vehicle use. Naturally, fleets will need to transition over time; thus, the economic impacts will be absorbed over the next couple of decades.

In addition to higher up-front costs for vehicles and costs for infrastructure upgrades, the Department anticipates that the proposed ACC II rules will result in lost revenue to the State. At present in New Jersey, vehicle sales are currently taxed at 6.625 percent; however, ZEVs are exempt from this sales tax. As the proposed rulemaking intends to increase the sale of ZEVs, pursuant to the existing tax model, fewer taxes will be collected on future vehicle sales. In addition to lost revenue from collections on new vehicle sales, revenue from the Motor Fuels Tax (presently 10.5 cents per gallon for gasoline and 13.5 cents per gallon for diesel fuel) and the Petroleum Products Gross Receipts tax will decline significantly if the ACC II program is adopted, as more New Jerseyans will drive vehicles that do not rely on gasoline.

The Department does not attempt to calculate the exact amount of revenue lost from vehicle sales taxes, the motor fuels tax, and the petroleum products gross receipts tax because intervening legislative, regulatory, and policy changes any time in the next two decades could radically alter any projection of revenue, and such factors are outside of the Department's control and foresight. The Department anticipates that impacts will be relatively small in the initial NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. years after the adoption of the ACC II program and will increase significantly as the percentage

of ZEVs on the road increases in the later years of the program.

Car Dealerships

As manufacturers produce new vehicles to comply with the ZEV requirements, as well as the more stringent multi-pollutant exhaust emission standards, dealerships in New Jersey will have to adjust to an evolving fleet of vehicles. In particular, dealerships will have to accommodate the influx of ZEVs and decrease in internal combustion engine vehicle models. Many dealerships have begun taking the steps necessary to accommodate ZEVs. As noted above, the Department adopted the LEV rules, which included a ZEV requirement, in 2006. As of December 31, 2022, 91,515 electric vehicles were registered in New Jersey, which is a fairly small percentage of the total vehicles sold by dealers since 2006. Accordingly, the Department anticipates that dealerships will need to make some fundamental changes in their business practices over the next decade as manufacturers comply with the steadily increasing annual ZEV requirements of the ACC II program. Dealerships will likely experience some negative economic impact early on due to the additional costs associated with ZEVs. The economic impacts to dealerships will include, but not be limited to, the costs associated with the installation or expansion of electric vehicle charging stations, the infrastructure needed to service electric vehicles, and/or training of staff. The number of vehicle charging stations to be installed, the amount of infrastructure modification and retraining of staff will depend on a number of

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dealership, as well as manufacturer requirements.

Automotive Repair Industry

Like dealerships, the automotive repair industry in New Jersey will need to adjust to an evolving fleet of vehicles if the ACC II program is adopted. For instance, automobile repair businesses may need to make infrastructure modifications to service and charge electric vehicles. Further, ZEVs (the majority of which are battery electric vehicles) generally require less maintenance over the lifetime of the vehicle, resulting in the lower total cost of ownership, as discussed above. Over time, this will likely reduce the demand for automobile mechanics in New Jersey, which in turn may decrease the number of businesses providing services. In addition, mechanics may find it necessary to undergo training, hire new specialists, and/or purchase new equipment as the ZEV population increases in New Jersey. Overall, the vehicle repair and maintenance service industry, including dealerships with service departments, is expected to see negative impacts. However, to put this in perspective, it is important to note that internal combustion engine-powered light-duty vehicles will likely make up a majority of the fleet in 2035. Based on the analysis performed by Sonoma, more than 60 percent of the registered lightduty vehicles in New Jersey will still be gasoline or diesel powered as the ACC II program reaches the 100 percent ZEV requirement in 2035. See Sonoma: Final Benefits Report. Thus, businesses and employees will have time to respond to changes in the labor market.

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Retail gasoline stations are expected to see negative economic impacts due to reduced gasoline sales as more of New Jersey's residents drive ZEVs. As of May 2022, the Bureau of Labor Statistics estimates that roughly 10,000 people throughout New Jersey are employed as automotive and watercraft service attendants. As gas stations experience a reduced demand for attendants to pump gas and diesel fuel, job losses are likely. As noted above, a majority of New Jersey's light-duty fleet will still likely consist of internal combustion engines in 2035. See Sonoma: Final Benefits Report. Thus, the need to service gasoline- and diesel-fueled vehicles driven by New Jersey residents and vehicles passing through from other states, will likely result in incremental employment impacts. Since the transition to ZEVs will occur over the next couple of decades, retail businesses and employees will have time to respond to changes in the labor market. For instance, it is possible that new business models will develop as a result of public charging. Attendants may be employed to assist with charging and/or retail spending may increase as drivers stop to charge their electric vehicles.

Tier 1 Suppliers, ZEV Infrastructure Installers, and Electric Utility Providers

As the ACC II program is implemented, CARB found that some businesses may see a positive economic impact from the increased sale and use of ZEVs. See SRIA, pp. 39-40. The most obvious beneficiaries are those businesses that supply engine components to manufacturers, otherwise known as "Tier 1 suppliers." See *Ibid*. These businesses will likely see an increase in demand as manufacturers work to develop technology that will decrease emissions in internal

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emerging ZEV technologies. See *Ibid.* Private businesses that provide ZEV infrastructure (manufacturers, installers, and operators of charging stations) are likely to see positive economic impacts as a result of the increased demand for their services. See SRIA at 40. The Department anticipates that the rules will result in an increase in the total amount of ZEVs registered in the State and, therefore, the total electric vehicle miles travelled will increase. This will increase the amount of electricity used for transportation, which may result in increased utility investments. See SRIA at 40. The Department does not attempt to calculate the exact amount of expected increases in investments or growth in industries because intervening legislative, regulatory, and policy changes over the next two decades could significantly alter projections and such factors are outside of the Department's control and foresight.

Monetized Value of NO_x and PM2.5 Emission Reductions

As discussed in the Social Impact, Sonoma Technology, Inc., conducted an analysis of the health benefits if the Department were to implement the ACC II program in New Jersey. That analysis estimated the potential health impacts of NO_x and PM2.5 reductions in New Jersey and the surrounding states using the EPA's Co-Benefits Risk Assessment Health Impacts Screening and Mapping Tool (COBRA) and estimated the value of health benefits associated with the following 14 health outcomes: asthma exacerbation; emergency room visits, asthma; cardiovascular hospital admissions; respiratory hospital admissions; lower respiratory symptoms; minor restricted activity days; mortality, all cause (low-end estimate); mortality, all cause (high-

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Adopting California's Advanced Clean Cars II (ACC II) Standards in New Jersey,

https://theicct.org/wp-content/uploads/2023/05/nj-acc-ii-benefits-fs-may23.pdf (Fact Sheet)

The aggregated economic values combining all health effects modeled can be found in

Table 3 of Sonoma Technology, Inc.'s Fact Sheet, as reproduced below:

Analysis	Total	Total	In-State	Out-of-	In-State	Out-of-	Net
Year	NOx	PM2.5	benefit ^b	State	burden ^c	State	benefit ^d
	reduction	reduction	(millions	benefit ^b	(millions	burden ^c	(millions
	(TPY) ^a	(TPY) ^a	\$)	(millions	\$)	(millions	\$)
				\$)		\$)	
2040	1,224	82	776.0	609.0	-27.5	-22.1	1,335.4

^a Emissions reduction in tons per year

^bBenefit of reduced on-road emissions

^c Burden of increased electric generation emissions

^d Sum of in-State and out-of-State benefits and burdens

As described in the Table, Sonoma Technology, Inc., estimated that the implementation of the ACC II program in New Jersey will provide a net in-State health benefit of \$748.5 million (\$776 million in-State benefit minus the in-State burden of \$27.5 million). Further, the analysis

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State benefits.

This amount is likely an underestimate of the avoided health costs, as there are additional avoided health outcomes linked to emissions that may not be captured by the COBRA tool. For example, PM2.5, polycyclic aromatic hydrocarbons (PAHs), NO_x, and black carbon have been associated with deficits in intelligence, memory, and behavior. PAHs, which are a component of black carbon and PM2.5, have been associated with developmental delay; reduced IQ; symptoms of anxiety; depression; and inattention; attention deficit hyperactivity disorder (ADHD); and reduced size of brain regions important for processing information and impulse control. See American Journal of Public Health, Healthy Air, Healthy Brains: Advancing Air Pollution Policy to Protect Children's Health, March 13, 2019, by D.C. Payne-Sturges et al., https://aiph.aphapublications.org/doi/full/10.2105/AJPH.2018.304902. Black carbon and PM2.5

have also been associated with asthma exacerbation. See Science of the Total Environment, Acute effects of black carbon and PM2.5 on children asthma admissions: a time-series study in a Chinese city, by Hua, J., Yin, Y., Peng, L., Du, L., Geng, F., and Zhu, L. (2014), Vol. 481, pp. 433-38. It was estimated that nationwide in 2008, \$4 billion in direct medical costs and nearly \$5 billion in indirect costs, such as lost productivity resulting from parents' caring for sick children, could be attributed to asthma. Applying a range of attributable fractions (10 percent to 35 percent), the best estimate of nationwide childhood asthma costs in 2008 that could be associated with environmental factors was \$2.2 billion. Health Affairs, Reducing the Staggering Costs of
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Y. Liu in Health Affairs, https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2010.1239.

Monetized Value of CO₂ Emission Reductions

As discussed in the Social and Environmental Impact statements, climate change impacts are significant and far-reaching. Among the significant direct and indirect environmental changes the State will experience are "increases in temperature, variability in precipitation, frequency and intensity of storms, sea-level rise, ocean acidification, and the associated impacts to ecological systems, natural resources, human health, and the economy." 2020 Report on Climate Change, p. vi.

The economic costs of greenhouse gas emissions can be expressed using the social cost of carbon (SC-CO₂). The SC-CO₂ is "the monetary value of the net harm to society associated with adding a small amount of that [CO₂] to the atmosphere in a given year." Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990, February 2021 (2021 IWG Interim Estimates), p.2,

https://www.whitehouse.gov/wp-

<u>content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide</u> <u>.pdf</u>. "The SC-CO₂ is intended to provide a comprehensive measure of the net damages—that is, the monetized value of the net impacts— from global climate change that result from an NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. additional ton of CO₂." National Academies of Sciences, Engineering, and Medicine 2017.

Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide. Washington, DC: The National Academies Press (2017 NAS Report), p.5,

https://doi.org/10.17226/24651. The damages include, but are not limited to, "changes in net agricultural productivity, human health effects, property damage from increased flood risk natural disasters, disruption of energy systems, risk of conflict, environmental migration, and the value of ecosystem services." 2021 IWG Interim Estimates, p. 2. As the SC-CO₂ provides a dollar valuation of the damages caused by one ton of carbon pollution, the SC-CO₂ can also be used to represent the monetary benefit of reducing carbon emissions by providing an estimate of the avoided cost of future damages.

In 2018, New Jersey's Legislature determined, as part of its findings relative to nuclear energy, that "[t]he social cost of carbon, as calculated by the U.S. Interagency Working Group on the Social Cost of Carbon in its August 2016 Technical Update, is an accepted measure of the cost of carbon emissions." N.J.S.A. 48:3-87.3.b(8). Likewise, the 2019 Energy Master Plan (EMP) and the Department's 2018 CO₂ Budget Trading Program rules notice of proposal used the U.S. Interagency Working Group on Social Cost of Greenhouse Gases (IWG) supported SC-CO₂ values to consider the avoided social costs of actions taken to reduce greenhouse gas emissions. Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, August 2016 (2016 IWG TSD

<u>12/documents/sc_co2_tsd_august_2016.pdf</u>. Considering all of these factors, the Department has determined that the techniques used to estimate the 2021 IWG SC-CO₂ values are based on the most current science and, therefore, are appropriate when estimating the monetary benefits of avoided greenhouse gas emissions.

The Department further notes that the Intergovernmental Panel on Climate Change (IPCC) has stated that the Federal SC-CO₂ estimates described in the 2016 IWG TSD Update and 2021 IWG Interim Estimates are likely underestimated due to the omission of significant impacts that cannot be accurately monetized, including important physical, ecological, and economic impacts. See IPCC, 2018: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5 degrees Celsius above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press (2018 IPCC Special Report), p.150-51,

https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15 Full Report High Res.pdf.

As noted in both the 2021 IWG Interim Estimates and the 2016 IWG TSD Update cited above, the models used by the IWG did "not include all of the important physical, ecological,

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time, and that in the IWG's judgement "these limitations suggest that the SC-CO₂ estimates are likely conservative." 2016 IWG TSD Update, 20-21. While the Department understands there is uncertainty regarding the precise potential future impacts of climate change, the Department agrees with the IPCC and the IWG's own guidance. Therefore, the monetary benefits set forth below are believed to be conservative, and the avoided greenhouse gas emissions achieved through this rulemaking will likely result in greater economic benefits.

The SC-CO₂ "for a given year is an estimate, in dollars, of the present discounted value of the future damage caused by a 1-metric ton increase in CO₂ emissions into the atmosphere in that year, or equivalently, the benefits of reducing CO₂ emissions by the same amount in that year." 2017 NAS Report, p.5. The SC-CO₂ is year specific and is highly sensitive to the discount rate used to discount the value of the damages in the future due to CO₂ emissions. The SC-CO₂ increases over time as social-ecological systems become more stressed from the aggregate impacts of climate change and future emissions cause incrementally larger damages.

Table ES-1 from the 2021 IWG Interim Estimates, as partially reproduced below, shows the increase of SC-CO₂ values over time for each discount rate used by the Department.

Table ES-1: Social Cost of CO₂, 2020-2050 (in 2020 dollars per metric ton of CO₂

Discount Rate and Statistic

Emissions	5%	3%	2.5%	
Year	Average	Average	Average	
2020	14	51	76	
2025	17	56	83	
2030	19	62	89	
2035	22	67	96	
2040	25	73	103	
2045	28	79	110	
2050	32	85	116	

(Values derived from the 2021 IWG Interim Estimates, p. 5, Table ES-1)

According to the 2021 IWG Interim Estimates, "the range of discount rates reflects both uncertainty and, at least in part, different policy or value judgements." *Id.* at 27. When modeling the economic impact of climate change, a higher discount rate decreases the value today of future environmental damages. The Department's SC-CO₂ estimates are calculated using the 2.5, three, and five percent discount rates determined by IWG to "reflect reasonable judgments under both descriptive and prescriptive approaches." Interagency Working Group on Social Cost of Carbon, United States Government, Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, February 2010 (2010 IWG TSD), p.23, https://www.epa.gov/sites/default/files/2016-12/documents/scc_tsd_2010.pdf. Following IWG recommendations, the Department's estimates of avoided SC-CO₂ benefits are presented as a

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Estimates.

Using the emissions reductions described in Table 1 of the Environmental Impact, the Department estimated the total SC-CO₂ benefits for avoided emissions from 2026 through 2050. The corresponding total SC-CO₂ benefits are estimated as \$4.24 billion (five percent discount rate), \$17.55 billion (three percent discount rate), and \$27 billion (2.5 percent discount rate). *Amendments to the LEV Program at N.J.A.C.* 7:27-29

The Department's proposed rulemaking to amend the existing LEV program at N.J.A.C. 7:27-29 at the conclusion of calendar year 2025 is not expected to have a substantial economic impact. As noted above, California has adopted the next phase of their emission control standards, the ACC II program, which is proposed to begin with model year 2027 in New Jersey. The proposed amendments simply clarify the end date of the existing program so there is no confusion about the applicable subchapter.

Clarifications and updates of Miscellaneous Provisions at N.J.A.C. 7:27-14, 15, 28A, and 31

The Department's proposed amendments to miscellaneous provisions at N.J.A.C. 7:27-14, 15, 28A, and 31 are not expected to have a substantial economic impact. The amendments at N.J.A.C. 7:27-14 and 15 merely update a reference to a memorandum; the amendments at N.J.A.C. 7:27-31 clarify that exemptions to California's ACT program should have been incorporated by reference; and the amendments at N.J.A.C. 7:27-28A update the CCR provisions, which were previously incorporated by reference, to establish a New Jersey-specific NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. ABT program consistent with the programs in other states. The cost to manufacturers to report

sales data to New Jersey will be *de minimis*.

Environmental Impact

The Department expects that the proposed ACC II program will have a net positive environmental impact. By establishing requirements for vehicle manufacturers to produce and deliver ZEV passenger cars and light-duty trucks as an increasing percentage of their annual sales in the State, the proposed rules will reduce emissions of CO₂, as well as the criteria pollutants, NO_x and PM2.5. According to the 80x50 Report, transportation sector emissions comprise the largest sector of greenhouse gas emissions in the State. See 80x50 Report, p. 11. According to the 2022 Greenhouse Gas Emissions Inventory Report Years 1990-2019 (2022 GHG Inventory Report), on-road gasoline-powered passenger vehicles, including sedans, pickup trucks, and SUVs, accounted for the largest share of on-road emissions at 29.7 MMT CO₂e (82 percent of on-road total of 34.0 MMT CO₂e) in 2019. See 2022 GHG Inventory Report, pages 3, 15-16, <u>2022-ghg-inventory-report_final-1.pdf (nj.gov)</u>. The proposed rules, which are estimated to result in 16.2 MMT/yr CO₂e benefits in 2050 (see Table 2 below) will serve as one step towards reducing emissions from the transportation sector, thereby mitigating the adverse environmental effects and impacts of climate change.

As described in the Social Impact, the Department participated in an analysis of the benefits in New Jersey if ACC II were adopted compared with a business-as-usual (BAU)

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NESCAUM. See Fact Sheet, Benefits of Adopting California's Advanced Clean Car II (ACC II) Standards in New Jersey. See https://theicct.org/wp-content/uploads/2023/05/nj-acc-ii-benefitsfs-may23.pdf. (Sonoma: Fact Sheet). Pursuant to the BAU scenario, ZEV sales are predicted to remain relatively flat after 2025 because the Department's existing rules at N.J.A.C. 7:27-29 end with a 22 percent requirement in model year 2025. However, there will still be a steadily increasing population of ZEVs in New Jersey's fleet as older internal combustion engine vehicles are retired and ZEVs are purchased, leveling off by 2040 with only about 17 percent of the total population of light-duty vehicles being ZEVs. The study modeled the emissions of NO_x, PM2.5, volatile organic compounds (VOC), sulfur dioxide (SO₂), ammonia (NH₃), and carbon dioxide equivalent (CO₂e). The pollutants of greatest concern and impact that are summarized include NO_x, PM2.5, and well-to-wheels (WTW) CO₂e. The modeling accounts for emissions of NO_x and PM2.5 resulting from tailpipe emissions from internal combustion engine vehicles and the power plant emissions associated with electricity used to charge electric vehicles. The WTW CO₂e emissions modeling also accounts for upstream CO₂ emissions related to petroleum production and refining, and power plant operation. The cumulative benefits resulting from implementation of the New Jersey ACC II program in 2027 can be found in Table 1 of Sonoma's Fact Sheet, as reproduced below.

Table 1

Cumulative ACC II Emissions Benefits Compared to the Business-as-Usual Scenario, MY2027 ACCII Program Start (NO_x and PM_{2.5} in US tons, CO₂e in million metric tons)

Ву 2030		By 2040		By 2050				
NO _x	PM _{2.5}	WTW	NO _x	PM _{2.5}	WTW	NO _x	PM _{2.5}	WTW
		CO ₂ e			CO ₂ e			CO ₂ e
881	59	8.2	8,886	649	94.2	25,998	1,775	269.7

See Sonoma: Fact Sheet.

Pursuant to a BAU scenario, CO₂e emissions from vehicles are expected to decrease based on improvements in technology and fuel economy, as well as the phase in of some ZEVs, as noted above. However, the proposed ACC II program accelerates and amplifies that decrease in emissions. Table 2 of Sonoma's Fact Sheet, as reproduced below, highlights the projected CO₂e emission reductions in a BAU scenario plus the additional emission reductions that would be achieved with the adoption of the ACC II program. For example, in the year 2030, the BAU scenario is expected to result in reductions of 3.1 million metric tons of CO₂e per year. But pursuant to the ACC II Program scenario, New Jersey is predicted to have a reduction of 5.8

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CO₂e reductions).

Table 2						
Projected Light-Duty Onroad Vehicle CO2e Emission Reductions, MY2027 ACCII Program						
Start – BAU and ACCII Adoption Scenarios (MMT/Y)						
	Γ		Γ			
Year	Business-as-usual	CO ₂ e reductions	Additional CO ₂ e reductions if ACC			
			II sales goals are achieved			
	Tailpipe	Total (WTW)	Tailpipe	Total (WTW)		
2030	3.1 MMT/Y	3.5 MMT/Y	2.7 MMT/Y	3.3 MMT/Y		
2040	7.3 MMT/Y	8.7 MMT/Y	10.1 MMT/Y	12.3 MMT/Y		
2050	7.9 MMT/Y	9.8 MMT/Y	16.2 MMT/Y	20.8 MMT/Y		

See Sonoma: Fact Sheet. While the BAU CO₂e reductions are significant, overlaying the ACC II program produces greater additional reductions. Though electric vehicles will increase the demand for electricity, the net environmental benefits are still positive because of the increased efficiency of electric vehicle powertrains versus internal combustion engine powertrains and the anticipated cleaner power generating mix in the State.

The Department's rulemaking to amend the existing LEV program at N.J.A.C. 7:27-29 at the conclusion of calendar year 2025 is not expected to have a substantial environmental impact. As noted above, California has adopted the next phase of their emission control standards, the ACC II program, which is proposed to begin with model year 2027 in New Jersey. The amendments simply clarify the end date of the existing program, so there is no confusion about the applicable subchapter.

Clarifications and Updates of Miscellaneous Provisions at N.J.A.C. 7:27-14, 15, 28A, and 31

The Department's proposed amendments to miscellaneous provisions at N.J.A.C. 7:27-14, 15, 28A, and 31 are not expected to have a substantial environmental impact. The amendments at N.J.A.C. 7:27-14 and 15 merely update a reference to a memorandum; the amendments at N.J.A.C. 7:27-31 clarify that exemptions to California's ACT program should have been incorporated by reference; and the amendments at N.J.A.C. 7:27-28A update the CCR provisions, which were previously incorporated by reference, to establish a New Jersey-specific ABT program consistent with the programs in other states.

Federal Standards Statement

N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c. 65), requires State agencies that adopt, readopt,

or amend State rules that exceed any Federal standards or requirements to include in the rulemaking document a Federal standards analysis.

The Federal Clean Air Act (CAA) (42 U.S.C. §§ 7401 et seq.) granted the State of California the authority to enact stricter emission standards than the national standards set by the EPA. See 42 U.S.C. § 7543. The CAA also authorizes qualifying states to adopt and enforce emission standards for which California has received a waiver, if the state gives two years' lead time. See 42 U.S.C. § 7507. Thus, once the EPA grants California's request for a waiver for the ACC II regulations, pursuant to 42 U.S.C. § 7543, the more stringent emission standards that the Department proposes to incorporate by reference will be a Federally authorized standard. If, however, a waiver is not granted, the proposed rules will not be applied or enforced pursuant to N.J.A.C. 7:27-29A.2. Given the framework of the CAA, the proposed rules would not exceed a Federal standard once a waiver is granted. Thus, no further analysis is necessary.

Although the Department determined a Federal standards analysis is not necessary because the proposed rules will either be Federally authorized or will not be enforced until Federally authorized, the Department recognizes that the proposed ACC II program is more strict than the EPA's current multi-pollutant emission standard. As discussed in the Social Impact, the Department has determined that it is critical to reduce greenhouse gas emissions to mitigate the impacts and effects of climate change. In New Jersey, passenger vehicles and light-duty trucks are the largest contributors to greenhouse gas emissions from the transportation sector. By

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the EPA's current multi-pollutant emission standards.

As explained in the Economic Impact, the direct costs of the ACC II rules will be borne by manufacturers, who will face an increase in incremental costs to produce ACC II compliant vehicles versus the production of vehicles compliant with EPA's existing emission standards. Nonetheless, a manufacturer's costs to design and produce vehicles that comply with the more stringent, ACC II emissions standards will only need to be incurred one time and will not recur each time a 177 state adopts the ACC II standards. Consumers of battery electric vehicles are likely to see a cost savings over a 10-year cost of ownership period. Whereas, consumers of fuel cell electric vehicles and plug-in hybrid vehicles, are not anticipated to achieve a net savings over time. Though the State may experience deceases in revenue, as a result of the decrease in sales of internal combustion engine vehicles, intervening legislative, regulatory, and policy changes related to vehicle sales and fuel taxes in the next two decades could reverse that trend. Car dealerships and the automotive repair industry in New Jersey will also have to make adjustments to their business models including investments in infrastructure, such as charging stations, that will result in increased costs. And some businesses in the State, like gasoline retail stations will see a decrease in sales, while other businesses, like Tier 1 suppliers and ZEV infrastructure installers, will likely see an increase in sales. To the extent costs are incurred, the

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from the light-duty vehicle sector and transition to zero-emission vehicles.

As CARB explained in its ISOR, "[m]anufacturers have made significant improvements in battery technology, which has enabled more vehicle offerings in more segments and increasing capabilities. [...] Additionally, technology costs have fallen significantly, namely battery costs, over the last 10 years and are expected to continue to drop over time. This will make ZEVs costcompetitive with gasoline vehicles in the 2030-2035 timeframe, if not sooner. [... T]he market is clearly poised for massive transformation. Every light duty vehicle manufacturer has made commitments to electrify their product line." ISOR at pp. 36-37. For these reasons, the Department is confident that the increase in ZEV sales required by the ACC II program is achievable.

As explained in the Summary, the proposed rules are intended to be a first step in a comprehensive plan to lower greenhouse gas emissions in the State in order to mitigate the impacts of climate change. The Department has determined that the proposed ACC II program is essential if the State is to successfully decarbonize light-duty vehicles. Further, the Department anticipates the benefits of the proposed rulemaking to be an increase in the quality of life and protection of human health and the environment.

The Department's rulemaking to amend the existing LEV program at N.J.A.C. 7:27-29 at the conclusion of calendar year 2025 would not exceed a Federal standard. In fact, the Federal standard would be in effect for at least one calendar year before the proposed ACC II program would become operative. Thus, no further analysis is necessary.

Clarifications and Updates of Miscellaneous Provisions at N.J.A.C. 7:27-14, 15, 28A, and 31

The amendments at N.J.A.C. 7:27-14 and 15 merely update a reference to an EPA memorandum; therefore, no Federal standard analysis is required. The amendments at N.J.A.C. 7:27-31 clarify that exemptions to California's ACT program should have been incorporated by reference when the Department originally adopted the rules. Since EPA granted California's request for a waiver for the ACT program rules, pursuant to 42 U.S.C. § 7543, the ACT program is a Federally authorized standard. Accordingly, no Federal standard analysis is required. The amendments at N.J.A.C. 7:27-28A establish a New Jersey-specific ABT program consistent with California's Low NO_x Omnibus rules. Once the EPA grants California's request for a waiver for the Low NO_x Omnibus rules, pursuant to 42 U.S.C. § 7543, the more stringent emission standards that the Department proposes to incorporate by reference will be a Federally authorized standard. If a waiver is not granted, the rules will not be applied or enforced; therefore, no Federal standard analysis is required.

Jobs Impact

The Department anticipates that the proposed rulemaking will have both a negative and positive impact on job retention and creation in the State over the long-term, depending on the employment sector being analyzed.

As part of its economic analysis, CARB estimated the impact of the ACC II regulation on the total employment in California across all industries. CARB stated that "The proposed regulation is estimated to have a negative impact on employment growth beginning in 2026, which increases through 2035 as the Proposed Regulation becomes more stringent but begins to diminish post-2035 as operational cost-savings grow and vehicle costs decrease." CARB ISOR, pp. 168-169. According to CARB, "[a]s the requirements of the Proposed Regulation go into effect, consumers and businesses must initially spend more on vehicle purchases, reducing spending elsewhere in the economy, which tends to reduce employment across many industries that serve and produce goods for consumers. Over time, vehicle purchasers are estimated to realize operational cost-savings, shifting consumer spending away from categories such as vehicle maintenance and repair and gasoline and towards other areas." ISOR, p. 169.

As discussed at length in the Social and Economic Impacts, one of the largest negative employment impacts anticipated is in the vehicle repair and maintenance industry. ISOR, p. 169. Retail gasoline sales are also expected to be negatively impacted since retail gasoline stations in New Jersey employ attendants to assist in gasoline sales. These impacts may be reduced if retail operations successfully transition to providing electric vehicle charging. And though some

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make gains. See ISOR, pp. 169-70.

As noted above, the proposed rulemaking represent a continuation of the Department's efforts to mitigate the impacts of climate change by reducing greenhouse gas emissions and short-lived climate pollutants. However, simultaneous efforts are needed and are underway to transition to clean energy across all sectors. The Department anticipates that the transition to clean energy will create jobs and spur advances, including advances in zero-emission electric vehicle technology and infrastructure.

The New Jersey Council on the Green Economy (NJCOGE) released the Green Jobs for a Sustainable Future roadmap in September 2022, which identified areas of green job growth in New Jersey, including the transition to alternative vehicles. See Green Jobs for a Sustainable Future, <u>https://www.nj.gov/governor/climateaction/documents/CGE%20Roadmap.pdf</u> (Green Jobs Roadmap). In modeling the employment impacts of alternative vehicle adoption, NJCOGE conducted an analysis specific to New Jersey's labor market and demographics. Although the Green Jobs Roadmap did not directly examine the impacts of ACC II, it projects a net employment growth of 39,844 jobs in the years from 2022 through 2031 in the alternative vehicles sub-sector. *Id.* at p. 21. This forecast for job creation does not include the full slate of economic or employment impacts from either the Infrastructure Investment and Jobs Act or the Inflation Reduction Act, both of which will be significant drivers of future job creation for New Jersey's green economy. *Id.* pp. 21-22. As the Green Jobs Roadmap notes, "new technologies

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Amendments to the LEV Program at N.J.A.C. 7:27-29

The Department's rulemaking to amend the existing LEV program at N.J.A.C. 7:27-29 at the conclusion of calendar year 2025 is not expected to have a substantial impact on jobs in the State. As noted above, California has adopted the next phase of their emission control standards, the ACC II program, which is proposed to begin with model year 2027 in New Jersey. The amendments simply clarify the end date of the existing program so there is no confusion about the applicable subchapter.

Clarifications and Updates of Miscellaneous Provisions at N.J.A.C. 7:27-14, 15, 28A, and 31

The Department's proposed amendments to miscellaneous provisions at N.J.A.C. 7:27-14, 15, 28A, and 31 are not expected to have a substantial impact on jobs in the State. The amendments at N.J.A.C. 7:27-14 and 15 merely update a reference to a memorandum; the amendments at N.J.A.C. 7:27-31 clarify that exemptions to California's ACT program should have been incorporated by reference; and the amendments at N.J.A.C. 7:27-28A update the CCR provisions, which were previously incorporated by reference, to establish a New Jersey-specific ABT program consistent with the programs in other states.

Agricultural Industry Impact

The Department anticipates that the proposed rulemaking will have a positive impact on the agricultural industry in New Jersey by reducing emissions of CO₂ and, therefore, reducing atmospheric concentrations of the gases that are driving climate change. The 2020 Report on Climate Change includes a section that outlines the existing and anticipated impacts of climate change on the agricultural industry in New Jersey. See 2020 Report on Climate Change, pp. 81-83. The term "agriculture" is defined broadly in the report to include crops, livestock, and nursery plants. See 2020 Report on Climate Change, p. 81. Though many factors can affect agriculture, the report focuses on alterations in temperature CO₂ concentrations, and availability of water, which can be attributed to climate change. See 2020 Report, p. 81. These alterations include:

- Increased temperatures, which can:
 - o negatively impact the flavor and visual appeal of crops
 - result in conditions that are no longer suitable for specialty crops, such as cranberries and blueberries
 - o result in a larger number of insects, whose lifespans are elongated
 - lead to an increased use of pesticides, which may cause other adverse environmental impacts
 - negatively impact livestock production (such as milk production)
- Increases in the concentration of CO2, which can:
 - o lead to increases in weeds competing for crop resources

o lead to an increased in the amount and frequency of herbicide use, which may

cause other adverse environmental impacts

- Changes in water availability, which can:
 - Lead to longer dry periods, increasing the need for irrigation and increasing the cost of production

See 2020 Report on Climate Change, pp. 81-83.

In other words, climate change is expected to have major impacts on the growth and productivity of New Jersey crops and livestock due to an increase in dry spells, heat waves, and sustained droughts. "Crop yields are expected to decrease [and become] stressed due to agricultural pests and weeds as winter temperatures continue to rise. All of this will increase pressure on farms, which will likely result in an increased use of herbicide and pesticide use." 2020 Report on Climate Change, p. 83. For this reason, the proposed rulemaking should have a positive impact on agriculture in this State by reducing the extent of significant losses attributable to climate change.

Regulatory Flexibility Statement

As required pursuant to the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Department has evaluated the reporting, recordkeeping, and other compliance requirements that the proposed rulemaking would impose upon small businesses. The Regulatory

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Housing Affordability Impact Analysis

In accordance with N.J.S.A. 52:14B-4, the Department has evaluated the proposed rulemaking to determine its impact, if any, on the affordability of housing. The proposed rulemaking will require manufacturers of passenger cars and light-duty trucks to meet an annual ZEV requirement intended to increase the percentage of ZEVs sold in New Jersey. As explained in the Social Impact, for the ACC II program to be successful in New Jersey, the State will need sufficient charging infrastructure build-out, including at homes. CARB estimated the additional cost of installing home Level 2 Circuit and Wiring to range from \$680.00 (single-family home detached) to \$2,000 (single-family home attached, duplex, triplex, quad). See CARB Standardized Regulatory Impact Analysis (updated March 29, 2022) page 92, at https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/accii/appc1.pdf. Based on this information, the Department does not believe that the proposed rulemaking will have a significant impact on housing affordability.

Smart Growth Development Impact Analysis

In accordance with N.J.S.A. 52:14B-4, the Department has evaluated the proposed

rulemaking to determine their impact, if any, on housing production in Planning Areas 1 or 2, or within designated centers, pursuant to the State Development and Redevelopment Plan. The proposed rulemaking will require manufacturers of passenger cars and light-duty trucks to meet an annual ZEV requirement intended to increase the percentage of ZEVs sold in New Jersey. The proposed rulemaking does not impact land use development of any kind, including that of residential housing. Therefore, the rulemaking is unlikely to evoke a change in housing production in Planning Areas 1 or 2, or within designated centers, under the State Development and Redevelopment Plan.

Racial and Ethnic Community Criminal Justice and Public Safety Impact

In accordance with N.J.S.A. 52:14B-4(a)(2) and 2C:48B-2, the Department has evaluated this rulemaking and determined that it will not have an impact on pretrial detention, sentencing, probation, or parole policies concerning adults and juveniles in the State. Accordingly, no further analysis is required.

Full text of the proposal follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]):

CHAPTER 27

AIR POLLUTION CONTROL

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POWERED MOTOR VEHICLES

7:27-14.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

"EPA [Memorandum 1A] **Tampering Policy**" means the memorandum dated [June 25, 1974] **November 23, 2020**, and issued by the EPA's Office of Enforcement and [General Counsel] **Compliance Assurance**, which sets forth the EPA's [interim tampering enforcement] **nonbinding** policy **regarding the potential investigation and prosecution of civil enforcement actions**. This term also includes any revisions [to the policy set forth in the June 25, 1974, memorandum that are], **supplements, or replacements that may be** subsequently issued by the EPA. A copy of this EPA [memorandum has been filed with the Office of Administrative Law and] **Tampering Policy** may be obtained from the Bureau of Mobile Sources in the Department of Environmental Protection.

•••

7:27-14.3 General prohibitions

(a) - (d) (No change.)

(e) No person shall cause, suffer, allow, or permit any of the following, unless it is performed in accordance with **the** EPA [Memorandum 1A] **Tampering Policy** or it is exempt from

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CARB Executive Order may be obtained from the California Air Resources Board, 1001 "I"

Street, PO Box 2815, Sacramento, CA 95812 or at www.arb.ca.gov):

1.-3. (No change.)

(f) (No change.)

SUBCHAPTER 15. CONTROL AND PROHIBITION OF AIR POLLUTION FROM

GASOLINE-FUELED MOTOR VEHICLES

7:27-15.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

"EPA [Memorandum 1A] **Tampering Policy**" means the memorandum dated [June 25, 1974] **November 23, 2020**, and issued by the EPA's Office of Enforcement and [General Counsel] **Compliance Assurance**, which sets forth the EPA's [interim tampering enforcement] **nonbinding** policy **regarding the potential investigation and prosecution of civil enforcement actions**. This term also includes any revisions [to the policy set forth in the June 25, 1974, memorandum that are], **supplements, or replacements that may be** subsequently issued by the EPA. A copy of [this] **the** EPA [memorandum has been filed with the Office of Administrative Law and] **Tampering Policy** may be obtained from the Bureau of Mobile Sources in the Department of Environmental Protection.

7:27-15.7 Prohibition of tampering with emission control apparatus

(a) No person shall cause, suffer, allow, or permit any of the following, unless it is performed in

accordance with the EPA [Memorandum 1A] Tampering Policy or it is exempt from

prohibition by CARB Executive Order (information on devices or modifications approved by

CARB Executive Order may be obtained from the California Air Resources Board, 1001 "I"

Street, PO Box 2815, Sacramento, CA 95812 or at www.arb.ca.gov):

1.-4. (No change.)

(b) (No change.)

SUBCHAPTER 28A. MODEL YEAR 2027 OR LATER HEAVY-DUTY NEW ENGINE AND VEHICLE STANDARDS AND REQUIREMENTS

7:27-28A.11 Incorporation by reference

(a)-(e) (No change.)

(f) The following provisions of the CCR and the California Vehicle Code are incorporated by reference within this subchapter, except as provided at (f)1 through 7 below:

Table 1
Provisions Incorporated by Reference
California Code of Regulations (CCR)
Title 13
Chapter 1

Motor	Vehicle Pollution Control Devices
	Article 1
	General Provisions
Section 1900	Definitions
Section 1905	Exclusion and Exemption for Military
	Article 2
Approval of 1	Motor Vehicle Pollution Control Devices
Section 1956.8	Exhaust Emission Standards and Test Procedures—1985 and Subsequent Model Heavy-Duty Engines and Vehicles, 2021 and Subsequent Zero-Emission Powertrains, and 2022 and Subsequent Model Heavy-Duty Hybrid Powertrains
Section 1961.2	Exhaust Emission Standards and Test Procedures—2015 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles
Section 1965	Emission Control and Smog Index Labels—1979 and Subsequent Model Year Vehicles
Section 1968.2	Malfunction and Diagnostic System Requirements—2004 and Subsequent Model Year Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles
Section 1971.1	On-Board Diagnostic System Requirements—2010 and Subsequent Model-Year Heavy-Duty Engines
	Article 6
Em	ission Control System Warranty
Section 2035	Purpose, Applicability and Definitions

Section 2036	Defects Warranty Requirements for 1979			
	Through 1989 Model Passenger Cars,			
	Light-Duty Trucks, and Medium-Duty Vehicles; 1979 and Subsequent Model Motorcycles and Heavy-Duty Vehicles; and Motor Vehicle Engines Used in Such			
				Vehicles; and 2020 and Subsequent Model
				Year Trailers
				Section 2037
		and Subsequent Model Year Passenger		
		Cars, Light-Duty Trucks and Medium-Duty		

	in Such Vehicles
	Chapter 2
Enforcem	nent of Vehicle Emission Standards and
	Article 1.5
	Anticle 1.3
Enforcement of Testing for 20	Vehicle Emission Standards and Surveillance 005 and Subsequent Model Year Heavy-Duty Engines and Vehicles
Section 2065	Applicability of Chapter 2 to 2005 and Subsequent Model Year Heavy Duty Engines and Vehicles.
	Article 2.1
Procedures f	or In-Use Vehicle Voluntary and Influenced Recalls
Section 2111	Applicability
Section 2112	Definitions
	Appendix A to Article 2.1
Section 2113	Initiation and Approval of Voluntary and Influenced Recalls
Section 2114	Voluntary and Influenced Recall Plans
Section 2115	Eligibility for Repair
Section 2116	Repair Label
Section 2117	Proof of Correction Certificate
Section 2118	Notification
Section 2119	Record keeping and Reporting Requirements
Section 2121	Penalties
	Article 2.2
Procedu	res for In-Use Vehicle Ordered Recalls
Section 2123	Initiation and Notification of Ordered Emission-Related Recalls
Section 2125	Ordered Recall Plan
Section 2126	Approval and Implementation of Recall Plan
Section 2127	Notification of Owners
Section 2128	Repair Label
Section 2129	Proof of Correction Certificate
Section 2130	Capture Rates and Alternative Measures
Section 2131	Preliminary Tests

Section 2133 Record keeping and Reporting Requirements			
	Article 2.3		
In-Use Ve	ehicle Enforcement Test Procedures		
Section 2137	Vehicle Selection		
Section 2139	Testing		
Section 2139.5	CARB Authority to Test for Heavy-Duty In-Use Compliance		
Section 2140	Notification of In-Use Results		
	Article 2.4		
Procedures for	Reporting Failure of Emission-Related Components		
Section 2141	General Provisions		
Section 2142	Alternative Procedures		
Section 2143	Failure Levels Triggering Recall		
Section 2144	Emission Warranty Information Report		
Section 2145	Field Information Report		
Section 2146	Emissions Information Report		
Section 2147	Demonstration of Compliance with Emission Standards		
Section 2148	Evaluation of Need for Recall		
Section 2149	Notification of Subsequent Action		
	Article 5		
Procedures for Equipme	r Reporting Failures of Emission-Related ent and Required Corrective Action		
Section 2166	General Provisions		
Section 2166.1	Definitions		
Section 2167	Required Recall and Corrective Action for Failures of Exhaust After-Treatment Devices, On-Board Computers or Systems, Urea Dosers, Hydrocarbon Injectors, Exhaust Gas Recirculation Valves, Exhaust Gas Recirculation Coolers, Turbochargers, Fuel Injectors		
Section 2168	Required Corrective Action and Recall for Emission-Related Component Failures		
Section 2169	Required Recall or Corrective Action Plan		
Section 2169.1	Approval and Implementation of Corrective Action Plan		
Section 2169.2	Notification of Owners		

Section 2169.3	Repair Label		
Section 2169.4 Proof of Correction Certificate			
Section 2169.5	tion 2169.5 Preliminary Tests		
Section 2169.6	Communication with Repair Personnel		
Section 2169.7	Recordkeeping and Reporting Requirements		
Section 2169.8	Extension of Time		
Section 2170	Penalties		
	Chapter 9		
	Article 4		
Off-Road Com	pression-Ignition Engines and Equipment		
Section 2423(n)	Exhaust Emission Standards and Test Procedures—Off-Road Compression- Ignition Engines		
	Chapter 10		
	Article 1		
Cor	mmercial Motor Vehicle Idling		
Sections 2485(c)(2), 2485(c)(3), and 2485(h)	Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling		
	Title 17		
	Division 3		
	Chapter 1		
	Subchapter 10		
	Article 4		
	Subarticle 12		
Greenhouse Gas Subsec	s Emission Requirements for New 2014 and quent Model Heavy-Duty Vehicles		
Section 95661	Applicability		
Section 95662	Definitions		
Section 95663	Greenhouse Gas Exhaust Emission Standards and Test Procedures for New 2014 and Subsequent Model Heavy-Duty Vehicles		
Provi	sions Incorporated by Reference		
	California Vehicle Code		
Divi	sion 12. Equipment Of Vehicles		
(Chapter 5. Other Equipment		

Article 2. Exhaust Systems	
Section 27156.2	
Section 27156.3	

1.-5. (No change.)

6. At 13 CCR 2485(c)(3)(D), replace "operation of the APS in California" with "operation of the APS in New Jersey"; [and]

7. At 13 CCR 1956.8(a)(2)(F), replace the text to read as follows:

"(F) Transit Agency Diesel-Fueled Bus and Engine Exemption Request

For 2027 and subsequent model diesel-fueled medium heavy-duty or heavy heavy-duty engines used in urban buses, the Department will approve a Transit Agency Diesel-Fueled Bus and Engine Exemption Request made by a transit agency or bus company that meets each of the conditions and requirements at subparagraphs 1 and 2 below. If granted, an exemption request will allow a transit agency or bus company to purchase, rent, or lease exempt buses, contract for service with bus service providers to operate exempt buses, or re-power buses with engines that are certified to both the federal emission standards for 2010 and later model year diesel-fueled medium heavy-duty or heavy heavy-duty engines and vehicles, as set forth at title 40, Code of Federal Regulations section 86.007-11, effective March 27, 2023, and the Greenhouse Gas Emissions and Fuel Economy Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2 requirements promulgated at 81 FR 73,478.

1. Conditions

If an exemption request is filed for the purpose of making a purchase of a MY 2027 or subsequent MY diesel-fueled medium heavy-duty or heavy heavy-duty engine to be used in an urban bus, the transit agency's or bus company's exemption request shall demonstrate that there are no diesel-fueled medium heavy-duty or heavy heavy-duty engines used in urban buses certified to meet the Exhaust Emission Standards for 2027 and Subsequent Model Light Heavy-Duty Engines, and Medium Heavy-Duty Engines located at 13 CCR 1956.

2. Requirements and Procedures

a. The transit agency or bus company must submit its Transit Agency Diesel-Fueled Bus and Engine Exemption Request to the Department.

b. The Transit Agency Diesel-Fueled Bus and Engine Exemption Request must be submitted by May 1st of the first calendar year in which the exemption is requested.

c. The Transit Agency Diesel-Fueled Bus and Engine Exemption Request must identify the number of exempt buses needed for each bus type.

d. If the transit agency or bus company requests to apply the exemption request to an existing contract, the Transit Agency Diesel-Fueled Bus and Engine Exemption Request must include a copy of the contract.

e. The Transit Agency Diesel-Fueled Bus and Engine Exemption Request must identify the number of exempt buses or re-powered buses that the transit agency or bus company requests for each calendar year within the triennial period of the Transit Agency Diesel-

Fueled Bus and Engine Exemption Request, where the year the request is submitted is counted as the first calendar year.

3. The Department will issue an Executive Exemption Approval Letter if all foregoing conditions and requirements at subparagraphs 1 and 2 above are met. The Executive Exemption Approval Letter will allow a triennial quota for the purchase, rent, lease, contract for service, or re-power of exempt buses or engines. The triennial quota expires at the end of the third calendar year of the triennial period.

4. If the Transit Agency Diesel-Fueled Bus and Engine Exemption Request is approved by the Department, the transit agency or bus company may proceed with engine repower or exempt bus purchase, lease, rental, or contract for service. In the instance where new exempt engines and buses will be purchased or manufactured under the contract, the Executive Exemption Approval Letter will allow the bus and engine manufacturers to sell exempt engines to and manufacture exempt buses for the transit agency or bus company that has obtained the exemption. The transit agency or bus company must notify all parties involved of the approval and provide a copy of the issued Transit Agency Diesel-Fueled Bus and Engine Exemption Approval Letter to the engine and bus dealer(s), bus manufacturer(s), and engine manufacturer(s) involved with delivering the exempt buses or engines to the transit agency or bus company.

5. A transit agency or bus company may request a hearing to review the Department's

denial of an Executive Exemption Approval Letter pursuant to the procedures set forth at

N.J.A.C. 7:27-1.32[.]"; and

8. At "CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 2004 AND SUBSEQUENT MODEL HEAVY-DUTY DIESEL ENGINES AND VEHICLES" incorporated by reference within 13 CCR 1956.8, replace the following terms:

i. At 86.1 15.B.3, in all subsections, replace "California" with "New Jersey," except

"California certified," and replace "CA-ABT" with "NJ-ABT";

ii. At 86.1 15.B.3.(e), replace "Manufacturers that do not begin enrollment in the

CA-ABT program in 2022 model year may not transfer any federal-ABT credits

into the CA-ABT program." with "Manufacturers that do not begin enrollment in

the NJ-ABT program in 2025 model year may not transfer any Federal-ABT credits into the NJ-ABT program.";

iii. At 86.1 15.B.3.(k)(1), replace "Chief, Emissions Certification and Compliance Division, California Air Resources Board, 4001 Iowa Ave., Riverside, CA 92507."
with "NJ Department of Environmental Protection, Bureau of Mobile Sources, PO Box 420, Mail Code 401-02E, Trenton, NJ 08625."; and

iv. At 86.1 15.B.3.(k)(3), replace "ARB" with "the Department."

7:27-29.2 Purpose

(a) (No change.)

(b) The LEV program shall apply to all model year 2009 [and subsequent] through model year 2025 motor vehicles that are passenger cars and light-duty trucks subject to the California LEV program and delivered for sale in New Jersey on or after January 1, 2009.

(c) (No change.)

7:27-29.3 Applicability - LEV program

(a) Except as set forth [in] **at** (b) and (c) below, no dealer or other person within this State shall deliver for sale, offer for sale, sell, import, deliver, purchase, rent, acquire, receive, or register on or after January 1, 2009, a new 2009 [or subsequent] **through 2025** model-year passenger car or light-duty truck, unless the vehicle has been certified by the CARB and has received a CARB Executive Order.

(b) - (d) (No change.)

7:27-29.4 Emission certification standards

Each model year 2009 [and subsequent] **through model year 2025** motor vehicle subject to N.J.A.C. 7:27-29.3(a) shall be California-certified.

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(a) A manufacturer of model year 2009 [or later] **through model year 2025** passenger cars or light-duty trucks delivered for sale in New Jersey on or after January 1, 2009, shall demonstrate compliance with the NMOG fleet-wide average exhaust emission requirement of Title 13, CCR, Section 1961, which average shall be based on the number of the manufacturer's vehicles subject to N.J.A.C. 7:27-29.3(a).

(b) (No change.)

7:27-29.6 ZEV [Sales Requirement] sales requirement

(a) Beginning on January 1, 2009, for vehicles manufactured in model year 2009 [and each subsequent] through model year 2025, each manufacturer shall comply with the ZEV sales requirement at Title 13, CCR, Section 1962, including early credit and banking provisions.
(b) (No change.)

7:27-29.8 Fees

(a) Each intermediate volume and large volume vehicle manufacturer shall pay to the Department an annual fee of \$0.25 per vehicle for each passenger car and light-duty truck, including both [Federal Tier 2 certified] **Federal-** and California-certified vehicles, delivered for sale in New Jersey on or after January 1, 2005 **and prior to January 1, 2026**, and which vehicles the manufacturer has been required to report under Section D.6(a), "California

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Duty Trucks and Medium-Duty Vehicles," as set forth at Title 13, CCR, Section 2062.

(b) For vehicles delivered for sale in calendar years 2005 [and thereafter] **through 2025**, each intermediate volume and large volume manufacturer shall report its New Jersey production numbers to the Department by March 1 of the succeeding calendar year.

(c) - (d) (No change.)

SUBCHAPTER 29A. NEW JERSEY ADVANCED CLEAN CARS II PROGRAM

7:27-29A.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

"Business" means an occupation, profession, or trade; a person or partnership or corporation engaged in commerce, manufacturing, or a service; or a profit-seeking enterprise or concern.

"California Air Resources Board" or "CARB" means the agency, or its successor, established and empowered to regulate sources of air pollution in the state of California, including motor vehicles, pursuant to Section 39003, California Health and Safety Code, as amended or supplemented.

"CCR" means the California Code of Regulations.
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vehicle has satisfied the criteria for the control of specified air contaminants from motor vehicles, adopted by CARB or the EPA, respectively, as set forth in their respective

regulations.

"Commissioner" shall have the same meaning as the term "Commissioner" as defined at N.J.A.C. 7:27-1.4.

"Dealer" means any person actively engaged in the business of offering to sell, soliciting, or advertising the sale, buying, transferring, leasing, selling, or exchanging of new motor vehicles and who has an established place of business.

"Delivered for sale" means vehicles that have received a bill of lading for sale in New Jersey and are shipped, or are in the process of being shipped, to a dealer in New Jersey.

"Department" shall have the same meaning as the term "Department" as defined at N.J.A.C. 7:27-1.4.

"EPA" shall have the same meaning as the term "EPA" as defined at N.J.A.C. 7:27-1.4.

"Intermediate volume manufacturer" means a manufacturer that has been designated by CARB as an intermediate volume manufacturer as defined at 13 CCR 1900.

"Large volume manufacturer" means a manufacturer that has been designated by CARB as a large volume manufacturer as defined at 13 CCR 1900.

"Lease" means any commercial transaction recognized pursuant to the laws of this

State as a means of creating a right to use a good and includes renting. It also includes offering to rent or lease.

"Light-duty truck" shall have the same meaning as "light-duty truck" as defined at 13 CCR 1900.

"Manufacturer" means any small, intermediate, or large volume vehicle

manufacturer as defined at 13 CCR 1900.

"Medium-duty vehicle" shall have the same meaning as "medium-duty vehicle" as

defined at 13 CCR 1900.

"Model year" means model year as defined at 40 CFR 85.2302 and determined in accordance with the provisions at 40 CFR 85.2301 through 85.2304, which are

incorporated herein by reference.

"Motor vehicle" or "vehicle" means every device in, upon, or by which a person or property is or may be transported otherwise than by muscular power, excepting such devices as run only upon rails or tracks and motorized bicycles.

"New motor vehicle" means a motor vehicle, the equitable or legal title to which has never been transferred to an ultimate purchaser.

"Passenger car" shall have the same meaning as "passenger car" as defined at 13 CCR 1900.

"Person" shall have the same meaning as the term "person" as defined at N.J.A.C.

7:27-1.4.

"PHEV" means a plug-in hybrid electric vehicle.

"Sale" or "sell" means the transfer of equitable or legal title to a motor vehicle to the ultimate or subsequent purchaser.

"State" shall have the same meaning as the term "State" as defined at N.J.A.C. 7:27-

1.4.

"Ultimate purchaser" means, with respect to any new motor vehicle, the first person who in good faith purchases a new motor vehicle for purposes other than resale.

"ZEV" means a zero-emission vehicle.

7:27-29A.2 Purpose and applicability

(a) This subchapter establishes, in the State, an Advanced Clean Cars II program, which incorporates the requirements of the California Advanced Clean Cars II program.

(b) The New Jersey Advanced Clean Cars II program shall apply to all model year 2027 or later motor vehicles that are passenger cars, light-duty trucks, and medium-duty vehicles subject to the California Advanced Clean Cars II program and delivered for sale in New Jersey on or after January 1, 2027.

(c) The specified engine and vehicle standards and requirements set forth in the provisions of the CCR, as identified at N.J.A.C. 7:27-29A.7, shall not be operative in New Jersey

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U.S.C. § 7543, as published in the Federal Register, for the applicable engine standard, vehicle standard, or other emission requirement.

(d) The New Jersey Advanced Clean Cars II program shall not apply to:

1. Emergency vehicles, pursuant to California's Vehicle Code Sec. 27156.2 and 27156.3, as incorporated by reference at N.J.A.C. 7:27-29A.7; or

2. Military tactical vehicles, pursuant to 13 CCR 1905, as incorporated by reference at

N.J.A.C. 7:27-29A.7.

7:27-29A.3 Requirements for vehicle transactions

(a) Except as set forth at (b) and (c) below, on or after January 1, 2027, no person who is a resident of this State, or who operates an established place of business within this State, shall sell, lease, import, deliver, purchase, acquire, register, receive, or otherwise transfer in this State, or offer for sale, lease, or rental in this State, a new 2027 or subsequent model-year passenger car, light-duty truck, or medium-duty vehicle, unless the vehicle has been certified by CARB.

(b) New model year 2026 passenger cars, light-duty trucks, and medium-duty vehicles that were produced and delivered for sale in New Jersey after December 31, 2025, and before January 1, 2027, are not required to be certified by CARB in order to be sold, offered for sale, purchased, acquired, or received in New Jersey.

1. A vehicle held for daily lease or rental to the general public or engaged in interstate commerce, that is registered and principally operated outside of New Jersey;

2. A vehicle acquired by a resident of this State for the purposes of replacing a vehicle registered to such resident, which vehicle was damaged, or became inoperative beyond reasonable repair, or was stolen while out of this State; provided that such replacement vehicle is acquired out-of-State at the time the previously registered vehicle was either damaged or became inoperative beyond reasonable repair or was stolen;

3. A vehicle transferred by inheritance;

4. A vehicle transferred by court decree;

5. A vehicle certified by CARB or the EPA and originally registered in another state by a resident of that state who subsequently establishes residence in this State;

6. A vehicle transferred directly from one dealer to another dealer;

7. A vehicle sold for the purpose of being wrecked or dismantled; or

8. A vehicle sold exclusively for off-highway use.

(d) For the purposes of this subchapter, it is presumed that the equitable or legal title to any motor vehicle with an odometer reading of 7,500 miles or more has been transferred to an ultimate purchaser and that the equitable or legal title to any motor vehicle with an odometer reading of fewer than 7,500 miles has not been transferred to an ultimate purchaser.

7:27-29A.4 Fees

(a) For vehicles delivered for sale in calendar year 2026 and thereafter, each intermediate volume and large volume manufacturer shall report its New Jersey production volume to the Department by March 1 of the succeeding calendar year.

(b) Each intermediate volume and large volume vehicle manufacturer shall pay to the Department an annual fee of \$0.50 per vehicle for each passenger car, light-duty truck, and medium-duty vehicle, including both Federally certified and California-certified vehicles, delivered for sale in New Jersey on or after January 1, 2026.

(c) The Department shall notify each manufacturer of the total fee due. The manufacturer shall remit the fee to the Department within 30 days after receipt of the Department's notice.

(d) An intermediate volume or large volume manufacturer that does not pay the fee shall not be permitted to earn, deposit, use, or acquire vehicle equivalent credits or values until such time as its fee and any unpaid balance are paid.

7:27-29A.5 Warranty

(a) Each manufacturer of a vehicle subject to N.J.A.C. 7:27-29A.3(a) shall warrant to the ultimate purchaser and each subsequent purchaser that the vehicle will comply during its period of warranty coverage with all applicable requirements set forth in the sections of the

(b) Each manufacturer of a vehicle subject to N.J.A.C. 7:27-29A.3(a) shall submit to the Department, upon request, an Emission Warranty Information Report as defined at 13 CCR 2144 and a Zero-Emission Vehicle Warranty Information Report as defined at 13 CCR 1962.8.

(c) For purposes of compliance with (b) above, a manufacturer may submit copies of the Emission Warranty Information Reports and the Zero-Emission Vehicle Warranty Information Reports that are submitted to CARB.

7:27-29A.6 Enforcement

(a) The Department, or its representative, shall have the right to enter and inspect any site, building, equipment, or vehicle, or any portion thereof, at any time, in order to ascertain compliance or non-compliance with the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq., this subchapter, any exemption, or any order, consent order, agreement, or remedial action plan issued, approved, or entered into pursuant thereto. Such right shall include, but not be limited to, the right to test or sample any material, motor vehicle, or any emissions therefrom, at the facility; to sketch or photograph any portion of the site, building, or vehicles; to copy or photograph any document or record necessary to determine such compliance or non-compliance; and to interview any employees or representatives of the owner, operator, or registrant. Such right shall be absolute and shall not be conditioned

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requested, and in compliance with appropriate standard safety procedures.

(b) Records to support any application, notice, report, or amendment submitted to the Department pursuant to this subchapter shall be maintained for a period of no less than five years after submitting the information to the Department, and shall be made readily available to the Department, upon request.

(c) Failure to comply with any of the obligations or requirements of this subchapter shall subject the violator to an enforcement action pursuant to the provisions at N.J.S.A. 26:2C-19 and N.J.A.C. 7:27A-3.

(d) Any order or enforcement action taken by CARB to correct noncompliance with any section of Title 13 of the California Code of Regulations, which action results in the recall of any vehicle pursuant to any provision of the CCR identified at N.J.A.C. 7:27-29A.7, shall be applicable in New Jersey, except where the manufacturer demonstrates to the Department's satisfaction within 30 days of issuance of the CARB action that the action is not applicable to vehicles subject to N.J.A.C. 7:27-29A.3(a).

(e) Any emission-related recall campaign, voluntary or otherwise, initiated by any manufacturer that results in the recall of any vehicle pursuant to any provision of the California Code of Regulations identified at N.J.A.C. 7:27-29A.7, shall be applicable in New Jersey, except where the manufacturer demonstrates to the Department's satisfaction NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. within 30 days of the CARB approval of the campaign that the campaign is not applicable

to vehicles subject to N.J.A.C. 7:27-29A.3(a).

7:27-29A.7 Incorporation by reference

(a) Unless specifically excluded by this subchapter, when a provision of the CCR or the California Vehicle Code is incorporated by reference, all notes, comments, appendices, diagrams, tables, forms, figures, publications, and cross-references are also incorporated by reference, as supplemented or amended.

(b) Supplements, amendments, and any other changes including, without limitation, repeals, or stays that affect the meaning or operational status of a California rule or legislation incorporated by reference, brought about by either judicial, administrative, or legislative action, and adopted or otherwise noticed by the State of California, shall be immediately effective and applicable to this subchapter on the date such change is effective in California, so that the New Jersey rule will have the same meaning and status as its California counterpart.

(c) In the event that there are inconsistencies or duplications in the requirements of the provisions incorporated by reference from the CCR or the California Vehicle Code and this subchapter, the provisions incorporated by reference from the CCR or the California Vehicle Code shall prevail. NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. (d) Nothing in the provisions incorporated by reference from the CCR or the California

Vehicle Code shall affect the Department's authority to enforce statutes, rules, permits, or

orders administered or issued by the Commissioner.

(e) The following provisions of the CCR and the California Vehicle Code are incorporated

by reference within this subchapter, as supplemented or amended, except as provided at (f)

and (g) below:

	Table 1
	California Code of Regulations (CCR)
	Title 13
	Chapter 1
	Motor Vehicle Pollution Control Devices
	Article 1
	General Provisions
Section 1900	Definitions
Section 1905	Exclusion and Exemption of Military Tactical
	Vehicles and Equipment
	Article 2
Approval	of Motor Vehicle Pollution Control Devices (New Vehicles)

Section 1956.8(g)	Exhaust Emission Standards and Test Procedures —
and (h)	1985 and Subsequent Model Heavy Duty Engines and
	Vehicles
Section 1960.1	Exhaust Emission Standards and Test Procedures —
	1981 through 2006 Model Passenger Cars, Light-Duty and
	Medium-Duty Vehicles
Section 1961	Exhaust Emission Standards and Test Procedures —
	2004 through 2019 Model Passenger Cars, Light-Duty
	Trucks, and Medium-Duty Vehicles
Section 1961.1	Greenhouse Gas Exhaust Emission Standards and
	Test Procedures — 2009 through 2016 Model Passenger
	Cars, Light-Duty Trucks, and Medium-Duty Vehicles
Section 1961.2	Exhaust Emission Standards and Test Procedures —
	2015 through 2025 Model Year Passenger Cars and Light-
	Duty Trucks, and 2015 through 2028 Model Year Medium-
	Duty Vehicles
Section 1961.3	Greenhouse Gas Exhaust Emission Standards and
	Test Procedures — 2017 and Subsequent Model Passenger
	Cars, Light-Duty Trucks, and Medium-Duty Passenger
	Vehicles

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Section 1961.4	Exhaust Emission Standards and Test Procedures —
	2026 and Subsequent Model Year Passenger Cars, Light-
	Duty Trucks, and Medium-Duty Vehicles
Section 1962.2	Zero-Emission Vehicle Standards for 2018 through
	2025 Model Year Passenger Cars, Light-Duty Trucks, and
	Medium-Duty Vehicles
Section 1962.3	Electric Vehicle Charging Requirements
Section 1962.4	Zero-Emission Vehicle Requirements for 2026 and
	Subsequent Model Year Passenger Cars and Light-Duty
	Trucks
Section 1962.5	Data Standardization Requirements for 2026 and
	Subsequent Model Year Light-Duty Zero Emission Vehicles
	and Plug-in Hybrid Electric Vehicles
Section 1962.6	Battery Labeling Requirements
Section 1962.7	In-Use Compliance, Corrective Action, and Recall
	Protocols for 2026 and Subsequent Model Year Zero-
	Emission and Plug-in Hybrid Electric Passenger Cars and
	Light-Duty Trucks

Section 1962.8	Warranty Requirements for Zero-Emission and
	Batteries in Plug-in Hybrid Electric 2026 and Subsequent
	Model Year Passenger Cars and Light-Duty Trucks
Section 1965	Emission Control and Smog Index Labels — 1979 and
	Subsequent Model Year Vehicles
Section 1968.1	Malfunction and Diagnostic System Requirements —
	1994 and Subsequent Model-Year Passenger Cars, Light-
	Duty Trucks, and Medium-Duty Vehicles and Engines
Section 1968.2	Malfunction and Diagnostic System Requirements —
	2004 and Subsequent Model Year Passenger Cars, Light-
	Duty Trucks and Medium-Duty Vehicles and Engines
Section 1968.5	Enforcement of Malfunction and Diagnostic System
	Requirements for 2004 and Subsequent Model Year
	Passenger Cars, Light-Duty Trucks, and Medium-Duty
	Vehicles and Engines
Section 1969	Motor Vehicle Service Information — 1994 and
	Subsequent Model Passenger Cars, Light-Duty Trucks, and
	Medium-Duty Engines and Vehicles, and 2007 and
	Subsequent Model Heavy-Duty Engines

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Section 1976	Standards and Test Procedures for Motor Vehicle
	Fuel Evaporative Emissions
Section 1978	Standards and Test Procedures for Vehicle Refueling
	Emissions
	Article 6
	Emission Control System Warranty
Section 2035	Purpose, Applicability and Definitions
Section 2036	Defects Warranty Requirements for 1979 Through
	1989 Model Passenger Cars, Light -Duty Trucks, and
	Medium -Duty Vehicles; 1979 and Subsequent Model
	Motorcycles and Heavy -Duty Vehicles; and Motor Vehicle
	Engines Used in Such Vehicles; and 2020 and Subsequent
	Model Year Trailers
Section 2037	Defects Warranty Requirements for 1990 and
	Subsequent Model Year Passenger Cars, Light-Duty Trucks
	and Medium-Duty Vehicles and Motor Vehicle Engines Used
	in Such Vehicles
Section 2038	Performance Warranty Requirements for 1990 and
	Subsequent Model Year Passenger Cars, Light-Duty Trucks

	and Medium-Duty Vehicles and Motor Vehicle Engines Used					
	in Such Vehicles					
Section 2039	Emission Control System Warranty Statement					
Section 2040	Vehicle Owner Obligations					
Section 2041	Mediation; Finding of Warrantable Condition					
Section 2046	Defective Catalyst					
	Chapter 2					
Enforcement	of Vehicle Emission Standards and Enforcement Testing					
	Article 1					
	Assembly Line Testing					
Section 2062	Assembly-line Test Procedures 1998 and Subsequent					
	Model Years					
	Article 2					
Enfe	prcement of New and In-use Vehicle Standards					
Section 2101	Compliance Testing and Inspection – New Vehicle					
	Selection, Evaluation and Enforcement Action					
Section 2109	New Vehicle Recall Provisions					
Section 2110	Remedial Action for Assembly-Line Quality Audit					
	Testing of Less than a Full Calendar Quarter of Production					
	Prior to the 2001 Model-Year					

Article 2.1				
Procedures for In-Use Vehicle Voluntary and Influenced Recalls				
Section 2111	Applicability			
Section 2112	Definitions			
Section 2113	Initiation and Approval of Voluntary and Influenced			
	Recalls			
Section 2114	Voluntary and Influenced Recall Plans			
Section 2115	Eligibility for Repair			
Section 2116	Repair Label			
Section 2117	Proof of Correction Certificate			
Section 2118	Notification			
Section 2119	Record keeping and Reporting Requirements			
Section 2120	Other Requirements Not Waived			
Section 2121	Penalties			
	Article 2.2			
Procedures for In-Use Vehicle Ordered Recalls				
Section 2122	General Provisions			
Section 2123	Initiation and Notification of Ordered Emission-			
	Related Recalls			

Section 2124	Availability of Public Hearing					
Section 2125	Ordered Recall Plan					
Section 2126	Approval and Implementation of Recall Plan					
Section 2127	Notification of Owners					
Section 2128	Repair Label					
Section 2129	Proof of Correction Certificate					
Section 2130	Capture Rates and Alternative Measures					
Section 2131	Preliminary Tests					
Section 2132	Communication with Repair Personnel					
Section 2133	Record keeping and Reporting Requirements					
Section 2135	Extension of Time					
	Article 2.3					
In	-Use Vehicle Enforcement Test Procedures					
Section 2136	General Provisions					
Section 2137	Vehicle, Engine, and Trailer Selection					
Section 2138	Restorative Maintenance					
Section 2139	Testing					
Section 2140	Notification and Use of Test Results					
<u> </u>	Article 2.4					

Procedures for Reporting Failure of Emission-Related Components				
Section 2141	General Provisions			
Section 2142	Alternative Procedures			
Section 2143	Failure Levels Triggering Recall and Corrective			
	Action			
Section 2144	Emission Warranty Information Report			
Section 2145	Field Information Report			
Section 2146	Emissions Information Report			
Section 2147	Demonstration of Compliance with Emission			
	Standards			
Section 2148	Evaluation of Need for Recall			
Section 2149	Notification and Subsequent Action			
	Article 3			
	Surveillance Testing			
Section 2150	Assembly-Line Surveillance			
Section 2151	New Motor Vehicle Dealer Surveillance			
Chapter 4				
Criteria for the Evaluation of Motor Vehicle Pollution Control Devices and Fuel				
Additives				
Article 2				

	Aftermarket Parts
Section 2221	Replacement Parts
Section 2222	Add-On Parts and Modified Parts
	Chapter 4.4
Specifications	for Fill Pipes and Openings of Motor Vehicle Fuel Tanks
Section 2235	Requirements
	California Vehicle Code
	Division 12
	Equipment of Vehicles
	Chapter 5
	Other Equipment
	Article 2
	Exhaust Systems
	Section 27156.2
	Section 27156.3

(f) For purposes of applying the incorporated sections of the CCR and California Vehicle Code, unless otherwise specified in this subchapter or the application is clearly inappropriate, "California" means "New Jersey," "Air Resources Board (ARB)" or "California Air Resources Board (CARB)" means "Department of Environmental

NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. Protection," and "Executive Officer" means the "Commissioner of the Department" or the

Commissioner's designee. For example, "delivered for sale in California" and "placed in service in California" shall mean vehicles "delivered for sale in New Jersey" or "placed in service in New Jersey."

(g) At 13 CCR 1962.4(1), Definitions, in the definition of "community-based clean mobility program," replace "serves a community in which at least 75 percent of the census tracts in the project area (where community residents live and services operate) are: a disadvantaged community, as defined in California by Health and Safety Code section 39711, a low-income community as defined in California by Health and Safety Code section 39713, or a tribal community regardless of federal recognition" with "serves a community in which at least 75 percent of the census tracts in the project area (where community residents live and services operate) are: an overburdened community subject to adverse cumulative stressors, as determined by the Department pursuant to N.J.A.C. 7:1C, a low-income community where at least 35 percent of the households qualify as low-income households as determined by the Department pursuant to N.J.A.C. 7:1C, or a tribal community regardless of Federal recognition."

SUBCHAPTER 31. ADVANCED CLEAN TRUCKS PROGRAM

7:27-31.3 Applicability

(a) (No change.)

1. An emergency vehicle, pursuant to California's Vehicle Code Sec. 27156.2 and

27156.3, as incorporated by reference at N.J.A.C. 7:27-31.4; or

2. A military tactical vehicle, pursuant to 13 CCR 1905, as incorporated by

reference at N.J.A.C. 7:27-31.4.

7:27-31.4 Incorporation by reference

(a)-(e) (No change.)

(f) The following provisions of the CCR are incorporated by reference with this subchapter,

except as provided at (g), (h), (i), and (j) below:

Table 1

Provisions Incorporated by Reference

California Code of Regulations (CCR)

Title 13

Chapter 1

Motor Vehicle Pollution Control Devices

Article 1

General Provisions

Section 1905 Exclusion and Exemption of Military Tactical Vehicles and Equipment

Approval of Motor Vehicle Pollution Control Devices (New Vehicles)

•••

Provisions Incorporated by Reference

California Vehicle Code

Division 12

Equipment of Vehicles

Chapter 5

Other Equipment

Article 2

Exhaust Systems

Section 27156.2

Section 27156.3

(g)-(j) (No change.)

CHAPTER 27A

AIR ADMINISTRATIVE PROCEDURES AND PENALTIES

NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE AUGUST 21, 2023 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. SUBCHAPTER 3. CIVIL ADMINISTRATIVE PENALTIES AND REQUESTS FOR

ADJUDICATORY HEARINGS

7:27A-3.10 Civil administrative penalties for violation of rules adopted pursuant to the Act(a) - (l) (No change.)

(m) The violations of N.J.A.C. 7:27, whether the violation is minor or non-minor in accordance with (q) through (t) below, and the civil administrative penalty amounts for each violation are as set forth in the following Civil Administrative Penalty Schedule. The numbers of the following subsections correspond to the numbers of the corresponding subchapter at N.J.A.C. 7:27. The rule summaries for the requirements set forth in the Civil Administrative Penalty Schedule in this subsection are provided for informational purposes only and have no legal effect.

1. –29. (No change.)

29A. The violations of N.J.A.C. 7:27-29A, New Jersey Advanced Clean Cars II Program, and the civil administrative penalty amounts for each violation, per vehicle, are as set forth in the following table:

						Fourth and
		Type of	First	Second	Third	Each
Citation	Rule Summary	Violation	Offense	Offense	Offense	Subsequent
						Offense
N.J.A.C. 7:27-29A.3(a)	Delivery of non-certified vehicle	NM	\$2,500	\$5,000	\$12,500	\$30,000

N.J.A.C. 7:27-29A.4(a)	Failure to report production volume	М	\$500	\$1,000	\$2,500	\$7,500
N.J.A.C. 7:27-29A.4(b)	Failure to pay an annual fee	М	\$500	\$1,000	\$2,500	\$7,500
N.J.A.C. 7:27-29A.6(b)	Failure to provide reports upon request	М	\$500	\$1,000	\$2,500	\$7,500
N.J.A.C. 7:27-29A.7	Failure to meet fleet-wide average	NM	\$5,000	\$10,000	\$25,000	\$50,000
incorporating by						
reference 13 CCR						
1961.4						
N.J.A.C. 7:27-29A.7	Failure to meet ZEV sales requirement	NM	\$5,000	\$10,000	\$25,000	\$50,000
incorporating by						
reference 13 CCR						
1962.4						
N.J.A.C. 7:27-29A.7	Failure to comply with ZEV reporting	М	\$500	\$1,000	\$2,500	\$7,500
incorporating by	requirements					
reference 13 CCR						
1962.4						
						1

30.-34. (No change.)

(n)-(w) (No change.)

ENVIRONMENTAL PROTECTION

AIR, ENERGY AND MATERIALS SUSTAINABILITY

DIVISION OF CLIMATE CHANGE MITIGATION AND MONITORING

Advanced Clean Cars II Program; Low Emission Vehicles; Diesel Powered Motor

Vehicles; Gasoline Powered Motor Vehicles; Model Year 2027 or Later Heavy-Duty New

Engine and Vehicle Standards and Requirements; Advanced Clean Trucks Program

Adopted Amendments: N.J.A.C. 7:27-14.1, 14.3, 15.1, 15.7, 28A.11, 29.2, 29.3, 29.4, 29.5,

29.6, 29.8, 31.3, and 31.4; and 7:27A-3.10

Adopted New Rules: N.J.A.C. 7:27-29A

Proposed: August 21, 2023, at 55 N.J.R. 1773(a).

Adopted: November 1, 2023, by Shawn M. LaTourette, Commissioner, Department of

Environmental Protection.

Filed: November 21, 2023, as R.2023 d.147, without change.

Authority: N.J.S.A. 13:1B-3.e, 13:1D-9, 26:2C-1 et seq., particularly 26:2C-37 et seq., and 48:25-1 et seq.

DEP Docket Number: 01-23-07.

Effective Date: December 18, 2023.

Operative Date: December 31, 2023.

Expiration Dates: Exempt, N.J.A.C. 7:27;

January 22, 2027, N.J.A.C. 7:27A.

This rulemaking will enable the State to continue its efforts to mitigate the impacts of climate change by reducing greenhouse gas emissions from the transportation sector, which

constitutes the largest source of climate pollution in New Jersey. Equally important, the adopted rules will reduce emissions of oxides of nitrogen (NO_x), which contribute to ozone nonattainment, and particulate matter (PM). The proposed rules will incorporate by reference California's Advanced Clean Cars II (ACC II) regulation, which will require manufacturers of passenger cars and light-duty trucks to meet an annual zero-emission vehicle (ZEV) requirement intended to increase the percentage of ZEVs sold in New Jersey that meet the new minimum technical requirements. In addition to the annual ZEV requirement, the ACC II regulation includes more stringent multi-pollutant exhaust emission standards that manufacturers of internal combustion engine passenger cars, light-duty trucks, and medium-duty vehicles must meet. The adopted rules will also clarify and update several subchapters related to motor vehicles, including: N.J.A.C. 7:27-14, Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles, 15, Control and Prohibition of Air Pollution from Gasoline-Fueled Motor Vehicles, 28A, Model Year 2027 or Later Heavy-Duty New Engine and Vehicle Standards and Requirements, 29, Low Emission Vehicle (LEV) Program, and 31, Advanced Clean Trucks Program.

Summary of Hearing Officer's Recommendation and Agency's Response:

The Department of Environmental Protection (Department) held a virtual public hearing on this rulemaking on October 21, 2023, at 9:30 A.M., through the Department's video conferencing software, Microsoft Teams. Peg Hanna, Director of Climate Change Mitigation and Monitoring, served as hearing officer. Thirty-eight people provided oral comments at the public hearing. After reviewing the written and oral comments received during the public

comment period, the hearing officer recommended that the Department adopt the proposed rulemaking without change. The Department accepts the hearing officer's recommendations.

A record of the public hearing is available for inspection, in accordance with applicable law by contacting:

Department of Environmental Protection Office of Legal Affairs 401 East State Street, 7th Floor Mail Code 401-04L PO Box 402

Trenton, New Jersey 08625-0402

This notice of adoption document can also be viewed or downloaded from the Department's website at <u>http://www.nj.gov/dep/rules/adoptions.html</u>.

Summary of Public Comments and Agency Responses:

The Department accepted comments on the notice of proposal through October 20, 2023. The following individuals provided timely written and/or oral comments:

1. Honorables Nilsa I. Cruz-Perez, Senator, 5th District, and James Beach, Senator, 6th District

2. Honorables Louis D. Greenwald, Assemblyman, 6th District and Pamela R. Lampitt,

Assemblywoman, 6th District

3. Honorable Shama A. Haider, Assemblywoman, 37th District

- 4. Honorable Gordon M. Johnson, Senator 37th District
- 5. Honorables Joseph Lagana, Senator, 38th District, Lisa Swain, Assemblywoman, 38th

District, and Chris Tully, Assemblyman, 38th District

- 6. Honorable Paul D. Moriarty, Assemblyman, 4th District
- 7. Honorables Steven V. Oroho, Senator, 24th District, F. Parker Space, Assemblyman, 24th

District, and Harold J. Wirths, Assemblyman, 24th District

- 8. Honorable Troy Singleton, Senator, 7th District
- 9. Honorables Shirley K. Turner, Senator 15th District, Verlina Reynolds-Jackson,

Assemblywoman, 15th District, and Anthony S. Verrelli, Assemblyman, 15th District

- 10. Jefferson Van Drew, Member, U.S. House of Representatives
- 11. Todd Abbott
- 12. Christopher Ainsworth
- 13. Eleanor Alexander
- 14. John Allen
- 15. Michael Alterman
- 16. Jose Alvarez
- 17. John Amatucci
- 18. Alex Ambrose, New Jersey Policy Perspective
- 19. William Ames
- 20. Froso Andronikou
- 21. C. Ante
- 22. Jospeh Anthony

- 23. Kenny Antoine
- 24. Donna Antonielo
- 25. Dorothy Antonow
- 26. Paul Antonucci
- 27. James Appleton, New Jersey Coalition of Automotive Retailers
- 28. Fernando Arias
- 29. Robert Armstrong
- 30. John Arout
- 31. Peter Arts
- 32. Matthew Asman
- 33. Sharon Asman
- 34. Daniel Astle
- 35. Phillipe Aubry
- 36. Kevin Aughtry
- 37. Diane Baker
- 38. John Bald
- 39. Andrew Balsys
- 40. Yvonne Barash
- 41. Michael Barbieri
- 42. Eric Bardach
- 43. Anthony Bariana
- 44. Daniel Barlette

- 45. Ranjit Barot
- 46. Robert Bartley
- 47. Nader Basta
- 48. Douglas Baumann
- 49. John Bean
- 50. Barbara Bear
- 51. Gary Bear
- 52. Joseph Becker
- 53. Alex Beda
- 54. Markian Bek
- 55. Ariel Bello
- 56. Bi Bennett
- 57. Jennifer Bennett
- 58. Bill Beren
- 59. Edward Bergan
- 60. Judy Bernard
- 61. Dominic Bertoldi
- 62. Julia Bialoglowa
- 63. Robert Bieth
- 64. Lorraine Biniek
- 65. Pamela Birbach
- 66. Gregory Biunno

- 67. Stephen Black
- 68. Heather Blehl
- 69. Dennis Block
- 70. Eric Blomgren, New Jersey Gasoline Convenient Store Automotive Association
- 71. Marc Blumberg
- 72. Kevin Blythe
- 73. David Bocchino
- 74. Leslie Bockol, New Jersey Working Families Alliance
- 75. Raymond Bogan
- 76. Amber Borkan
- 77. Fgordon Borteck
- 78. Danielle Boyer
- 79. Thomas Boylan and Albert Gore, Zero Emission Transportation Association
- 80. Nancy Brady
- 81. Frank Breakell
- 82. Nosson Breskin
- 83. Corrine Brickner
- 84. John Brickner
- 85. Uchenna Bright, Environmental Entrepreneurs
- 86. Karoline Brilliante
- 87. Tracey Brink
- 88. Lorraine Brong

- 89. Karen Brown
- 90. Marc Bruggemann
- 91. Ian Brundage
- 92. Vincent Buonanno
- 93. Brian Burger
- 94. Richard Burgess
- 95. Christopher Burgos
- 96. Sean Burke
- 97. Susan Burton
- 98. John Burzichelli, former New Jersey Assemblyman
- 99. Vincent Busardo
- 100. Peter Busch
- 101. Kenneth Bustard
- 102. Jim Butler
- 103. Mike Butler, Consumer Energy Alliance
- 104. Eric Butto
- 105. Olga Bychkowski
- 106. Annette Caamano
- 107. Jennie Cadet
- 108. Linda Caffrey
- 109. Andrea Caggiano
- 110. Michael Calorel

111. Penelope Campbell

- 112. Denise Canell
- 113. Ray Cantor, New Jersey Business and industry Association
- 114. Sueann Capela
- 115. Matthew Capella
- 116. Ronald Capik
- 117. Levin Carber
- 118. Stephen Carrellas, National Motorists Association, NJ Chapter
- 119. James Casas
- 120. Candice Cassella
- 121. Frank Catalano
- 122. Dennis Cataldo
- 123. Jacqalene Catrino
- 124. Michael Cavanaugh
- 125. Bob Cento
- 126. Centrist Democrats of America
- 127. Elizabeth Cerceo, American College of Physicians, New Jersey
- 128. Robert Checchio
- 129. Daniel Cheesman
- 130. Catherine Chen
- 131. Janis Chilton
- 132. Nicholas Chimienti

- 133. Ralph Cicirelli
- 134. David Clark
- 135. Michael Claudy
- 136. Tammy Clermont
- 137. Mitchell Cohen
- 138. Rhonda Cohen
- 139. James Coleman
- 140. Patricia Conlon
- 141. Timothy Connery
- 142. Alexis Convissar
- 143. Gerald Cook
- 144. Richard Copeland
- 145. Jesus Cortes
- 146. Thomas Cosgrove
- 147. Jose Coss
- 148. Janeen Coughlin
- 149. Lateefa Covington
- 150. Thomas Cox
- 151. Debra Coyle, New Jersey Work Environment Council
- 152. Rodney Crable
- 153. Jean Creidi
- 154. Lauren Cremins

- 155. Thomas Cumello
- 156. John Cunningham
- 157. Nancy Cunningham
- 158. Michael Currie
- 159. Christina Curry
- 160. Rosanne Curry
- 161. Petra Cusato
- 162. Ilene Cutroneo
- 163. Thomas D'Angelo
- 164. Denis Dankosky
- 165. Polly Deal
- 166. Steven DeCredico
- 167. Joseph DeFlora, American Fuel and Petrochemical Manufacturers Association
- 168. Eric DeGesero, Fuel Merchants Association of New Jersey
- 169. William Deile
- 170. Andrew DeMaio
- 171. Roman Dementiuk
- 172. Romanno DeSantis
- 173. Steve Devlin
- 174. Clelia Di Tacchio
- 175. Alan Dibella
- 176. Peter DiEgidio

- 177. Donald Dienst
- 178. Jason Dietz
- 179. Anthony DiGerolamo
- 180. Brandylee Dignall
- 181. Lisa DiLeo
- 182. James Dilks
- 183. Michael DiMartino
- 184. Judy Dodson
- 185. James Donnelly
- 186. Raymond Donovan
- 187. Zachary Dooley
- 188. David Dougherty
- 189. Mark Doughty
- 190. Adam Drewry
- 191. Rachit Dubey
- 192. Joshua Dubnick
- 193. Steven Dudish
- 194. Megan Duffy
- 195. Thomas Duncan
- 196. James Dunn
- 197. Robert Dvorsky
- 198. Patrick Dwyer
- 199. Robert Eagan
- 200. Terrance Egan
- 201. Nick Egelhoff, Ceres
- 202. Michael Egenton, New Jersey State Chamber of Commerce
- 203. Jeffrey Eichinger
- 204. Aneel Eijaz
- 205. Brian Eitner
- 206. Thomas Elder
- 207. Leslie Elero
- 208. David Epstein
- 209. Leon Erdner
- 210. George Ernst
- 211. Brian Estes
- 212. Michelle Evans
- 213. Zack Fabish, Sierra Club
- 214. Lisa Fabrizio
- 215. Sal Fama
- 216. Justin Farrell
- 217. Melissa Farrell
- 218. Jeremy Fellgraff
- 219. Edmond Fernand
- 220. Therese Fibraio

- 221. Jeffrey Finger
- 222. Robert Fiore
- 223. Michael Fitzsimmons
- 224. Brett Florance
- 225. Melissa Flynn
- 226. Craig Fogel
- 227. Mary Jo Foley-Birrenkott, Rural and Agricultural Council of America
- 228. Arthur Ford
- 229. Marybeth Ford
- 230. Sara Forni, Corporate Electric Vehicle Alliance
- 231. Paul Foster
- 232. Robert Frahm
- 233. Ron Francis
- 234. Pam Frank, ChargEVC
- 235. Anthony Franzonia
- 236. Paul Freisinger
- 237. George Freshcoln
- 238. Kirk Frost
- 239. Paul Fuller
- 240. Susan Fuller
- 241. Peter Furey, New Jersey Farm Bureau
- 242. Frank G.

- 243. Glen G.
- 244. P.G.
- 245. John Gaeta
- 246. Keith Gallaudet
- 247. Lisa Garbarino
- 248. Kevin Garrity
- 249. Nicholas Gaura
- 250. Annmarie Gerhardt
- 251. Michael Giaimo, American Petroleum Institute
- 252. Vincent Giampeitro
- 253. Michael Giannone
- 254. Carrie Giordano
- 255. Michael Giordano
- 256. Noemi Giszpenc
- 257. Jim Glass
- 258. Suzan Globus
- 259. Christine Goeller
- 260. Fred Goerlitz
- 261. Frederick Goerlitz
- 262. Mike Gogel
- 263. Richard Going
- 264. Graham Goldman

265. Amy Goldsmith, Clean Water Action

- 266. Jacob Goldsmith
- 267. Pedro Gonzalez
- 268. Charles Goodyear
- 269. Daniel Gorby
- 270. Peter Gordinier
- 271. David Gottlieb
- 272. Daniel Gould
- 273. Chris Grech
- 274. Jacqueline Greco
- 275. Richard Green
- 276. Vincent Green
- 277. Nancy Griffeth, Unitarian Universalist FaithAction NJ
- 278. Fran Griffin
- 279. Michele Griffin
- 280. Calum Groover
- 281. Jane Grothusen
- 282. George Grow
- 283. Craig Grunke
- 284. Daniel Hagerty
- 285. Tim Hagerty
- 286. Kim Haines

287. Dan Hall

- 288. Justin Halwagy
- 289. Steven Hannah

290. Billie Harris

291. Kathy Harris, Natural Resources Defense Council

292. Kathy Harris, on behalf of the Natural Resources Defense Council, the Sierra Club, Environment New Jersey, GreenLatinos, Tri-State Transportation Campaign, New Jersey League of Conservation Voters, New Jersey Sustainable Business Council, E2 (Environmental Entrepreneurs), Public Citizen, Ceres, and the Environmental Defense Fund

293. Patrick Haynes, Tenneco

- 294. Michael Headman
- 295. Michael Heck
- 296. Brian Heise
- 297. Harold Heller
- 298. William Heller
- 299. M. Hemeleski
- 300. Laura Hemenway
- 301. Warren Hemple
- 302. Patricia Hemsworth
- 303. Donna Hermann
- 304. Lee Herrick
- 305. Dave Herrmann
- 306. Emily Hess

- 307. Christopher Hidalgo
- 308. Bryan Hoedt
- 309. Robert Hoffman
- 310. Jeannine Hogan
- 311. MaryAnn Hogan, Thai Industrial Standards Institute
- 312. Kyle Holder, Cherry Hill Dodge
- 313. Barbara Horn
- 314. Emerald Hornig
- 315. David Horoff
- 316. Christine Howell
- 317. Robert Huizer
- 318. Ihor Huk
- 319. Dawn Hunter, Greater Vineland Chamber of Commerce
- 320. Geoff Hutchinson
- 321. James Hutchinson
- 322. Andrew Hutnikoff
- 323. Vanilla Ice
- 324. Gabriel Ioan
- 325. Robert Iracane
- 326. Judy Irwin
- 327. Ryan Irwin
- 328. Laurie Jackson

329. Stanislav Jaracz, New Jersey Electric Vehicle Association

- 330. Ben Jealous, Sierra Club
- 331. Dan Johnson
- 332. Anne Johnston
- 333. Anthony Joseph
- 334. Katherine Joyce
- 335. Verne Joyce
- 336. Lee K.
- 337. Leeba K.
- 338. Jeffrey Kaden
- 339. Zack Kahn, Tesla
- 340. Ivan Kaltman
- 341. Mendel Kaplan
- 342. Michael Karlovich and Mark Lucey, PBF Energy
- 343. Lynn Katz
- 344. Andrew Kavulich
- 345. Michael Kelly
- 346. James Kennedy
- 347. Darlene Kenney
- 348. Theresa Keogh
- 349. Stephen Kertesz
- 350. Thomas Kesolitis

- 351. Jessica Keyes
- 352. Maryann Keyes
- 353. Brian Kiesche
- 354. John King
- 355. Laszlo Kiss
- 356. Raymond Klas
- 357. Jamie Klenetsky Fay
- 358. Joan Klinger
- 359. Alex Kloman
- 360. Jack Kocsis, Associated Construction Contractors New Jersey
- 361. Renee Kohut
- 362. David Korfhage
- 363. John Korolow
- 364. Demetrios Koukounas
- 365. Vanessa Koutla
- 366. David Kruczek
- 367. Brian Krzywicki
- 368. Andrew Kvarta
- 369. Calvin Kwan
- 370. Matthew Labella
- 371. Jason LaGuardia
- 372. Lauren Lamastra

373. Matt Larkin, Compliance and Research Services

- 374. Robert Laurino
- 375. Robert Lawrence
- 376. Richard Lawton, New Jersey Sustainable Business Council
- 377. Richard Lawton and Alli Gold Roberts, New Jersey Sustainable Business Council and

Ceres

- 378. James Layton
- 379. Ronald Leach
- 380. Annabelle Lee
- 381. David Lee
- 382. Erin Lee
- 383. David Leeds
- 384. Jacqalene Lentz
- 385. Christopher Leone
- 386. Peter Lepp
- 387. Jonathan Lesser, Affordable Energy for New Jersey
- 388. Eric Levy
- 389. Joe Lewin
- 390. Albert Lewis
- 391. Alex Liberman
- 392. Andy Lin
- 393. Gail Lindstrom

394. Brian Lipman, New Jersey Division of Rate Counsel

- 395. Christine Livesay
- 396. Sylvia Lock
- 397. Brian Logan
- 398. Shannon Logar
- 399. Mark Longo, International Union of Operating Engineers Local 825
- 400. Isabel Lopez
- 401. Birger Luecht
- 402. Dominique Lueckenhoff, Hugo Neu Corporation
- 403. John Lurch
- 404. Carrie Lurilli
- 405. Kenneth Lutin
- 406. Jo Lynch
- 407. Joann Lyncj
- 408. Gregory Machak
- 409. Shaan Machchhar
- 410. Patti Maddamma
- 411. Susan Madison
- 412. Charles Magee
- 413. Kim Magliocchetti
- 414. Eileen Maglione
- 415. John Maguire

416. Marianne Maher

- 417. Andrew Mai
- 418. Cat Mailander
- 419. Joseph Maio
- 420. Gregory Maizous
- 421. Arlene Majette
- 422. Lori Malvey
- 423. Alexander Marcus
- 424. Andrea Marpillero-Colomina, Green Latinos
- 425. Michelle Martin
- 426. Pam Martin
- 427. Tom-Allan Masch
- 428. Gregory Mashas
- 429. Paul Matar
- 430. Wally Matei
- 431. George Mathis
- 432. Ernest Mattei
- 433. Tracey Matthews
- 434. Theresa Mazza
- 435. Pete McCarthy
- 436. Maryanne McCue
- 437. Melanie McDermott

- 438. Mary McGuire
- 439. Elizabeth McLoone
- 440. Michael McSweeny
- 441. Gregory Meehan
- 442. John Meiler
- 443. Kelsey Meiler
- 444. Angel Mendez
- 445. Michele Menser
- 446. Glen Meny
- 447. Lisa Menzel
- 448. Diane Meo
- 449. Michael Mercado
- 450. Jennifer Messina
- 451. Biana Mester
- 452. George Meyer
- 453. John Michalik
- 454. Chris Michaud
- 455. Antor Miha
- 456. Brad Miller
- 457. John Miller
- 457-1. Tom Miller, Alliance for Automotive Innovation
- 458. Stephen Minnisale

- 459. Sean Mohen, Tri-County Sustainability
- 460. Ted Mojka
- 461. Isabel Molina, on behalf of herself and approximately 510 additional individuals
- 462. Isabel Molina, New Jersey LCV
- 463. Chris Molnar
- 464. Nicholas Moltzen
- 465. Donald Monetti
- 466. John Moore
- 467. Rita Moore
- 468. Andrew Morgan
- 469. Robert Morris
- 470. Michael Morrisey
- 471. Moshe Moskowitz
- 472. Fred Mossbrucker
- 473. Michael Mroz
- 474. Robert Mulhern
- 475. Peter Mullen
- 476. Robert Munoz
- 477. Kimberley Murray
- 478. Frank Mytfast
- 479. James Nalepa
- 480. Gerry Nass

- 481. Ramanan Natarajan
- 482. Pamela Nicholson
- 483. Salvatore Nicosia
- 484. John Niles
- 485. Patricia Nistorenko
- 486. Christopher Norman
- 487. Michael Nothofer
- 488. Simon Nwachukwu
- 489. Marge O'Brien
- 490. Basil O'Connor
- 491. John Ogle
- 492. Ken Ohern
- 493. Doug O'Malley, Environment NJ
- 494. Doug O'Malley, on behalf of 54 organizations
- 495. Elizabeth Oravetz
- 496. Mark Oryzysn
- 497. Tiffany Otai
- 498. Alberto Pacheco
- 499. Dennis Palmer
- 500. Brian Parsons
- 501. Linda Pascarella
- 502. James Pasquariello

- 503. Carmella Passaro
- 504. Fin Patel
- 505. Guarav Patel
- 506. Kelly Patterson
- 507. Ken Peabody
- 508. Spencer Peck
- 509. James Peidl
- 510. John Pereira
- 511. Omary Perez
- 512. John Perrotta
- 513. William Peterson
- 514. Denise Petronella
- 515. David Petry
- 516. Alison Picerno
- 517. David Pickens
- 518. Anthony Pilawski
- 519. Kenneth Plunkett
- 520. Jerry Porreca
- 521. Marilyn Portenza
- 522. Neil Post
- 523. Miles Powell
- 524. Martin Presinzano

- 525. Emilio Prestamo
- 526. Timothy Price
- 527. Ryan Principato
- 528. Michael Proto
- 529. Jean Publiee
- 530. David Purcell
- 531. Andrew Puzycki
- 532. Geoff Raicer
- 533. Brian Rak
- 534. Anjuli Ramos, Sierra Club, New Jersey Chapter
- 535. Anjuli Ramos-Busot, New Jersey Sierra Club submitted a petition signed by 925 New
- Jersey residents
- 536. Jaydeep Rana
- 537. Nicole Randall
- 538. Nancy Rawley
- 539. Patricia Ray
- 540. Patti Ray
- 541. Jen Raymond
- 542. Stephen Raymond
- 543. Anthony Reale
- 544. Thomas Rebele
- 545. Sharon Reed

546. John Reichenberger

- 547. Darrell Reilly
- 548. Trish Reilly, Centrist Democrats of America
- 549. Gerald Reiner
- 550. Jill Reit
- 551. Joanne Rejevich
- 552. Serafim Reppas
- 553. Ken Revolinsky
- 554. Ben Rich
- 555. Chris Richards
- 556. Steven Richman
- 557. Nicholas Riess
- 558. Sarah Ritter-Chung
- 559. Denise Robbins
- 560. Pamela Roberts
- 561. Charles Robinson
- 562. Michael Roche
- 563. Robert Roesch
- 564. Jeffrey Roscoe
- 565. Samuel Ross
- 566. Elizabeth Roztoczynski
- 567. Paul Ruffin

- 568. Sean Runyon
- 569. Dave Russo
- 570. Sarah S.
- 571. Adam Saad
- 572. Nancy Sadlon
- 573. Tracy Saltarelli
- 574. Andrew Sangataldo
- 575. Brian Sangataldo
- 576. Christa Sangataldo
- 577. Jo-Ann Sangataldo
- 578. Maureen Santonastaso
- 579. Louisa Sargent
- 580. Gregory Scarpino
- 581. Karen Scheideler
- 582. Frank Schiavone
- 583. Mike Schiavone
- 584. Ira Schlusselfeld
- 585. Robert Schober
- 586. Bruno Schreiber
- 587. Andrew Schwartz
- 588. Ml Schwartz
- 589. Louis Seiden

590. Michael Seilback, American Lung Association

- 591. David Semah
- 592. Margaret Seme
- 593. Gail Serdiuk
- 594. Kevin Sferra
- 595. Amy Sharkey
- 596. Dan Sharkey
- 597. Herb Sharp
- 598. Ryan Shea
- 599. Mark Shelly
- 600. Sam Shenenberger
- 601. Joseph Shepherd
- 602. Elizabeth Shimwell
- 603. Amy Shnider
- 604. Stephen Sibilia
- 605. Lisa Siemanowicz
- 606. Robert Sienrukos
- 607. Yosef Siff
- 608. Walt Simon
- 609. Ron Singer
- 610. David Skibinski
- 611. Holly Smith

- 612. Joyce Smith
- 613. Keith Smith
- 614. Michaela Smith
- 615. Scott Smith
- 616. Steven Smith
- 617. Tracy Smith
- 618. Walter Smith
- 619. Diane Snelson
- 620. Brian Sosa
- 621. Janet Sosely
- 622. Tommy Souren
- 623. Michelle Spencer
- 624. Curtis Springstead
- 625. Adam Springsteel
- 626. Stephen Sromovsky
- 627. Paul Stangas
- 628. Mary Stange
- 629. Rebecca Stanislaw
- 630. Richard Stanislaw
- 631. Michael Stanton
- 632. Sharon Starke
- 633. Frank Starosciak

- 634. Michael Staub
- 635. Stephanie Stavrianos
- 636.Marian Steinfeld
- 637. Ronald Steinhart
- 638. Brian Stevens
- 639. Alison Stidworthy
- 640. Lucas Stock
- 641. Robert Stone
- 642. Christine Storar
- 643. Andrea Streaman
- 644. Kerri Sullivan
- 645. Scott Sullivan
- 646. Bob Sully
- 647. Donald Susanen, Phillips 66 Company
- 648. Nancy Swift
- 649. Edward Szubski
- 650. Loren Talbot
- 651. Michael Taylor, NAFA The Fleet Management Association
- 652. Dominick Tedesco
- 653. Charles Thomas
- 654. Anita Thompson
- 655. Mary Ann Timko

- 656. Russell Todaro
- 657. Drew Tompkins, Jersey Renews Coalition
- 658. James Tosone
- 659. Alison Tribus
- 660. Asher Tribus
- 661. Michael Trocchia
- 662. Howard Trout
- 663. Nancy Troy
- 664. Steve Trynosky
- 665. Louis Tulini
- 666. C.V.
- 667. Sanjay Vadapalli
- 668. Christine Valente
- 669. Richard Valentine
- 670. Guy Vanderhoof
- 671. Tom Van Heeke, Rivian
- 672. Robert Vannozzi
- 673. Melanie Vasa
- 674. Oscar Velez
- 675. Dana Veronica
- 676. Daniel Vicente, UAW Region 9
- 677. Deborah Villarreal-Hadley

- 678. Frank Visone
- 679. Anne Viviani
- 680. Sharleen van Vlijmen, Clinicians for Climate Action New Jersey
- 681. John Vogel
- 682. Linda Von Bulow
- 683. Edward Von Der Linde
- 684. Martin Vongrej
- 685. Kristine Waldren, ECOS
- 686. Sandy Walton
- 687. Linda Wancho
- 688. Ellen Webner
- 689. Amy Weed
- 690. Kimi Wei
- 691. Nathan Weiss
- 692. Chad Wells
- 693. Roy Wells
- 694. Stephen Wells
- 695. Willis Wells
- 696. Neil Wendt
- 697. John West
- 698. Lauren Wheeler
- 699. Patrick Whipp

- 700. Elizabeth White
- 701. Janet White
- 702. Kelly Whitfield
- 703. Deegan Williams
- 704. George Williams
- 705. MaryAnn Williams
- 706. Raymond Wilmott
- 707. Michael Wilson
- 708. Rachel Winiecki
- 709. Angela Wise
- 710. Brian Wisner
- 711. Matthew Wittman
- 712. James Wolverton
- 713. Tim Wong
- 714. Jeremy Workman
- 715. Chris Wramage
- 716. Kathleen Wright
- 717. Tracy Wright
- 718. Wayne Wright
- 719. Jackie Yeager, Cummins Inc.
- 720. Lewis Yetter
- 721. Patrice Yodice

- 722. Samantha York
- 723. Joseph Yost
- 724. Anas Younes
- 725. J. Zalkalns
- 726. Arthur Zayat
- 727. Ariel Zeitlin
- 728. Stanley Zimmerman
- 729. Slawomir Zolnierowski
- 730. William Zorzanello

General Support

COMMENT: The Department should adopt California's ACC II regulation. The commenters detailed a number of reasons including, but not limited to, the need to improve air quality, address climate change, and end fossil-fuel reliance. (18, 72, 74, 108, 151, 156, 174, 191, 224, 238, 244, 256, 258, 262, 265, 277, 288, 293, 325, 334, 339, 355, 357, 362, 382, 435, 459, 489, 497, 533, 554, 567, 650, 659, 660, 673, 671, 677, 696, 700, 711, and 727)
 RESPONSE: The Department acknowledges the commenters' support of the adopted rules.

Support Adoption By The End Of The Year

2. COMMENT: The Department should adopt the Advanced Clean Cars II (ACC II) standards before the end of the year so the State may enter the program in vehicle model year 2027. (74, 130, 234, 265, 291, 292, 329, 330, 339, 377, 402, 462, 494, 535, 657, 671, and 680)

3. COMMENT: The failure to adopt ACC II in 2023 would mean that by 2030, there will be more than 90,500 fewer zero emission vehicles (ZEVs) on New Jersey's roads. Delaying adoption would deprive residents of the ZEVs they would otherwise be able to acquire, reduce more consumer options and the many important co-benefits ACC II provides, including improved health, air quality, climate safety, and financial savings. Furthermore, since the majority of New Jerseyans – particularly low-income drivers – purchase used vehicles, a delay in the rulemaking means there would be fewer clean, affordable vehicles available for drivers in the secondary market. (329 and 494)

4. COMMENT: Air pollution is deadly. Pollution from the burning of fossil fuels is responsible for nearly one in every five deaths worldwide. Of the 15 New Jersey counties that reported air quality data to the American Lung Association, nine received a grade of C or below due to excessive ozone. Adopting ACC II in New Jersey this year would significantly reduce air pollutants below 2021 levels by 2035. Levels of light duty emissions would result in a 72 percent reduction of carbon dioxide (CO₂), an 80 percent reduction in nitrogen oxides (NO_x), 72 percent reduction of fine particulate matter (PM2.5), and a 73 percent reduction of sulfur dioxide (SO₂). Delaying the adoption of the rulemaking means missing another model year and postponing how long it will take to improve the health of New Jerseyans. New Jersey should not be left behind other states. The adoption of clean transportation is a priority and this rulemaking must be implemented this year. (680)

5. COMMENT: The Department should immediately adopt and implement the proposed ACC II rules as a critical part of a series of policies and actions to improve the health of New Jersey residents and to address the current and future climate crisis. Delay of this rulemaking and delay

of widespread adoption of ZEVs in New Jersey will hurt the health and daily functions of people, living beings, and natural systems. (277)

6. COMMENT: Failure to adopt the ACC II regulations by the end of 2023 could mean that drivers will not have as much access to electric vehicles (EVs) in the New Jersey market and will have to travel to neighboring states to purchase the EVs, which could reduce vehicle sales in the State. To keep EV sales in New Jersey and meet the growing demand for these vehicles, the State must adopt the regulations by December 2023. (234)

7. COMMENT: New Jersey is one of the only clean cars states in the region that has not joined the ACC II program. Other states in the region, including New York, Connecticut,

Massachusetts, Rhode Island, Maine, Maryland, Virginia, and Vermont, and the District of
Columbia, have finalized or are on the path to finalization of ACC II this year. Washington,
Oregon, and California adopted ACC II in 2022. New Jersey needs to catch up by adopting ACC
II by the end of this year, so that the State does not miss another vehicle model year. (461)
8. COMMENT: Please make the conversion to ZEV vehicles sooner and more aggressive.

(238)

9. COMMENT: The Department should adopt the rules within the 2023 calendar year. This is vital not only to provide critical relief to New Jerseyans suffering daily from dirty air and the health impacts caused by transportation pollution, but also for the State to meet its climate (greenhouse gas emissions reduction) goals. Disturbingly, the State's transportation emissions have been increasing since 2020, the wrong trend for the largest sector (35 percent) of the greenhouse gas emissions in the State. The burdens of the resulting pollution are unequally borne, making this an urgent environmental justice issue as well. By adopting the ACC II

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program, New Jersey can make deep cuts in harmful tailpipe pollution that will save lives and make our households, businesses, and economy less dependent on dirty, volatile, and costly gasoline that damages our climate. (437)

10. COMMENT: The Department is urged to adopt ACC II in 2023 to maximize the economic benefits during the transition to a clean economy. As the State looks to maximize the wide-ranging economic benefits of ACC II, it is essential to act now and move towards adoption before missing another compliance year. There will be people who say, "slow down, wait," but the State has nothing to gain from dragging its feet. The time to act is now. By adopting the standard this year, New Jersey residents will breathe easier, have more options for fighting the climate crisis, and will be given the potential choice of beginning to save money by avoiding the ever-rising, ever-volatile high price of gasoline, which gas-powered cars rely on. Also, the State can do this all while supporting in-State economic growth. If New Jersey adopts the rules this year, ACC II will ensure an increasing number of ZEVs will be available for sale to New Jersey consumers starting with model year 2027. (85)

11. COMMENT: Adopting ACC II in 2023 is critical for the State to achieve its goal of cutting climate pollutants by 50 percent by 2030, to keep up with nearly every other Section 177 state (states that, in accordance with section 177 of the Federal Clean Air Act, adopt the California motor vehicle standards – referred to as "177 states," or "Section 177 states") and ensure that New Jersey does not lose another model year as part of this program. This is a critical moment for New Jersey to join other Section 177 states in moving towards a clean transportation future and ensure that the State can access the full range of economic and public health benefits of the transition. (685)

12. COMMENT: Electric vehicles have reached an inflection point and it is imperative that New Jersey join these other leading clean car states and adopt these standards by the end of this calendar year to ensure that more electric vehicles are available. (493)

13. COMMENT: Adopting the ACC II standards this year will help provide critical relief to New Jerseyans suffering daily from dirty air and health impacts caused by transportation pollution. Cars, trucks, and buses are a primary source of the State's most dangerous air pollutants, impacting our health and environment. On a daily basis, residents are breathing in dangerous amounts of tailpipe pollution, including nearly two million Latino people, high numbers of whom are situated near the New Jersey Turnpike, Parkway, and other major transportation hubs. For too long, communities of color, in particular, have been overburdened with exposure to tailpipe pollution, which can cause or worsen lung disease, asthma, and even cancer. In particular, the New York, Newark metropolitan area currently ranks 12th highest for ozone days in the country. Counties like Bergen, Mercer, Camden, and Middlesex were graded with F and D for high ozone days. By adopting the ACC II program, the State can make deep cuts in harmful transportation pollution that will save lives and make households, businesses, and the economy less dependent on dirty, volatile, and costly gasoline that damages the climate. (424) 14. COMMENT: New Jersey needs to catch up to neighboring states and kick start its just transition to accessible clean transportation. For manufacturers to prioritize New Jersey when providing ZEVs for sale, New Jersey must adopt ACC II by the end of 2023, or it will miss another model year. The faster new ZEVs are introduced on the road, the faster they will enter the used vehicle market making them more affordable and accessible to all New Jerseyans. Every day implementation is delayed, more New Jerseyans will feel the impact of poor air

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quality and climate change. Public and environmental health depend on a cleaner transportation sector. (534)

RESPONSE TO COMMENTS 2 THROUGH 14: The Department acknowledges the commenters' support of the rulemaking. The Department is required, pursuant to the Clean Air Act (CAA), 42 U.S.C. §§ 7401 et seq., to provide a two-year lead time before implementing a California emission standard. Therefore, the Department is adopting the rulemaking in order that the rules are in place in New Jersey for model year 2027.

General Opposition

15. COMMENT: The Department should not adopt the proposed rules. (16, 19, 42, 54, 60, 87, 113, 119, 123, 161, 172, 175, 179, 189, 217, 220, 283, 303, 306, 319, 338, 354, 358, 364, 375, 410, 414, 470, 472, 480, 486, 491, 521, 522, 547, 585, 602, 655, 666, 706, and 729) RESPONSE: The adopted rules are a continuation of the Department's efforts to mitigate the impacts of climate change by reducing greenhouse gas emissions and reductions in pollutants, such as NO_x emissions (which are a precursor of ground-level ozone), as well as PM2.5. Emissions from the transportation sector constitute the largest source of greenhouse gas emissions in the State. On-road gasoline-powered passenger vehicles and light-duty trucks, such as pickup trucks and sport utility vehicles (SUVs), are the largest share of transportation sector emissions. By increasing the sale of ZEVs that meet the minimum technical requirements and the stringency of the multi-pollutant exhaust emission standards, the rules will reduce emissions of CO₂ and air pollutants, such as NO_x and PM2.5 from the transportation sector. As explained in the notice of proposal Summary and Social Impact statements, by decarbonizing light-duty

vehicles, the Department anticipates that the rulemaking will have a positive social impact on the State's residents. See, for example, 55 N.J.R. at 1773, 1780-81. By reducing emissions from mobile source fossil fuel combustion, the Department expects to reduce greenhouse gas emissions, criteria pollutants, and air toxics such as formaldehyde and benzene, which will have public health benefits, protect water and air quality, and safeguard ecosystems in the State. *Id.* See also the Response to Comments 198 through 214.

Alternative Strategies and Technologies

16. COMMENT: Just three percent of New Jersey voters (based on polling) say limiting the number of gas vehicles sold in the State is the best approach to encouraging more EV usage, and only three percent of New Jersey voters say more funding or increasing the number of electric vehicles should be the top funding priority. (126 and 548)

17. COMMENT: It is not reasonable for the Department to force people to buy electric vehicles when there are better strategies to address environmental concerns. (50, 92, 100, 102, 138, 155, 196, 310, 343, 368, 518, 581, and 704)

18. COMMENT: The Department should not ban fossil fuel vehicles without alternatives better than battery electric vehicles. (134, 205, 347, 484, 625, 662, and 720)

19. COMMENT: The technology needs to develop further before the rules are adopted. Solid state batteries in a vehicle do not yet exist. (55, 134, 204, 324, and 625)

20. COMMENT: With only one technology option and one charging method, the rules are overly ambitious. (134)

21. COMMENT: Embracing a combination of technologies is essential for propelling society forward, both metaphorically and literally. It is imperative that the government refrains from prematurely favoring a single winner, such as battery electric vehicles (BEVs), given the significant challenges of mile-zero BEV, CO₂, and the potential far-reaching consequences of killing off the entire combustion engine supply chain. The rush to exclusively adopt BEVs by 2035 is hasty and unsustainable, primarily due to concerns related to energy density and battery chemistry. These issues give rise to costliness and impracticality that are unlikely to be fully resolved in an economically viable and non-discriminatory manner. (532)

22. COMMENT: A one-size-fits-all approach from California does not, in fact, fit the needs of New Jerseyans. The Department and this Administration should consider other ways to reach its emissions reductions goals without disproportionately affecting the State's rural residents and the food and agriculture industry, which is the third largest economic driver in the State. (227)

23. COMMENT: The Department is encouraged to ensure that the rules have adequate flexibility to ensure that fleets will continue to have access to the vehicles they need to perform the myriad of public and private sector services that New Jersey citizens rely upon. (651)

24. COMMENT: Converting fossil fuels into electricity, then storing that electricity in vehicle batteries is a highly inefficient process. (21)

25. COMMENT: The rules are premature and do not consider new technologies that improve the performance and emissions of gasoline engines and gasoline-fueled automobiles. (178)26. COMMENT: A mix of gas, electric, and hybrid is fine, but to ban an entire industry is crazy. (469)

27. COMMENT: The Department should not ban internal combustion engine (ICE) vehicles when environmental issues could be addressed through greater efficiency. Some commenters cite specific examples, such as requiring ICE vehicles to attain greater mileage, improving emission reductions, regular emission testing, and/or requiring hybrid engines. (22, 29, 56, 83, 138, 145, 155, 167, 204, 206, 208, 301, 309, 333, 336, 363, 385, 389, 438, 522, 529, 543, 579, 625, 664, 722, and 720)

28. COMMENT: The Department should not mandate electric vehicles at this time when there are other technologies available and emerging technologies that could address environmental issues. Some examples cited include developments in hydrogen, synthetic fuels, alternative fuels, as well as increased efficiency of internal combustion engines. (22, 28, 75, 77, 83, 110, 195, 285, 259, 167, 186, 196, 197, 267, 333, 350, 524, 530, 543, 613, 669, 674, and 683)

29. COMMENT: Thanks to significant investments in natural gas infrastructure and continued advancement in internal combustion engine technology, the Environmental Protection Agency's (EPA) own data show that New Jersey, alone, has reduced its total greenhouse gas emissions by 32 percent between 2005 and 2020. Clearly these proven technological advancements are working. (399)

30. COMMENT: As the Department considers options to reduce transportation emissions, the Department should consider whether there are less expensive and more efficient ways to reduce carbon emissions. The free market has a proven track record of demonstrating that competition can achieve policy objectives and effectuate advanced technology at a reduced cost to the consumer. New Jersey should support policies that allow all technologies to compete, including efficient gasoline and diesel vehicles operating with conventional and lower carbon intensity

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fuels, battery electric vehicles, hybrid electric vehicles, hydrogen fuel cell vehicles, and hydrogen internal combustion engine vehicles. Technology-neutral policies create the most efficient and effective opportunities to reduce greenhouse gas emissions in the transportation sector for new vehicles, as well as in the existing vehicle fleet. By pursuing a ZEV mandate program like ACC II and ignoring other technologies, New Jersey will be missing a significant opportunity to reduce greenhouse gas emissions from vehicles in the existing fleet and from those ICE vehicles that will continue to be sold in the future. The Department should consider if the ACC II rule is a realistic approach to mandate this technology and the downsides of focusing on one technology. (251)

31. COMMENT: This ban could threaten investment in cost-effective future low carbon or zero carbon energy solutions including hydrogen because sales of traditional fuels partially fund such efforts. (342)

32. COMMENT: New Jersey has the tools and resources to reduce emissions without heavy-handed government mandates. There are many other safe, proven methods of reducing carbon emissions from industrial facilities, like carbon capture and storage, that would protect workers and preserve existing businesses if widely implemented. Additionally, there are affordable and currently available transportation alternatives like compressed natural gas (CNG), propane autogas, renewable diesel, and hybrid cars. Hydrogen vehicles are also in development. (14)
33. COMMENT: The Department should adopt the rules and should also support other transportation technologies and their infrastructure, such as compressed air-powered vehicles.

(690)

34. COMMENT: The transition of vehicles (all classification types) to zero emissions needs to start with targets in 2024 with a 100 percent transition target by 2040. This is achievable, but it requires the Department to work with the New Jersey Board of Public Utilities (BPU) and other agencies in developing substantial incentive packages that engage all vehicle owners.

Additionally, it also requires creating incentives for home and business renewable hydrogen selfcontained solution installations. There are currently two companies offering home and business turnkey solutions. Hydrogen fuel cell vehicles offer features and capabilities that eliminate the constraints of BEV vehicles. New Jersey needs to build incentives so that homeowners and es and hydrogen electric storage for all residents and businesses that have the land to install. New Jersey must break away from the fossil fuel model of central mining and transmission to distribution. This fossil fuel model emits millions of tons of methane that is not currently reported, nor measured, by owners and the Department. The distributed model is much more efficient, has substantially less environmental impact, and rapidly increases availability of hydrogen to New Jersey residents and businesses. (238)

35. COMMENT: It is important to address climate change, but the rules should allow for alternative cleaner automobile technologies, like hydrogen or cleaner ICE vehicles. (490) 36. COMMENT: While the rules would allow for hydrogen vehicles to qualify as zero emission vehicles, the timeframes for implementing the rules and eliminating new ICE vehicles could squeeze out competing technologies. This rulemaking freezes ZEV technology to what can be achieved today, rather than allowing technology to advance. There is only so much money to invest in technological development, infrastructure, and equipment. Once the commitment is made to eliminate ICE vehicles in a little over a decade, the Department will have locked in EVs

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as the only choice for New Jersey. This is not beneficial to the State or to the environment. (113 and 196)

37. COMMENT: The automotive industry is experiencing rapid technological advancements. A hasty shift to electric vehicles might lock the State into a specific technology, potentially preventing New Jersey from benefiting from future developments like hydrogen fuel cells or other alternative fuels. Such a move could limit the State's adaptability to emerging automotive technologies. (485)

38. COMMENT: The Department should not mandate electric vehicles at this time but should instead transition the transportation sector to hybrid vehicles. (22, 26, 122, 138, 173, 188, 249, 313, 333, 345, 403, 409, 415, 433, 504, 530, and 691)

39. COMMENT: Existing ICE vehicles should not be banned and plug-in hybrid vehicles should be allowed to be sold. (304)

40. COMMENT: The rules should allow hybrids including plug-in hybrids. (52)

41. COMMENT: Hybrids are the answer for the foreseeable future because the initial torque is capable of getting a vehicle moving and these same electric motors can provide four-wheel capabilities to vehicles and to supplement total power peaks for vehicles like pickups, vans, and delivery vehicles. Fusion electric generation and printable solar voltaic panels, which are flexible, will be a game changer some day, but are not commercially viable yet. (198)
42. COMMENT: The transition to lower-carbon transportation is underway. Several efforts at State and Federal levels over many years have reduced emissions and improved the fuel efficiency of light-duty vehicles. Engine technology and gasoline improvement have worked together to help meet various environmental standards with innovation driving the most
technologically feasible and cost-effective solutions. Vehicle technology and energy/fuel improvement can continue to work together to meet the State's greenhouse gas reduction goals. However, ACC II's mandate of only EVs for future manufacturer sales of light-duty vehicles ignores the inclusion of all technologically feasible market-based solutions to lower greenhouse gas emissions, including use of renewable liquid fuels. The State is now picking winners and losers with its narrow definition of ZEVs. While it is true that battery electric vehicles (BEV) have no carbon dioxide emissions from the vehicle itself, the full carbon life cycle of vehicle manufacturing and consumed energy (fuel) is not zero carbon. The Department is addressing vehicles and energy in silos and is not considering the greenhouse gas implications across the full global vehicle manufacturing, energy emissions from electricity production, and delivery supply chain. The Department should replace the proposed ZEV mandate under ACC II with cost-effective, fuel neutral, market-based technological solutions for greenhouse gas reduction from light-duty vehicles. (647)

43. COMMENT: The Department should explain whether it has looked at alternative energy sources besides electric vehicles and explored using other sources of energy such as hydrogen or plasma in vehicles. (44)

44. COMMENT: An older car has roughly five grams per mile of emissions for every one gram per mile that a car that is five years or newer has. Implementing a supplemental catalytic converter on these older vehicles can bring these cars down to more current emission standards and provide a bridge to the cleaner air that EVs will bring. Implementing a program of supplemental catalytic converters would be very similar to the existing Diesel Emissions

Reduction Act (DERA) program for diesel trucks. That program requires EPA-verified technology and it allocates funds to implement the program. (373)

RESPONSE TO COMMENTS 16 THROUGH 44: The ZEV requirement of the ACC II rules requires manufacturers to produce and deliver for sale in New Jersey an increasing number of new ZEVs as part of their new passenger car and light-duty truck (collectively also referred to as light-duty vehicles) fleets. 55 N.J.R. at 1774. The ZEV requirement reaches 100 percent in 2035. Id. At that time, a manufacturer must satisfy 100 percent of production volume of new light-duty vehicles with an equal number of vehicle values. *Ibid.* Generally speaking, a single vehicle value is generated by the production and delivery for sale of a single qualifying ZEV or a qualifying plug-in hybrid electric vehicle (PHEV), which is a vehicle that uses both battery-powered electricity and another fuel, such as gasoline or diesel. A manufacturer may produce and sell its own qualifying ZEVs or PHEVs to generate the vehicle values necessary to meet its annual ZEV requirement, purchase or trade surplus vehicle values generated by another manufacturer, or use its own banked surplus values. Id. As manufacturers can bank surplus vehicle values for a limited number of model years, it is theoretically possible that one or more manufacturers would have enough vehicle values banked to meet an annual production volume in model year 2035 that includes a small portion of strictly ICE vehicles. As the Department explained in the notice of proposal, "[b]ecause of the program framework, the Department is unable to predict exactly how manufacturers will meet their requirements..." 55 N.J.R. at 1780. By and large, however, the Department expects that the majority of light-duty vehicle manufacturers will not be seeking CARB certification for new ICE vehicles in model year 2035. The ACC II rules do not apply to used vehicles.

As explained in the notice of proposal, the transportation sector, and particularly passenger cars and light-duty trucks, comprise the largest sector of the State's greenhouse gas emissions. See, for example, 55 N.J.R. at 1774, 1787. The Department determined that adopting ACC II is necessary for the State to reduce the State's greenhouse gas emissions and mitigate the most severe impacts of climate change. Further, the increase in ZEVs combined with the multipollutant exhaust emissions standards for ICE vehicles that are included in the ACC II rules are necessary to reduce the criteria pollutants like NO_x and PM. As set forth in New Jersey's 2017 emission inventory, the on-road sources within the transportation sector are responsible for 44 percent of New Jersey's annual Statewide NO_x emissions, which are a precursor to ozone and secondary particulate matter (PM). On-road sources are also responsible for 10 percent of New Jersey's annual Statewide PM2.5 emissions. See also the Response to Comments 238 to 258.

The annual ZEV requirement of ACC II is technology neutral. The ACC II rules do not specify a particular technology. Rather, the rules prohibit the sale and registration of new model year 2027 or subsequent model year passenger cars, light-duty trucks, or medium-duty vehicles that are not certified by the California Air Resources Board (CARB), see N.J.A.C. 7:27-29A.3(a), and require increasing percentages of vehicles sold to be zero emission. As explained in the notice of proposal, the ACC II rules recognize that battery electric vehicles (BEVs), fuel-cell electric vehicles (FCEV), and plug-in hybrid vehicles that meet the minimum technical requirements will qualify as vehicle values. See 55 N.J.R. at 1774-75. "Most [FCEVs] are powered by hydrogen (H_2) [...] FCEVs are like [BEVs] in that they are both electric vehicles (EVs) that use an electric motor instead of an internal combustion engine to power the wheels. However, while BEVs run on batteries that are plugged in to recharge, FCEVs produce their

electricity onboard." See EPA Green Vehicle Guide Hydrogen in Transportation,

https://www.epa.gov/greenvehicles/hydrogen-transportation. The ACC II rules not only recognize that FCEVs are ZEVs, but also a manufacturer that produces FCEVs for sale in California or a Section 177 state can receive extra values based on percentage of sales volume of the manufacturer's FCEV sales in the state where it sells the most FCEVs (known as the "annual proportional FCEV allowance"), 55 N.J.R. at 1775. Thus, the ACC II rules recognize that there are alternatives to BEV technology. Further, the Department recognizes that there are additional fuels that have low carbon emissions, such as compressed natural gas, ethanol, and biodiesel, but these fuels may still produce byproducts when combusted. The emission standards within the adopted rules are multi-pollutant standards, and require that ZEVs emit no criteria pollutants from the tailpipe. Nevertheless, there are opportunities for alternative fuel and combustion technologies to improve the emissions performance and efficiency of plug-in hybrid vehicles while generating power using fuel other than electricity. Currently, adopting an alternative to the Federal requirements other than the California program is not an option. As explained in the Response to Comments 675 through 687, pursuant to the Clean Air Act, New Jersey has only two choices when it comes to emission standards: the emission standards set by the EPA or those set by California.

Regarding comments that the conversion of fossil fuels into electricity is inefficient compared to internal combustion engines, the Department analyzed this as follows. New Jersey's electricity is produced from a mixture of energy sources through the PJM regional transmission organization. The bulk of the fossil fuel used for electricity production in the PJM region is natural gas (generation fuel mix at <u>www.pjm.com</u>). According to the U.S. Energy Information

Administration (EIA), most natural gas power plants use combined cycle steam turbines for base and intermediate loads, and "Combined-cycle systems have an average operating heat rate of 7,146 Btu/kWh." See https://www.eia.gov/todayinenergy/detail.php?id=52158. As one kWh is equivalent to 3,412 Btu, this translates to an efficiency of 48 percent of the chemical energy in natural gas converted to electricity. The EIA estimates average electricity transmission and distribution losses at 5 percent. See https://www.eia.gov/tools/faqs/faq.php?id=105&t=3. The U.S. Department of Energy and U.S. Environmental Protection Agency website www.fueleconomy.gov has a breakdown of how electricity is used and lost in an average electric vehicle. See https://www.fueleconomy.gov/feg/atv-ev.shtml. From losses due to battery charging, accessories, drive system, auxiliary electrical, wind resistance, rolling resistance, and braking, plus energy recovered from regenerative braking, overall electric vehicle efficiency is 87 percent to 91 percent from the charging station to the wheels. Thus, overall efficiency from natural gas electricity generation to electric vehicle wheels is (48 percent - five percent) x (87 percent to 91 percent) = 37 percent to 39 percent. The website www.fueleconomy.gov also has a breakdown of how energy is used in a gasoline vehicle. See

<u>https://www.fueleconomy.gov/feg/atv.shtml</u>. From losses due to engine heat and friction, accessories, drivetrain, parasitic pumps, auxiliary electrical, wind resistance, rolling resistance, and braking, overall gasoline vehicle efficiency is 16 percent to 25 percent. In conclusion, comparing the combustion of fossil fuels to generate electricity and power the wheels of an electric vehicle is 37 percent to 39 percent efficient, while directly combusting gasoline to power the wheels of a gasoline vehicle is only 16 percent to 25 percent.

To compare the emissions of New Jersey fossil fuel power plants versus gasoline and diesel vehicles, the Department references the 2017 Criteria Pollutant Air Emissions Inventories. See https://dep.nj.gov/airplanning/emissions-inventories/. For the purpose of the State air emissions inventories, power plants are classified as large stationary point sources of emissions. For volatile organic compounds, on-road mobile sources account for 20 percent of emissions, while point sources are eight percent. For oxides of nitrogen, on-road mobile sources account for 44 percent, while point sources are 14 percent. For fine particles, on-road mobile sources account for 10 percent, while point sources are 11 percent. With the exception of fine particles (where the numbers are similar), the overall on-road mobile sources emit a greater percentage of criteria air pollutants than power plants.

Achievability and Readiness

<u>General</u>

45. COMMENT: As of September 2022, Bloomberg's New Energy Finance projects that market forces alone will make electric vehicle sales reach 23 percent of U.S. passenger vehicle sales in 2025, and 52 percent in 2030. In New Jersey, sales of ZEVs were at 12.12 percent of the new vehicle sales market during the first quarter of 2023 – an increase from just over 10 percent at the end of 2022, and these numbers continue to grow annually. ACC II will facilitate and accelerate that already occurring process and strengthen the current standards. Also, with strong automaker commitments and Federal laws—such as the Infrastructure Investments and Jobs Act and the Inflation Reduction Act (IRA)—electric vehicles will become even more accessible and affordable. During the ACC II hearing at CARB, no automaker opposed the regulations. While

many automakers stated that hitting the ZEV targets could be a challenge, none said it was infeasible. Not only have automakers already announced more than \$210 billion dollars of investments to support the transition towards ZEVs in the United States, several automakers have committed to electrifying most or all of their fleet in the 2025 to 2035 timeframe, when ACC II will be in effect. The ACC II standards merely support and accelerate the industry's transition to ZEVs by ensuring that New Jersey is among the first to obtain ZEVs. (292)

46. COMMENT: In 2022, the number of EV models worldwide reached 500, up from below 450 in 2021 and more than doubling relative to 2018-2019. In particular, manufacturers are expanding their SUV and pickup truck offerings in line with consumer demands. Consumer Reports has compiled a list of at least 30 new EVs in different makes and models that are expected in the U.S. by the end of 2024. Over the time frame covered by the ACC II program, the number of models can be expected to continue to increase quickly as major carmakers expand their EV portfolios and new entrants strengthen their positions. The Department should adopt the ACC II program without delay, as it is an important step towards decarbonizing the transportation sector and the goals are achievable. The automotive industry has centered on electrification as the most commercially viable way to protect public health, the climate, and the environment by reducing tailpipe emissions. Industry competence in EVs is paralleled by public opinion, as 71 percent of New Jersey voters aged 18 to 35 favor the phase-out of fossil fuel vehicles. (79)

47. COMMENT: Adopting ACC II is consistent with where the market is going; with major auto companies, such as General Motors, Ford, and Volvo, already committed to 100 percent electrification and releasing an increasing number of EVs over the next three to five years. These

commitments by almost all major auto companies reflect the growing interest of New Jersey consumers. In the first half of 2023, 33,000 EVs were sold. That is just 4,000 shy of the 37,000 sold in all of 2022. This market is already transforming, and adoption of ACC II would support that transformation. We can do big things in New Jersey. While it seems daunting to adopt a goal of 330,000 EVs by 2025, this past June, there were 123,000 and this trend is accelerating. (234)

48. COMMENT: New Jersey is making rapid progress in the adoption of EVs and the State exceeded all of calendar year 2022 car and light truck EV registrations in just the first six months of 2023. The Charge Up NJ EV Incentive Program (CUNJ) by the New Jersey Board of Public Utilities (BPU), a cash-on-the-hood incentive for new car buyers, seeks to amplify this momentum and bring price parity for EVs. In its first three years, the CUNJ Program incentivized 16,375 new EVs on New Jersey's roads. These accelerated results demonstrate that the New Jersey EV market is moving in the right direction and that New Jersey can achieve the goals of the EV Act, N.J.S.A. 48:25-3, and ACC II. On the national stage, the IRA has dramatically impacted the trajectory of the EV market and light duty EV load is expected to jump nearly 375 percent by 2030, according to S&P Global Commodity Insight's latest U.S. Long-Term Plug-in Electric Vehicle Forecast. The United States Energy Information Administration (EIA) projects that electric vehicles, including both BEVs and PHEVs, will account for up to 30 percent of new light-duty vehicle sales in the U.S. by 2050. Furthermore, S&P Global analysts revised their previous EV sales forecasts based on IRA impacts, with battery electric vehicles now expected to surpass 4.6 million by 2030, more than double the prior expectation of two million. (329)

49. COMMENT: The U.S. lags far behind the world in EV sales. Although 2023 is not over yet, projections are that about one in five new vehicles across the world will be EVs. That figure in the U.S. is about one in 10, and New Jersey does better than the nation as a whole. (213) 50. COMMENT: The ACC II rules will be another example of industries adapting, new technologies becoming available, learning to live with the changes, and living longer because of less pollution. Ways for new and more powerful batteries, longer battery life, and replacement of lithium ion batteries are all being worked on. It is clear that people like EVs, which are hitting a transition point where rapid growth increases. Although manufacturers say they want to go electric, they continue to promote high-end gas SUVs, so a mandate is needed to push the industry along. Both incentives and minimum sales requirements are necessary. (58)

51. COMMENT: ZEV technology already offers a superior alternative to internal combustion engines. Relying on market forces alone to address the climate change market failure would be self-defeating and naïve. Consumers and businesses who have made the switch to EVs have already experienced them as being superior technology. (376)

52. COMMENT: Adopting ACC II will ensure residents can access the ZEVs they want within the State while solidifying the State's role as a climate leader. (494)

53. COMMENT: Many automakers have already announced their plans to no longer produce internal combustion cars so by adopting the rules, New Jersey will send another massive signal that they should focus their efforts on electric cars. The Department should require ZEVs by 2030 or sooner. (533)

54. COMMENT: EVs and plug-in hybrids have never been safer, cleaner, or more fuel efficient than they are now. (18)

55. COMMENT: There are six states that adopted the ACC II standards last year. The vast majority of clean car states are moving forward with adoption right now in model year 2023, and the automobile manufacturers are also leading the charge. GM, for example, has committed to phasing out the sale of new internal combustion engine cars by 2035. This is obviously a transition, but it is a transition that is accelerating. You can go to every major automobile manufacturer and find, not just an EV, but an EV in the type of vehicle that you are used to buying. That is critical. (493)

56. COMMENT: By requiring that a significant percentage of vehicle manufacturers' sales comprise zero-emission vehicles, the State is fostering innovation, encouraging investment in clean technologies, and creating a healthier environment for all residents. The proposed plan's gradual approach, culminating in a 100 percent zero-emission vehicle sales target by 2035, demonstrates a thoughtful and feasible trajectory for our transportation sector. This not only aligns with the global movement towards cleaner mobility, but also presents economic opportunities by positioning the State as a hub for electric vehicle manufacturing and adoption. (156)

57. COMMENT: Six states have already adopted the ACC II rules and car makers are also supporting the transition. (329)

58. COMMENT: The Department's approach to phasing out gas cars and replacing them with electric cars allows time for markets to shift. Also, as more EV production comes online, the prices will come down so the financial burden will not be as great. Similarly, the phased approach allows time for the energy grid to adapt to a heavier load from all the charging and charging networks will have more time to be built out. Positive health impacts from the switch

cannot be left out of the equation. Reductions in air and noise pollution will make New Jersey residents healthier and happier. (645)

59. COMMENT: Current products meet the requirements of ACC II and are proof that now is the time to adopt the rules. (671)

60. COMMENT: Adopting ACC II's strong vehicle standards is necessary and feasible. (201)
61. COMMENT: The ACC II regulations require very aggressive increases in EV sales. New
Jersey's ZEV sales comprised 8.32 percent of new vehicles sales in 2022. Thus, in New Jersey,
EV sales must increase more than four-fold in about three model years. These are staggering
required sales increases for a new technology that relies heavily on customer acceptance and
market readiness. Consumer awareness, understanding, and trust of the technology is essential to
move from 8.32 percent New Jersey EV sales to 100 percent in the next 12 years. (457-1)
62. COMMENT: It is important to address climate change, but the rules should provide a

longer timeline for the transition to EVs. (41, 149, 429, 550, and 638)

63. COMMENT: Although addressing environmental issues is important, the 2035 timeline is unrealistic and extremely costly for everyone. (695)

64. COMMENT: This *de facto* ban on ICE vehicles is unattainable. Neither California nor New Jersey has studied whether this social experiment is achievable, including whether the majority of New Jersey residents will buy EVs. (342)

65. COMMENT: The Department has not explained why it proposed a ban date of 2035. (92)
66. COMMENT: Moving to all EV sales should evolve over a 25-year period. Auto
manufacturers are putting their entire shareholder investors at risk as the buying market will
resist these vehicles in the short run. (519)

67. COMMENT: The State does not have the infrastructure or resources to remove all ICE vehicles. (287 and 724)

68. COMMENT: While the idea of cleaner energy is fantastic, the State is not yet in a position to consider a full-fledged switch to battery power and will not be within the next 10 years either.(78)

69. COMMENT: The Department must carefully weigh the benefits of all EV or hybrid vehicles against the potential financial, logistical, environmental, and economic challenges and drawbacks and ensure that any shift aligns with the State's long-term goals and objectives. (485)
70. COMMENT: The Department should not adopt the rules because the timing of the transition to EVs is too rapid. Some commenters cite specific concerns, including the challenge of financing the transition, immature EV technology, lack of technicians, and/or the inadequate power supply/infrastructure. (55, 64, 67, 73, 75, 95, 114, 138, 143, 150, 152, 165, 166, 181, 200, 222, 223, 235, 246, 301, 305, 324, 344, 350, 364, 369, 379, 389, 408, 411, 412, 458, 516, 519, 525, 555, 562, 572, 604, 619, 625, 629, 638, 641, 679, 681, 688, 689, 718, and 720)
71. COMMENT: New Jersey does not have the infrastructure to support the rules. (512)
72. COMMENT: EVs are probably at least 50 years from being commercially viable without subsidies. (198)

73. COMMENT: The technology is not advanced enough to ban ICE vehicles and force EVs on consumers. (50, 92, 120, 171, 179, 368, 611, and 717)

74. COMMENT: Not enough batteries can be produced for the EVs required by the rules. (250)

75. COMMENT: The State of New Jersey is faced with a binary choice: adopt California's ACC II plan or revert to the Federal Clean Car rule. New Jersey is not ready to go all-electric and the State needs additional time to move in that direction. (9)

76. COMMENT: The vision of a transition to near-zero and zero emission vehicles is supported and will be most successful if the rules take a full and accurate account of the critical factors facing the transition. Any proposed rulemaking around electrification must thoroughly assess the cost, operational suitability, and availability of electric vehicles. As an example, electric lightduty vehicle availability has dramatically decreased in the last several years due to COVID and manufacturing-related supply chain disruptions, and more recently by the United Auto Workers (UAW) strikes. These disruptions have put many fleets behind in their ability to replace aging vehicles with ZEVs. For many of these vehicles, the manufacturing backlog is not anticipated to improve for at least a year, if not more. Partly because of the microchip shortage, and partly due to slower than anticipated advancements in technology, many of the cost-effective light-duty ZEVs that were expected to be available by now are still many years from production. Vehicles in these categories make up a significant part of many fleets. (651)

77. COMMENT: The ACC II rules set ambitious targets for EV sales that are currently unattainable based on market trends. Forcing automakers to meet these targets may lead to unintended consequences, such as rushed production and potential quality concerns. (312)
78. COMMENT: The Department must consider whether car manufacturers can construct and deliver, to New Jersey, enough EVs in the time frame required, given the supply challenges in acquiring the rare earth materials to make the batteries. If there is not enough supply to meet a

demand for EVs that is being artificially propped up by this regulation, EVs may be sold for more than sticker price, making them even more unaffordable for motorists. (70)

79. COMMENT: Nobody denies climate change or that society must move with all due deliberate speed to reduce the carbon footprint from automobiles. Automakers and auto retailers have already invested billions, indeed tens of billions, to design, build, and sell EVs. New Jersey new car dealers spent an estimated \$150 million to invest in the necessary tools, training, and equipment to sell and service EVs. However, ACC II begins with questionable and extremely optimistic assumptions about potential ZEV and qualified PHEV sales volumes in New Jersey. The Department's analysis about the environmental and health benefits of adopting ACC II is based upon the assumption that ZEV and PHEV sales growth will jump up from a combined total of just over 10 percent today, to 43 percent in 2027, and all the way up to 100 percent by 2035. While EV sales growth is increasing each year, growing an additional 33 percent in less time than it took to reach 10 percent strikes most industry experts as overly optimistic. Also, the goal of 100 percent ZEV sales by 2035 is laudable, but not realistic, considering the impact ACC II will have on affordability and consumer choice in the auto marketplace. The State should first get to 10 or 15 percent EV sales before imposing the ACC II mandates. The State should also demonstrate the capacity of meeting the current mandates before doubling and tripling down on even more stringent rules. The current California rules that apply in New Jersey call for model year sales this year to come in at 22 percent. The State is at less than 10 percent. (27) 80. COMMENT: The rules assume the auto industry can meet the demand, which they cannot and will not meet. (425)

81. COMMENT: The rules overlook the current limitations of EVs and the supporting infrastructure, which will limit transportation for residents, particularly those in rural areas or with longer commutes. Balancing environmental goals and the practicality of implementing such measures is crucial. (577)

82. COMMENT: Many of the concerns that were brought up during the April 12, 2018, Clean Air Council public meeting are identical to the concerns of today– affordability, infrastructure issues, range anxiety, grid reliability, etc. EVs are expected to be a significant part of the solution to the air pollution problems in New Jersey and the region. However, much more must be done to increase the sale and use of these vehicles, particularly to more of the mainstream public. (202)

<u>RESPONSE TO COMMENTS 45 THROUGH 82</u>: By setting an annual ZEV requirement, the Department is providing certainty to vehicle manufacturers, suppliers, utilities, and infrastructure manufacturers to make the long-term investments that will be crucial to large-scale deployment of light-duty ZEVs and consumer choice. Although compliance with the adopted rules will require significant changes to manufacturers' product offerings and scale of production, as some commenters indicated, many automakers committed to expanding their offerings of new ZEV makes and models before the adopted rules were proposed. This shift was further detailed in CARB's Initial Statement of Reasons, which noted that "[t]he industry has rapidly responded to evolving market pressures, consumer demands, and regulatory requirements in California, across the United States, and around the globe. Overall, these improvements have reduced costs for batteries, the main driver of BEV and PHEV costs, as well as for non-battery components. This has enabled manufacturers to accelerate plans to bring to market more long-range ZEVs in more

market segments and highly capable PHEVs. Today, every manufacturer has a public commitment to significant if not full electrification in the next 20 years. Based on public announcements, it is expected that nearly 120 ZEV and PHEV models will be available to consumers before the 2026 model year." CARB ISOR, p. 7

(https://ww2.arb.ca.gov/rulemaking/2022/advanced-clean-cars-ii).

Today, there is a significant variety and diversity of EV makes and models available in New Jersey. Based upon the latest Alternative Fuel Vehicle (AFV) report

(https://dep.nj.gov/drivegreen/nj-ev-data/), which includes vehicles registered in New Jersey through June 30, 2023, a total of 72 unique models of 2023 light-duty battery electric, plug-in hybrid, and fuel cell electric vehicles are in use, as compared to the 349 unique models of light-duty ICE vehicles. As the adopted rules' requirements do not take effect until model year 2027, manufacturers should have sufficient lead time to develop and validate new products within the range CARB predicted by model year 2027 and to continue to expand upon their product offerings as the annual ZEV requirements ramp up through 2035. As discussed more fully in the Response to Comments 87 through 115, manufacturers are expected to produce vehicles that meet consumers' needs. The adopted rules will help to ensure quality by including minimum requirement. See the Response to Comments 608 through 612. Further, as discussed in the Response to Comments 289 through 419, as the annual ZEV requirement increases and technology advances, economies of scale and more EV choices for consumers are likely to result in price parity of EVs with comparable ICE vehicles.

The Department acknowledges that supply chain issues are a variable today in terms of ZEV production. However, the Department cannot predict if, and for how long, such issues may persist. As CARB noted, the ACC II rules "provide flexibilities in the use of banked credits to facilitate compliance" should there be supply disruptions. CARB Final Statement of Reasons (FSOR), Appendix A at 15 (<u>https://ww2.arb.ca.gov/rulemaking/2022/advanced-clean-cars-ii</u>). Additionally, the Department notes that the annual ZEV requirements that manufacturers must meet in New Jersey would not begin until model year 2027. As CARB noted, in the years leading up to 2027, manufacturers have opportunities to take advantage of the flexibilities, such as the ability to earn early credits, that are built into the rules. The Department may always revisit the rules as necessary. See the Response to Comments 705 through 710.

Compliance with the rules will require an infrastructure transition as the light-duty fleet moves from refueling at gas stations to recharging their vehicles with electricity primarily at home or work or, less frequently, at public fast charging stations or hydrogen fueling stations. Please see the Response to Comments 116 through 169 regarding the sufficiency of the State's charging infrastructure.

Automotive Repair

83. COMMENT: There are not enough repair shops to support the rules. (81)

84. COMMENT: How will maintenance be handled by car shops? Will auto mechanics be trained and allowed to repair EVs? (623)

85. COMMENT: The rules should include owner right-to-repair. If car dealerships and companies are the only ones allowed to work on these vehicles, prices will likely increase. (623)

86. COMMENT: The rules would force people to use an EV dealer for maintenance, which typically costs more than using a third-party mechanic. (115)

RESPONSE TO COMMENTS 83, 84, 85, AND 86: Commenters have expressed concern regarding what facilities may work on electric vehicles. Since dealerships that sell electric vehicles are typically required by the motor vehicle manufacturers to be equipped to service what they sell, the Department anticipates no shortfall in service facilities for the duration of new vehicle warranties. While dealerships generally need to provide warranty and recall repairs where the manufacturer bears the cost of parts and labor, it is not necessary for dealerships to perform out-of-warranty work. There are several provisions of the California ACC II regulations that the adopted rules at N.J.A.C. 7:27-29A.7 incorporate by reference that address that issue. First is the requirement that California-certified ZEVs must adhere to standard data connector and communications protocols (on-board diagnostics, or OBD). This makes it easier for nondealers to use standard scan tools and diagnostic equipment on electric vehicles. Second is a requirement that vehicle manufacturers "... make available for purchase ... all emission-related motor vehicle information and emission-related engine information, and propulsion-related information, as applicable, that is provided to the motor vehicle manufacturer's or engine manufacturer's franchised dealerships or authorized service networks for the engine or vehicle models they have certified in California." 13 CCR 1969(e)(1), adopted by reference at N.J.A.C. 7:27-29A.7. Pursuant to this regulation, individuals and independent repair shops will have access to the same vehicle information as dealerships. If independent repair shops require special equipment to work on electric vehicles, such as battery tray lifts or forklifts, it is up to the shop as to whether they wish to make such investments. However, there is no obstacle in terms of

vehicle data or repair information that would prevent an independent repair shop from servicing an electric vehicle. Additionally, the Department notes that the National Institute for Automotive Service Excellence (ASE) offers several relevant certification paths for automotive technicians working on hybrid and electric vehicles, see <u>https://www.ase.com/</u>. These include the Light Duty Hybrid/Electric Vehicle Specialist Certification Test (L3), parts of their Automobile & Light Truck Certification Tests (A1 – A9), which cover electronics and electrical systems, and new xEV Safety Certifications for technicians working on high voltage batteries and electrical systems. Finally, as mentioned in the Department's ACC II proposal, electric vehicles generally require less maintenance than internal combustion engine vehicles. Many common maintenance items, such as tires, brakes, windshield wipers, glass, and lights are the same on electric vehicles as on internal combustion engine vehicles and any vehicle service facility can address these items without EV-specific training or equipment.

Operational Needs and Range; Performance

87. COMMENT: It is important to address climate change, but the rules should allow for hybrids and/or internal combustion engine (ICE) vehicles for situations in which charging stations are limited and/or range is a concern. (106 and 466)

88. COMMENT: The rules are supported. However, there needs to be a greater selection of EVs that have a 300 mile per charge range and more fast charging stations on the road. (556)
89. COMMENT: There is no environmentally friendly car in this country that is also reliable and completely safe for the driver and passengers. Therefore, the only consumer friendly and environmentally friendly car available so far is the gasoline powered vehicle. While consumers

may look forward to the next solution, for now this is the choice. The State should not limit or ban the only strong choice for commuting or travel. (37)

90. COMMENT: The Department should not adopt the rules because EVs do not meet the

operational needs and/or wants of all consumers and/or the technology is not supported. (7, 32,

51, 66, 133, 134, 182, 204, 209, 210, 239, 252, 254, 286, 314, 318, 321, 350, 365, 403, 405, 441,

474, 483, 499, 500, 519, 541, 595, 596, 597, 610, 624, 625, 639, 648, 661, 662, 667, and 709)

91. COMMENT: Not all families would benefit from having an EV. A large family needs larger vehicles and there are no electric minivans and passenger vans. (368 and 405)

92. COMMENT: The State's culture includes driving down the shore, which would be lost if

ICE vehicles are banned or limited. (483)

93. COMMENT: The Department should not adopt the rules because EVs do not have the range or efficiency needed for long-term use. (484 and 413)

94. COMMENT: The Department should not adopt the rules because EVs are unreliable, are much less reliable than ICE vehicles, and/or are unsafe. (50, 182, 210, 281, 323, 368, 479, 506, 509, 625, 639, 641, 648, 662, and 702)

95. COMMENT: Assumptions made for EVs are that they are typically used only for 30-mile maximum travel from home base and that recharging can easily be done overnight with a household Level 2 charger. The impact of simultaneous numbers of EVs, including trucks and buses requiring Level 3 charge, has not been addressed in any analysis. (350)

96. COMMENT: The Department should not adopt the rules because EVs have limited range on a single charge. Some commenters cite specific concerns, including the impracticality of driving an EV if traveling a great distance, such as for a long daily commute, a long day of deliveries,

and/or a vacation destination and/or for consumers who need vehicles with significant towing capacity or to plow snow. (7, 25, 32, 40, 45, 51, 68, 115, 133, 134, 135, 136, 142, 167, 169, 170, 182, 185, 188, 193, 198, 206, 209, 210, 221, 239, 261, 263, 271, 275, 285, 308, 318, 323, 350, 356, 379, 403, 406, 411, 413, 415, 426, 453, 463, 467, 485, 491, 501, 504, 506, 518, 528, 529, 541, 544, 546, 599, 607, 625, 662, 679, 639, 707, 709, 716, 705, and 701)

97. COMMENT: The rules should include options that allow long-distance Rving. (599)

98. COMMENT: The Department should not adopt the rules because EV batteries lose range (miles per charge) over time. (55, 350, and 388)

99. COMMENT: EV battery technology is the same lithium ion that has existed for ages. Few changes have been made to this technology and nothing significant is expected to change by 2035 to increase range. (504)

100. COMMENT: It has been found that electric cars lose close to 2.5 percent of their battery capacity every year. That means an eight-year-old used car that is purchased would have mileage that is 20 percent less than when the car was new, and using DC fast chargers would reduce the battery capacity over time at a higher rate. (51)

101. COMMENT: The maximum range of an EV is only achieved if there is no radio or air conditioning used because the more power used, the less mileage achieved. (135)

102. COMMENT: It is uncertain whether the range and mileage of EVs will improve by 2035.(709)

103. COMMENT: Rules on electrification must consider proven technology that is both comparable in range and duty cycle, as well as job performance before mandating either their manufacture or adoption. Regulations are incapable of mandating technological innovation and

improvement by manufacturers. This effectually compromises the ability of fleet managers to deploy a mix of vehicles designed to deliver required or adequate services to their respective communities. (651)

104. COMMENT: The Department should not adopt the rules because certain weather and/or road conditions have a negative impact on the performance of EVs. Some commenters cite specific concerns, such as the negative impact on reliability and/or range. (24, 64, 104, 114, 143, 185, 210, 308, 318, 350, 356, 359, 403, 425, 428, 464, 467, 474, 506, 516, 529, 586, 625, 648, and 684)

105. COMMENT: If there is a freezing cold winter, 20 percent of the charge overnight that was paid for in electricity costs is lost because it was cold out. (356)

106. COMMENT: EVs have limits in emergencies like hurricanes or forest fires. (308)

107. COMMENT: In a bad winter and/or storm, EVs will stop running, either stranding motorists or trapping citizens and risking their lives. (91, 259, and 464)

108. COMMENT: EVs will create life-threatening situations for those stuck in the elements. An EV heater and/or air conditioner does not last as long as a gas-powered HVAC system within a traditional vehicle. (115)

109. COMMENT: If an EV dies on the road, the EV cannot be charged and it will be a major undertaking to have it towed, if it can be towed. The Department should explain what happens if there is an emergency situation and EVs all die on the road and block the road. (648)

110. COMMENT: There are significant dangers of EVs breaking down in a snow storm. (611)

111. COMMENT: EVs do not work well in cold climates, which could impact emergency workers' ability to get to work. (467)

112. COMMENT: An all-electric push now will lead to stranded vehicles. (519)

113. COMMENT: The Department should explain what happens if a ZEV breaks down and how the driver will get an initial charge as opposed to getting a gas can. (245)

114. COMMENT: EVs are entirely dependent on their battery, making them much less efficient during cold winter months, reducing their driving range and they struggle to make heat in the cabin. EV drivers must sometimes choose between driving range or getting heat into the cabin on a frigid cold day. EV manufacturers do not test EVs in all weather conditions as extensively as gasoline powered cars. EV manufacturers often test EVs in pristine weather conditions and on pristine road surfaces. They do not test EVs on New Jersey's many pothole-ridden roads and highways. Also, they do not test EVs on frigid cold New Jersey winter nights. (363)

115. COMMENT: The Department should explain what happens if a family driving an EV gets caught roadside in a storm or an accident or runs out of power in the cold. (701)

RESPONSE TO COMMENTS 87 THROUGH 115: Before proposing ACC II, CARB staff evaluated potential ZEV compliance requirements based, in part, on manufacturers' public announcements and investments in ZEV technology. CARB ISOR, pp. 36-42. CARB noted that "manufacturers have announced plans to electrify, and many have indicated to CARB in survey responses that even in the near-term there will be significant electrification growth. This indicates manufacturers are not only adding specialty low-volume ZEV models but transitioning high-volume gasoline models into ZEVs. [CARB] Staff expects this sort of compliance response as manufacturers seek to meet the early years of the requirement with the easiest segments to electrify, such as small and midsized cars, and small crossover utility vehicles. The proposed trajectory for 2026 through 2030 aligns with what [original equipment manufacturers] have

stated in projections of ZEVs and PHEVs. [CARB] staff is [also] proposing a trajectory that moderates in the final years to 2035. This is because staff expect the last 20-percent of the fleet will be more challenging to electrify than the first 80-percent." CARB ISOR, p. 40. The Department recognizes that the available makes and models of ZEVs on the market today will not meet the operational needs of all consumers today. However, "[m]anufacturers have made significant improvements in battery technology, which has enabled more vehicle offerings in more segments and increasing capabilities." CARB ISOR, p. 37. For these reasons, the Department is confident that the number of makes and models serving a greater diversity of operational needs will increase as the annual ZEV requirement increases.

To the extent that there are concerns about the range of ZEVs, as explained in the notice of proposal, ACC II requires that ZEVs meet certain minimum requirements, including range. See 55 N.J.R. at 1776. Further, it is worth reiterating that each manufacturer may meet 20 percent of its annual ZEV requirement with qualifying PHEVs. Starting in model year 2026, to qualify as a ZEV, California's ACC II regulation has a minimum certification range value of greater than or equal to 200 miles, *ibid.*, well more than the 29 miles the average driver drives each day (<u>https://www.bts.gov/statistical-products/surveys/national-household-travel-survey-daily-travel-quick-facts</u>).

Additionally, 13 CCR 1962.4, which is incorporated by reference at N.J.A.C. 7:27-29A.7, outlines the minimum durability requirements for a ZEV to qualify as one vehicle value. For model years 2026 through 2029, a ZEV must maintain 70 percent of its range value for a useful life of 10 years or 150,000 miles, whichever occurs first. As an example, a new model year 2026 vehicle with a CARB-certified range value of 300 miles must maintain a range value of 210

miles during its useful life. For model years 2030 or later, a ZEV must maintain 80 percent of its range value for a useful life of 10 years or 150,000 miles, whichever occurs first. *Ibid*. For a new 2030 vehicle with a 300-mile CARB-certified range, it would maintain at least a 240-mile range. This is a minimum requirement.

For PHEVs, ACC II requires a minimum certified range value of greater than or equal to 70 miles and a minimum all-electric range value greater than or equal to 40 miles using the US06 test procedures if it is to qualify for a single vehicle value. See 13 CCR 1962.4. As a PHEV can run on battery or an internal combustion engine, its internal combustion engine must be certified to full useful life for super-ultra-low-emission-vehicle 30 (SULEV30) or lower exhaust emission standards for passenger cars and light-duty trucks to qualify as a single vehicle value. *Ibid*.

Manufacturers know that they will need to produce ZEVs with increased range for certain vehicle segments. As the adopted rules' requirements do not take effect until model year 2027 in New Jersey, manufacturers should have sufficient time to expand upon their product offerings through model year 2035 to ensure that some ZEV models appeal to consumers with long commutes and/or high mileage requirements. However, the ACC II rules recognize that for a portion of consumers, only a PHEV will meet their lifestyle or business needs. Therefore, as mentioned above, the ACC II rules allow a manufacturer to meet 20 percent of its annual ZEV requirement with qualifying PHEVs.

To the extent that there are concerns about the potential for diminished range in different weather or geographic conditions, the Department notes that the overall electric vehicle ownership in Norway is estimated to be 20 percent as of December 2022 (https://europe.autonews.com/automakers/evs-now-make-20-norways-cars) while overall EV

sales hit 65 percent in 2021 and 79 percent in 2022 (<u>https://electrek.co/2023/01/02/norway-hits-record-ev-share-in-2022/</u>). The average mean temperature in Norway is colder than the average mean temperature in New Jersey in every season. Compare https://climateknowledgeportal.worldbank.org/country/norway/climate-data-historical with https://climateknowledgeportal.worldbank.org/country/united-states. According to the

Norwegian Automobile Federation, EVs can lose up to 20 percent of their range in sub-freezing weather. See Cold Temperatures Affect an Electric Vehicle's Driving Range - Consumer Reports (<u>https://www.consumerreports.org/cars/hybrids-evs/how-much-do-cold-temperatures-affect-an-</u>evs-driving-range-a5751769461/#:~:text=Cold).

Taking the Norwegian experience into account, to mitigate the effects of extreme temperatures, many EVs are equipped with battery thermal management systems to heat and cool the battery pack to optimize the chemical reaction that allows for faster charging and discharging of the battery. See <u>www.nrel.gov/docs/fy13osti/57747.pdf</u>. Some EVs also come with high efficiency heat pumps to provide cabin heating with less battery drain than resistance heaters. Also, many EVs come standard with heated steering wheels and seats. While some people may view this as a luxury option, it is more efficient to heat only the seat occupants rather than the entire vehicle cabin. Seat and steering wheel heaters use a fraction of the energy required for resistance cabin heating. Another option on many EVs is preconditioning, which allows the vehicle to warm the batteries and cabin while still plugged in to avoid draining the batteries. See <u>https://www.edmunds.com/electric-car/articles/heaters-in-electric-cars-how-do-they-work.html</u>. This is similar to "remote start" on gasoline vehicles, but is not limited by the Department's

engine idling restriction of three minutes because battery electric vehicles have no tailpipe emissions.

As CARB noted in its Final Statement of Reasons, "[m]anufacturers continue to conduct durability testing of their ZEV models in the same extreme weather environments that they test their conventional vehicle models. Additionally, the SAE J1634 BEV range testing standard has an optional 5-cycle pathway that allows manufacturers to test in cold weather conditions to generate different range calculations than they would be able to on the more standard testing pathways. Some manufacturers have started to choose this pathway, because their cold weather performance is outperforming the standard reduction multiplier created with years of input testing vehicles of all types." (FSOR Appendix A, Page A-11). In short, ZEV technology continues to improve because manufacturers know that they will need to build vehicles for consumer segments with varying needs.

As noted by CARB, "fuel risks from blackouts or being stranded on the freeway also exist similarly for conventional vehicles and are not new or unique to ZEVs." CARB FSOR Appendix A at 28. The Department also notes that roadside charging programs for electric vehicles continue to be developed and expanded upon. See, for example, Electrifying AAA Member Benefits (December 1, 2022), at <u>https://newsroom.aaa.com/2022/12/electrifying-aaamember-benefits/?_gl=1*11car3k*_ga*MTI5MzI0MDU5OS4xNjk3NjU0NDk1</u>. In addition to AAA service, many motor vehicle manufacturers offer roadside assistance for their electric vehicles. See <u>https://www.recurrentauto.com/research/roadside-assistance-in-an-electric-car</u>. See also the Response to Comments 170 through 195.

As mentioned above, electric vehicles may be subject to specific cold weather testing and labeling at the discretion of the manufacturer. In addition, any concerns about electric vehicle safety are addressed by the National Highway Traffic Safety Administration in the U.S. Department of Transportation. All motor vehicles in the U.S. are required to meet the same safety standards. See

https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/motor_vehicle_safety_unrelated_uncodified provisions may2013.pdf.

Adequate and Accessible Charging Infrastructure

116. COMMENT: To help with the transition to ZEVs, it is vital that the State continues to support charging station infrastructure deployment. Also, just as the ACC II regulation ramps up over time, so can the State's charging infrastructure. New Jersey is already taking strides to further build out a robust network of charging infrastructure within the State. As part of the Federal Infrastructure Investments and Jobs Act, New Jersey will receive over \$104 million to help further build out the charging infrastructure in the State through 2026—before the start of the ACC II program. While it is important that the State continues to support the build out of charging infrastructure, adoption of the ACC II regulations will also help to draw private investments into the State. Private charging station companies are more likely to install and maintain charging infrastructure in states that have strong zero-emission vehicle standards, as they know the demand for the charging infrastructure will be prevalent. (292)

117. COMMENT: The rules will incentivize the building of necessary EV infrastructure and public transportation. (256)

118. COMMENT: The State has ample charging so driving range is not a concern. EVs are perfect vehicles for commuting and running errands in many of the State's easily walkable and transit-accessible communities. (711)

119. COMMENT: The United States Department of Energy's (DOE) Alternative Fuels Data Center has mapped 1,048 public Level 2 and DC fast charging stations with 3,006 individual ports in New Jersey; the data exclude residential charging, where a majority of charging occurs. While there are many charging options available to EV drivers, the expansion of the national charging network through the National Electric Vehicle Infrastructure (NEVI) formula program, of which New Jersey will receive \$104.4 million over five years, paired with millions of dollars in private capital will only further inspire confidence in the technology. (79)

120. COMMENT: Some question the cost and likelihood of more EV cars on the road due to range anxiety and lack of public charging stations to meet future and increased demand if ACC II is adopted. New Jersey is already working on the issue of adequate public charging through the implementation of the NEVI program, which maps out locations and installs public charging stations along the State's major traffic and commuter corridors like the New Jersey Turnpike and Garden State Parkway. (265)

121. COMMENT: Reliable and convenient access to charging stations supports the State's customers who buy or lease EVs. Publicly available charging stations ease perceived "range anxiety" concerns and substantially increase consumer awareness of the technology. The challenge of reaching the ACC II mandate of 100 percent electric vehicle market share by 2035 requires New Jersey to address several hurdles to consumer acceptance. For example, the State must deploy convenient, reliable, and affordable access to public EV charging and hydrogen

refueling stations and monitor stations to ensure reliability of charger availability and charging power rate delivered at DC Fast Chargers. The State must also install 350 kW DC Fast Chargers at airports and major transportation hubs and consider installing hydrogen fueling stations at locations to fuel and support transportation network company EVs and taxis. Hydrogen vehicles may be better suited for some customers, especially those that do not have access to charging at home or the workplace, or those that have a lifestyle that requires short refueling times and a similar refueling process as gasoline.

Currently, New Jersey has 2,584 EV charging ports for 92,286 registered EVs in the State. This ratio of approximately one charging port for every 36 EVs is well below the CARB recommendation of a 1:7 ratio or worst case, 1:10 ratio. To support the prospect of 100 percent ZEV-only sales in 2035, New Jersey's charging capabilities will likely need to increase significantly within the next 12 years to be in line with the California infrastructure assessment ratio of seven EVs to one charger port. (457-1)

122. COMMENT: Moving aggressively toward a zero-emission vehicle goal is supported but significant infrastructure improvements are required at a faster pace than currently planned. The availability of public DC fast charging facilities for road trips is a major concern. Because most charging will occur at home, people who own single-family homes will have the least problem installing charging equipment. The issue is far different for those who rent or live in condos without their own garage. Rules will need to be promulgated regarding EV charging in multiple family dwellings. Perhaps requiring Level 2 charging at a certain percentage of common parking spaces (increasing as EV ownership increases) or DC fast charging at a smaller number of spaces but requiring users to move their vehicles upon completion of charging. In addition, the public

fast charging network needs to be ramped up much more quickly than proposed. In April, the State announced an agreement to add 240 charging ports along the Garden State Parkway and New Jersey Turnpike by April 2033. Both the number of ports and the speed of implementation need to be significantly increased in order for the EV sales goal to be feasible. Furthermore, similar EV charging infrastructure implementation needs to be available Statewide and nationwide so that people purchasing an EV can be confident that a road trip will not only be possible but enjoyable without hassle. This may require State laws that supersede local zoning so that charging stations can be installed quickly in convenient locations. (192)

123. COMMENT: Although the rules can be great, it may be hard to get done because the State does not have the necessary charging infrastructure. The State must consider charging for people who park on the street. The State should also require any apartment complex with more than 25 residential apartments to install chargers, public and workplace charging, and municipalities to establish the necessary infrastructure for home chargers. (510)

124. COMMENT: While the transition to green energy is important for New Jersey and the nation, this proposed vehicle mandate may not be the correct way to execute it. The State should be wary of banning gas vehicles before the nation's EV infrastructure, primarily safe, reliable, and readily accessible charging is up to the task of allowing millions of people to charge their vehicles in rural and urban locations. (548)

125. COMMENT: The State must do more and faster. Major areas that need State mandates, subsidies, and/or grants are Level 2 public charging at all government facilities, such as schools, offices, prisons, and parks, and retail locations, as well as DCFC along all major corridors at every location that currently sells fossil fuels. State building codes should also require all

apartment and multifamily dwellings to install Level 2 charging for every unit that has parking and all new and existing construction to include Level 2 charging. (335)

126. COMMENT: People are still waiting to hear about the success of EVs in terms of charging ease and availability. Programs for charging stations along transportation corridors are being worked on, which will go a long way to reducing greenhouse gas emissions. (488)

127. COMMENT: The Department should adopt the rules, but should also make improvements

to EV infrastructure in a manner that does not result in a monopoly for a certain charging

company. (262 and 730)

128. COMMENT: The Department should adopt the rules, but also install many more charging stations so that charging is more convenient. (382)

129. COMMENT: There are not enough reliable charging stations. Mandating that all new homes built after 2025 must have EV in-home charging stations may help. (633)

130. COMMENT: While the Department should address environmental issues, adopting this rulemaking raises issues concerning the inadequate number of charging stations and/or access to charging stations. (51, 128, 146, 181, 412, 497, 507, 559, 644, and 709)

131. COMMENT: If electrification of the transportation industry and the 80X50 goals remainpriorities for New Jersey, the ACC II rules provide greater certainty than the other options.However, the State will need to work rapidly to install charging infrastructure at a rate equal toZEV mandates to address key consumer concerns, such as range anxiety. (302)

132. COMMENT: The Department should not adopt the rules because the State does not have enough EV charging equipment throughout the State to support the number of EVs envisioned by the rules. Some commenters cite specific concerns including the absence of a Statewide

charging infrastructure plan, accessibility in certain geographic locations with population and weather challenges, the proposed timeframe in comparison to the quantity of infrastructure needed, the particular need for fast chargers, the reliability and safety of public charging stations, workplace charging, and/or need for expensive retrofits to accommodate charging. (29, 32, 47, 51, 54, 56, 64, 66, 69, 81, 88, 90, 91, 92, 115, 117, 119, 128, 131, 142, 145, 190, 193, 199, 203, 204, 206, 210, 212, 237, 240, 245, 246, 249, 259, 278, 286, 287, 294, 300, 305, 305, 308, 314, 318, 321, 328, 350, 350, 351, 366, 374, 389, 411, 412, 415, 421, 421, 439, 441, 463, 475, 483, 485, 495, 498, 499, 501, 519, 527, 541, 556, 558, 571, 577, 579, 597, 598, 614, 623, 626, 627, 629, 630, 633, 636, 639, 642, 648, 661, 662, 667, 668, 681, 688, 689, 692, 693, 701, 705, 709, 716, 720, and 725)

133. COMMENT: The Department should not adopt the rules because the issue of accessibility to charging, for those not living in single-family dwellings, without a garage, or those renting, has not been addressed. Some commenters cite specific concerns including the absence of accessibility for those individuals residing in urban environments and who must park on the street, accessibility for those individuals residing in multi-family dwellings, and/or accessibility for those individuals residing in trailer parks or campgrounds, as well as space needed for charging stations. (11, 26, 33, 49, 54, 56, 65, 69, 90, 102, 112, 115, 125, 128, 131, 134, 145, 208, 209, 210, 211, 237, 246, 249, 275, 278, 279, 324, 328, 342, 350, 453, 485, 498, 499, 523, 578, 579, 597, 599, 623, 626, 626, 638, 644, 648, 693, and 709)

134. COMMENT: Mandating this type of car purchase is discriminatory to those who reside in apartments, townhome developments, or rental homes, since these dwellings do not have access

to charging facilities. The expectation that towns will provide this is bogus and misleading. Stop pushing an agenda that will only hurt the lower income population and residents. (162)

135. COMMENT: Almost a third of the New Jersey residents live in rental properties. The notice of proposal mentions requiring developers of new units to place charging stations but does not mention the same requirement for existing rental properties, such as apartments or condos. There could be various reasons why charging equipment is not installed, including existing infrastructure. The only mention of the charging stations in existing rental properties is in the "Multi Unit Dwelling Electric Vehicle Charging (EV) Toolkit." This is a big obstacle in the EV adoption. Residents with EVs who live in an apartment complex without charging equipment must charge elsewhere. This forces residents to charge at fast charging stations often which is not good for a battery's long-term health. Charging at rental properties must be addressed equally with charging at new developments. Otherwise, the EV adoption will remain low for residents at rental properties where most of the working class live. Any EV mandate must consider the time needed for existing rental properties to complete infrastructure upgrades for charging. (504) 136. COMMENT: The purchase of an EV is only one hurdle. The rules will require massive infrastructure changes to work. Rather than assuring drivers that there will be financial incentives to help purchase cars, the Department should explain how this would work on a practical level. How to maintain the car is a massive hurdle that is not being addressed. (644)

137. COMMENT: The rules ignore the reality of cost and charging infrastructure that make EVs impractical and unaffordable. The cost of retrofitting an older apartment building to be able to accommodate charging for residents will outweigh any minor cost savings over a gas refill. If there is no home charging, the alternative would be to use charging stations elsewhere, but these

options such as at workplaces are also limited. With no charging available, what solution does the Department have to offer if one needs a new vehicle and the only option is an EV that cannot be charged? (324)

138. COMMENT: Pursuant to the ACC II scenario, Sonoma estimated that 2.5 million light-duty ZEVs will be registered in New Jersey in 2035. The California ISOR report estimates one charging station is needed for every 8.7 EVs. Thus, 287,256 charges would be needed by 2035. While the Department seems quite proud of funding 5,271 charging stations, this seems to be woefully short. A 2022 study reported by NJ Spotlight news indicates New Jersey ranks 28th out of 50 states for available public chargers. It appears the infrastructure necessary to support this program is significantly lacking, particularly for the disadvantaged community and those living in multi-family dwellings. Forcing a change without the supporting infrastructure is folly. (102) 139. COMMENT: While the evolution to a transportation environment that has reduced dependence on gasoline-powered cars is needed, that evolution cannot succeed without a more robust effort towards creating an adequate charging infrastructure. Thus, the requirement that all automobile sales after 2030 be EV or PHEV cars should be delayed until plans are in place to first install a charging infrastructure that can service the expected number of non-gasoline cars. The notice of proposal fails to adequately address the need for a robust public charging infrastructure that can meet the needs of electrically powered vehicles in the same way that gasoline stations currently meet the needs of ICE cars. While there are brief mentions of the need to build sufficient charge points, no information is provided regarding any attempt to actually model the number of public charge points when all new cars sold will be BEVs or PHEVs, especially for renters who will be dependent on public chargers. (128)

140. COMMENT: The Department must consider how many households lack the electric supply to support charging and will need to upgrade their electric boxes and wiring, and the cost. (129) 141. COMMENT: By mandating ZEVs, what improvements have been earmarked for the State's infrastructure, including the number of charging stations and electric supply? (122) 142. COMMENT: As public charging (other than one specific charging network) is limited,

there should be a proactive effort to encourage all hotels and bed and breakfast establishments to make available at least Level 1 (household 120 VAC outlet) charging. This would go a long way in moving forward the EV adoption. (606)

143. COMMENT: If the rules are adopted, new home construction should be required to install EV chargers. (558)

144. COMMENT: Houses are not ready to switch to EVs. (300)

145. COMMENT: Access to charging infrastructure may not be evenly distributed across all communities, which could disadvantage lower-income residents and those living in apartment buildings with limited off-street parking or underground garages. They would be forced to compete for the limited charging stations that cities and towns might install in local parking lots. (485)

146. COMMENT: According to a 2017 National Renewable Energy Laboratory (NREL) report, 88 percent of EV charging occurs at home, making access to home charging a top priority for customers considering an EV. The converse is also true: lack of access to home charging is a major barrier to the EV adoption. (457-1)

147. COMMENT: There are not enough public or private chargers. People living in urban areas, apartments, or condos, will not have access to convenient charging even if they can afford an
EV. For example, Vineland has 81 apartment complexes for a total of 5,819 units. If each apartment renter has one car, assuming just one car per apartment, the total number of cars is almost 6,000 that need to be charged. Reliable charging is necessary for workers to get to work on time. (319)

148. COMMENT: New Jersey also must consider challenges associated with the power sector and EV charging infrastructure. According to one study, "as the EV market expands, access to home charging is likely to decrease over time" because "most early EV adopters live in detached homes where it is relatively easy to install a home charger, and have relied on low-cost, overnight, at-home charging for their primary charging needs." Additionally, modelling results from the report quantify that over 890,000 charging ports (for example, private and shared access and public direct-current fast chargers) will be required by 2030. Thus, there are other issues to consider before adoption of the ZEV requirements included in ACC II. (251)

149. COMMENT: The Department should not adopt the rules because recharging EV batteries is not convenient at this time. Some commenters cite specific concerns including the length of time it takes to charge the battery and/or the availability of chargers when and where needed (that is, fear of running out of range without a nearby charger and/or fear that the charger you can access will not be functional). (7, 25, 50, 51, 55, 63, 65, 92, 102, 115, 128, 135, 142, 143, 157, 160, 167, 173, 182, 188, 193, 200, 221, 223, 232, 271, 275, 298, 309, 348, 350, 351, 372, 378, 428, 441, 467, 485, 498, 501, 518, 527, 528, 538, 541, 543, 544, 546, 571, 577, 588, 608, 619, 625, 638, 639, 648, 656, 662, 663, 709, 716, and 725)

150. COMMENT: The 350 kw generator that is used to charge electric cars uses 12 gallons of diesel fuel per hour. It takes three hours to charge an electric vehicle to go 200 miles. That is 36

gallons for 200 miles. Compare this with the time it takes to put 36 gallons of gas into a gaspowered vehicle. (11)

151. COMMENT: Charging times for current BEVs are dramatically longer than the time to refuel an ICE vehicle. According to the Department of Transportation, Level 2 chargers (the type most likely to be generally installed) take up to an hour to charge a PHEV and could take four hours or more to charge a BEV. One car being charged could tie up a charge point for an hour or more, making it unavailable to other drivers, as well as creating significant inconvenience for BEV and PHEV owners. The ISOR publication referenced in the notice of proposal makes only scant reference to the excessive charge time problem. (128)

152. COMMENT: New Jersey does not yet have the infrastructure to accommodate EV charging. Depending on the level of EV, homes may need upgrades for special charging equipment, which is a cost added to the purchase or lease of an EV. Charging an EV is extra challenging for individuals who live in multiple dwelling developments where most apartments or condominiums do not have charging stations. In cities where parking is extremely limited and rarely available in front of someone's home, EV owners will not have the convenience of charging their vehicles overnight. (9)

153. COMMENT: Citizens who live in large apartment buildings are understandably concerned about having sufficient access to residential charging stations. Between the significant cost of getting the charging station installed, the difficulty of running power from the building to the parking structure, and the long wait times involved with sharing chargers across many residents, renters are likely to have to rely on public charging stations far more than homeowners. Unfortunately, the public charging infrastructure is also substantially lacking, and only a small

percentage of the EV chargers in the State are the DC fast chargers needed for efficient on-the-go charging. (2)

154. COMMENT: The ACC II rule may not be feasible in practice when considering the housing choices available to New Jersey residents. A more cautious approach is merited considering the number of New Jersey residents who rent or live in multiple-unit dwellings. The State's continued progress in incentivizing the purchase and use of electric vehicles and charging stations is strongly supported. However, people who rent will be effectively unable to purchase a new car from a New Jersey dealer without the landlord installing electric chargers. Also, if living in a multiple unit dwelling or housing with a parking garage, the cost to install electric chargers could be much higher than a single-family home. Installing numerous electric chargers at one location could require overhauling the electric system serving the multiple unit dwelling. The Department is urged to use caution and not prohibit the sale of non-electric vehicles until these dilemmas are given the consideration they desire. (4)

155. COMMENT: ACC II was designed for the California marketplace without regard to the vastly different conditions on the ground here in New Jersey. With respect to publicly available EV charging infrastructure, New Jersey needs a greater commitment to support ACC II. According to the Department of Energy, Alternative Fuel Data Center, as of April 6, 2023, New Jersey has only 943 public locations that support 2,671 electric vehicle service equipment (EVSE) ports, with 10 Level 1 chargers, 1,838 Level 2 chargers, and only 823 DC Fast chargers. New Jersey currently has 90,000 registered EVs, and most public chargers are located along the Garden State Parkway and New Jersey Turnpike. Adopting ACC II before New Jersey ramps up EV infrastructure development is a classic case of putting the cart before the horse. Though

dealers are all in and doing their part to increase EV charging infrastructure, there are expenses that must be considered. Also, in addition to the expense, the biggest obstacle to achieving greater EV infrastructure expansion is the utility companies' preparedness to upgrade electric capacity at dealership locations that are ready and willing to install additional chargers. That preparedness challenge must be offset by the government's creation of more public EV charging infrastructure, and that infrastructure must be non-proprietary. (27)

156. COMMENT: The notice of proposal included only limited analysis to confirm whether charging infrastructure is adequate to meet consumer demand and if not, how much additional cost would be necessary to adequately build out the charging infrastructure or maintain a reliable electric grid. The Department only indicated that it has awarded \$240 million since 2019 and utilities have committed \$215 million, without indicating the source of funding. (647)

157. COMMENT: The infrastructure to support electric vehicles does not yet exist. It seems unrealistic that all places where vehicles are parked daily for eight hours or more (such as, work places, schools, and commuter parking lots) can be equipped to support a large number of electric vehicles in the rules' time frame. (278)

158. COMMENT: Range anxiety is one of the most frequently cited obstacles to EV sales. A robust Statewide network of EV charging infrastructure will build consumer confidence and support the growth in consumer demand for these vehicles. The State should develop a strategic plan to guide public and private deployment of EV infrastructure to support the broad portfolio of charging needs at home, work, around town, at destination locations, and on the road. (202) 159. COMMENT: From a charging perspective, New Jersey cannot put enough chargers in place at this point in time even at homes to be significant. Further, there are a lot of people who

live in apartments, condos, and other densely populated areas where it is not possible to put enough charging stations in to be convenient for people. The Department cannot tell people they need to walk blocks in order to charge their vehicles. (113)

160. COMMENT: The environmental impact of the large-scale infrastructure necessary to repeatedly charge batteries is not a trivial matter and must be addressed. (267)

161. COMMENT: The Department must consider the environmental impact of building out the necessary charging infrastructure across the State. (31)

162. COMMENT: The rules will require a huge increase of immense charging stations and buildout of electric generation. (664)

163. COMMENT: New Jersey residents who need to drive long distances and have no choice but to own or rent a 100 percent EV will need assurance that the nationwide infrastructure of charging stations is adequate for long-distance travel. Other states must have ample charging stations along the highway and in rural/isolated areas to accommodate New Jersey EV drivers. (709)

164. COMMENT: Remember that people who buy cars in New Jersey drive in other states. The whole country should have the proper infrastructure to support all EVs before the State mandates

that people in New Jersey buy only EVs. (614)

165. COMMENT: Infrastructure to drive across the country or to other states is not there. (633, 648, and 518)

166. COMMENT: While New Jersey may increase the number of public charging points, charge point availability could easily remain an issue for anyone traveling out-of-State, especially

commuters to New York City or Pennsylvania or anyone contemplating a long car trip. This uncertainty might be a disincentive for many prospective EV purchasers. (128)

167. COMMENT: EVs do not presently have a standard charging connection. This needs to change so that all EVs can use the same charging connection. (627)

168. COMMENT: Car makers are supporting the transition to EVs. Recently, Ford announced they are going to adopt the Tesla charging port, North American charging standard because it helps users get more reliable charging on the road. After Ford, it was General Motors and Rivian, so the availability of charging on the go is only getting better. (329)

169. COMMENT: Each EV has a different type of plug in so a driver would need to find an EV station that fits the car and is available. (518)

RESPONSE TO COMMENTS 116 THROUGH 169: As explained in the notice of proposal, a key to the success of ACC II and transition of the transportation sector is "adequate access to charging and sufficient charging points across the State." 55 N.J.R. at 1782. There are three charging levels: Level 1, which is the slowest method but anticipated to be sufficient for many drivers; Level 2, which can meet the needs of drivers who typically travel more than 40 miles a day or who want a faster charge; and DC Fast Chargers (DCFC), which offer the fastest charging speeds. See generally NJDEP, Drive Green, Chargers and Charging, at

https://dep.nj.gov/drivegreen/charging/.

The ACC II rules include various requirements related to charging that are intended to enhance consumer convenience. *Id.* For example, pursuant to 13 CCR 1962.3, as incorporated by reference at N.J.A.C. 7:27-29A.7, all EVs must come equipped with Level 1 and Level 2 compatible charging cords, which will enable charging at home where the Department expects

most charging to occur. See 55 N.J.R. at 1782. A Level 1 cord plugs directly into a normal 120 V electrical outlet. Thus, if a single-family house or other residence has a garage with a 120 V outlet or a 120 V outlet on the house exterior, no electrical upgrade is required, and no charging equipment needs to be purchased to accommodate an EV purchase. However, a Level 1 charger plugged in overnight would afford only approximately 1.44kW per hour or enough charge to offset about 50 miles of driving. For EV owners with longer commutes, a Level 2 charger may be necessary, which may require the installation of a 240 V outlet of the type commonly used for an electric dryer, range, welder, or recreational vehicle (RV). The cost to install a 240 V outlet is extremely variable based on the length of cable run and difficulty, as well as local labor costs. For light-duty, private vehicles, New Jersey offers incentive programs to property owners to install Level 2 chargers <u>www.drivegreen.nj.gov</u>. However, as noted, ACC II requires manufacturers to provide a Level 2 charging cord with an EV, so no additional charging equipment purchase is required. In addition, the charging cord required under ACC II must fully recharge the vehicle using Level 2 in under four hours.

In addition to the Level 1 and 2 charging cord, 13 CCR 1962.3, as incorporated by reference at N.J.A.C. 7:27-29A.7, requires that all EVs are equipped with a port for DCFC. This is important as some base models of EVs recently available did not include this as a standard feature. DCFC enables an EV to be charged to approximately 80 percent within 20 to 30 minutes, and those speeds and capabilities are improving over time. DCFC would be the preferred charging method for motorists travelling longer distances who need to charge quickly.

The Department acknowledges the home charging challenges for individuals living in multi-family dwellings. For those living in apartments, townhouses, or condominium complexes

(multi-unit dwellings), the State has grant programs available to assist building managers to make EVSE available to their residents <u>www.drivegreen.nj.gov</u>. Moreover, as explained in the notice of proposal, recent New Jersey legislation requires electric vehicle charging infrastructure for new multi-family dwellings, parking lots, and garages. 55 N.J.R. at 1782. State law requires developers of new multi-unit dwellings with five or more units to have "make-ready" electrical infrastructure at 15 percent of the parking spaces and to install charging stations through phase-in within six years. See P.L. 2021, c. 171. "Make-ready" is defined as the "pre-wiring of electrical infrastructure at a parking space, or set of parking spaces, to facilitate easy and cost-efficient future installation of Electric Vehicle Supply Equipment or Electric Vehicle Service Equipment, including, but not limited to, Level Two EVSE and direct current fast chargers." *Id.*; see N.J.S.A. 40:55D-5. Developers must initially install charging stations in one-third of the 15 percent, followed by an additional one-third within three years, and the final one-third within six years. N.J.S.A. 40:55D-60.

For those living in highly dense urban environments that may not have access to charging at their multi-family dwelling or within a parking garage or lot, other public charging options offering Level 2 or DCFC may be the best option. The law also includes requirements to increase public charging. Developers of new parking lots and garages must install a minimum number of make-ready parking spaces in proportion to the total number of off-street parking spaces. If there are 50 or fewer off-street parking spaces, the parking lot or garage must include at least one make-ready space. If there are more than 150 off-street parking spaces, at least four percent of the total spaces must be make-ready, of which at least five percent must be accessible for people with disabilities. See 55 N.J.R. at 1782. Pursuant to the same law, the Department of Community

Affairs has also promulgated a Statewide municipal electric vehicle model ordinance that ensures consistent permitting practices for EV charging stations in all municipalities. See P.L. 2021, c. 171; <u>https://www.nj.gov/dca/dlps/home/modelEVordinance.shtml</u>.

Currently, in New Jersey there are 3,127 total ports, including 2,124 Level 2 Ports and 1,003 DCFC Ports. The Department recognizes that the public charging network, and specifically, fast chargers, will need to continue to expand over time to meet the need. As noted by some commenters, charging takes more time than filling a gas tank. The rate at which fast charging can replenish an electric vehicle battery is dependent on variables, such as temperature (ambient and battery), state of charge, and capability of the charging station, and vehicle. Many current EV manufacturers specify that fast charging time is longer than filling a gas tank, as noted, the Department expects most charging to occur at home. Adjusting to longer charging times at a public charging station is an inevitable part of the transition to ZEVs though battery and charging technology continues to improve charging speeds and reduce charging times.

With the adoption of ACC II, there will be a greater incentive for private investment in charging infrastructure. As stated in the notice of proposal, it is possible that new business models will develop as a result of the growing demand for public charging. 55 N.J.R. at 1785. Gasoline stations may become charging hubs and/or retail stores may offer charging as a separate service to customers. *Ibid*. ACC II provides the regulatory certainty and time for utilities and EVSE suppliers to continue expanding the public charging infrastructure to meet a more predictable timeline.

As noted by some commenters, the State and Federal governments are working on increasing at-home and public charging infrastructure. In addition to the State grant programs for private residential property and multi-unit dwelling owners explained above, the State also has grants available for light-duty charging in public spaces. The State's It Pay\$ to Plug In program has grants available specifically aimed at workplace charging, as well as major travel corridor fast charging and community charging. See https://dep.nj.gov/drivegreen/it-pays-to-plug-in/.

While the Department cannot deploy EVSE outside of State boundaries, it is working with several organizations and neighboring states to collaborate on strategic charging locations on interstate corridors. There are also several Federal programs designed to accelerate the installation of EVSE nationwide. These programs will serve to increase access to electric vehicle charging for New Jersey motorists travelling out-of-State. The NEVI program administered by the Federal Highway Administration (FHWA) has \$5 billion in grants for EV charging infrastructure along identified alternate fuel corridors, which are national network of national highway system corridors as designated by the FHWA. Additionally, the Charging and Fueling Infrastructure Discretionary Grant Program, also administered by FHWA, has another \$2.5 billion in grants for EVSE installation. This second FHWA program prioritizes charging station installation in rural areas, predominantly low-income areas, as well as areas with a high ratio of multi-unit dwellings. See https://www.fhwa.dot.gov/environment/nevi/;

Another Federal program offering assistance to businesses looking to install EVSE is the Alternative Fuel Vehicle Refueling Property Tax Credit administered by the Internal Revenue

Service (IRS). This program offers tax credits of up to \$100,000 to businesses that install EVSE or other qualifying alternative fueling stations. See <u>https://www.irs.gov/credits-</u> <u>deductions/alternative-fuel-vehicle-refueling-property-credit</u>. All of these Federal programs are part of the Inflation Reduction Act and the Infrastructure Investment and Jobs Act. See <u>https://www.fhwa.dot.gov/bipartisan-infrastructure-law/nevi_formula_program.cfm</u>.

Since 2019, the Department and the BPU have awarded nearly \$240 million in grants for charging stations and electric vehicles, part of which has funded 2,980 charging stations with 5,271 ports at 680 locations. New Jersey electric utilities have committed \$215 million for make-ready infrastructure funding for public, multi-unit dwelling, and workplace light-duty EV charging stations and residential chargers. 55 N.J.R. at 1782. As part of the Federal Infrastructure Investment and Jobs Act, New Jersey will receive millions in infrastructure funding from the Federal government to build-out an electric vehicle fast charger network on major travel corridors. Although the Federal requirements are for fast charging stations every 50 miles, New Jersey is receiving enough funding to provide fast charging stations every 25 miles on designated corridors. For additional details regarding this effort, please refer to New Jersey's NEVI Deployment Plan. See https://dep.nj.gov/wp-content/uploads/drivegreen/pdf/nevi.pdf. As the State and Federal government continue to invest in public charging infrastructure, there will be a greater incentive for private investment in charging infrastructure.

As discussed more fully in the Response to Comments 170 through 195, the Department recognizes that electric grid upgrades may be necessary and will continue to work with the BPU and other agencies directly responsible for ensuring reliability. The Department anticipates that the regulatory certainty that ACC II provides will make planning for these upgrades more

feasible as the agencies work to manage the current load and address any challenges in meeting predicted increases in the load that may result from the increasing number of EVs.

To address concerns regarding the environmental impact of charging stations, the Department considered the following scenarios. As the Department anticipates that most EV charging will take place at home, such charging would be accommodated with a Level 1 or Level 2 charging station. These units may be either wall mounted or in-line on the power cord itself and, thus, lay on the ground. Level 1 and 2 charging stations of this type are typically around the size of a couple of paperback books, as an example. Home charging stations would have no environmental impact as they are either not permanently mounted, or they are wall mounted on existing facilities. Public Level 2 charging stations are designed to be more robust and weatherresistant and are physically larger. Public Level 2 charging stations are either wall-mounted (for example, in a parking garage), mounted on a small pedestal with a concrete pad, or on a preexisting parking lot surface. As an example, Level 2 charging stations are about the size of a mailbox on a pedestal. The largest of public charging stations would be DC fast chargers. These are, for example, about the size of a vending machine and may be mounted on a similarly-sized concrete pad or on a pre-existing parking lot surface. In none of these scenarios does the Department consider the footprint of the charging station to have significant environmental impact, especially considering that public charging stations are typically co-located with existing paved parking surfaces.

Electric Grid Capacity and Power Outages

170. COMMENT: California, the state with the most ZEVs in the country, has proven that ZEVs actually result in very little grid upgrade costs. From 2012 to 2017, the number of EVs in three of California's utilities service territories increased by a factor of 16, but the number of EVs that resulted in service line or distribution system upgrades was fewer than 0.2 percent. Put simply, very few EVs required any distribution system or service line upgrades. As the State anticipates an increasing EV market share, ACC II would be an important signal to utilities and decision makers to take electricity demand from EVs into account in their planning. ZEVs can, furthermore, be used as a grid resource and as battery storage to alleviate electricity outages, especially with proper utility investments and rate designs that incentivize, and thereby shift, vehicle charging to the times of day when the grid is underutilized. The grid can handle and benefit from the growing ZEV market, but again, in order to plan ahead, grid planners and utilities, like the auto industry, need certainty to begin making the investments to adapt and meet the needs of ZEVs through 2035 and beyond. (292)

171. COMMENT: Adopting ACC II is necessary, but additional complementary policies and programs will be necessary to support a complete transition to an electrified transportation sector. The NEVI Formula Program provides funding for a Statewide build-out of EV charging stations is a good start, but will not be sufficient for the State's needs. New Jersey needs to further support the build-out of charging infrastructure throughout the State and, of crucial importance, ensure the grid manages the additional electric load to the benefit of all electric customers. Given that ACC II requirements ramp up incrementally over time, there is time for the State to develop a path forward to ready the grid and facilitate a robust charging

infrastructure network in tandem with the regulations. Adopting ACC II also signals to the private market that New Jersey is committed to a zero-emission future. These policy commitments historically stimulate private investments. (234)

172. COMMENT: Expanded EV deployment will lead to significant changes to the 24-hour electricity demand cycle. By incorporating emerging technologies, such as power storage and grid-scale battery technology, using smart software to optimize charging schedules, capitalizing on time-of-use rates, and ensuring strategic charging buildout, transportation electrification has the potential to become a mechanism for reinforcing and stabilizing U.S. electricity infrastructure. (79)

173. COMMENT: The State must ensure grid resiliency and utility electric rates that provide low-cost EV charging if the State hopes to achieve the ACC II ZEV requirements. The State should thoroughly review its electric grid to determine the viability of expanded access in the near- and long-term. Public confidence in the grid's resiliency will only help spur faster EV adoption. Failure to provide consistent service, particularly when the majority of EV charging is done at home, could be devasting for increased EV adoption. As part of the review, New Jersey should commit to a transparent dialogue with the utility commission and energy companies about making home and public charging affordable and convenient. In addition, the State should promote education about the different types of charging systems and suggestions about prime charging times to lessen the load on the grid. (457-1)

174. COMMENT: While the Department should address environmental issues, this rule raises concerns about the existing electric grid's capacity to address the increased demand. (38, 41, 490, 549, 559, and 620)

175. COMMENT: If there is insufficient power on the grid to handle charging stations, diesel generators will be relied on which will create emissions to power a car with no emissions. (356)176. COMMENT: New Jersey needs a plan for how it will expand the energy grid to support the additional energy needs of electric vehicles. (44)

177. COMMENT: The Department should not adopt the rules because there is not enough capacity to support the increase in electric demand to power the vehicles. Some commenters cite specific concerns including the possibility of rolling blackouts during peak demand, restrictions on electric use, utility unpreparedness, general unreliability of and/or stress on the existing grid, grid vulnerability to cyberattack, and/or the reliability of New Jersey's aging infrastructure, as well as electric supply in extreme cold or heat and/or natural disasters. (11, 15, 24, 51, 56, 62, 63, 69, 81, 82, 86, 90, 92, 93, 94, 100, 101, 111, 112, 119, 137, 138, 142, 147, 157, 166, 167, 169, 170, 173, 179, 180, 181, 182, 185, 194, 196, 198, 199, 204, 205, 218, 219, 222, 223, 225, 235, 239, 248, 250, 261, 268, 272, 274, 276, 279, 284, 294, 299, 305, 305, 313, 314, 315, 319, 321, 322, 323, 327, 340, 348, 349, 350, 350, 356, 359, 365, 371, 374, 378, 379, 380, 381, 389, 395, 398, 401, 401, 403, 404, 412, 419, 420, 422, 425, 433, 434, 445, 446, 447, 454, 460, 464, 474, 477, 479, 491, 492, 498, 499, 501, 502, 504, 505, 506, 518, 519, 528, 529, 537, 541, 546, 551, 553, 562, 581, 586, 587, 591, 592, 594, 595, 596, 597, 605, 607, 611, 614, 617, 621, 623, 627, 628, 630, 633, 636, 639, 640, 648, 656, 661, 663, 665, 669, 674, 679, 684, 687, 688, 689, 704, 717, and 724)

178. COMMENT: The Department must first answer important and fundamental questions about electricity demand and grid capacity before adopting the rules on the aggressive timeline proposed. The Department must consider the extent of increased electricity demand due to the

rules. While the rules would certainly skyrocket demand for electricity in the State, the Department must consider exactly how much, when, and in what areas of the State. For example, based on economics, if 30 percent of the fleet were EVs, the 30 percent would not be evenly distributed across the State. The Department must determine the impact on the electric grid, the types and timing of upgrades that would be needed, and whether the upgrades can be constructed fast enough to meet the new demand. The Department must also consider the economic impact if upgrades are not constructed fast enough and power outages become more frequent. (70) 179. COMMENT: The rules will fail because the State does not have the infrastructure necessary. The State's Energy Master Plan (EMP) predicts that an all-electrification policy, of which EVs are a major part, will require a doubling or even tripling of the State's electricity demands. PJM (the regional electricity transmission organization that serves New Jersey) has expressed concern that existing power plants are being taken offline faster than they are being replaced. Renewables, which many see as the future replacement power for these plants, cannot come online either due to transmission limitations or other permitting and cost factors. Although the development of the wind industry in New Jersey is supported, supply chain, financial, and other obstacles have delayed their construction and have put in doubt the breadth and timing of the industry. The State should not mandate electrification of the transportation sector without knowing where the power will come from. Studies that show consumers can save power and costs by charging at night and shifting to a winter peak system are overly optimistic in their assumptions of consumer behavior. They also do not adequately address the supply issues. These studies may be useful were we to have a market-driven, thoughtful transition to EVs and other ZEVs. These policy options will be overrun by an EV mandate.

Equally as important as the electrical supply is that of transmission and distribution. The grid is just not adequate enough to handle the increase in supply and it is not adequate at a street level to supply enough power to people who want to charge their cars at home, which over 90 percent of EVs owners want to do. If only a few homes on a block want to charge their EVs, it is likely that the transformer on that block will need to be upgraded. Over an entire state, this is an enormous cost that will be borne by ratepayers. Each home will also need its own charging system at the cost of a few thousand dollars each.

Even if all the money were available for all the additional electricity production, all the transmission upgrades, all the distribution upgrades, all the transformers, all the home and public charging systems, it is very unlikely that there will be enough equipment available to meet these needs. This is especially true given the other states that are also seeking to impose the same EV mandate. However, even if the equipment supply issue were resolved, it is unlikely that there will be enough trained professionals to build these facilities and install all the chargers. There is a workforce crisis across many technical professions, including many of the ones who are needed to build out an EV ecosystem. (113)

180. COMMENT: To the extent EV penetration does increase at any significant amount, the State lacks the appropriate electricity infrastructure to handle the surge in demand posed by mass adoption of EVs. Such a situation could lead to dangerous spikes in energy usage, resulting in rolling blackouts and a treacherous electric grid, which has occurred in California. In a February report, the regional grid operator, PJM, warned that overly rigid greenhouse gas emission reduction targets are putting grid reliability at risk, threatening supply, and likely driving consumer prices higher. The report notes thermal retirements are on track to exceed supply from

renewable electricity generation additions, noting policy factors helped drive and could continue to greatly exacerbate this situation. To the extent greater electric vehicle adoptions occurs in concert with mandates like those New Jersey is seeking to adopt, it will amplify grid reliability concerns and certainly drive rates even higher; leaving transportation consumers that do choose EVs paying even more for energy needed to charge their vehicles, if the electricity will even be available when needed. Again, California provides a cautionary tale in this arena. Consumers in California now experience the highest electricity prices in the nation outside of Hawaii. The state is also prone to rolling blackouts. Bottom line: charging an EV in California is often more expensive than filling up a gasoline powered automobile. (342)

181. COMMENT: As the Department considers options to reduce transportation emissions, it should consider and fully analyze whether the electric grid is capable of supporting the mandated number of vehicles. (251)

182. COMMENT: If the power grid and related infrastructure are not ready to absorb the demands of thousands more electric vehicles hitting the highway every year, the State could lose its grid reliability and be subject to more frequent outages. For example, in California, despite the state being a top producer of electricity, residents still experience frequent and arbitrary power outages. If California, the initiator of ACC II, cannot handle the increased demands on its energy infrastructure, it seems unreasonable to think that New Jersey would be able to. (227) 183. COMMENT: Electricity generating units must be available on demand. The electricity demand from the number of chargers proposed on highways will impose a considerable drain on available generating capacity. The Department has not analyzed the anticipated usage by long distance travelers. (350)

184. COMMENT: The electricity needed for all EVs could result in a cap or quota on electricity usage, which could affect residential or charging stations, which in turn would affect public movement. (504)

185. COMMENT: The rules would require more generation facilities, transmission lines, and distribution lines to meet the increased demand. (627)

186. COMMENT: The rules would make a monopoly of the power grid, which is not the correct solution to the pollution problem. (143)

187. COMMENT: Fossil fuels power the grid, which will need to be increased to keep up with demand. (717)

188. COMMENT: Everything electric is not sustainable and/or environmentally responsible. (581 and 605)

189. COMMENT: The aggressive ZEV goal raises a major concern about electric grid reliability. In October 2012, in the wake of Superstorm Sandy, many parts of New Jersey were left without power for an extended period of time. While gasoline was hard to find for the first day or two, it soon became readily available both for transportation and for generator use. If a significant proportion of residents impacted by extended power outages owned EVs in the aftermath of Sandy, they would have been stuck without transportation. While climate change makes the switch to EVs more important than ever, it also means that severe weather that will lead to extended power outages is also more likely. Any mandate for EV implementation needs to include contingency plans to allow for mobile DC fast charging stations to be quickly deployed to impacted areas. Ideally, they will be powered in a green manner (for example, large

batteries charged elsewhere), but unfortunately, they may need to be diesel generators at first. (192)

190. COMMENT: The electric grid is not stable enough to support EVs. If an EV cannot be charged because the power is out, one's ability to get to work and earn a salary would be affected. This would be a serious burden. (51)

191. COMMENT: The Department should not adopt the rules because electric vehicles will not be capable of functioning if there is an extended power outage. (101, 111, 229, 268, 274, 298,

309, 492, and 501)

192. COMMENT: In any emergency or natural disaster, vehicle transport can be a life-critical service. Our society is more resilient when there are more options to provide that transport. Making this life-critical service solely dependent on electricity verges on foolhardy at a time when electricity service is becoming less reliable. (Blunt, 2023). New Jersey should take a more careful look at how it can ensure its rules are resilient to the unpredictable twists and turns of energy, economic, and transport policy. (139)

193. COMMENT: This initiative has an unrealistic implementation timeline because there is already insufficient electric infrastructure available in rural areas of the State. This is a major concern to the agricultural industry since a large percentage of the State's agricultural products come from rural areas with the least infrastructure. Residents have already encountered limitations in southern counties due to the grid being insufficient resulting in disapproval of some solar energy generating installations. Instead of ACC II, the Department should incentivize the use of EVs and wait until a time when the State's electrical infrastructure becomes adequate and equitable for all before mandating an increase in EV use. (241)

194. COMMENT: Investments must be made to upgrade the electric grid in the entire State, including rural areas and not just the suburbs. (120)

195. COMMENT: To ensure grid reliability is not compromised, the Department should quantify the total gap between consumer demand for charging and electricity supply, as well as additional load on the power grid. (647)

RESPONSE TO COMMENTS 170 THROUGH 195: The Department recognizes the concerns about the sufficiency of the power supply needed to meet the demand of EVs. As the Department noted in the notice of proposal, "the State will need to ensure that distribution lines and electricity supply meet the increased electricity demand, while monitoring potential ratepayer impact for any upgrades or buildout needed. The New Jersey Board of Public Utilities (BPU), in late 2022, released a report on the modernization of New Jersey's electric grid and is advancing regulatory changes and working with stakeholders to further develop regulatory and policy proposals based on the report's recommendations. <u>https://nj.gov/bpu/</u>

newsroom/2022/approved/20221110a.html." 55 N.J.R. at 1782-83.

The Department expects that the regulatory certainty that ACC II provides will make planning by PJM (the regional transmission organization that coordinates the movement of wholesale electricity in all or parts of 13 states, including New Jersey), the State's electric utilities, and the BPU more feasible. As these entities continue to work to manage the current load and address any challenges in meeting future load requirements, they will have a roadmap in the form of the number of EVs that they can reasonably expect to be added each year based on the annual ZEV requirements. The Department is not aware of a workforce crisis, but the Department notes that jobs related to the clean economy are growing at a fast rate, which is good

for the State's economy. See Green Jobs for a Sustainable Future, NJ Council on the Green Economy (September 2022), at

https://www.nj.gov/governor/climateaction/documents/CGE%20Roadmap.pdf.

The Department recognizes that there are concerns about charging vehicles during power outages. However, ICE vehicles need gasoline or diesel fuel to run – fuels, which can also be subject to shortages, particularly during bad weather. Since gasoline and diesel fuel are stored in underground storage tanks at service stations, electricity is still required to pump these fuels into a vehicle. ICE vehicle drivers must prepare for inevitabilities, like filling gas tanks prior to a bad storm. EV drivers will need to take similar measures, like charging cars before a bad storm or during off-peak hours.

CARB stated that it "expects, supported by the record, that California's electric grid will be capable of meeting additional demand from ACC II" and addressed concerns about grid blackouts. See CARB FSOR Appendix A at 28. An article in National Geographic on the history of blackouts in California (<u>https://education.nationalgeographic.org/resource/case-study-</u> <u>california-blackouts/</u>) noted that such rolling blackouts began in 2000, well before electric vehicles were in common usage.

Security

196. COMMENT: EV systems are vulnerable to hacking. (704)

197. COMMENT: EVs that are constantly connected to the internet or database somewhere raise data collection and privacy concerns, as well as concerns of outside manipulation of the vehicle or illegal hacking. (543)

RESPONSE TO COMMENTS 196 AND 197: The Department's adoption of the ACC II program incorporates by reference, at N.J.A.C. 7:27-29A.7, 13 CCR 1962.5, Data Standardization Requirements for 2026 and Subsequent Model Year Light-Duty Zero Emission Vehicles and Plug-in Hybrid Electric Vehicles. This section of regulations requires EVs to conform to the same standards for data collection, storage, transmission, and connection as all other light-duty gasoline and diesel vehicles. In other words, data security will be treated the same way in EVs as in other vehicles and will not present any unique data vulnerability just because they have an electric drivetrain. The specific standards are established by the Society of Automotive Engineers (SAE) and are fully referenced at 13 CCR 1962.5. A manufacturer must test EVs to ensure compliance with the SAE protocols and standards. Failure to comply subjects a manufacturer to enforcement action.

Environmental and Health Impacts

<u>Health</u>

198. COMMENT: New Jersey can significantly benefit from a widespread shift to zeroemission transportation and electricity. This transition could result in \$43.6 billion in public health benefits for the State, 3,960 premature deaths avoided, 92,400 asthma attacks avoided, and 464,000 lost workdays avoided cumulatively by 2050. (292, 329, 494, 590, and 680) 199. COMMENT: There are only two counties in New Jersey that received an A grade for ozone pollution in the Lung Association's annual state of the air report, but there are over 750,00 residents living with asthma, including more than 100,000 children. Millions more residents are at greater risk due to harmful air pollution associated with other lung and heart diseases and other

vulnerabilities. The Lung Association's report highlighted the benefits of increasing zero emission technologies in new passenger vehicles, medium and heavy duty trucks, along with clean energy resources. The assumptions in the study track closely with the ACC II and previously adopted Advanced Clean Trucks standards. By 2050, the ongoing transition to zero emissions can translate to \$43.6 billion in cumulative public health benefits in New Jersey, 3,960 deaths avoided, 92,400 asthma attacks avoided, and 464,000 lost work days avoided. The ACC II standards are especially important as climate change amplifies the conditions for unhealthy air, driving the greater likelihood of ozone pollution formation. These conditions place a greater inequitable burden on the most vulnerable and disadvantaged communities. The ACC II rules are a critical health intervention to save lives, prevent tens of thousands of asthma attacks, and lost work days by delivering cleaner air to all communities while also taking an important bite out of climate pollution. (590)

200. COMMENT: The American Lung Association estimates that implementing zero emission standards like the ACC II rules could prevent nearly 4,000 premature deaths, 92,000 asthma attacks, and avoid over 400,000 lost work days by 2050. (130)

201. COMMENT: The rules will bring social benefits and significant strides in improving air quality. For years, the American Lung Association has given the State failing grades in several counties for air quality. Families are already suffering from air pollution and expensive health problems, especially those in already overburdened communities. Reducing transportation emissions will enhance the health and well-being of citizens. Cleaner air means fewer respiratory illnesses, lower healthcare costs, and overall improved quality of life for everyone in the State, especially those in overburdened communities. (18)

202. COMMENT: ACC II is a common-sense rule that would bring over \$97 billion of economic health, air quality, and climate benefits to New Jersey, and will help to reduce climate harming pollution by 243 million metric tons while also reducing NO_x emissions by 93 percent by 2050. (291)

203. COMMENT: ACC II will not only benefit the health of New Jersey's residents but also accelerate the growth of the State's economy. A report commissioned by Sierra Club and the National Resources Defense Council found that by adopting ACC II by the end of 2023, New Jersey has the potential to generate \$97 billion in cumulative benefit by the end of 2050. (330) 204. COMMENT: New Jersey has one of the highest rates in the country of fossil fuel pollution, and transportation contributes 46 percent of our greenhouse gas emissions Statewide. Removing tailpipe emissions would have a sizable impact on health outcomes in the State and health co-benefits from decreased air pollution would substantially outweigh implementation costs. The full scope of the impact of fossil fuel pollution on public health is more fully understood now. The World Health Organization estimates that air pollution from fossil fuel combustion results in 13.7 million premature deaths, which amounts in one in four deaths being preventable, and many times more people experience poor health from everything from cancer, heart disease, dementia, increased hospitalizations, and much more. Also, the health effects of many toxics are often only uncovered years after millions have been exposed. New Jersey would not be the first state to make the transition to EVs. In California, as residents rapidly transition to EVs, the health impacts were exactly what we as physicians would expect. As EV adoption increased in a given zip code and air pollution dropped, so did asthma-related emergency room

visits, such that the health benefits of EVs in local communities were realized directly by those in that community. (127)

205. COMMENT: Electrification will lead to significant emissions reduction and improved public health outcomes. Adequate regulation of vehicle emissions through programs such as ACC II is critical to meeting the U.S. targets under the Paris Climate Agreement while protecting American communities from avoidable increases in adverse health outcomes. (79) 206. COMMENT: As more EVs are on the road, there will be fewer greenhouse gas emissions and fewer co-pollutants. Adopting ACC II is a sound policy for communities that have disparaging impacts from pollution as well as the State's environmental justice (EJ) communities. The rules are good public health and environmental policies. (151) 207. COMMENT: The Department should adopt the rules because they will reduce harmful air pollution from ICE vehicles that can cause negative health impacts such as asthma attacks, heart attacks, lung and cardiovascular emergencies, and even premature death. (535 and 590) 208. COMMENT: Tailpipe emissions contain harmful pollutants that further degrade air quality and put all communities in the State at risk. It is clear that vehicles operated in densely populated New Jersey have a significant impact on ozone as well. Thirteen out of 15 counties have reported air quality that received poor grades from the American Lung Association due to high ozone days. New Jersey's historically high ozone levels are exacerbating race- and income-based health disparities and have a major impact on the State's environmental justice communities. For example, the EPA's EJ screen tool indicates that Trenton's surrounding area is in the 80th to 90th percentile for the ozone EJ index, which combines ozone levels with demographic data by averaging populations of low income people and people of color. In other words, only about 10

percent of the U.S. population has worse ozone pollution impacts when considering the demographic factors of income and race. Emergency department visits for asthma are more than five times higher for black New Jerseyan residents than other residents. Reducing NO_x emissions an ozone precursor is therefore an essential aspect to mitigate the adverse and unjust health impacts affecting New Jersey residents. The current fossil-fuel centered transportation infrastructure is directly harming residents' public health and quality of life. To address this air pollution and environmental injustice, the State must curb vehicle emissions as soon as possible. (534)

209. COMMENT: A recent American Lung Association report showed cleaner cars could have upwards of \$43 billion in public health benefits for New Jersey residents. (85)

210. COMMENT: Moving towards clean cars means reducing toxic co-pollutants like NO_x, SO_x, particulate matter, and ground level ozone. This is particularly important in high-traffic areas like highways, but also in neighborhoods, as car and truck traffic has increased over the years. The entire State does not meet the Federal air quality standards for ozone, and 13 out of 15 counties in New Jersey received poor grades from the American Lung Association due to high ozone days. Electric vehicles have no point-source emissions, which means significant reductions in ozone and improved public health from the transition to EVs, which will be accelerated through adoption of ACC II. (461)

211. COMMENT: ACC II will improve public health and reduce health costs in communities. Strong policies that result in improving air quality and access to cleaner transportation are critical for improving public health, addressing inequities, and preventing further economic strain. Reducing respiratory illness and hospitalizations lead to more disposable income for individuals

and families and help reduce the financial pressure on the healthcare system. As commercial vehicles in the State's fleet and employees' personal vehicles cross State lines, impacts will also extend across State lines. New research shows that combined with a 90 percent clean energy grid, electrifying all new cars and trucks by 2035 would prevent 150,000 premature deaths and avoid 1.3 trillion in economic and health costs by 2035. (201)

212. COMMENT: The transportation sector, which is crucial for the State's economic prosperity, is the biggest emissions problem. New Jersey traffic harms our air quality and health, especially in communities nearest major traffic corridors and environmentally overburdened communities. ACC II will replace fossil-fuel vehicles with better, cleaner alternatives and thereby reduce harmful co-pollutants like NO_x, sulfur oxides, PM, and ground-level ozone concentrations. The Department should adopt the rule to protect environmentally overburdened communities. (74)

213. COMMENT: Reducing greenhouse gas emissions from transportation is crucial to addressing both the climate crisis and protecting the health of New Jersey residents. In New Jersey, cars, trucks, and buses are among the largest drivers of air pollution plaguing the State. The ACC II standards will help New Jerseyans breathe easier, live longer, and lead better lives. Frontline communities will benefit the most from the reforms. The effects of the ACC II are critical to reducing the equity gap. (680)

214. COMMENT: ACC II will contribute to the creation of significant public health benefits. (376 and 685)

RESPONSE TO COMMENTS 198 THROUGH 214: The Department acknowledges the commenters' support of the adopted rules. The Department participated in an environmental and

economic analysis conducted by Sonoma Technology, Inc., which included estimates of the monetized health benefits, 55 N.J.R. at 1782-1785, but acknowledges that some commenters have submitted independent studies with respect to the health impacts of local air pollution and greenhouse gas emissions. Also, though the Department's estimates may differ from the specific figures in the analyses and studies provided by commenters, the Department agrees generally with the commenters' assertions that the adopted rules will provide overall economic benefits, in the form of health benefits, for residents of the State.

Emissions

General

215. COMMENT: The Department should adopt the rules because they will reduce transportation emissions throughout the State. (535 and 590)

216. COMMENT: The ACC II rules are an important step to mitigating environmental impacts by accelerating the number of cars on our roads that do not emit tailpipe pollution and incentivizing placement of these vehicles in communities disproportionately impacted by vehicle pollution. As per analysis conducted by NRDC and the Sierra Club, by 2035, adoption of ACC II would reduce NO_x emissions by roughly 60 percent, and by 2050 would reduce emissions by over 80 percent – far in excess of a business-as-usual baseline. According to an analysis by Environmental Resources Management (ERM), if New Jersey were to adopt ACC II in 2023, by 2050 the State can expect to see reductions of up to 243 million metric tons of greenhouse gas emissions, 81 thousand metric tons of NO_x , and 7,200 metric tons of particulate matter. Zeroing out pollution from tailpipes will improve not only air quality, but also help improve health. (292)

217. COMMENT: ZEVs, which require no gasoline or diesel and emit no pollution from the tailpipes, present a critical opportunity in addressing the climate crisis by reducing pollution, protecting public health, creating U.S. jobs and green energy, and helping the U.S. lead the way globally in a cars market that is zeroing away from dependence on fossil fuels and towards a zero-emissions future. This is a life-saving policy. New Jersey is currently out of compliance with the EPA's goals for reducing ozone pollution. This failure impacts not only the health of residents of New Jersey, but also of the surrounding states. (330)

218. COMMENT: The ACC II rules are good for communities because they will lower ground level air pollution. The rules are good for the environment because they will mitigate climate change since over 45 percent of the State's emissions come from the transportation sector. (657) 219. COMMENT: Truck traffic often runs through our most underprivileged neighborhoods, putting our communities there at highest health risk – particularly due to the inequitable exposure to toxins. ACC II is an opportunity to reduce inequities in the exposure to transportation emissions, which account for 42 percent of our greenhouse gas emissions here in the State. (130)

220. COMMENT: The transportation sector accounts for over 40 percent of carbon emission in the State. The ACC II rules will result in environmental benefits. (376)

221. COMMENT: Statewide action must be taken to protect our communities, especially underserved communities that are often impacted first and worst by vehicle emissions and climate change impacts. (685)

222. COMMENT: As a State between urban centers like New York City and Philadelphia, New Jersey is densely populated and heavily trafficked. The transportation is the State's dirtiest,

accounting for 34 percent of New Jersey's greenhouse gas emissions. Greenhouse gas emissions exacerbate the climate crisis and increase the risk of more extreme weather events, including hurricanes, severe rainfall, and heat waves. ACC II must be adopted for cleaner transportation. (534)

223. COMMENT: The recent Statewide strategic climate action plan details that the State will need at least 4.5 million PHEVs on the road by 2035 to meet the State's emissions goals. Fossil fuel prices are expensive and volatile, and transportation is the number one contributor to the State's air pollution. By promoting electric and fuel-efficient cars, the State can reduce its carbon footprint, lower smog-forming emissions, and decrease fossil fuel reliance. The State will benefit from better air quality. By 2035, the State will see nearly three-quarters reduction in NO_x and CO_2 emissions compared to today, but only if the State moves quickly. (18)

224. COMMENT: The transportation sector is the largest source of climate-harming pollution in New Jersey, generating roughly 35 percent of the State's climate pollutants. Within the transportation sector, more than 90 percent of climate pollution comes from passenger cars and trucks. A key strategy to decarbonize this sector is accelerating the transition to a zero-emission vehicle fleet. (329 and 494)

225. COMMENT: The rules should be adopted because New Jersey should prioritize reducing and eliminating greenhouse gas emissions. It should be top priority given the recent history in New Jersey that we have worsening climate. This summer was the hottest globally. The State is experiencing extreme weather, flooding, extreme heat, and air quality issues related to forest fires because of CO_2 emissions. (329)

226. COMMENT: Adoption of the ACC II rules will set the State on a path to lower vehicle emissions and a healthy transition to electric vehicles and cleaner air. The transportation sector accounts for 34 percent of the State's greenhouse gas emissions, making it the largest emissions source in the State. Greenhouse gas emissions exacerbate the climate crisis and increase the risk of more extreme weather events, including hurricanes, severe rainfall, and heat waves. Tailpipe emissions also contain harmful pollutants that further degrade air quality and put all New Jersey communities at risk. Vehicles operated in the densely populated State also have a significant impact on ozone. Due to high ozone days, the American Lung Association gave poor grades to 13 out of 15 counties in New Jersey that reported air quality data. (535)

227. COMMENT: Given that roughly 35 percent of all climate pollutants in New Jersey are transportation related, New Jersey will not be able to meet its greenhouse gas reduction mandate (50 percent by 2030) and protect communities and people from the acceleration of multiple climate impacts without aggressive plans to electrify various aspects of the transportation sector including cars, trucks, buses, utility vehicles, and rail. This means that benefits of ACC II cannot just be for the more affluent but must also be for New Jersey car owners more likely to look for and purchase electric cars used on the secondary market. These are people who more often than not cannot afford to buy a new car (whether gas or electric powered), but who might benefit from low/no fuel costs the most and cleaner air fastest due the cumulative impact of pollution and other burdens in their communities. (265)

228. COMMENT: As the Intergovernmental Panel on Climate Change (IPCC) recently reported, "Human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming," with the result that "global surface temperature" is

already "1.1°C above 1850-1900 in 2011-2020." With "high confidence," the IPCC observes that even this initial increase in global mean temperatures has resulted in "widespread adverse impacts and related losses and damages to nature and people." Nonetheless, greenhouse gas emissions continue to increase, making it *"likely* that warming will exceed 1.5°C during the 21st century and make it harder to limit warming below 2°C." In order to avoid catastrophe, the IPCC indicated that immediate greenhouse gas emissions reductions in all sectors this decade are necessary to limit warming. As the transportation sector is the largest contributor to greenhouse gases in the United States in general and in New Jersey specifically (34 percent), reducing the emissions from this sector is a key strategy to limit warming and prevent the most drastic effects of climate change from occurring. (292)

229. COMMENT: The ACC II program will accelerate EV deployment and ensure the necessary emissions reductions from ICE vehicles at the pace and scale that climate change demands. Climate change poses a significant risk to our long-term economic success, threatens the health and livelihood of communities in which we operate, and disrupts the values chains on which we rely. Transportation of people, goods, or services represents a substantial component of each of our carbon footprints and major costs for our supply chains. Strong policies are needed to help meet the State's climate and air quality goals while generating climate benefits and delivering health and economic benefits for communities and employees. (201)

230. COMMENT: The transportation sector remains the largest source of climate and healththreatening pollutants in New Jersey. As of June 2023, there were just over 100,000 EVs on the road. Adopting ACC II this calendar year is necessary to ensure that New Jersey achieves its EV

adoption and clean energy goals. Adopting this policy is consistent with established New Jersey law and policy. (234)

231. COMMENT: The rules will drive critical reductions in greenhouse gas emissions and air pollution in the State and are necessary to meet various legal requirements and State objectives. For example, the rules will cut vehicle tailpipe emissions in support of the Global Warming Response Act (GWRA), N.J.S.A. 26:2C-37 et seq., obligations and the State's efforts to comply with the Federal ozone standards. With transportation contributing more to New Jersey's greenhouse gas emissions inventory than any other economic sector, the State cannot afford to leave any emissions reductions in this sector on the table. (671)

232. COMMENT: Reducing transportation emissions has been and should continue to be a top priority for New Jersey. The transportation sector is far and away the largest contributor to greenhouse gas emissions in the State at more than 45 percent. The State has a statutory goal to reduce greenhouse gas emissions by 80 percent below 2006 levels by 2050, and the Department itself has found that New Jersey will need to reduce greenhouse gas emissions from the transportation sector by 87 percent to meet this goal. In addition, adoption of ACC II will help New Jersey comply with the 2015 national ambient air quality standards (NAAQS) for ozone. The EPA announced it is initiating a new review of ozone NAAQS to reflect the latest science. Recent scientific evidence indicates a more stringent standard will provide significant public health and welfare benefits. New Jersey should anticipate the ozone NAAQS level to be lowered, and plan to reduce transportation emissions through electrification. (339) 233. COMMENT: The rules would reduce exposure to vehicle pollution in communities

throughout the State, but most particularly in so-called frontline communities in Newark that are

disproportionately exposed to vehicular pollution. Also, New Jersey should be doing everything it can to mitigate the effects of climate change with all deliberate speed. The standards represent the bare minimum of what the State should be doing. (96)

234. COMMENT: This rule will help bring hundreds of thousands of light duty electric vehicles on the road and improve upon existing emission standards for new vehicle sales in New Jersey. This will significantly reduce greenhouse gas emissions that contribute to climate change and toxic pollutants that harm human health, particularly in areas with high traffic and historically disenfranchised communities. (462)

235. COMMENT: When people talk about a public health risk, they have to acknowledge that air pollution will worsen because of climate change. Ozone will double over the course of the next three decades because of the impact from climate pollutants. There are a litany of climate impacts obviously, to say extreme weather, hurricane season, and inland flooding. All of these climate impacts are supercharged by vehicles, but cleaner cars are a positive step. (493) 236. COMMENT: The number one driver of greenhouse gas emissions is transportation. Forty percent of greenhouse gas emissions are from transportation, with most of the impacts from light-duty vehicles and medium- and heavy-duty trucks. By transitioning to ZEVs, we can significantly reduce harmful emissions, improve air quality, and mitigate the impacts of climate change. The ACC II standards are not only beneficial for residents of New Jersey who live and work in the tri-state region, but also for overburdened communities adversely impacted by the greatest degree of exposure to these and other pollutant emissions. (402)

237. COMMENT: The rules are needed to address climate change before it is too late. (58)

RESPONSE TO COMMENTS 215 THROUGH 237: The Department acknowledges the commenters' support of the adopted rules. The Department participated in an environmental analysis conducted by Sonoma Technology, Inc., complete with estimates of the emission reduction benefits, 55 N.J.R. at 1786-1787, but acknowledges that some commenters have submitted independent studies with respect to the greenhouse gas emissions. Also, though the Department's estimates may differ from the specific figures contained in the analyses and studies provided by commenters, the Department agrees generally with the commenters' assertions that the adopted rules will provide overall emission reductions and environmental benefits, for residents of the State.

238. COMMENT: The Department should not adopt the rules because climate change is unproven and/or man-made CO₂ does not contribute to global warming. (159, 171, 250, 264, 280, 327, 380, 395, 417, 445, 455, 455, 482, 539, 564, 654, 665, 710, and 721)
239. COMMENT: It is important to address climate change, but singling out automobiles and/or gas burning vehicles will not resolve the issue. (50, 274, and 490)
240. COMMENT: If the goal of the rules is to better the environment and lower pollution, manufacturers that are not in compliance should not be allowed to trade credits. (122)
241. COMMENT: The Department should not adopt the rules because they will have no measurable impact on climate change and/or air pollution globally. (30, 59, 81, 93, 100, 102, 115, 116, 155, 160, 182, 209, 214, 231, 240, 286, 297, 372, 397, 423, 433, 460, 465, 520, 524, 524, 529, 610, 664, 670, 682, 683, and 710)
242. COMMENT: In the case of PHEVs, excessive charge times could lead to reduced usage of the electric capacity and increased usage of the gasoline engine undermining the needed air quality and greenhouse gas reductions (ISOR, page 50). (128)

243. COMMENT: The rules burden consumers, while doing little to actually protect our environment. (245 and 352)

244. COMMENT: Used ICE vehicles are dirtier than new ones, while EVs will get cleaner over time because cleaner energy resources are deployed. (329)

245. COMMENT: The Department should not adopt the rules because they will have negligible

impacts on the environment while making it even more expensive to live in New Jersey. (331)

246. COMMENT: On the highway, EVs are only marginally better than gas cars at reducing emissions while costing more. (141)

247. COMMENT: The Department should not adopt the rules because they will not have a positive impact on the State's environment. (22, 63, 143, 179, 204, 214, 218, 221, 240, 264, 299, 333, 343, 381, 384, 398, 408, 502, 503, 518, 543, 570, 574, 585, 595, 596, 605, 625, 654, and 715)

248. COMMENT: The rules are short-sighted and do not consider the negative environmental impact that EVs actually have. (248)

249. COMMENT: EVs are not good or better for the environment. (101, 316, and 479)

250. COMMENT: EV technology is not a pollution panacea. (92)

251. COMMENT: Mandating the use of EVs by 2035 is not a sustainable solution to reduce carbon emissions. (350)

252. COMMENT: Electric companies pollute the air more than cars. (348)

253. COMMENT: Much of the justification for this rule is to address the genuine problem of climate change, which is being affected by the addition of carbon dioxide to the atmosphere by human activities. The rule proposal estimates that in 2050, this policy (if actually followed) would lower carbon emissions by 16.2 million metric tons per year. However, climate change is a strictly global problem, and the State's emissions have as much impact on the New Jersey coastline as they do on the coastline in China, and vice versa. According to the International Energy Agency, in 2022 worldwide emissions were 36.8 billion metric tons. This means that if the policy works exactly as planned, after 25 years and all the economic costs and disruptions described, the policy will only lower emissions by 0.04 percent. A 0.04 percent decline, in a quarter century, will not have any discernible impact in mitigating climate change's impact on New Jersey. Ultimately, the benefits to the people of New Jersey are not worth the costs of this regulation. (70)

254. COMMENT: The Department estimates a savings of 5.8 MMT/year of CO₂ by 2030 from this program. This is only 0.12 percent of the State's annual total CO₂ emissions and a paltry 0.015 percent of global emissions. It goes against common sense and scientific reasoning to expect any noticeable changes. The old adage "every little bit helps" only applies if everybody is moving in the same direction. This is currently not the case. The Department's own transportation sector CO₂ emissions indicates a reduction of 13.8 MMT/year between 2006 (47.9 MMT) and 2020 (34.1 MMT) and a reduction of 6.4 MMT since 2017 (40.5 MMT). Additionally, it is estimated that there was somewhere between 5.4 percent and 13 percent global CO₂ emission reductions during the pandemic years. There was no measurable change in global temperature as a result of these CO₂ reductions. As these reductions are greater than the

reduction estimates from these regulations, this means that the program will not have positive benefits. (102)

255. COMMENT: To justify this rulemaking, the Department has thrown in every potential and speculative climate impact. The Department should study the recent studies put forth by the IPCC that significantly decreased the potential warming that may result from realistic emission scenarios. The IPCC has also refuted much of the claims on many of the extreme weather events being attributed to climate change, calling the science supporting them to be of "low confidence." The Department's assertion of an "ozone penalty" due to climate change is also speculative and the Department should review those claims based on the latest IPCC data and reports under likely emission scenarios. Given the enormous burden this rulemaking would have on New Jersey's citizens and its economy, any rationale to justify the imposition of this burden needs to be equally great. Listing climate change, greenhouse gas emissions, generic impacts, and the intellectually false "social cost of carbon" as justifications for this rule does not meet that high burden. When talking about the benefits of these rules, the Department did not provide any details as to what would actually change in the environment. It is understood that every action results in less carbon emissions and theoretically at some point there may be a beneficial impact. Setting aside the fact that models have shown that even a complete and immediate elimination of greenhouse gas emissions will not change warming trends this century and setting aside the issue of climate uncertainty due to natural variability, this rule will have a tremendous negative impact on the economy and mobility of the citizens of this State. The Department's promotion of the co-benefits of EVs as they relate to NO_x, particulates and ozone ignores the decades of environmental progress made under its leadership in addressing these pollutants. Merely stating

the health impacts of these pollutants is disingenuous. The question is what additional benefits the EV policies will have on the State and specific communities. If this rule were really about these co-benefits, and not about greenhouse gas reductions, perhaps different strategies would be pursued, such as taking action to reduce pollution crossing into the State from neighboring states. (113)

256. COMMENT: The Social Impact statement ascribes value to reducing NO_x and PM2.5 emissions. There is a recent study that shows that these two vehicle emissions are incredibly low in today's ICE vehicles and when compared to an EV. They are nearly the same. Specifically, the Transportation Energy Institute study states with regards to NO_x, "[c]omparing EPA NO_x emission certification values for all 2019 vehicle models, GREET [Greenhouse Gases, Regulated Emissions and Energy Use in Technologies] results indicate that both gasoline-fueled ICEVs' and EVs' NO_x emissions will continue to decrease in the future, and all vehicle technology options' NO_x reductions from a 1980 NO_x level are within 1% of each other." Examining the results of the authors' investigation into PM, they state, "with the transition to ultra-low sulfur gasoline and diesel enabling higher efficiency catalytic converters on gasoline vehicles and the introduction of selective catalytic reactors to control diesel NO_x emissions, ICE vehicles have reduced criteria emissions 97-99%." The study also states that "[a]ccording to GREET well-towheel (WTW) emission values, today's gasoline and diesel vehicles' tailpipe PM emissions are 98.3 percent - 100.3 percent lower than the average 1980 gasoline car and 97.3-99.4 percent lower on a well-to-wheel basis." In the case of both NO_x and PM emissions, there is virtually no difference between EVs and ICE vehicles. (251)

257. COMMENT: Given the current mix of electrical generators in PJM Interconnection, in which New Jersey is a participant, replacing new ICE vehicles with new EVs will result in an increase in emissions of SO₂ and NO_x. New ICE vehicles must meet the EPA's "Tier 3" emissions standards, which were adopted in 2021. Those standards limit CO₂ emissions to 161 grams per mile, SO_2 emissions to 0.001 grams per mile, and NO_x emissions to 0.03 grams per mile. Compared with the current mix of generation in PJM, emissions of SO₂ will increase by a factor of more than 100. Emissions of NO_x will increase by a factor of two. Although SO₂ and NO_x emissions from electric generating plants would not be released directly on New Jersey roads and communities, prevailing winds will carry these emissions towards the State from fossil-fuel generators west of the State. Although PJM does not publish data for particulate emissions from power plants, the Department fails to consider a significant source of particulate emissions: roads and tires themselves. EVs are heavier than ICE vehicles owing to the weight of battery packs. As such, EVs create more particulate emissions from road contact. When heavy trucks are required to be electric, as California is implementing, particulate emissions from roads and tires will increase even further. (387)

258. COMMENT: In reality, the rules will not improve the State's air quality. Most residents will be forced to keep their old vehicles. Currently each model of new gas-powered car has better gas mileage and less emissions. So, any perceived benefit from mandating EV use will be lost as people keep their old cars. Also, commuter traffic from out-of-State will continue to fill the highways with their gas-powered cars from their freedom-loving states. (518) RESPONSE TO COMMENTS 238 THROUGH 258: As explained in the notice of proposal, the ACC II rules are one piece in a larger strategy to mitigate climate change and address air

pollution. See 55 N.J.R. at 1774, 1781, and 1782. The State's goal, set forth in the GWRA, is to reduce greenhouse gas emissions to 80 percent less than the 2006 level of Statewide greenhouse gas emissions by 2050 (80x50 goal). Executive Order No. 274 (2010) also developed an interim benchmark goal for reducing greenhouse gas emissions to 50 percent below 2006 levels by 2030 (50x30 goal). Given the magnitude of reductions necessary to meet the State's 80x50 or 50x30 goal, there is no single rule or strategy that will achieve all the emission reductions necessary. The State will need to continue to develop, and refine, the mix of policies, rules, and laws that will work to mitigate climate change and reduce criteria pollutants in the State. Also, though the emission reduction estimates from this rulemaking may seem relatively modest on a global scale, it is important to remember that no single policy, state, or country will solve the issue of climate change or air pollution. Accordingly, New Jersey continues to work collaboratively with California, other states that have adopted California's emission standards pursuant to Section 177 of the CAA (a "Section 177 state"), the Federal government, and the international community to implement policies that will build upon one another - policies that, when taken together, have a global impact. To this end, the Department can and will continue to promulgate rules "preventing, controlling and prohibiting air pollution throughout the State" (N.J.S.A. 26:2C-8 and 8.1) through the adoption of technologically feasible, emission reducing measures.

In order to reduce greenhouse gas emissions, the Department must address the largest source sectors. The Department's Greenhouse Gas Inventory indicates that emissions from transportation represent 39 percent of New Jersey's greenhouse gas emissions. 55 N.J.R. at 1774; https://dep.nj.gov/ghg/nj-ghg-inventory/. This is the largest single sector of greenhouse gas emissions in the State. See https://dep.nj.gov/ghg/nj-ghg-inventory/. This is the largest single sector of greenhouse gas

sector, the largest source, about 82 percent, is gasoline-fueled light-duty passenger cars and trucks. For these reasons, the Department has determined that the ACC II rules are a necessary piece of a more comprehensive strategy to reduce emissions. The Department and other State agencies, like the BPU, Department of Community Affairs (DCA), and Economic Development Authority (EDA) have, and will continue to take steps to address greenhouse gas emissions from every sector including electric generation. To learn more about the ongoing efforts of the Department, please refer to: <u>https://dep.nj.gov/climatechange/mitigation/</u>.

The notice of proposal addressed the environmental impacts of the ACC II program. See 55 N.J.R. 1786-1787. While the notice of proposal focused on the in-State emission reductions and health benefits, the study conducted by Sonoma, Inc., demonstrates that those benefits are magnified when one considers the cumulative emission reductions that will be achieved by the implementation of ACC II in all of the other Section 177 states. <u>https://theicct.org/wp-content/uploads/2023/05/ACC-II-project-report-final-042623.pdf</u>. The reductions in greenhouse gas emissions and criteria pollutants, such as NO_x and PM2.5, are quantifiable and significant in New Jersey and as part of a regional approach. Further, criteria pollutants primarily affect the health and environment of New Jersey residents and residents of downwind states. Accordingly, there will be a positive impact on the environment, even beyond addressing climate change.

Unlike criteria pollutants, greenhouse gas emissions have a cumulative global impact. As explained by the National Oceanic and Atmospheric Administration within the U.S. Department of Commerce, "[h]uman activities are largely responsible for recent climate change. Over the past century, the burning of fossil fuels to produce energy, has released large amounts of carbon dioxide (CO₂) into the atmosphere. Other human activities, such as deforestation, industrial

processes, and some agricultural practices also emit greenhouse gases into the atmosphere. Greenhouse gases are positive forcing because they absorb energy radiating from the Earth's surface, rather than allowing it to be directly transmitted into space. This traps energy close to the surface of the Earth, acting like a blanket that warms the planet. This phenomenon, known as the greenhouse effect, is natural and necessary to support life on Earth. However, the everincreasing amounts of greenhouse gases over the past century have increased this warming of the Earth's climate, resulting in dangerous effects to human health and welfare, and to ecosystems. NOAA's Annual GHG Index, which tracks changes in radiative forcing from greenhouse gases over time, shows that such forcing from human-added greenhouse gases has increased 27.5 percent between 1990 and 2009. Increases in CO₂ in the atmosphere are responsible for 80 percent of the increase." https://gml.noaa.gov/aggi/; https://dep.nj.gov/climatechange/climatescience/. For more information regarding climate science, please visit: https://dep.nj.gov/climatechange/climate-science/; https://www.usgs.gov/science/scienceexplorer/climate/climate-change-101; https://www.epa.gov/climatechange-science/basicsclimate-change; https://climate.nasa.gov/what-is-climate-change/.

As discussed in the notice of proposal, climate change impacts are significant and far reaching. See, for example, 55 N.J.R. at 1780-81. These impacts include worsening ground-level ozone concentrations, despite the work the State has done to reduce the ozone precursor emissions. *Ibid*. While these rules have costs associated with their implementation, the failure to mitigate climate change carries its own price. See 55 N.J.R. at 1785-86. To help explain the costs of the failure to act, the Department examined the social cost of carbon, a measure of the monetized global damages associated with an incremental increase in carbon emissions in a

given year, as part of its Economic Impact statement. *Ibid*. After careful consideration of all of these factors, the Department determined that the ACC II rules will have an overall net positive impact.

As explained in the Response to Comments 16 through 44, the ZEV requirement of the ACC II rules requires a manufacturer to satisfy the applicable production volume percentage with an equal number of vehicle values. See also 55 N.J.R. 1774-75. The rules include various ways for a manufacturer to comply, including trading surplus vehicle values. In accordance with 13 CCR 1962.4(f)(4), as incorporated by reference at N.J.A.C. 7:27-29A.7, manufacturers may trade only excess vehicle values. In other words, if the manufacturer has generated more ZEV values than required by their total production volume, then they may trade only those excess values.

Please see the Response to Comments 259 through 283 regarding the well-to-wheels emissions considered and the Response to Comments 284, 285, 286, 287, and 288 regarding vehicle weight. Please also see the Response to Comments 466 through 511 regarding CARB-certified requirements in neighboring states.

Well-to-wheels

259. COMMENT: The lifecycle emissions of an EV are much cleaner than gasoline vehicles and will continue to get cleaner over time. According to the DOE's Alternative Fuels Data Center, in New Jersey—even with the current electricity grid mix—the well-to-wheels emissions (emissions from fuel production, processing, distribution, and use) of internal combustion engine

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vehicles produce more than 87 percent annual emissions than zero-emission vehicles. As more renewable energy is added onto the grid, ZEVs will only continue to get cleaner over time. (292) 260. COMMENT: The Union of Concerned Scientists found that electric cars and pickup trucks produced fewer global warming emissions than gasoline vehicles when considering fueling – that is, electricity versus gasoline. The study acknowledges that the manufacturing of an EV may initially produce more greenhouse gas emissions (due to the current battery supply chain), but over the lifespan of the vehicle, emissions are between 52 and 57 percent less than a comparable gasoline car and truck. The authors state that "most of the global warming emissions over the lifespan of a vehicle occur during its use, so the reductions from driving an EV more than offset the higher manufacturing emissions." (292)

261. COMMENT: An analysis by Reuters using the Argonne National Laboratory's GREET model considered the well-to-wheel emissions of an electric vehicle. The analysis shows that while production of an electric vehicle emits 15 carbon dioxide g/mile more than the production of a gasoline vehicle, EVs still emit far less carbon dioxide than their gasoline counterparts over their lifetime, due to the emissions benefits of electricity as a fuel source as opposed to gasoline. Even charging an electric vehicle using only a coal-powered electric grid would still reduce emissions by half a million grams of carbon dioxide a year compared to a gasoline vehicle. Reuters estimates that beyond 13,500 miles driven, EVs' well-to-wheel emissions would be cleaner than that of gasoline vehicles. Considering the average vehicle in the United States is driven approximately 11,400 miles per year, this means that after only a year of vehicle ownership an EV will be cleaner than a gasoline vehicle when considering the vehicle lifecycle. (292)

262. COMMENT: The cumulative reduction in CO₂ emissions between now and 2035, compared with an equal number of new ICE vehicles purchased, by meeting the two million EV mandate by 2035 is approximately 28 million metric tons. The estimated reduction is based on the current mix of generation in PJM Interconnection and assuming EVs are driven the same average number of miles per year as ICE vehicles. If two million EVs are assumed to be charged solely with emissions-free electricity, the annual emissions reduction would be just over four million metric tons compared with new ICE vehicles. By comparison, in 2022, world energy-related CO₂ emissions were approximately 34.3 billion metric tons. Hence, the cumulative emissions reductions between 2023 and 2035 will be equivalent to about one day of world CO₂ emissions electricity, the annual CO₂ reduction would be equivalent to just one hour of 2022 world emissions. Hence, neither the State's EV mandate nor the ACC II rules will have any measurable impact on world climate. (387)

263. COMMENT: While the Department should address environmental issues, adopting this rule raises issues concerning the emissions that will result from the existing electric grid as a result of the increased demand for electricity from electrification of vehicles. The Department must plan for greater clean energy production. (490 and 690)

264. COMMENT: If electrification of the transportation industry and the 80x50 goals remain priorities for New Jersey, the ACC II rules provide greater certainty than the other options. However, the scale-up of renewable power generation, and buildout of grid infrastructure is another key challenge. New Jersey's clean power generation needs to ramp up significantly. If ZEV adoption outpaces adequate additions of available generation, added through efficiency and

integration of distributed energy resources (DER), there is a risk that power prices will rise constraining power availability. (302)

265. COMMENT: The Department should not adopt the rules because the State does not have enough renewable/sustainable energy sources to meet the increased electric demand that will be needed to power the vehicles. (166, 309, 346, 389, and 578)

266. COMMENT: The Department should not adopt the rules because EVs will be charged or manufactured using the electricity generated from fossil fuels. (22, 36, 110, 115, 143, 166, 170,

206, 218, 221, 245, 268, 284, 324, 333, 350, 356, 359, 380, 422, 463, 465, 485, 487, 502, 528,

593, 633, 637, 652, 664, 669, 678, 689, 691, 698, 717, and 725)

267. COMMENT: The Department must consider the environmental impact of generating all of the electricity that the new EVs will require on an ongoing basis. (31)

268. COMMENT: The Department should not adopt the rules because EVs also negatively impact the environment. (326 and 559)

269. COMMENT: The Department should not adopt the rules because emissions that will be produced to expand the current power grid would be great. (637)

270. COMMENT: The methods to create the electrical energy to fuel EVs are dirtier than anything an efficient internal combustion engine produces. (662)

271. COMMENT: The Department must consider how much carbon dioxide is generated from the entire lifecycle (mining of raw materials, production of vehicles, distributing, and consuming vehicles) of running an electric vehicle. (44)

272. COMMENT: Although efforts to reduce carbon emissions are supported, mandating the sale and use of EVs fails to account for significant carbon emission sources from EVs. All

vehicles, regardless of power train, should be evaluated using a full life cycle assessment accounting for all emissions, including emissions associated with vehicle production, recharging or refueling, drive train or battery replacements, infrastructure modifications, and end-of-life disposal and recycling of the vehicle. (167)

273. COMMENT: When all the numbers are crunched, EVs are only five percent more efficient and less polluting the fossil fuel vehicles. (198)

274. COMMENT: The production of EVs has been proven to be worse for the environment than gasoline powered cars over their entire lifetime. (287 and 640)

275. COMMENT: Electric cars are still coal-based, which is less environmentally friendly than gasoline. (37)

276. COMMENT: Considerable total energy is used to manufacture, produce, distribute, consumer, and recycle or scrap an EV versus a comparable ICE vehicle, expressed in kilowatt hours. (44)

277. COMMENT: Before adopting the rules on the proposed timeline, the Department must evaluate whether New Jersey can meet the increased demand through generation of electricity entirely with zero emissions sources, while simultaneously bringing online enough new clean energy to replace all existing natural gas usage and to cover the increased demand from the building electrification program. There is no point to the rules if all of the vehicles are powered by electricity generated mostly by natural gas. (70)

278. COMMENT: The notice of proposal Summary spent very little time discussing the actual carbon reduction benefits of this rule given the fact that the electricity coming from the PJM grid (New Jersey has now become a net importer of electricity) is produced from facilities using coal,

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oil, and gas. While there will be some carbon reductions even with the PJM emissions, it is important to note that EVs are not zero emission devices given their reliance on the generation of electricity and the fact that the grid is not clean. It likely will not be clean, even under the best circumstances, during the life of the cars being mandated pursuant to this rulemaking. While assumptions can be made that carbon emissions from the PJM grid will decrease over time as more renewables are put onto the grid and older, coal plants are removed, the extent of these reductions are largely speculative. The Department should not claim to be promoting cars that have zero emissions when, in fact, they do. These concerns do not even take into account the full lifecycle of carbon emissions from EVs, a topic ignored by the Department. (113)

279. COMMENT: Although the Department states that the modeling regarding lower emissions takes into account some increase in electricity attributable to increased electricity use, it seems like the model only attributes this to emissions associated with power plants. Much of the electricity in the State is currently provided by natural-gas-fired generation plants. It is unclear whether this type of gas-fired generation was utilized in this analysis. A complete analysis of air emissions related to electricity generation would also consider the extensive leaks, venting, and flaring that accompanying natural gas production. Without taking into account the origin of how the electricity is generated or the fossil fuels used in its generation, the environmental and health benefits stated cannot be accurate. (394)

280. COMMENT: Much of the current debate assumes EVs are more environmentally friendly than internal combustion engines. However, a growing body of evidence suggests this may be inaccurate. Data from many studies indicates that the list of net environmental benefits from EVs

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often fails to accurately account for the source of electricity powering these vehicles or the greenhouse gas emissions associated with manufacturing and components. (342)

281. COMMENT: Any rule should be based on a full lifecycle analysis that considers that all vehicles have emissions across their life cycle from production, utilization, infrastructure, and disposal. Using this analytical methodology will provide the best opportunity to decarbonize the transportation sector. Simply analyzing tailpipe emissions is not a scientifically sound approach to assessing vehicle emissions. According to one study, "advanced internal combustion engine vehicles (ICEVs) and hybrid electric vehicles (HEVs) can produce comparable reductions in greenhouse gas emissions as similarly equipped, full battery electric vehicles." In order to provide comprehensive evaluation of greenhouse gas impacts, the Department should undertake an analysis of the complete lifecycle emissions of passenger vehicles from mine-to-wheel and well-to-wheel, to end of life of battery electric vehicles and internal combustion engine vehicles, respectively. (251)

282. COMMENT: Swedish carmaker Volvo recently announced that the carbon emissions required to produce its all-electric vehicle are 70 percent higher than its gasoline equivalent. Volvo says that its all-electric car would need to be driven up to 68,000 miles before it breaks even on carbon emissions. (465)

283. COMMENT: The Department relied on the services of the International Council on Clean Transportation (ICCT) to develop this rule proposal. The ICCT is a non-governmental organization wholly funded by private foundations and consulting firms that state on their IRS form 990 schedule O the following: "In the last five years alone, we have worked successfully with regulators and lawmakers around the world and have played a significant role in 48 distinct

Regulations and policies." This organization is not a New Jersey-funded member environmental advocacy group. This is a political advocacy lobbyist group whose funding is hidden behind global private foundations and consulting firms. The Department relied on the services of this organization's contractor (Sonoma Technology) to analyze and evaluate the effects of this rule proposal on the citizenry and environment of New Jersey, despite the fact that the Department employs hundreds of environmental engineers and scientists who are more than qualified to perform the necessary impact statements required by the New Jersey Administrative Procedures Act to support this rule proposal. As a result of this relationship, the conclusions of the Social, Economic, and Environmental Impact statements in the notice of proposal are called into question. The ICCT's contractor used a well-to-wheel CO₂ calculations in place of lifecycle mass balance accounting to calculate the CO₂ emission increase/decrease estimates, coupled with the unrealistic assumption that the New Jersey electric grid will consist of 100 percent zero emission generation by 2050. Recent news on the troubles of the offshore wind industry illustrate problems using the latter assumption. The well-to-wheel methodology used by the ICCT's contractor ignores CO₂ emissions in the mining of raw materials, manufacturing, and transport of EV vehicles, while at the same time maximizing future CO₂ emission reductions from the electrical grid and petroleum refining industry. This is a dubious choice of methodology given that the ICCT has conducted one of the most comprehensive meta analyses of CO₂ lifecycle emissions associated with EV battery manufacturing here:

https://theicct.org/sites/default/files/publications/EV-life-cycle-GHG_ICCT-

<u>Briefing_09022018_vF.pdf</u>. This ICCT study indicates that lifecycle CO₂ emissions from EVs are only slightly better than efficient ICE vehicles. Removing local generated CO₂ emissions

from tailpipes while increasing CO_2 emissions in other parts of the world negates the Department's assumed climate change benefits of these rules. The Department chose instead to obfuscate this fact by using well-to-wheel CO_2 accounting in a disingenuous attempt to demonstrate positive social, economic, and environmental benefits attributed to this rule proposal. (317)

RESPONSE TO COMMENTS 259 THROUGH 283: As explained in the notice of proposal, the Department participated in an environmental analysis conducted by Sonoma Technology, Inc., to compare the benefits in New Jersey if ACC II were adopted compared with business-as-usual. 55 N.J.R. at 1786-1787. Sonoma's analysis was peer-reviewed, technically sound, and used Federally accepted models: the Motor Vehicle Emissions Simulator model (MOVES) <u>www.epa.gov/moves</u>, the National Renewable Energy Laboratory's (NREL) Greenhouse gases, Regulated Emissions, and Energy use in Technologies Model (GREET)

(https://bioenergymodels.nrel.gov/models/29/), and the CO-Benefits Risk Assessment model (COBRA) <u>www.epa.gov/cobra/what-cobra</u>. The analysis relied on by the Department calculated well-to-wheel CO₂e emissions, which includes emissions associated with the production of the energy used to propel the vehicle (for example, petroleum extraction and refining for gas-fueled vehicles and natural gas extraction and combustion in a power plant for a battery EV charged using electricity) as well as operational emissions, such as tailpipe emissions and tire and brake wear. Thus, as the Department explained, the modeling accounts for emissions resulting from combustion of fuel in ICE vehicles and power plant emissions associated with electricity used to charge EVs. 55 N.J.R. at 1787. The modeling also accounts for emissions related to petroleum production and refining, and power plant operation. *Ibid*. The well-to-wheel analysis excludes

emissions associated with the manufacturing of the vehicle itself, as well as end-of-life disposition of the vehicle. *Id.* More specifically, the study modeled emissions of NO_x, PM2.5, volatile organic compounds, sulfur dioxide, ammonia, and carbon dioxide equivalent (CO₂e). The pollutants of greatest concern and impact include NO_x and PM2.5 and well-to-wheels CO₂e. Based on the analysis, the Department estimated an additional reduction of 20.8 MMT/Y of CO₂e emissions in 2050, compared with the business-as-usual scenario, if the ACC II sales goals are achieved. *Id.* As explained, this emissions estimate included the increase in emissions from power plants that would be needed to produce electricity to recharge EVs, using a mixture of electricity generation that includes fossil fuels and is representative of New Jersey's current and future grid. See 55 N.J.R. 1786-1787. New Jersey's current grid mix is based on data from U.S. EPA eGRID, (https://www.epa.gov/egrid), and projected grid mix is based on the Global Warming Response Act 80x50 Report (https://dep.nj.gov/wp-content/uploads/climatechange/nj-gwra-80x50-report-2020.pdf) and the New Jersey 2019 Energy Master Plan

(https://www.nj.gov/emp/).

The Department acknowledges that emission reductions could be increased if there were more grid-supplied renewable sources. Accordingly, New Jersey has developed several strategic plans to ramp up renewables as part of the generation sector. Please refer to the Global Warming Response Act 80X50 Report <u>https://dep.nj.gov/wp-content/uploads/climatechange/nj-gwra-80x50-report-2020.pdf</u> and the New Jersey Energy Master Plan https://nj.gov/emp/docs/pdf/2020 NJBPU EMP.pdf. In accordance with these plans, the State

has invested, and continues to invest, significantly in clean electricity generation through support for offshore wind, solar, and nuclear generation. While it is true that the Department did not

account for vehicle manufacturing (sometimes referred to as production) emissions from electric vehicles, it also did not include vehicle manufacturing (production) emissions from ICE vehicles. However, the EPA has concluded that while initial manufacturing emissions from EVs are higher than from ICE vehicles, the reduced emissions over the vehicles' lifetimes more than make up for the difference. See https://www.epa.gov/greenvehicles/electric-vehicle-myths at "Myth #2: Electric vehicles are worse for the climate than gasoline cars because of battery manufacturing." Likewise, the International Council on Clean Transportation published a study on this topic and arrived at the same conclusion. See https://theicct.org/sites/default/files/publications/EV-life-

Contrary to the commenter's conclusions, the ICCT report shows that life-cycle emissions of EVs are still less than that of the "most efficient" vehicles versus the "average European car." The New Jersey vehicle population is composed of more light-duty trucks (which includes pickups, vans, SUVs, and some crossover vehicles) than passenger cars. In addition, the typical passenger cars in New Jersey are larger and heavier than many car models driven in Europe. These factors notably increase the benefits of EVs versus typical vehicles driven in New Jersey because light-duty trucks and heavier cars will consume more fuel and produce more emissions over their lifetime. Also, note that the cited ICCT report indicates that future factors are likely to further widen the gap in life-cycle emissions in favor of EVs. ICCT mentions improved battery technology, battery reuse and recycling, and increased electric grid decarbonization as examples. Finally, the cited ICCT report recommends against using life-cycle manufacturing emissions, considering it misguided for a number of reasons they detail in the

report. See https://theicct.org/sites/default/files/publications/EV-life-cycle-GHG_ICCT-

Briefing_09022018_vF.pdf.

Vehicle Weight

284. COMMENTS: The Department should not adopt the rules because it has failed to consider the impacts of the heavier weight of the EVs. Some commenters cite specific concerns, including the impact of the heavier vehicle weight as it relates to the increased wear on roadways, driveways, bridges, overpasses and/or older parking structures, and/or the increased wear on automobile tires. (122, 181, 182, 309, 328, 365, 380, 527, 669, and 687)

285. COMMENT: The weight of EVs is 30 percent heavier than that of a gasoline powered car.

This is a problem as the parking decks were built to support the weight of gasoline powered cars. (365)

286. COMMENT: The increasing weight of batteries is of concern because EVs can accelerate at unheard-of rates and outweigh gas-powered cars by 10 to 1. As a result, there is a real concern about more motor vehicle deaths because the State is so densely populated and has many cars on the road. (142)

287. COMMENT: EV are death traps on wheels. They weigh nearly twice as much as a traditional vehicle and are a major fire hazard if they ignite. Someone who gets in an accident with an EV will more likely suffer injuries or death. (115)

288. COMMENT: The Department must analyze the environmental impact fully and accurately. It is becoming increasingly clear that battery electric EVs are not truly "zero" emissions. Not only do they create particulate emissions from their tires and their brakes, but they do so at a higher rate than ICE vehicles owing to the added weight of the vehicle's batteries. (70)

RESPONSE TO COMMENTS 284, 285, 286, 287, AND 288: The Department has found that the increase in light-duty vehicle weights as a result of electrification does not significantly contribute to road damage. The relationship between axle weight and road damage was established by a study conducted by the American Association of State Highway Officials (AASHO). Although the AASHO Road Test

(https://onlinepubs.trb.org/Onlinepubs/sr/sr61g/61g.pdf) study was conducted from 1956 to 1960, the information gleaned was considered landmark and is still used for road and bridge design. One of the primary outcomes was a mathematical comparison of pavement damage caused by different axle weights. As explained in the AASHO Road Test study, the generalized fourth power law states that the greater the axle load of a vehicle, the stress on the road surface caused by the vehicle increases in proportion to the fourth power of the axle load.

The AASHO Road Test study was done using loaded trucks because lighter vehicles resulted in negligible road wear. Road design uses a standard unit called the Equivalent Single Axle Load (ESAL), which represents a single axle 18,000 pound load. According to the National Center for Freight & Infrastructure Research & Education (CFIRE) University Of Wisconsin– Madison in their analysis Understanding Freight Vehicle Pavement Impacts: How do Passenger Vehicles and Trucks Compare?: "The ESALs that a car generates also vary with the overall car weight. Virginia DOT estimates cars generate 0.0002 and 0.0003 ESALs on flexible and rigid pavements respectively. Other estimates put car ESALs at 0.0004 for rigid pavement. Still other research calls the impact of cars on roadways insignificant for design purposes and implicitly questions the validity of any comparisons between the two vehicle types."

(https://midamericafreight.org/wp-content/uploads/2018/10/ESALs.pdf). As highlighted by the

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very small numbers in the CFIRE analysis, the impact of cars on road wear, compared to trucks, is negligible. The U.S. Government Accountability Office further states that "... a five-axle, tractor-trailer loaded to the 80,000-pound Federal limit, has the same impact on an interstate highway as 9,600 automobiles. In addition, as truck axle weights increase, pavement damage increases at an even faster rate. For example, while a truck axle carrying 18,000 pounds is only 9 times heavier than a 2,000-pound automobile axle, it does 5,000 times more damage." (https://www.gao.gov/products/109954). Applying the fourth power law to weight increases in light-duty electric vehicles shows road wear may increase by 1.5 to 2.0 times. Therefore, the road impact caused by the weight increase in light-duty EVs is still substantially less than that of a truck.

The design of parking decks and their weight capacities is outside of the scope of this rulemaking.

While it is true that EVs currently weigh more on average than their gasoline vehicle counterparts, the Department is not aware of any traffic accident or fatality statistics that specifically examined the impact of EVs. The Insurance Institute for Highway Safety (IIHS), has expressed concern about the growing weight of EVs and all vehicles in general (https://www.iihs.org/news/detail/as-heavy-evs-proliferate-their-weight-may-be-a-drag-on-safety) and recommended both increased safety technologies, as well as scaling back on motorists purchasing bigger and heavier vehicles than is necessary for daily driving.

Particulate emissions related to tire and brake wear were included in the Department's emissions analysis originally published in the ACC II proposal at 55 N.J.R. 1773. See the Response to Comments 259 through 283.

Economic and Jobs Impacts

Affordability

289. COMMENT: This government mandate is designed to restrict the supply of ICE vehicles, which will naturally result in higher prices for all vehicles. This will increase inflation and make buying and owning a new car virtually unaffordable for working- and middle-class families in New Jersey. (27)

290. COMMENT: Mandating families who are already financially stretched that they must also adopt new technology that is not yet affordable or dependable is not good policy. (368)

291. COMMENT: The State's overriding goal should be to have low-cost, affordable energy for

residents, not expensive policies that will additionally burden people already struggling. (528)

292. COMMENT: Government should stop making things harder on average people. (219, 464,

and 627)

293. COMMENT: If applying a cost benefit analysis, taxpayers (voters) will incur higher costs to comply with the rules with no evidence of any benefit. (397)

294. COMMENT: The rules are nothing more than a tax that is unwarranted and cost-prohibitive to the average resident. (171)

295. COMMENT: This mandate cannot and should not cripple our communities and businesses and exacerbate income inequality in the State. The disadvantages outweigh any potential or perceived benefits. (675)

296. COMMENT: Forcing this rule will only hurt average New Jersey citizens and punish everyone who is not rich. (642)

297. COMMENT: The rules will harm, burden, and/or is not in the best interest of State taxpayers. (216, 336, and 451)

298. COMMENT: The rules will damage and/or destroy the economy. (97 and 261)

299. COMMENT: Implementation of the standards will result in lower costs to NJ Transit and the State of New Jersey. (96)

300. COMMENT: Mandating EVs will just be another tax on lower income families. (77)

301. COMMENT: State residents are taxed enough already. (140)

302. COMMENT: The rules will not benefit the State where residents are already overtaxed.

(454)

303. COMMENT: The rules are a tax on New Jersey residents with no good purpose. (231)

304. COMMENT: The additional costs of the rules make the rules unlikely to succeed. (599)

305. COMMENT: The environment needs to be taken care of but in a reasonable fashion.

Pushing the cost of the rules onto New Jersey citizens when they are already burdened with the highest property taxes in the nation is unacceptable. The rules are only for the one percent, not the other 99 percent who just make it every week. (621)

306. COMMENT: The cost of EVs and necessary charging and grid infrastructure will result in more government subsidies for buyers, which will increase inflation further. (137)

307. COMMENT: The rules will accelerate inflation by driving up electricity and road maintenance. (605)

308. COMMENT: The cost of charging at the frequency required will dramatically increase the cost of goods. (223)

309. COMMENT: There is no sensible plan to replace ICE vehicles without causing pain to the average consumer. (417)

310. COMMENT: Banning ICE vehicles will inequitably strain the limited resources of families, businesses, and utilities. (62)

311. COMMENT: The people hurt by this mandate will be the most vulnerable, who most need the State's protection. (279)

312. COMMENT: Government agencies are not getting rid of their private planes, private

limousines, or any of their luxuries. The people who cannot afford them are being forced to do

what is not fair. (135)

313. COMMENT: The cost of implementing the program for the average consumer will put new cars out of reach. (703)

314. COMMENT: Many people will not be able to afford any of this. (447)

315. COMMENT: Whenever a particular technology is artificially pumped up, costs will skyrocket. (518)

316. COMMENT: The rules will make it impossible for residents, including the working and/or middle class to survive. (54, 68, 179, 281, and 569)

317. COMMENT: It is unconscionable to put an additional burden on people who can barely pay rent and put food on the table. It is not just the cost of the car but also maintenance, repairs, and parts that will be more expensive. The rules benefit only the wealthy elites and disregard the middle class and poor. (636)

318. COMMENT: The costs of the rules make the mandate an affront to residents. (133)

319. COMMENT: This EV mandate would result in fewer low- and middle-income families, teenagers, and seniors being able to afford a car – greatly impacting their quality of life and ability to get to work, school, and food stores. By denying thousands of New Jerseyans access to an affordable vehicle, this mandate would be crippling to our communities, businesses, economy, and labor workforce, and would exacerbate income inequality in our State. (14)

320. COMMENT: The rules would upend the middle- and working-class economy and create an unconscionable burden on New Jersey residents. (22 and 333)

321. COMMENT: It is vital that in the transition to a clean transportation future, all residents have equitable access to zero-emission vehicles and transportation more broadly and realize these benefits as soon as possible. ACC II has some modest equity measures, such as environmental justice credits, which allow manufacturers to earn additional credits for lower cost vehicles, ZEVs placed in community car share programs, or ZEVs sold at end of lease to dealerships participating in financial assistance programs to encourage sales to low-income community members, but more needs to be done. (292 and 329)

322. COMMENT: The Department should adopt ACC II this year, and work with other State departments and stakeholders to develop a comprehensive and just transition plan. As the State moves policy forward to reduce greenhouse gas emissions and transition to a clean energy future, it must ensure its policies do not leave any workers or communities behind. (494)

323. COMMENT: The Department should work with other State departments and stakeholders to develop a comprehensive and just transition plan. (685)

324. COMMENT: Access to EVs may not be evenly distributed across all communities, which could disadvantage lower income residents. (485)

325. COMMENT: As proposed in New Jersey, ACC II would incentivize manufacturers to offer vehicles at low MSRP rates and financial assistance programs for low-income New Jerseyans. This, in addition to current State and Federal incentives, makes EVs more affordable to more moderate-income customers. (462)

326. COMMENT: EVs are starting to be produced by many different manufacturers at many different price points that make them affordable for different income levels. (151)

327. COMMENT: EV cost is not a problem today. According to an article released last

December, the average price of a car, not just an EV, was over \$50,000. The cost decreased a little because the supply chain is better, but still close to \$50,000. After incentives, the most affordable EV is \$14,500, equivalent to an ICE vehicle. The most affordable Tesla after

incentives is \$23,385. (329)

328. COMMENT: By increasing the growth rate of the EV market, the resulting economies of scale will lower EV prices, making EVs more affordable. The price of lithium has fallen more than 50 percent this year and the cost of nickel and cobalt have also declined. EVs also have significantly lower maintenance and operating costs. (376)

329. COMMENT: ACC II will create a ZEV supply to meet demand, which will accelerate the transition to ZEVs and encourage economies of scale that will help decrease costs and set the stage for further economic development, such as EV charging infrastructure. (201)

330. COMMENT: The costs to buy electric will continue to drop with technology advancement through better and safer batteries. (696)

331. COMMENT: The phase-out of ICE vehicles is supported. Hybrid vehicles have lower maintenance costs, high reliability, and fuel savings. State rebates and Federal tax credits also

lower purchase cost. Financial incentives and widespread availability of public charging stations are primary factors for the purchase of a full EV or a PHEV. (48)

332. COMMENT: The rules are supported, but the State should ensure that car dealers do not take advantage of consumers. (536)

333. COMMENT: EVs often have lower maintenance costs than ICE vehicles. By funding EVs at the State level, the State can lower the cost and barrier to entry for many residents and help them transition to safer and newer vehicles. (711)

334. COMMENT: The Department should adopt the rules, but should also address the concerns about the costs of electric vehicles (EVs). (288 and 730)

335. COMMENT: While the transition to green energy is important for New Jersey and our nation, this proposed vehicle mandate may not be the correct way to execute it. The State should be wary of banning gas vehicles before EVs are affordable to working families (548)

336. COMMENT: Before the Department considers eliminating ICE vehicles by any date

certain, the Department must first consider the impact on the majority of the State's population,

seniors, and/or those on fixed incomes who cannot afford an EV and/or a hybrid. (31, 54, 120,

315, 343, 345, and 612)

337. COMMENT: Most people cannot afford electric vehicles. (25 and 426)

338. COMMENT: Few can afford EV cars that even now quickly become obsolete. (259)

339. COMMENT: The extra costs of a vehicle and home charger installation will be out of reach of many residents, especially for lower income individuals, single parents, and the younger generation. (692)

340. COMMENT: Many New Jersey citizens 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. (577)

341. COMMENT: The cost of EVs makes consumer acceptance of EVs far from a foregone conclusion. (167)

342. COMMENT: Most people cannot afford an EV, which is why they are currently less than five percent of registered vehicles. (518)

343. COMMENT: The Department should not adopt the rules because of the high cost to purchase an EV and/or hybrid. Some commenters stated that an EV is substantially more expensive than the cost of an ICE vehicle, the cost will place a financial burden on lower- and middle-class citizens, families, teenagers, as well as seniors and those on fixed income, and/or the average person cannot afford an EV. (14, 25, 29, 33, 40, 49, 54, 57, 63, 65, 68, 73, 75, 80, 83, 84, 92, 97, 104, 111, 115, 120, 136, 138, 142, 145, 147, 148, 152, 185, 190, 193, 196, 198, 199, 212, 223, 225, 245, 274, 278, 279, 281, 300, 308, 321, 314, 315, 328, 332, 340, 343, 351, 366, 374, 380, 395, 401, 405, 406, 411, 420, 421, 428, 432, 433, 434, 443, 455, 464, 468, 475, 485, 501, 503, 512, 518, 531, 537, 538, 539, 544, 545, 577, 586, 588, 595, 596, 611, 623, 627, 630, 632, 633, 636, 639, 642, 648, 653, 662, 665, 681, 686, 715, 722, and 725)

344. COMMENT: The Department should not adopt the rules because the costs to maintain an EV are too great. Some commenters cite specific concerns ranging from the increased expense to maintain and/or replace the battery of an EV, fluctuations in electricity pricing, and/or the costs

of home charging. (14, 25, 63, 90, 114, 115, 120, 125, 152, 157, 183, 225, 263, 279, 294, 308, 309, 332, 343, 365, 366, 401, 406, 428, 433, 434, 502, 518, 527, 538, 539, 559, 588, 611, 619, 623, 636, 639, 642, 648, 643, 663, 665, 670, 686, 701, 720, and 725)

345. COMMENT: A battery will not last for the length of time the vehicle is owned and will need to be replaced at a cost of up to \$20,000 when the battery can no longer be charged. (467)

346. COMMENT: The battery in an EV has a short life span and can cost \$5,000 to replace, roughly after five years. This is unaffordable for the average resident. (518)

347. COMMENT: Used EVs are not an affordable option because the batteries wear out and it can cost up to \$20,000 to replace. (468)

348. COMMENT: When an EV battery is reaching its end of life, the market for the vehicle will be limited because it will need an investment in the thousands to keep it running. (465)

349. COMMENT: The cost of a battery at this time is basically the same price as a new car. The consumer is likely to just buy a new car because an EV battery's lifespan will make used EVs very difficult to resell. (527)

350. COMMENT: There is no resale value for EVs. No one would take the risk of buying a used or pre-owned EV not knowing how long the expensive battery will last. (115)

351. COMMENT: While operating an EV may be cost effective over the long-term, a significant upfront expenditure for the car and charger is required. One study indicates that 11.8 percent of the State's population are behind on mortgage payments and 37 percent lack the confidence to pay. Thus, over 1/3 of the State currently has significant issues in affording housing, which will make it near impossible for these individuals to purchase a new car and install a charger. (102)

352. COMMENT: Gasoline powered cars have become extremely reliable, are relatively inexpensive to repair, and have long lives of 16 years or more with proper, inexpensive maintenance. To replace a battery in a gasoline powered car costs only about \$200.00 versus \$15,000 to replace the giant lithium battery that operates an EV when it can no longer be charged. The average consumer cannot afford to spend \$15,000 on a replacement EV battery. (363)

353. COMMENT: Spending \$20,000 on a replacement battery is a waste of money. (665) 354. COMMENT: EVs cost on average \$20,000 more than a traditional ICE vehicle and are too expensive for the average person even with existing and proposed government rebates. (115) 355. COMMENT: As EVs cost, on average, almost \$10,000 more than the average ICE vehicle, EVs will continue to be the privilege of the financially well off, who will be the primary beneficiaries of the State's myriad subsidies. Moreover, EVs cost more to insure than ICE vehicles, further hindering their purchase by lower-income New Jerseyans. As a recent article stated, "Unless Tesla and other carmakers produce more easily repairable battery packs and provide third-party access to battery cell data, already-high insurance premiums will keep rising as EV sales grow and more low-mileage cars get scrapped after collisions, insurers and industry experts said." (387)

356. COMMENT: While the Department should address environmental issues, adopting this rule raises economic issues. Some commenters cite specific concerns such as the high cost of the vehicles, the cost of charging, and/or the higher cost of insurance. (51, 143, 149, 184, 196, 429, 466, 490, 497, 538, 549, and 582)

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357. COMMENT: The Department should not adopt the rules because they will be a financial burden to the people of New Jersey, including those on fixed incomes. Most people in the State are not able to bear the additional expense of EV ownership. (7, 20, 29, 30, 46, 47, 49, 51, 54, 75, 90, 95, 107, 110, 119, 122, 125, 144, 158, 173, 204, 228, 229, 235, 237, 246, 261, 281, 298, 301, 309, 310, 322, 337, 372, 378, 381, 388, 401, 406, 407, 416, 430, 445, 448, 458, 473, 476, 491, 498, 499, 515, 529, 551, 560, 565, 578, 595, 596, 604, 619, 626, 634, 637, 639, 643, 668, 678, 679, 683, 698, 707, and 713)

358. COMMENT: Although unknown by how much, the cost of vehicle insurance coverage and liability will increase. (653)

359. COMMENT: Compare the cost of insurance for a gas combustible four-door sedan versus an electric vehicle four-door sedan. New Jersey residents must bear the cost of extra insurance premiums on electric vehicles. If New Jersey motorists get into a car accident with an electric vehicle, there is also the cost of replacing that vehicle if totaled, which could be greater than an accident in a comparable ICE vehicle. Also, there is the cost of replacing the battery in the EV versus the battery in an ICE vehicle. (44)

360. COMMENT: Cost of car insurance and homeowners' insurance are higher for EVs. (406) 361. COMMENT: Most New Jersey residents cannot afford the additional financial cost and burden of an EV. Some commenters state that the rules will benefit only the privileged, elite, and/or wealthy. (152, 328, 393, and 496)

362. COMMENT: The rules will devastate residents who cannot afford an EV and do not have access to public transportation, thus losing their jobs and homes. (290)

363. COMMENT: The rules will strain everyday citizens who rely on private transport for their daily lives. As the State does not have an adequate public transportation network, the rules will reduce the State's residents' autonomy. There should be a greater discussion of creating a more cost-effective plan to reduce emissions without bankrupting normal people. (713)

364. COMMENT: The Department must consider whether the price of 100 percent EVs will be more costly and disadvantage people of lower income. Even if some less expensive cars are available, the limitations or downfalls of those vehicles could negatively impact the economically disadvantaged. (709)

365. COMMENT: Ordinary people will not be able to afford cars they need to drive to work and for other essential things. (423)

366. COMMENT: This top-down rule will only hurt the most vulnerable people in the State. No amount of tax breaks will help most residents afford EVs. (32)

367. COMMENT: The cost of EVs even with rebates and/or tax credits will be unaffordable and/or a burden for most residents of the State. (181, 246, 406, and 415)

368. COMMENT: The most likely result of the ACC II program is that consumers will keep their older, more polluting vehicles. This is because EVs are not affordable and claims they will soon be less costly than ICE vehicles ignore the increasing costs of materials used for their batteries. The range of EVs decreases significantly in cold weather, which New Jersey experiences. Similarly, for consumers who purchase light trucks, range decreases significantly when hauling heavy loads. (387)

369. COMMENT: Average people, especially low- and moderate-income people, seniors, and students, cannot afford electric vehicles and cannot utilize tax incentives or tax incentives are not

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effective. The rule will drive up the cost of operating gas-powered vehicles due to increases in the fuel tax, which will have a major negative impact on the working poor and low- and moderate-income wage earners. More people will not be able to afford a new car, harming them and businesses they frequent if they can no longer drive. (319 and 499)

370. COMMENT: There is a risk that the rules may discourage consumers from purchasing newer cars and will raise gasoline taxes on citizens stuck in these aging, less-safe vehicles. These concerns bear more consideration at a time when more and more Americans are not able to afford regular car purchases. (McLain, 2023). (139)

371. COMMENT: The rules will disproportionately harm lower-income and/or middle-income people who cannot afford EVs or charging platforms. (107, 349, and 411)

372. COMMENT: The rules will affect all middle and minority classes because EVs are costly and unsustainable. The rules have no benefits that outweigh the greatly increased costs to taxpayers due to these rules. (398)

373. COMMENT: Supply issues for cars and/or materials needed for EV batteries may impact the cost of a new car and/or make EVs affordable only for the wealthy. (75, 115, 476, and 625) 374. COMMENT: For the Department to propose and adopt this rule knowing all the challenges, the lack of realistic plans to address them, and the lack of consumer acceptance is the equivalent of the adage "shoot first, aim later." Electric vehicles are not affordable for a large segment of the New Jersey population. The rules will especially impact low- and moderate-income people, seniors, young people, and families, but will also impact middle class families. CARB in public venues recognized that there will be segments of the population who will no longer afford to own a car. The solution being offered are programs to promote EV buses, ride share, and bicycle

ownership. These are not realistic solutions for New Jersey residents who depend on their cars to get to work, shop, vacation, and see their health care professionals. The Department should explain whether it has done any analysis on how this rulemaking will impact their lives and disadvantaged communities. It is not sufficient to say climate change has negative impacts and, therefore, any burdens we place on individuals or communities are justified. EVs are less affordable, even with government subsidies which will likely not be available in the future, and less convenient. In addition, once this rulemaking goes into effect, as early as mid-2026 (when model year 2027 cars are released), all car prices will be impacted. The costs of EVs, contrary to claims, are going up, not down. This is largely due to unavoidable supply chain and mineral availability and processing issues. While one mine is being contemplated out west for certain minerals, there are no plans for a processing plant. There does not appear to be any short-term or even mid-term resolution to these problems. The Department should not impose draconian mandates based on speculation that these issues will be solved or that prices will come down. Once this rulemaking goes into effect, the price of new ICE vehicles will go up as their supply will be limited, as the State experienced with the supply chain issues during COVID. If the Department is deciding on this rulemaking, then it should be obligated to actually study and evaluate who is being impacted and what those impacts will be. (113)

375. COMMENT: Electric vehicles are generally more expensive than traditional combustion engine vehicles, making them less accessible to many consumers. It is vital to consider the economic impact of mandating the adoption of EVs, especially for lower-income individuals and families. (312)

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376. COMMENT: EVs are not within the price range of all consumers, yet ACC II aims to impose these new cars on all New Jerseyans. New Jersey and the Federal government already offer interested consumers financial incentives to choose electric vehicles. While those incentives help to reduce the purchase price by providing cash on the hood or providing a tax rebate (as in the case with the Federal incentive program), EVs still account for less than 10 percent of all new vehicle sales in New Jersey. EVs and the cost of replacing an EV battery are cost-prohibitive for low-income individuals. EVs limit transportation options for individuals from low-income communities when the State's public transportation system is not convenient or reliable and having a vehicle to get to work, school, appointments, or to the store is a necessity.

(9)

377. COMMENT: The Department should not adopt the rules because EVs are not affordable to purchase, there is increased damage when EVs are involved in accidents, and EV batteries have a short lifespan and are expensive to replace. (687)

378. COMMENT: Electric vehicles are more likely to be totaled if in an accident, increasing insurance premiums. (185 and 506)

379. COMMENT: The cost to repair and maintain an electric vehicle is far more than that of a traditional combustion car. There is no market for affordable or cheap electric vehicles. When an EV fails, it is largely related to one of three parts: the battery, the motor, or the supporting electronic systems. This creates a two-part impact on the consumer: first, each of those parts is enormously expensive to replace in relation to the value of the vehicle, meaning it is cost-prohibitive to keep an out-of-warranty car on the road and, therefore, it is more cost-effective to recycle the vehicle than to fix it. Further, shortening the life cycle of the vehicle shrinks the pool
of available used cars. As the State saw post-pandemic, when there is a limited supply of vehicles, the market prices inflate beyond what a working person can afford for what would otherwise be affordable cars. (2)

380. COMMENT: EVs are unaffordable for the vast majority of New Jerseyans and have other hidden costs. The average price of an electric vehicle this year is over \$53,000. New Jersey's per capita income is \$46,691, which clearly means that an EV purchase will be difficult for many New Jersey residents. These facts make it clear policies requiring that the only new vehicles allowed to be sold are EVs will hurt low-income citizens the most, who are disproportionately minorities. (342)

381. COMMENT: The cost of an electric vehicle is burdensome to most New Jersey residents. The base price for a 2023 Ford F-150 Lightning starts at \$61,869, while the suggested retail price of a traditional 2023 Ford F-150 is just above \$43,000. The Kelley Blue Book reports the average price for a new EV at \$55,000 while the average four-door sedan costs around \$35,000. Going beyond that initial \$20,000 price difference, the American Automobile Association also estimates that EV owners spend, at a minimum, \$600.00 more annually on maintenance than ICE vehicle owners. The initial cost and maintenance of EVs is an overwhelming burden to ask of consumers. Going beyond that initial price tag, reporting by MotorTrend found that it can cost up to an estimated \$18,000 to install Ford's solar-powered home charging system. (227) 382. COMMENT: The current electric vehicle lineup represents a considerably more expensive option for New Jersey residents than a comparable combustion vehicle; if the State moves to further limit options for consumers those limited options that remain will only get more expensive as demand increases. (2)

383. COMMENT: Not all consumers can afford EVs. The average cost of a new electric vehicle averages about \$60,000. (1)

384. COMMENT: For many motorists, the only way they can access effective transportation is through purchasing an affordable used car. If they want to stay with the existing fleet of gaspowered cars, those prices will be increasing as the supply drops and cost of maintenance increases over time. If they want a used EV, they may not be able to afford it. If the battery needs to be replaced after a few years, and the cost of a new battery alone is around \$25,000, not to mention the cost for the rest of the car, they may be effectively excluded from car ownership and the freedom of mobility that comes with being a motorist. These people still need to get to work. NJ Transit may not be able to handle such a widespread expansion if many people are forced to use the bus to commute from their suburban home to their suburban jobsite, and there will likely be delays. Under the existing framework, these people have personal vehicles that afford them the freedom to leave when they choose and pull up right to their destination. The high cost of batteries also has an impact on the cost of car insurance, as some insurance companies are already writing off fairly new vehicles with low miles because slight damage to the battery means the entire pack must be replaced at a five-figure cost. This leads to higher premiums for these cars and ultimately for all motorists. This is a problem that seems likely to increase as EVs make up an increasing share of the vehicle fleet. (70)

385. COMMENT: New Jersey's commitment to reducing greenhouse gas emissions from the transportation sector is appreciated. However, adopting and implementing ACC II will create consumer price impacts unless important issues such as decreasing options to purchase new vehicles and increasing new vehicle prices are addressed. Although the Department states that

the regulation only requires manufacturers to make ZEVs, the direct result will be felt only by families and individuals across the State. Consumer impacts, especially the impacts on those with low- and fixed-incomes, must be front and center of the discussions. The Department must consider the affordability of vehicles for low- and middle-income families. The average EV costs \$65,041 in 2022, while the overall average automobile costs only \$48,681, according to Kelly Blue Book data, which is a \$16,360 upfront price differential. Clearly, new EVs are out of the price range for the average New Jersey resident and the initial purchase of an EV is not one that working-class families can often consider. And contrary to popular opinion, the cost of EVs has been steadily increasing since 2015. Today, the average EV costs well over \$60,000, a price which can only be considered affordable by the upper quintiles of income earners. This is not an option for the average working-class family.

Regarding the used vehicle market, a National Automobile Dealers Association study on the cost of ownership estimated that after five years, EVs depreciate \$43,515 in value, while ICE vehicles average only \$27,883 in depreciation. This depreciation almost eliminates any residual value advantage of the higher-priced EVs after only a short period of usage. If EVs become a non-viable option as used cars due to substantial depreciation and cost of battery replacement, used car markets operating under EV mandates will see very constrained supply despite sustained demand, eventually making even used cars too expensive for many working-class families. (103)

386. COMMENT: A recent study by the United Way found that the cost to live in New Jersey is expensive. While the Federal Poverty Level for a family of four in the United States on average is \$26,500 per year, in New Jersey the average cost of living for a family of four is \$82,176, over

300 percent higher than the Federal Poverty Level. More shocking, about 1.3 million households, or about 37 percent of all residents in New Jersey, are struggling to pay their bills. This is 2021 data, and the bills in all sectors just keep going up. During this period of high inflation, the cost of living is rising faster than wages. People in New Jersey are hurting, and costs matter, particularly the monthly costs of necessary utility bills. The Department must understand that many people living in New Jersey cannot afford any motor vehicle at all. With 37 percent of the State struggling to pay bills at all, many residents may not own a car or, if they own a car, it was purchased as a used vehicle. For many, a new vehicle is simply not attainable. The average cost of a new EV is over \$50,000, more than many New Jersey residents' yearly income. Such an expensive purchase is simply not realistic. The Department must assemble and consider facts relevant to the potential financial impact the rules will have on people who do not own an EV. (394)

387. COMMENT: The rules would create a divide between wealthy people who will still be able to afford to buy the cars being allowed to be sold and everyone else, especially low- and moderate-income people, who are being told to take an EV bus, ride share, or buy a bike. This policy seems contradictory to the Department's previous policies in support of disadvantaged communities and to support policies to make us stronger and fairer. (113)

388. COMMENT: There are significant economic benefits associated with adoption of ACC II. Operating expenses, including fuel and maintenance costs, are typically lower for ZEVs. A recent survey by Consumer Reports found that electric vehicle owners pay around half as much to maintain and repair their vehicles compared to owners of conventional cars. A recent analysis by Energy Innovation also found that today's leased EVs are the cheapest option for new car

buyers. Taking the full cost of ownership into account, for all nine of the most popular EVs on the market below \$50,000, lifetime ownership costs were "many thousands of dollars lower than all comparable ICE (internal combustion engine) vehicles' costs, with most EVs offering savings of between \$6,000 and \$10,000." These savings will be even more pronounced for used ZEVs, which will become increasingly available as ZEV adoption rates increase. Additionally, ZEV investments, including those from utilities, can put downward pressure on rates for all utility customers. (292)

389. COMMENT: ACC II will save drivers significant money in fueling and maintenance costs while also helping to keep vehicle sales in New Jersey. Even today, electric vehicles are cheaper to own and operate than a comparable gasoline vehicle, providing significant savings for families, and we know that transportation is one of the largest household energy burdens. While upfront costs of new electric vehicles may be higher today than a gasoline vehicle, EV upfront costs are lowering and the State and Federal governments offer robust rebates to help offset this price difference. In a recent report by Energy Innervation shows that leased EVs are actually the cheapest option for drivers today, and ACC II only affects new vehicle sales and around 25 percent of drivers purchase their vehicles in the new market. (291)

390. COMMENT: The ACC II program will result in economic benefits to the State by generating cumulative net societal benefits (the sum of public health and climate benefits, net cost savings for vehicles owners, and net utility costs from increased electricity demand for electric vehicle charging) of up to \$97 billion. (535)

391. COMMENT: A 2022 study showed that 96 percent of EV owners across the country say they will purchase another EV in the future. The main reason is that consumers save money by

driving an EV. Due to reduced fuel and maintenance costs, a typical driver can expect to save between \$6,000 and \$12,000 over a vehicle's lifetime by switching to an EV. Fuel savings alone for drivers in the State ranges from \$22.00 to \$36.00 per fill-up, depending on vehicle type. (79) 392. COMMENT: Long-distance travel will take more time with an EV. For example, it can take less than 24 hours to drive to Florida in a gas car. An EV will take two to three days. Even if there are savings on fuel, one would have to pay for lodging all the way down. (135) 393. COMMENT: According to a United States Department of Energy Argonne National Labs presentation, the levelized cost of driving (LCOD) on a dollar per mile basis for a midsize sedan for a conventional gasoline-fueled vehicle is only slightly less cost efficient when compared to a BEV with a 300-mile range (BEV 300). Similar results are identified for a small SUV in the "high tech future." A hybrid electric vehicle is shown to have an even lower LCOD than the conventional gasoline vehicle. This more cost-effective solution is limited by ACC II. (251) 394. COMMENT: The total cost of ownership over 10 years of an EV compared with an ICE vehicle relies on California studies that do not apply to New Jersey. California has much higher fuel prices, lower vehicle miles travelled per car, a different climate, more pollution, and different demographics. These studies make certain assumptions about cost savings that seem optimistic in a market that has not yet developed. No one knows how the cost of EV repairs will remain over time, or even if there will be enough service centers to deal with repairs. These studies do not consider the resale value of EVs versus ICE vehicles. However, the resale EV market is weak. Once an EV battery is degraded down to 70 percent, it must be replaced at the cost of \$20,000 or more. Few people can afford that, and that known liability will decrease the

value of used EVs. On the other hand, used car values of ICE vehicles are well known and established. (113)

395. COMMENT: Based on New Jersey's 2022 EV sales, the ACC II program will require more than a four-fold sales increase in New Jersey, where the average transaction price of EVs is currently about \$58,725. Based on this average transaction price, EV buyers are far more likely to be affluent single-family homeowners with modern electric panels just a few feet from their garage where they will charge their EVs. These buyers do not represent a full cross-section of New Jersey's new car buyers. Achieving even 40, 70, or 100 percent of the new car market will require reaching buyers of more moderate means and action well beyond automakers' ability to produce more EVs. Purchase incentives can be a persuasive and effective way to address vehicle affordability and interest customers in purchasing an EV, as EVs continue to cost substantially more than a comparable gasoline-fueled vehicle. The compounded effect of Federal and State incentives is necessary to equalize purchase costs. There should be additional funding to expand existing tax rebates of consumer purchases as well as rebates on EVs.

New Jersey's State-funded consumer tax incentives will become even more critical to the State's goals of greater consumer EV adoption. The recently enacted Inflation Reduction Act redefines new clean vehicle credits. When signed into law in August 2022, approximately 70 percent of previously eligible vehicles were unable to qualify for credits due to a North America assembly requirement. Also, starting on January 1, 2023, MSRP and income caps went into effect and starting with the release of proposed guidance from the U.S. Treasury Department in March 2023, the credit is split in half with requirements tied to critical minerals (\$3,750) and

battery components (\$3,750). When the battery content requirements go into effect, the number of vehicles that will qualify for the full credit is expected to drop further. (457-1)

396. COMMENT: The Department should adopt the rules to reduce the overall cost of transportation by converting to electricity and reducing dependence on unreliable foreign sources of oil and gas. Electric vehicles are less complex and, thus, less costly to build and maintain. Also, using electricity is more efficient than using fossil fuels. The cheapest gas-powered car in the U.S. available in New Jersey in 2023 is the Nissan Versa S. It is listed in Car and Driver as costing \$17,075. The cheapest electric powered car available in the U.S. in New Jersey in 2023 is the Chevy Bolt EV LT at a cost of \$27,495 according to Car and Driver. However, the electric car would cost the buyer less than the gas car if the buyer can utilize eligible rebates (\$7,500 Federal rebate and \$4,000 State rebate). The buyer also saves through the State sales tax exemption, which in the example of the Chevy Bolt EV LT would save the buyer \$1,821.54 that the buyer would have to pay if the vehicle were a gas-powered vehicle. The net effect is that the electric car could cost the hypothetical electric car buyer \$14,174 versus \$18,206.21 to purchase the gas car. Further, if the cost of an ICE vehicle is on average higher than the cost of a ZEV, that additional expense is compensated for by savings on fuel, which would average about \$600.00 a year. (277)

397. COMMENT: In terms of cost, with the Federal tax credit of \$7,500, and New Jersey's EV rebate of \$4,000, a consumer can purchase a new 2023 Chevy Bolt for a little over \$21,000.(493)

398. COMMENT: If electrification of the transportation industry and the 80X50 goals remain priorities for New Jersey, the ACC II rules provide greater certainty than the other options.

However, an aggressive outreach and education plan is necessary to educate the public on incentives. The plan should encompass working with manufacturers to implement a plan for environmental justice to provide under-market vehicles to underserved communities, including incentives for ride sharing, and to provide vehicles under-market coming off rental company leases. As it stands now, these manufacturer incentives are options, not directives. Further, marketing plans from auto companies need to focus on mid-market and lower-income buyers who rely on used cars; there are now no used car secondary markets in ZEVs since the incentives only apply to new cars. (302)

399. COMMENT: Existing incentive programs are depleted quickly and do not provide a large enough price reduction for many New Jersey consumers. Even with such deductions, consumers are not buying EVs at the rate mandated by this rulemaking. If the government wishes to mandate a specific technology, it should bear the full financial burden associated with implementing and supporting that technology instead of passing part of that burden onto its residents. (312)

400. COMMENT: The Clean Air Council recommended that the Department develop greater financial incentives for consumers to purchase zero emission vehicles, while being sensitive to our current economic climate and fiscal challenges of the State. One of the Council's key recommendations is a zero-emission vehicle purchase rebate program. Other recommendations include extending the State tax exemption to include new and used PHEVs, establishing incentives for local government fleet purchases, and reducing vehicle registration fees on all electric vehicles. The State should also develop non-financial incentives for electric vehicle owners to encourage greater use of these vehicles, such as preferential parking. (202)

401. COMMENT: Market forces will encourage EVs but government incentives, such as cash rebates, continue to be needed. (58)

402. COMMENT: The ACC II rules complement and reinforce State and Federal incentives and overcome initial cost barriers for consumers and companies. (376)

403. COMMENT: The State does not provide real incentives to purchase an EV. Offering tax incentives that have no direct impact on a tax refund or a \$4,000 incentive, which is enough to pay for a plug is not an incentive to purchase an EV that is very limited in its capabilities. With the rise of electricity costs in a home, it is becoming just as expensive to charge a car as it is to fill up at a gas station. (152)

404. COMMENT: EVs are too expensive. The State will have to provide rebates or other financial assistance for EV purchases. (458 and 612)

405. COMMENT: If the average family cannot afford an EV, the State will have to provide grants at the cost of taxpayers. (129)

406. COMMENT: There should be more financial incentives for low-income families before mandating the deadline for EVs. (412)

407. COMMENT: If consumers wish to purchase EVs, they should be allowed to do so, but without State and/or Federal subsidies. (387 and 593)

408. COMMENT: Working people will have to pay higher taxes for electric cars for the poor just like they have to pay for everything else. (232)

409. COMMENT: People are still waiting for low cost EVs; incentives can help. Education is also important. (488)

410. COMMENT: If consumers want an EV, they should be able to get one but not subsidized by working class and poor taxpayers who can barely afford a car at all and who cannot afford an EV even with incentives. (216)

411. COMMENT: If EVs are so great then the need to subsidize the sale of EVs with taxpayerfunded incentives is not only unnecessary but also artificially inflates the cost of these vehicles. When government becomes involved in financing enterprises, the cost of doing business increases and the cost unjustly falls on the shoulders of current and future citizens of our country.

(119 and 270)

412. COMMENT: Gas-powered automobiles are reliable and relatively inexpensive compared to EV models. Lower income people rely on secondary markets like used automobiles. The process of creating batteries and driving up the costs of EV infrastructure is counterproductive. (353)

413. COMMENT: There is no price parity between ICE vehicles and EVs. While a low-end EV may be comparable to an average SUV, they are not comparable vehicles. A family of four or more may need a large SUV. A comparably sized EV is \$20,000 to \$30,000 higher in initial cost. Incentives, even where they exist, do not make up for that difference. Nor is there any guarantee that State or Federal incentives will exist when ACC II takes effect. Incentives should not be part of the cost or economic calculations. Incentives are not funded with free money. Taxpayers or ratepayers pay for them. They act as more a subsidy for wealthy people funded largely by those who cannot afford EVs. (113)

414. COMMENT: The proposed ban on gasoline cars will penalize the ordinary working people of New Jersey and make the State even more unaffordable. It is unconscionable to be using

taxpayer dollars to subsidize the purchase of EVs for upper income people who can afford them if they really want them. (124 and 393)

415. COMMENT: Providing subsidies and rebates just shifts the burden onto taxpayers so the average person loses. (115)

416. COMMENT: EVs will never be a cost-effective alternative for Americans and no subsidies should be given. (540)

417. COMMENT: EVs are not within the price range of all consumers, yet ACC II aims to impose these new cars on all New Jerseyans. New Jersey and the Federal government already offer interested consumers financial incentives to choose electric vehicles. While those incentives help to reduce the purchase price by providing cash on the hood or providing a tax rebate (as in the case with the Federal incentive program), EVs still account for less than 10 percent of all new vehicle sales in New Jersey. EVs and the cost of replacing an EV battery are cost prohibitive for low-income individuals. EVs limit transportation options for individuals from low-income communities when the State's public transportation system is not convenient or reliable and having a vehicle to get to work, school, appointments, or to the store is a necessity.

418. COMMENT: On the high, luxury end of the EV market, with government incentives, there is price parity. But this high-end market is already not affordable for most of the market. At the lower end, EVs are substantially more expensive than an ICE vehicle, even with incentives. This is true for both new car sales and leases. Leases make up a substantial part of the new car market. Consumers who lease have a certain down payment and cost in mind that dictates their vehicle choice. EV lease prices do not meet those buying criteria. (113)

419. COMMENT: The adverse economic impacts of the rules are not a decade away. Instead, residents will begin to see them as early as 2026, two years from when this rulemaking is adopted. If the Department adopts this rulemaking in 2023, as it declared it intends to do, it will impact model year 2027. These impacts will get worse and worse each year thereafter. If a dealer cannot sell the EVs delivered, they will also not be able to sell ICE vehicles to meet the demand. This will only exacerbate the cost and social issues. These impacts are not discussed in the notice of proposal Summary. (113)

RESPONSE TO COMMENTS 289 THROUGH 419: The Department acknowledges concerns about higher upfront costs to purchase or lease a new ZEV compared with an ICE vehicle with similar features, functionality, style, etc. Although the typical ZEV model currently has an upfront purchase price that is higher than a comparable conventional vehicle model, when considering total cost of ownership (TCO), an owner could see long-term savings on fuel and maintenance, resulting in total net savings over the course of vehicle ownership. As the Department explained in the notice of proposal, the total cost of ownership over a 10-year period for a battery electric vehicle purchased in 2026 is expected to result in a \$1,732 cost-savings compared to an internal combustion engine vehicle. 55 N.J.R. at 1784. The potential cost savings of a battery electric vehicle purchased in 2035 is \$6,683 when compared to an internal combustion engine vehicle. *Id*.

The TCO analysis conducted by CARB and reviewed by the Department "accounts for a number of cost factors, including vehicle price, loan fees, sales taxes and registration fees, fuel costs, maintenance costs, and a home charger capital investment for some buyers …" ACC II FSOR Appendix A at 22. The TCO analysis also includes insurance cost. CARB ISOR at 144-

45. CARB assumed maintenance costs of BEVs to be 40 percent lower than maintenance costs of comparable conventional vehicles. Due to warranty and useful life requirements in the rules, CARB did not assume that BEV and PHEV batteries would require replacement at the end of their useful life during the 10-year total-cost-of-ownership analysis period. ACC II FSOR Appendix A at 22 and 141. As CARB noted, "[e]ven if some batteries or portions of battery packs prematurely fail, the majority of BEVs are not expected to require a full battery replacement within their designed lifespans. The warranty and durability requirements in the ACC II regulations are designed to minimize the occurrence of premature failure and remedy them if they occur." *Id.* at 47.

Although a ZEV costs more than a comparable conventional vehicle, the gap is closing. "The cost of the average EV in the second quarter of 2023, was about \$54,300 while the average cost of all new light-duty vehicles in that time was about \$48,500. Year-over-year, EV prices declined more than \$10,700 from the second quarter of 2022 while the average cost of all new light-duty vehicles rose over just \$2,000." Alliance for Automotive Innovation, Get Connected, Electric Vehicle Quarterly Report (Second Quarter, 2023), available at

<u>https://www.autosinnovate.org/posts/papers-reports/get-connected-q2-2023</u>. However, as CARB cautioned, "the current average transaction price is a misleading metric given that it obscures the true variability in prices of ZEV that auto manufacturers offer and can be skewed higher by a small volume of high-priced vehicles ..." ACC II FSOR Appendix A at 133.

In response to concerns about faster depreciation of ZEVs, CARB included requirements "to guarantee access to service information, assure minimum durability, and provide the protection of minimum warranties ..." CARB ISOR at 70. As CARB explained, the "ZEV

assurance measures are necessary to address varied operating characteristics and consumer needs and priorities for household transportation: durability for vehicle longevity and value retention; warranty for vehicle longevity and peace of mind in avoiding costly unexpected repairs; and data availability for transparency to drivers and prospective used vehicle purchasers, reassurance about vehicle component health, and availability and convenience of service options." *Id.* at 71. See also the Response to Comments 87 through 115, regarding battery durability and other requirements.

As the ZEV sales mandate increases and technology advances, economies of scale and more EV choices for consumers are likely to result in price parity of EVs with comparable internal combustion engine vehicles. As manufacturers will be required to produce more compliant vehicles as states adopt the ACC II regulation, "[t]he increased production volume tends to drive down the additional incremental per vehicle cost, and gives manufacturers more flexibility in recovering their initial costs to adapt to California standards." 55 N.J.R. at 1783. According to CARB, "ZEVs are expected to reach purchase price parity with conventional vehicles within the years of the ACC regulations." ACC II FSOR Appendix A at 153. In other words, ZEVs will be as affordable as conventional new vehicles and more affordable when considering total cost of ownership. *Ibid*.

Also of note is that an average transaction price may not include tax incentives or rebates that do not occur at the point of sale. *Id*. To assist with the purchase price, the State has various incentives in place. Pursuant to N.J.S.A. 54:32B-8.55, zero-emission vehicles (as defined by the New Jersey statute), are exempt from the vehicle sales tax, which is currently 6.625 percent. 55 N.J.R. at 1784. The BPU also has a cash on the hood program for electric vehicles, <u>Charge Up</u>

<u>New Jersey (https://chargeup.njcleanenergy.com/)</u>. In addition to State-sponsored programs, there are also Federal programs to support the purchase of all-electric, plug-in hybrid, and fuel cell electric vehicles. For example, there is a Federal tax credit available to individuals who purchase a qualified vehicle and meet the income requirements. See Federal Tax Credits for Plug-in Electric and Fuel Cell Electric Vehicles Purchased in 2023 or After

(https://fueleconomy.gov/feg/tax2023.shtml). Similarly, there is a Federal tax credit available to a business or tax-exempt organization that buys a qualified commercial clean vehicle. See Commercial Clean Vehicle Credit | Internal Revenue Service (https://www.irs.gov/credits-deductions/commercial-clean-vehicle-credit). Although the Department cannot predict how long the State and Federal incentives will be available, the Department anticipates that incentives will help the affordability of EVs at least during the early years of the rules, when price parity concerns are greater.

As another mechanism to increase ZEV affordability, the ACC II rules include a provision that allows manufacturers to earn an additional 0.10 vehicle value for "a 2026 through 2028 model year ZEV or PHEV delivered for sale with an MSRP less than or equal to \$20,725 for passenger cars and less than or equal to \$26,670 for light-duty trucks." ACC II FSOR Appendix A at 153; 55 N.J.R. at 1777. This flexibility may encourage manufacturers to increase production in the more affordable EV market segments in the early years as they work toward parity and economies of scale for all market segments.

The ACC II program also allows vehicle manufacturers to earn additional vehicle values through two additional environmental justice flexibilities: community-based clean mobility programs and vehicles sold at the end of lease to participating dealerships. See 55 N.J.R. at 1776-

77. The flexibilities are intended to encourage manufacturers to provide access to clean mobility solutions in overburdened and low-income communities and incentivize used ZEVs and PHEVs for lower-income consumers.

As more ZEVs are produced, the variety of ZEVs in all price ranges is also expected to increase. Also, as more ZEVs are sold, more ZEVs will be available in the used vehicle market, which will also increase access to ZEVs for residents in the State. In addition to being able to access used ZEVs, customers seeking vehicles at lower price points will continue to be able to purchase used conventional vehicles throughout and well beyond the period of the ACC II program.

The Department recognizes that more is needed to ensure equitable access to zeroemission vehicles and clean transportation. However, as explained in the Response to Comments 675 through 687, adopting an alternative to Federal requirements other than a California program is not an option. Under the Clean Air Act, New Jersey has only two choices when it comes to emission standards: the emission standards set by the EPA or those set by California. This is referred to as "identicality."

Although the Department is constrained by the identicality requirements of the Clean Air Act, the Department will continue to evaluate a variety of regulatory mandates, policies, and funding sources to support incentive programs to transition the transportation sector, reduce emissions, and directly address emission and equity issues in overburdened communities in a collaborative manner. As part of the State's ongoing efforts to encourage transportation electrification, the State has awarded millions to increase infrastructure and electrify vehicles operating in and around overburdened communities and will continue to focus available funding

on such efforts. See <u>https://dep.nj.gov/drivegreen/emobility-awarded-projects/and</u> <u>https://dep.nj.gov/drivegreen/multi-unit-dwelling-toolkit/</u>. See also the Response to Comments 420 through 465, Response to Comments 87 through 115, Response to Comments 608, 609, 610, 611, and 612, and Response to Comments 613 through 632.

Cost of Charging Infrastructure and Electricity

420. COMMENT: The time it takes to charge EVs will be an enormous drag on the economy. (528)

421. COMMENT: As EVs are often more expensive to purchase and maintain than their gaspowered counterparts, expediting the demand for these vehicles might create an unnecessary burden on New Jersey residents. These vehicles require charging ports to be built, whether it be at home, in parking lots, or other public places. Often, the burden falls on the State to build the necessary infrastructure to fully support EVs. (8)

422. COMMENT: Gas-powered automobiles are reliable and relatively inexpensive compared to EV models. Lower income people rely on secondary markets like used automobiles. The process of creating batteries and driving up the costs of EV infrastructure is counterproductive. Currently, the State offers tax rebates for EVs, which means the lower class, taxed citizenry are subsidizing the wealthy purchasers of EVs. By divesting from gas-powered vehicles, the State will weaken the market for the people relying on that transportation infrastructure. (353) 423. COMMENT: The plan imposes a substantial expense on property taxpayers, without a necessary funding mechanism, for building and maintaining robust charging infrastructure. Even with historic investments over the next decade, there is no guarantee that the infrastructure to

support such a massive network of charging stations can be built in just 12 years in a reliable manner and maintained to support our large population. (14)

424. COMMENT: Gas-powered vehicles and their unchecked carbon emissions undoubtedly impact the environment. Accelerating EV demand may place a burden on residents due to higher costs and the need for additional charging infrastructure. (6)

425. COMMENT: As the Department considers options to reduce transportation emissions, it should consider and fully analyze what infrastructure investments will need to be made to accommodate EV charging and how low-income residents living in multi-unit housing will be impacted. (251)

426. COMMENT: There is substantial cost associated with upgrading the electric power and distribution network and install the necessary charging infrastructure. (69)

427. COMMENT: New Jersey will have to make major investments in modernizing its aging power grid to handle the significant increase in demand from new cars and home appliances. Ultimately, these upgrades are another expense that would be passed on to New Jersey's families and businesses for years to come. The Energy Master Plan estimates that an electrification policy will result in a doubling or tripling of electricity demand. This is on top of an already growing demand for more power. The result will be blackouts and brownouts and economic and social harm. (14)

428. COMMENT: Most of New Jersey's residents live in apartments they rent or have homes that lack EV chargers. For the State's working-class homeowners, purchasing the infrastructure to have an EV charger in their homes is just not a financial debt they can incur. (1)

429. COMMENT: The Department should not adopt the rulemaking because of the cost to install charging infrastructure in homes, other buildings such as apartment buildings, senior citizen communities, and dormitories, and/or businesses, which some commenters state will be too expensive for the majority and/or will require costly electrical upgrade. (83, 84,125, 129, 143, 148, 184, 190, 328, 343, 351, 415, 433, 463, 528, 531, 538, 582, 588, 639, 641, 648, 653, 663, 691, 693, 698, and 722)

430. COMMENT: The cost of installing the infrastructure needed to charge vehicles around the State will be exorbitant. (528)

431. COMMENT: The rules will require homeowners to spend tens of thousands of dollars to install 30-50 amp charging circuits in their homes and upgrade the size of their electric service. The lead times on electrical materials are very long. The current lead time on something as simple as a meter pan, which houses the utility company meter, is 60 weeks. Circuit breakers can take as long as 16 months to obtain. It is unclear how all of these services will be upgraded.

(170)

432. COMMENT: The Department must consider the cost and time of building out the necessary charging infrastructure across the State. (31 and 190)

433. COMMENT: If the Department wants to mandate EVs, the State should come up with the money for every resident who is forced to buy an EV to upgrade their electric service and to pay for the charging stations which will be required. Examples of buildings include apartment buildings, townhouses, senior complexes, and other dwellings. (208 and 582)

434. COMMENT: Apartment complexes do not have charging stations and rentals become less affordable every year, which will increase the financial hardship on low- and middle-income people. (49)

435. COMMENT: The rules will require an expansion of the charging network, which should not be at taxpayer expense. There is no justifiable reason the public should pay for charging infrastructure any more than they pay for gas stations. (627)

436. COMMENT: Numerous studies have shown that retrofitting residential and non-residential charging is five to six times more expensive than installing charging stations during new construction. For existing residential and non-residential buildings, installing infrastructure during any significant renovations, such as parking lot paving, electrical panel upgrades, etc., also substantially reduces costs. The State should adopt non-residential building codes that require installation of EV-ready charging capabilities in a significant portion of all new parking at a workplace and public locations. Building codes should require that every new unit in a multi-family dwelling with available parking have at least one EV-ready parking space. Each EV-ready space should provide, at a minimum, low-power level 2 (208/240V, 20A) terminating in a receptacle or an electric vehicle supply equipment, with EV-ready signage posted at each parking space. The State should consider the recommendation for level 2 power charging levels as the bare minimum requirement, while recognizing that mainstream customer satisfaction may require higher power charging (which is why CARB mandated that every new model year 2026 and later EV contain a portable charger capable of charging the vehicle at 5.76 kW (208/240V, 30A). (457-1)

437. COMMENT: Residents would be forced to take public transportation because they cannot afford to have their homes retrofitted to charge EVs and would have to use a public charging station. (453)

438. COMMENT: The Department should not adopt the rules because it will be too expensive to charge an EV at public charging stations for those who cannot afford, do not have access to charging infrastructure at home, and/or run out of charge on the road. (26, 125, 223, 279, 473, 498, and 639)

439. COMMENT: The charging network for EVs is not affordable to use. According to articles, public charging stations, when available and working, are almost as expensive if not more expensive than filling up with gasoline. (54)

440. COMMENT: It is important to ensure low- to moderate-income and multi-family dwelling residents have identical access to the low-cost, convenient, and reliable level 2 home charging that single-family homeowners enjoy. Special attention should be given to the infrastructure needs in the State's underserved communities to ensure access to affordable and convenient charging and hydrogen refueling options are made available on an equally aggressive timeline. Multi-family dwelling residents often face the greatest, most costly, and burdensome obstacles to installing residential EV charging. The additional costs to upgrade the electrical panel, install conduit between the electrical panel and their parking space, and the logistical challenges of securing building owner approval, coordinating the billing with the building owner, and persuading an owner to make a long-term investment on a rental property, make it near impossible to be an EV driver in a multi-family dwelling. Multi-family dwelling residents could be forced to charge elsewhere, such as DC fast charge stations or public chargers, which is much

more expensive, less reliable, and much less convenient than home charging. It is unreasonable to expect residents of multi-family dwellings to pay two or three times as much for charging and spend hours away from home each week fueling their EVs. The Department should set targets for residential charging and then monitor and track progress toward meeting those targets. For example, it seems reasonable that in 2030, when ACC II requires 68 percent of new vehicles to be electric, that 25 percent of low- to moderate-income and multi-family housing units have access to level 2 charging at home. The State should also adopt building codes addressing new construction and retrofit requirements for EV-ready residential and commercial parking. Building codes that address new construction are not nearly enough to support a transition to electrification. For example, new residential construction typically accounts for about one percent of all residential units each year. Thus, new building codes would only provide residential charging in about 15 percent of the residential units by model year 2035. Therefore, New Jersey should consider public and private programs to support retrofitting of existing homes and multi-family dwellings, such as apartments, condos, and townhouses. Although retrofits are far more expensive than incorporating EV-ready infrastructure at the time of new construction, they will be necessary to support increasing customer adoption of EVs.

(457-1)

441. COMMENT: Issues of equity are a particular challenge as New Jersey attempts to reap the benefits of electric vehicles in highly impacted urban areas. The Department must ensure that low-income communities and communities of color, which have historically been exposed to disproportionately high levels of pollution, share in the benefits of transportation electrification. Among other things, the Department should explore charging solutions for multi-unit dwellings

(apartments, condominiums, townhouses, etc.), as well as for urban areas without private garages and driveways. (202)

442. COMMENT: The practical use of EVs benefits wealthier users. Charging infrastructure is a critical component for EV usage, with access to chargers (and specifically fast chargers) a major consideration in purchasing an EV. Wealthier users are far more likely to live in single family homes where installation of a fast charger costing thousands of dollars is simply a matter of fact. Lower income families who are more likely to reside in apartments or rented properties do not have the option of installing their own personal dedicated fast chargers. Even the location of charging infrastructure tends to benefit the wealthier, whiter, male demographic that makes up 75 percent of the individuals who purchase EVs. A recent MIT study on California, which New Jersey appears to be emulating, examined EVs and equity noting the disproportionate access to public chargers and that public charging, when available to lower income communities, typically costs more than home charging. By creating disparities in access to the "fuel" through charging network realities this further exacerbates the differences in transportation equity between the rich and poor. Combine that with what is sure to be higher electricity prices from the requisite generation, distribution, and transmission infrastructure buildout required to meet growing electricity demand, as is often the case, the poor will just keep getting poorer. (103)

443. COMMENT: Some would argue that an increase in demand for electricity will increase the price. However, the price of electricity depends on many other factors, in particular, how much of the electricity is produced from renewable sources. Numerous scholars have looked at the impact of renewable energy on the electricity market. They find that because the marginal

costs of renewable energy are close to zero, an increase in renewable energy generation shifts the supply curve to the right, thereby lowering prices. Also, even if the price of electricity should increase due to increased demand, that is more than offset because consumers no longer need to pay for fossil fuels. A more accurate comparison of prices would compare the total cost to consumers of energy from all sources. (277)

444. COMMENT: The Department should not adopt the rules because it has not taken into account the cost of the upgrades to the electric grid that will be needed to charge the increasing number of EVs. (340, 498, 626, 648, and 691)

445. COMMENT: The State needs a detailed plan to increase the energy infrastructure due to an increased demand for electricity to charge electric vehicles. There will be a significant cost associated with building the new energy producing plants to accommodate the increase in demand to charge consumers electric vehicles. New energy sources will be needed to generate electricity for EV owners to charge their vehicles, and there will be a cost per kilowatt hour associated with these energy sources. When sales of the ICE vehicles is no longer allowed, more electricity will be needed to be produced in New Jersey, and distribution lines and capital infrastructure will need to be added to accommodate the increased demand. Operation and maintenance costs of the electricity generation plants will also increase. This could have an impact on consumers' electricity rates. (44)

446. COMMENT: With all of the subsidies for renewable energy, it is possible that the cost to charge EVs, even at home, will be higher than the comparable price per gallon of gas. (499) 447. COMMENT: It will be a challenge for the working class and/or most residents to afford the increase in electricity bills that will occur due to the rules. (623 and 639)

448. COMMENT: EVs will require more power, which will increase the price of electricity. (143 and 225)

449. COMMENT: Residents will see increased electric bill costs, which are already very high.

(653)

450. COMMENT: The Department should address the added cost of having to charge the car every night. (428)

451. COMMENT: The cost of creating an infrastructure to support EVs will require increasing utility rates to fund the buildout, which will put an additional financial strain on residents. (389 and 713)

452. COMMENT: New Jersey taxpayers are being asked to pay for EV stations being installed. (274)

453. COMMENT: Someone will have to pay for the electric infrastructure required to power all these cars. (232)

454. COMMENT: ICE vehicles should not be banned unless electric charging is free. (53)

455. COMMENT: The Department must consider whether the necessary grid upgrades and all of the new zero-emission generation that needs to be installed to meet the State's clean energy goals and meet demand of increased electrification of vehicles and buildings can be achieved using revenue from current utility rates, or how much rates will need to be increased to pay for it all. The Department must also consider the impact of higher utility rates on all ratepayers, from homeowners to small businesses, especially in an inflationary environment where affordability is the State's biggest concern. If higher rates will not cover the cost, the State may end up having to rely on revenues from the general fund or from new taxes to subsidize the costs. (70)

456. COMMENT: The Department should address the anticipated cost to taxpayers and rate payers to build out the charging infrastructure. (204, 208, 340, 474, 647, and 648)

457. COMMENT: The proposal acknowledges that the rules will increase demand for electricity, requiring a buildout of electricity supply and distribution. However, the rulemaking does not sufficiently consider the risks that this increase in electricity demand may pose to the State's economy and citizens. Much of the cost of the electricity system is driven by peak load rather than average load. To avoid frequent blackouts, there must be enough generation and distribution to meet peak demand. (Stott, 1992). This makes electric vehicles a particular challenge for the electricity grid. While the average house uses just over one kW of power, a Tesla can pull 11.5 kW of power. Building a grid that can allow each homeowner to charge multiple electric vehicles whenever they want, potentially increasing their peak demand by more than an order of magnitude, would require a truly unprecedented and eye-wateringly expensive expansion to the electricity grid at a time when consumers are already facing higher utility bills. Alternatively, consumers will have to be trained to time their electricity use to accommodate their neighbors. (139)

458. COMMENT: New Jersey's rural and agricultural communities will be hardest hit by the ACC II proposal. Internal combustion engine vehicles are a necessary part of everyday life for rural Americans, where it is not an easy task to find an electric vehicle charging station. As of 2022, more than 833,400 New Jersey residents live in rural areas at the fringes of the State. These areas take up the majority of the State's landmass and comprise most of the State's farmland. There are nearly 1,000 public electric vehicle charging stations Statewide, but it is unclear how many of those are located in convenient and accessible areas for rural residents.

Rural residents suffer the most from the effects of an aging power grid, as external factors like heavy winds, snowstorms, and over-usage of electric circuits by urban/suburban areas impact transmission. In particular, thousands of residents in rural towns along the Jersey Shore and South Jersey suffered multiple outages in the last few months due to these vulnerabilities. Mandating electrical vehicle use in sparsely populated areas where the power grid is already fragile will be a huge burden on rural constituents.

ACC II will massively increase demands on the New Jersey power grid, which will inevitably lead to higher utility costs for residents who already pay some of the highest electricity rates in the country. The State's most recent electricity rate hike will raise electricity bills by as much as seven percent, depending on the provider. Mandating electric vehicles by 2035 will place more demand on the power grid but will do nothing to increase the supply of electricity. Simple economic theory shows us that an increase in demand without a correlating increase in supply only results in higher energy prices. (227)

459. COMMENT: Forcing the poor to subsidize the wealthy is inequitable and unjust. Yet, because many lower-income New Jerseyans will be unable to afford an EV, and because many do not live in single-family homes where they can install a residential charging system, the subsidies will primarily benefit the wealthiest New Jerseyans, at the expense of the poorest ones, as has happened in California regarding the distribution of vehicle-related pollution emissions. The subsidies and additional infrastructure costs will be paid by the least well-off residents of the State, through higher electricity rates that recoup the costs of distribution system upgrades, highcost offshore wind development, and the need to provide extensive back-up generation and storage to ensure electric system reliability. (387)

460. COMMENT: The increased demand for electricity, which the State intends to meet primarily with offshore wind and solar installation, and the resulting need for backup storage and generation to keep the lights on, will result in much higher electricity costs for consumers and businesses. The adverse economic impacts of higher electricity costs will reverberate through the entire State economy. Higher electricity costs will lead to an exodus of energy-intensive businesses from the State. It will also reduce economic growth and jobs as businesses and consumers must devote more money to paying for electricity, leaving less for everything else. Businesses will either forego new investment in the State or relocate to states with lower-cost electricity. Further, it will disproportionately harm the least well off in New Jersey, who will be required to subsidize wealthier residents who purchase EVs and install subsidized home chargers. (387)

461. COMMENT: The Department is proposing with these rules to virtually eliminate sales of new ICE vehicles as of January 2027. The total impact of these rules will have far-reaching and cascading effects into the State's economy and on utility ratepayers' pockets; therefore, they must be viewed in a broader economic context than that which the Department offers. Improved air quality and the reduction of greenhouse gas emissions are important public health and public policy goals. However, the issue of concern is who will pay for the proposed far-reaching transition of the transportation industry and the financial impact on utility ratepayers of subsidizing the EV industry.

Utility ratepayers will pay the cost of expanding the electric grid to enable electrification of the transportation. Pursuant to current plans, ratepayers will also continue to subsidize EV charging infrastructure, whether or not they own or lease an EV. Significant upgrades to the

State's electric infrastructure will be necessary if every new car in the State will be powered by electricity as of 2027. At present, most electric circuits in the State would not be able to accommodate the increase in load associated with EV charging even if nearly every customer charged during non-peak hours. Additionally, in the future, ratepayers could be subsidizing Demand Charges that are associated with high electricity usage. For other extensions of new or expanded electric service, such as for new homes, businesses, or industries, the customer requesting the new or expanded service must pay for it in advance and may then receive a gradual rebate as the utility bills for the new or expanded electric use. With ratepayer-subsidized preferential EV charging rates, the recipient of the new or expanded electric service will pay only a portion of the cost; the balance will be paid by all ratepayers. Thus, due to the expanding scope of utility ratepayer subsidies of EVs, expanded EV adoption will impact every ratepayer's electricity bill. Imposing those costs on utility ratepayers without considering their ability to afford them may result in unfair and unanticipated outcomes. The Department should gather and evaluate a broader range of relevant facts, and amend the proposed rules to reflect those facts, before finalizing and adopting the ACC II rules. (394)

462. COMMENT: Currently, the State offers tax rebates for EVs, which means the lower class, taxed citizenry are subsidizing the wealthy purchases of EVs. By divesting from gas-powered vehicles, the State will weaken the market for the people relying on that transportation infrastructure. (353)

463. COMMENT: New Jersey ratepayers, as part of their utility bills, currently subsidize the installation of electric chargers and purchase rebates for EVs, whether or not those same ratepayers own an EV. Currently, each electric distribution company (EDC) in the State has an

EV program where ratepayers are funding public and private EV chargers and some of the "make ready" electrical work that must first be performed before installing an EV charger. The money funding these programs is ultimately collected from ratepayers. Additionally, through the Societal Benefits Charge, which is included in every ratepayer's bill, ratepayers are also funding State rebates to lower the cost of EVs for purchasers who may or may not need this financial incentive to purchase an EV. This means that the State's most vulnerable ratepayers are subsidizing more affluent customers' purchases of EVs and EV chargers.

A report from 2020 by the American Council for an Energy-Efficient Economy found that 25 percent of all U.S. households and 66 percent of low-income households have what is known as a "high energy burden," which is defined as spending more than six percent of household income on utility bills. Additionally, two of every five low-income households have severe energy burdens, spending more than 10 percent of their income on energy costs. This confirms that lower-income households are paying a greater share of their income to utility bills in comparison with their middle income and more affluent neighbors and an increase in utility rates has an even greater impact on households with lower incomes.

With the ACC II rules, the pertinent question for ratepayers is, at what point will ratepayers stop subsidizing EVs and EV charging equipment? Subsidization, especially by those who have less means to do so, should be curtailed once an industry is no longer considered nascent. The rules demonstrate that the "nascent" era of the EV industry has ended or is shortly coming to an end in New Jersey and, therefore, ratepayer subsidization of the EV industry should end as well. In the meantime, while ratepayers are continuing to fund the EV industry, the

Department must take into account this significant financial burden on ratepayers in its rule proposal and evaluate the economic impact on consumers and ratepayers. (394)

464. COMMENT: The rules incorrectly pre-suppose that electric rates will not rise in the coming years. Rates have gone up and continue to do so as ratepayers pay for not just EVs, but many other initiatives such as Energy Efficiency, Offshore Wind, and nuclear power. This will impact a comparison of fuel costs between EVs and ICE vehicles. As the cost of electricity increases due to the need to upgrade infrastructure, associated demand charges incurred at higher levels of electric use, subsidies of electric generation or just energy price inflation, it is unclear whether EV drivers will pay more or less for charging EVs than they would to fuel ICE vehicles. Additionally, even if EV charging is cheaper than gasoline, those same consumers will pay higher electric bills overall to account for infrastructure upgrades and other EV and electric generation subsidies that offset any lower transportation costs. This is important information for consumers, especially those who may just barely be able to afford an EV, to understand when they are evaluating whether to purchase a new EV or ICE before the ACC II rules take effect. It is also important to consider the rate impacts on ratepayers who do not even own a car. (394) 465. COMMENT: The ACC II rules raise infrastructure challenges and the systemic inequity and energy injustice issues that the Department must consider before adopting the rules. In 2022, 441,100 new light-duty vehicles were sold in New Jersey. Of those vehicles, only 31,300 were EVs (7.1 percent) while 402,567 (91.27 percent) were powered solely by gasoline or diesel. Electric vehicle "fuel" efficiency is .364 kWh per mile. According to data provided by the Federal Highway Administration in 2021, New Jersey light-duty vehicles averaged approximately 10,600 miles driven. U.S. Department of Energy data shows that in 2022, New

Jersey registered 6,425,000 light-duty ICE vehicles. If the Department adopts ACC II, New Jersey will have to add over 27 billion kWh of electricity annually to charge vehicles under a 100 percent EV mandate, which only accounts for light-duty vehicles. The Department must ask itself from where this generation is going to come and at what cost to New Jersey's families and businesses. In addition to increased electric generation capacity, the Department must consider what kind of improvements to electric transmission and distribution infrastructure will be required to serve the increased electricity demand and who pays for the upgrades, which include charging infrastructure necessary to serve approximately 6.4 million EVs reliably and affordably. (103)

RESPONSE TO COMMENTS 420 THROUGH 465: As discussed in the Response to Comments 116 through 169, the Department recognizes that an increasing number of ZEVs will require a corresponding increase in charging ports and stations at residences, as well as public charging stations. The Department expects charging at home to be the most common and economical charging method for EV owners. The State has also addressed and will continue to address charging availability at multi-family dwellings which can be more challenging than single-family homes. Legislation requires minimum charging infrastructure in new construction, while grants and education are being used to retrofit existing structures. See the Response to Comments 116 through 169 for a more thorough discussion of the State's efforts to increase charging infrastructure and access to charging.

As CARB understood the critical importance of charging as part of EV ownership, CARB included charging as part of the total cost of ownership when it proposed the ACC II regulation. See CARB ISOR at 143-45; CARB SRIA at 102-109. CARB estimated net savings

for a battery electric vehicle owner both with and without a home charger. See CARB ISOR at 143-45. "For someone with a home charger, they incur an additional capital cost of installing a home charger and receptacle, yet they have lower fuel costs given the cheaper retail price of residential electricity ..." CARB ISOR at 144. For someone without a home charger, they still experience annual savings within a year, and almost the same net savings over a 10-year total-cost-of-ownership period (\$7,659 vs. \$8,835 for owner with a home charger), due to the savings from lower fuel costs. *Id.* at 145. As explained in the Response to Comments 116 through 169, various State and Federal grant programs, as well as Federal tax credits exist to help offset charging installation costs.

The Department acknowledges that increased demand for electricity from ZEV adoption may increase the per kilowatt price of electricity. However, there is some evidence that increased adoption can lead to lower electricity costs for all ratepayers (see

https://escholarship.org/uc/item/6dz355d9 and https://chargevc.org/wp-

<u>content/uploads/2018/03/ChargEVC-New-Jersey-Study.pdf</u>), although it is unclear if this will be the case in New Jersey. The Department cannot predict the impacts that might be felt by ratepayers, as rates are beyond the Department's authority and depend on a number of interrelated factors, including ZEV owner behavior, the current state of capital investments by utilities, the ebbs and flows of the overall global energy market, and policy, regulatory, and legislative choices that are about the design of electric rates and allocation of costs for transmission upgrades.

While rate design and transmission upgrades are not within the scope of the Department's authority, the Department notes that the Administration, as a whole, is presently engaged on

these issues, which are critical to equity in the overall clean energy transition and not just in relation to the ACC II program. For example, as the Department noted in the notice of proposal (55 N.J.R. at 1783), the BPU, in late 2022, released a report on the modernization of New Jersey's electric grid and is advancing regulatory changes and working with stakeholders to further develop regulatory and policy proposals based on the report's recommendations. See https://nj.gov/bpu/newsroom/2022/approved/20221110a.html.

The Department acknowledges the expense of charging infrastructure, as well as the significance of plentiful EV charging options in public spaces, like parking garages and workplaces; grant funding is available to assist with the cost. Each electric distribution company (EDC) in the State has an EV program where ratepayers are funding the make ready portion of public and private EV chargers, but are not funding the charging stations themselves. See the Response to Comments 116 through 169. To the extent the comments request the Department enact building codes or legislation, those comments are beyond the scope of the Department's authority and this rulemaking. The Department will continue to work with other State agencies, including DCA, which has the authority to amend building codes, BPU, and EDA, to ensure equitable and affordable access to charging.

The comment that this rule virtually eliminates new sales of ICE vehicles in 2027 is incorrect. The annual ZEV requirement for model year 2027 is 43 percent and gradually increases to 100 percent for model year 2035. See 55 N.J.R. 1775; 13 CCR 1962.4, incorporated by reference at N.J.A.C. 7:27-29A.7. As explained more thoroughly in the Response to Comments 16 through 44, a manufacturer must meet its production volume with an equal number of vehicle values and it is theoretically possible that one or more manufacturers would

have enough vehicle values banked to continue producing a small portion of strictly ICE vehicles in model year 2035 and beyond. And as long as those ICE vehicles are CARB-certified, N.J.A.C. 7:27-29A.3(a) would not prohibit their registration in New Jersey in 2035 (or any subsequent year that an ICE vehicle is CARB-certified). Thus, sales of new ICE vehicles would be allowed after 2027.

Impacts on Businesses and Jobs

466. COMMENT: Investments in the U.S. are being spurred with the enactment of the Inflation Reduction Act (IRA) and the Infrastructure Investments and Jobs Act, together with State and Federal vehicle standards. These investments are helping to onshore the electric vehicle industry—creating jobs in the U.S. and helping to make the country a competitive leader in the electric vehicle industry. In 2022, the clean-energy economy accounted for more than three million jobs across the nation with New Jersey among five states that recorded job growth in the sector of more than six percent, according to the eighth annual Clean Jobs America analysis by Environmental Entrepreneurs. The largest jobs growth occurred in clean-vehicle manufacturing, which added nearly 50,000 jobs and outpaced the gas- and diesel-powered vehicle industry by more than 250 percent. (292)

467. COMMENT: Widespread electric vehicle adoption will promote American competitiveness and create good-paying jobs. Due largely to incentives in the Federal Inflation Reduction Act, the industry is continuing to invest at unprecedent speed to scale the domestic EV supply chain at every production stage. Based on research, private sector investments in the domestic EV supply chain total over \$200 billion and support nearly 400,000 American jobs. Since August 2022, the
private sector has invested over \$70 billion in the domestic EV supply chain and has created over 32,000 American jobs. The U.S. battery manufacturing industry is also quickly scaling to meet demand. Since January 2021, the U.S. private sector has announced over \$100 billion in battery manufacturing investments, translating to more than 190 new or expanded processing and manufacturing facilities with enough production to power 10 million EVs each year. The manufacturing capacity is translating to lower battery prices. As of September 2023, battery cells are reported to cost an average of \$98.2/kWh, which is a 33 percent drop from March 2022 estimates. (79)

468. COMMENT: An important piece of the rules is that they will go a long way in creating a number of good paying jobs. The EV infrastructure that will need to be built to accommodate all the new EVs on the road is pretty exciting. It is expensive to live here in New Jersey, and these rules will go a long way in creating good family-sustaining jobs. However, the State also needs to ensure that as New Jersey (and the nation) transitions to EVs, there are complimentary policies to ensure no workers are left behind. As the EV industry creates new jobs, there is also going to be a transition of jobs and some jobs that will not be around. So, it is important to ensure that those workers are taken care of as the economy transitions. The Department should support complementary policies (Federal and State policies) that prioritize U.S. manufacturing, because manufacturing jobs, especially union manufacturing jobs, are high wage jobs. (151) 469. COMMENT: The ACC II rules are good for labor in our State, because it will require the build out of the infrastructure necessary to charge the vehicles. Also, it will be good for the country, as more and more electric vehicles, as well as the battery facilities that are necessary to support these vehicles are built here in the United States. The State must also continue working

towards a just transition across the economy, that centers on communities and creates good paying union jobs throughout the State so that everybody can enjoy the family-sustaining benefits that the clean energy economy can create. (657)

470. COMMENT: The State is already lagging behind in the green economy. By encouraging the use of cleaner and more efficient vehicles, the State can invest in a greener future that will drive innovation, add high quality green jobs to the economy, and advance social equity. (18) 471. COMMENT: Embracing ZEVs will create new job opportunities, stimulate innovation, and attract investment in clean technologies. The rules will position New Jersey as a leader in the green economy and help towards a sustainable future. (402)

472. COMMENT: Clearly, jobs will be lost in motor vehicle maintenance and in fossil-fuel based market sectors. However, there will need to be many more jobs in the solar and wind industries, which are growing rapidly, and in the energy transmission, switching, and storage industry. In fact, according to NJ Spotlight, the clean energy sector is adding jobs 53 percent faster than the rest of the economy. The largest jobs growth occurred in clean-vehicle manufacturing, which added nearly 50,000 jobs and outpaced the gas- and diesel-powered vehicle industry by more than 250 percent. New Jersey will have increased local jobs created by local solar, wind, energy storage, and grid related jobs. (277)

473. COMMENT: The ACC II rules will drive investment, support local job growth, and facilitate cost savings in New Jersey by accelerating ZEV adoption across the State. When combined with historic levels of Federal funding to build out charging infrastructure, New Jersey has a clear and unprecedented opportunity to attract both the public and private investment needed to create the high-wage, very naturally local jobs that will be supporting the new, modern

clean transportation infrastructure of the future. New Jersey's clean vehicle sector has already proven itself to be a strong economic driver. A recent report shows that jobs in New Jersey's clean vehicles sector grew by more than 15 percent in 2022 with 5,700 workers already employed. Also, with 85 percent of the world's car market committed to embracing 100 percent electrification within the next 20 years, the ACC II standards can help New Jersey build and maintain the market leadership critical to continued job growth in this sector. (85) 474. COMMENT: The ACC II rules should be implemented so that the State no longer relies on foreign oil and volatile oil prices, which is bad for business. (459)

475. COMMENT: Adopting ACC II is an essential step to mitigating the significant financial impacts to business from operational disruptions due to climate change. (685)

476. COMMENT: ZEVs, particularly BEVs, offer significant benefits for businesses and institutions. Transitioning to ZEVs can reduce operational costs through lower fuel and maintenance costs, avoid risks associated with the volatility of fossil fuel prices and supply, enhance company reputations, and improve workforce recruitment and retention. ACC II will help develop a more energy efficient economy, create new jobs, cut costs, and mitigate climate risk. (201)

477. COMMENT: Charging accessibility may be an issue but should be construed as an opportunity for high quality jobs, rather than as a barrier to EVs. Additionally, the State has programs to bring charging to everyone, including disadvantaged communities. (329)
478. COMMENT: The amount of time spent at an EV charging station is on average 20 minutes. This will impact commercial businesses, especially those that deliver, which base their business model on expeditious service. (92)

479. COMMENT: Banning gas-powered cars would impact thousands of businesses across the State, especially small businesses that depend on vehicles to sell goods and provide services. Likewise, this plan would put New Jersey's automotive-focused businesses, which contribute more than \$2 billion in State and local taxes and employ more than 71,000 individuals, at a significant competitive disadvantage. (14)

480. COMMENT: Are gas station owners expected to put in multiple electric charging stations, and at whose expense? (611)

481. COMMENT: The rules will have a negative impact on businesses related to ICE vehicles and potentially put them out of business. Examples cited by commenters include local gas stations, small distributors, manufacturers, mechanics, and repair shops. (114, 115, 120, 137, 169, 266, 274, 483, 538, 588, 652, and 722)

482. COMMENT: The 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. (577)

483. COMMENT: New Jersey has a substantial presence of traditional automobile manufacturers, dealerships, and related industries. A rapid transition to electric vehicles could disrupt these sectors, resulting in job losses and economic challenges. (485)

484. COMMENT: The rules will put traditional auto mechanics out of business creating more job losses and loss of tax revenue in the State. (115)

485. COMMENT: Repair facilities would have to be retrofitted to accommodate the repair of electric vehicles. There is also the expense of building an approved repair facility for electric

vehicles. (44)

486. COMMENT: The ban on internal combustion engines would greatly affect businesses. (670)

487. COMMENT: The ban on ICE vehicles will take away jobs from New Jersey citizens and affect even food prices because of higher food delivery costs. The Department must think about the long-term effects of the rules on the lower and working class, not just the upper middle class and the wealthy. (586)

488. COMMENT: The Department must consider the potential impact on jobs (including the Motor Vehicle Commission), dealerships, gas stations, mechanics, and/or insurance companies, and the resulting rise in unemployment (including losses for State union workers) and/or loss in property values and property tax revenue. (219, 294, 425, and 620)

489. COMMENT: Phasing out gasoline cars means a decrease in gas stations. This will impact people traveling to New Jersey from states where EVs are not required. It could be harder for them to find gas stations and, thus, deter tourism and reduce the State's income from tourism. (709)

490. COMMENT: EVs are not able to be worked on by small businesses. (308)

491. COMMENT: The rules will eliminate more jobs than created. (77)

492. COMMENT: The rules will result in a loss of jobs. (538)

493. COMMENT: The EV industry will eliminate jobs and in particular, union jobs for American workers. (423)

494. COMMENT: The rules will destroy American jobs. (397)

495. COMMENT: EVs and EV parts should be made in the U.S. and provide jobs to Americans. (623)

496. COMMENT: The lack of public charging locations in rural areas, which already lack public transportation and highway access, will unfairly burden these areas and businesses will suffer, as the rest of the State benefits from improvements. (212)

497. COMMENT: The Department must address the impact on surrounding car markets in states that allow ICE vehicles to be sold. (623)

498. COMMENT: The rules will weaken New Jersey's automotive sales industry and/or put

New Jersey dealers out of business because people will go out-of-State to purchase automobiles.

(131, 145, 179, 216, 219, 343, 383, and 563)

499. COMMENT: The rules will cause people to go out-of-State to purchase their next vehicle and will harm New Jersey businesses. Taking away consumer choice only makes the State more expensive. (295)

500. COMMENT: The rules will hurt car dealerships and the economic activity that they provide to the State. (7)

501. COMMENT: Strict regulations in New Jersey may drive consumers to purchase vehicles in neighboring states with less stringent requirements, potentially harming the local economy and dealerships. (312)

502. COMMENT: Businesses such as repair and service contractors, delivery services, and builders that will need to turn over their fleet will be negatively impacted by the increased costs of EVs. (319)

503. COMMENT: While the commenter appreciates the need for further environmental protections, the rules cannot be supported because of the heavy financial burden the rules will impose on New Jersey taxpayers and businesses. Increased costs for manufacturers will be passed on to the consumer through direct price increases. This also includes higher prices for businesses in purchasing company vehicles and fleets. In addition to the up-front cost of constructing electric vehicle charging stations at office spaces, contractors will have to determine how to have employees charge personal and company vehicles while on job sites. (360) 504. COMMENT: ACC II is a heavy-handed government approach that will have the negative effect of forcing manufacturers to send fewer vehicles to New Jersey, which will lead to consumers buying fewer new cars and even result in others holding onto their current gas-powered vehicles longer than customary. In actuality, this ill-conceived rulemaking will harm the automobile industry and the New Jersey dealerships. (7)

505. COMMENT: As long as other states are not establishing strict EV rules, ACC II will negatively impact New Jersey's car dealers and both New Jersey and local economies. Residents can easily go to neighboring Pennsylvania to purchase the vehicle of their choice to circumvent the ACC II rules. This heavy-handed government approach is likely to backfire by forcing manufacturers to send fewer vehicles to New Jersey. That means higher demand, lower supply, and higher prices. If adopted, ACC II will also make consumers hesitate to replace their older vehicles. (9)

506. COMMENT: It is clear that gas-powered vehicles have an impact on the environment. If left unchecked, the carbon emissions from these vehicles will continue to cause irreparable

damage to the environment. An increasing number of automobiles being sold in New Jersey are EVs, which the automobile industry readily supplies. However, if the automobile industry cannot keep up with the demand that this rule will generate, it will have a harsh economic impact on the State. (8)

507. COMMENT: The Department incorrectly asserts that the rule applies to manufacturers, not to consumers and dealers. This is not how the new car market works. Dealers can only sell what manufacturers build, and consumers can only buy what retailers have to offer. Once the rules becomes effective, manufacturers will have to either deliver for sale into New Jersey the requisite number of EVs or face the financial penalties associated with non-compliance. As, demand for EVs is much lower than the mandate, manufacturers will be forced to lower the total number of vehicles offered for sale in New Jersey or buy credits from competing EV manufacturers. Either way, the rule will force new car prices to go up in New Jersey, which consumers do not want. Under ACC II, automakers will be forced to carefully control production and steer the product they allocate to ACC II state dealers as inventory. A mandate to increase the percentage of ZEVs or PHEVs sent to the State could result in fewer vehicles allocated to the New Jersey market to manage their top-line numerator and bottom-line denominator, and/or manufacturers limiting the number of base model vehicles manufactured and allocated to the New Jersey marketplace in order to maximize profit on the vehicles they can deliver for sale to ACC II states. In either case, New Jersey consumers lose because tighter inventories result in higher prices and/or less availability in the marketplace of base model vehicles. This is certain to make many new vehicle models unaffordable for many middle- and working-class families. (27)

508. COMMENT: There is the chance that dealer lots are full of EVs that nobody wants to buy. (499)

509. COMMENT: These rules pose very serious risks, given the challenges that manufacturers are facing in producing affordable electric vehicles. Ford Motor is reportedly losing almost \$60,000 per electric vehicle that it sells (Olinga 2023), and even with companies willing to accept these massive losses on each vehicle sold, electric vehicles still cost consumers more than gasoline vehicles (Threewitt, 2023). If electric vehicles ever become the core product of car companies, as this proposal envisions, manufacturers may have to sharply raise prices to turn a profit. (139)

510. COMMENT: The U.S. liquid fuel industry is largely unionized. That is not the case for EV and battery manufacturing. Losing refining jobs in the U.S. means weakening the union base. These jobs will not be recovered by the EV industry, they will be sent overseas to China's EV and battery factories and to the rest of the world where liquid fuel demand continues to grow. Based on 2021 data, more than 80 percent of the refineries owned by the biggest U.S. refining companies are unionized. The big companies—which include some merchant refiners—operate more than 70 facilities. Just over 60 of those are unionized.

Yet again, California provides a cautionary tale here. The University of California, Berkeley, Labor Center, released a study on the impacts of Bay Area refinery closures on workers. The organization surveyed former refinery workers more than a year after the plant closures and found nearly a quarter of them were still without jobs. Additionally, the ones that did have jobs made significantly less money and believed they were worse off from a working conditions perspective compared to their former refinery jobs. As previously mentioned, New

Jersey workers have already felt the adverse impacts of refinery closures. The region cannot afford to lose more jobs, particularly in support of policies that will export American jobs and energy security overseas. (342)

511. COMMENT: Regulations that push the industry to adopt cleaner technologies are important to creating a strong domestic union manufacturing base. However, the carrots and sticks employed to propel industry innovation must be carefully tailored to preclude auto companies from shifting costs to consumers and workers, while companies shield shareholders and their massive profits. It is crucial that the State adopt EV and emissions policies that are ambitious, but feasible.

As the State considers its approach to transportation emissions and electric vehicle adoption, the Department is urged to prioritize consideration of the impact the rules would have on workers and their communities in its analysis. Overly aggressive or unachievable EV requirements can have negative impacts on workers and communities. Policy based on overly optimistic EV adoption projections can lead to regulatory costs that fall on auto workers. Any rulemaking must take into account the potential impact on the domestic manufacturing base or on the union manufacturing worker base.

The auto industry is reaching a key inflection point with the rise of electrification. Policies and investment decisions made in the next few years will re-shape the industry for decades. There is an opportunity to get this transition right for workers and the environment. That means avoiding the mistakes of the past, adopting a strategy that reverses decades of offshoring and declining unionization in the industry, and ensuring the domestic auto industry keeps pace with the latest clean technologies.

Unfortunately, initial trends in the EV transition are troubling. Despite planning to invest over a trillion dollars globally in electric vehicle production, major auto companies seek to use the transition to cleaner vehicles to circumvent and roll back hard-fought labor standards for workers, including by shuttering and offshoring manufacturing facilities, cutting wages, and fighting attempts to include new facilities under existing collective bargaining agreements. Union workers are proud to be building the vehicles of the future, including hybrids, PHEVs, BEVs, autonomous vehicles, and increasingly efficient gasoline vehicles. Policies promoting cleaner vehicles must create economic security for auto workers in the industry, including safeguards that strengthen the domestic manufacturing supply chain, and require the EV transition to provide at least the same level of investment and quality jobs as the current ICE footprint. Otherwise, society will fail to build the public confidence necessary to sustain policies for the EV transition and the continued competitive position of the U.S. auto industry. (676)

RESPONSE TO COMMENTS 466 THROUGH 511: The Department acknowledged the potential negative economic impacts on New Jersey businesses and jobs in the notice of proposal. See 55 N.J.R. at 1783-1785, 1788. The Department explained that the ACC II program will advance a paradigm shift for this vehicle sector that will have indirect economic impacts on various areas of the economy, including dealerships, automotive repair, retail gasoline stations, engine component suppliers, ZEV infrastructure businesses, and the green job economy. 55 N.J.R. at 1783, 1788. Although jobs may be lost during this transition, job opportunities will also be created. As the Department explained, the New Jersey Green Council on the Green Economy

identified areas of green job growth in the State, including the transition to alternative fuel vehicles. 55 N.J.R. at 1788.

The Department cannot predict how the adoption of ACC II will impact the marketing strategy or distribution of vehicles by each manufacturer. Rather, the Department expects the rules to drive technology and increase choices for consumers, as manufacturers will produce greater number and variety of compliant vehicles for sale and lease in New Jersey, California, and other states that have adopted or will adopt the ACC II rules. As explained in the notice of proposal summary, "[m]anufacturers have stated that 'the future is electric' and set their own targets for ZEV sales." 55 N.J.R. at 1782. As such, although dealerships will have to adapt to increasing percentages of ZEVs to be sold or leased, the Department does not expect dealerships to suffer losses from vehicle sales. Consumers looking to purchase a new vehicle will still visit dealerships to find vehicles, including, at least until 2035, new ICE vehicles that have been certified by CARB.

With regard to the concern that consumers will purchase ICE vehicles in another state, the Department notes that the annual ZEV requirement for new light-duty vehicles (passenger cars, light-duty trucks, and medium-duty vehicles) is applicable to manufacturers, not consumers. Nevertheless, as the Department explained in the notice of proposal, and as required at N.J.A.C. 7:27-29A.3(a), "no person who is a resident of this State, or who operates an established place of business within this State, shall sell, lease, import, deliver, purchase, acquire, register, receive, or otherwise transfer in this State, or offer for sale, lese, or rental in this State, a new 2027 or subsequent model-year passenger car, light-duty truck, or medium-duty vehicle unless the vehicle has been certified by CARB." Therefore, all new light-duty vehicles registered

in New Jersey are required to be CARB-certified regardless of where they are purchased. This is a pre-existing requirement that is not changed by this adoption. See N.J.A.C. 7:27-29.3(a); 55 N.J.R. at 1777-78. All the states bordering New Jersey, including Pennsylvania, New York, Delaware, and Maryland, also currently require CARB-certified vehicles be sold in their states. Of those neighboring states, New York and Maryland have also adopted the ACC II program and will require increasing sales of electric vehicles. Thus, residents will not be able to register in the State a non-compliant vehicle (that is, a non-CARB-certified new vehicle) purchased out-of-State, unless one of the exemptions applies.

Although the ACC II rules will phase out the sale of new ICE vehicles, the rules do not apply to used vehicles or require any vehicle owner or lessee to give up or replace their ICE vehicle with a ZEV. Therefore, the Department expects there will be a continued demand for gas stations and services for conventional vehicles after 2035, when the annual new ZEV sales requirement peaks at 100 percent. As the new vehicle transition occurs, the job sector should also transition, reducing the adverse impacts on individuals and businesses. Also, as explained in the Response to Comments 613 through 632, the Department understands the importance of domestic manufacturing and jobs and will support efforts underway to encourage and increase domestic manufacturing of EV battery minerals and ZEVs generally.

See the Response to Comments 553 through 607 regarding the impact of emission control standards on innovation and production and the Response to Comments 289 through 419 on the total cost of ownership of an EV compared with an ICE vehicle.

With regard to the impact on businesses that provide delivery of goods and services, the Department is aware that most businesses that operate vehicle fleets prefer to manage their own

EV charging at central locations rather than relying on public fast charging. Fleet operators can more effectively plan usage and timing of charging EVs to best fit their use cases. For example, delivery trucks used throughout the day can be slowly charged overnight. Fleets that offer 24hour services can rotate vehicles in and out of service while they are being fast charged at a fleetowned facility. As noted above, this will be a paradigm shift for the industry and the economy. However, commercial vehicle fleet managers are already familiar with careful planning of vehicle operations and can adjust accordingly. Please see the Response to Comments 723 and 724 for discussion of the weight classes to which the ACC II program applies.

With regard to the impact on gas stations, as stated in the notice of proposal, the transition to ZEVs will occur over the next couple of decades; thus, retail businesses and employees will have time to respond to changes in the labor market. For instance, it is possible that new business models will develop as a result of public charging. Gas stations may choose to install EV charging stations, and attendants may be employed to assist with charging, and/or retail spending may increase as drivers stop to charge their electric vehicles.

State Revenue

512. COMMENT: While electrification is generally a good idea, there must be a sustainable funding source for State roads, bridges, and highways. The State must modernize the Transportation Trust Fund to account the impact of electrification on the gasoline tax. (549)
513. COMMENT: The Department should not adopt the rules because it has not addressed the impact on the gas tax and/or Transportation Trust Fund. (47, 92, 114, 128, 170, 219, 301, 322, 340, 383, 389, 401, 425, 616, and 627)

514. COMMENT: The Department should analyze the impact of the rules on the Department of Transportation, since most funding for the Transportation Trust Fund comes from taxes on gasoline and diesel motor fuel. It should also consider how the State will pay for basic road maintenance if there is a dramatic drop in sales of these fuels. Most other states have assessed an annual registration fee for EVs. New Jersey should decide whether to follow their lead and effectively have one department subsidize EVs while another department charges them an extra tax. Also, it should evaluate whether road construction costs should just be borne by the State's General Fund, and if so, where the nearly \$2 billion a year will come from. New Jersey should consider the duration and amount of subsidies for new EV purchases. New EVs are exempt from the sales tax, but ICE vehicles are not. If the transition called for by this regulation works, a significant portion of the State's sales tax revenues will disappear in a few years. New Jersey should evaluate the impact of that lost revenue and determine whether the sales tax will be added back on EVs, thereby making them even more unaffordable, or raise taxes on other items to make up the shortfall. (70)

515. COMMENT: Electric vehicle mandates should be on hold until there is a plan in place to fund New Jersey's highway infrastructure projects and repairs without putting the full cost on individuals who choose to purchase pre-owned vehicles due to the cost restrictions of purchasing a new electric vehicle. By New Jersey adopting California's ACC II, the assessment done by CARB did not take into account New Jersey's gas tax or the Petroleum Products Gross Receipts (PPGR) tax. Within N.J.A.C. 7:27-29A's Indirect Consumer Impacts, the stated result of this oversight is an increase of the cost of ownership for internal combustion engine vehicles. It is unfair to put the cost of roadway maintenance and highway infrastructure on those who are not

able to purchase a new electric vehicle to meet the mandate. The mandate should be held off until a successful plan comes to fruition to replace New Jersey's gas tax and continue to fairly fund highway infrastructure projects. (360)

516. COMMENT: The rulemaking is conspicuously silent on the impacts to the Transportation Trust Fund. Funding of transportation projects through the Transportation Trust Fund will decrease pursuant to the goals sought by ACC II. The societal and economic implications of the reduction of gas-tax dollars collected because of the decreased use of gasoline stations is not analyzed as an additional aspect of adopting ACC II. (27)

517. COMMENT: The ACC II rules completely miss the mark by not considering New Jersey's gas tax or the PPGR tax, the primary method of funding road and bridge repair and maintenance. The Department's negligence in ignoring this cannot be overstated. Quite simply, any mandates or rule adoptions should be held off until a successful plan comes to fruition to replace New Jersey's gas tax and continue to fairly fund highway infrastructure projects. The regressive tax and unfunded mandates facing New Jersey's most vulnerable residents, particularly those in overburdened communities, to foot the bill for road repair while EVs continue to get a free ride is alone reason to pause this entire rulemaking. (399)

518. COMMENT: The notice of proposal states that "[t]he Department does not attempt to calculate the exact amount of revenue lost from vehicle sales taxes, the motor fuels tax, and the petroleum products gross receipts tax because intervening legislative, regulatory, and policy changes any time in the next two decades could radically alter any projection of revenue, and such factors are outside of the Department's control and foresight." However, the Department should in fact analyze the impact on tax revenue generated from changes to gasoline

consumption and switching to increased consumption of electricity. Liquid transportation fuels are taxed at both the Federal and State level to fund the construction and maintenance of bridges, roads, highways, and other transportation initiatives. The Federal tax on gasoline is 18.4 cents per gallon, while New Jersey adds 10.5 cents per gallon in State tax as of 2023.

The rulemaking acknowledges that an additional 6.625 percent per vehicle tax revenue will be lost, as ZEVs are exempt from this sales tax; as well as impacts to the State's PPGR tax, which will be impacted by decreased demand for gasoline and diesel fuel (according to the statutory formula, which must be adjusted annually to meet the State's Highway Fuels Revenue Target, this would cause an increase in the price per gallon paid by consumers). The revenue collections in FY 2020 from these three taxes (motor fuels sales, vehicle sales, PPGR) in New Jersey were \$440 million, \$621.6 million, and \$1.38 billion dollars, respectively. (251) 519. COMMENT: The Department must consider how the State will replace approximately \$1.1 billion from Federal fuel tax revenue and over \$461 million in motor vehicle fuels tax revenue that would be lost if ICE bans go into effect. If the State utilizes an electricity consumption tax to replace fuel tax revenue, that will impact low-income families. (103)

520. COMMENT: Meeting the two million EV mandate by 2035 will cost the State \$70 billion, or \$35,000 per EV. This amount reflects the estimated direct costs, excluding all Federal subsidies, which will be recovered, in part, from New Jersey taxpayers. The costs include direct subsidies offered by the State pursuant to S2252; foregone sales tax collections, because ZEVs are exempt from the State sales tax; foregone State gasoline tax collections; subsidies for public and private charging systems; and local distribution system upgrade costs. The additional Federal

subsidies, primarily the Federal tax credit of \$7,500 and foregone Federal gasoline taxes, add an additional \$16.6 billion to the total subsidy cost, for an overall total of \$87 billion.

Based on the \$70 billion total estimated State cost to reach the two million EV mandate by 2035 and the 28 million metric ton estimated cumulative reduction in CO₂ emissions, the average cost per ton of CO₂ reduced is approximately \$2,500 per metric ton. This is 20 times greater than the social cost of carbon (SCC), which as shown in Table ES-1 of the notice of proposal is only \$116.00 per metric ton (2020 dollars) in 2050 when using the lowest assumed discount rate. Including the Federal EV tax credit and foregone gasoline tax collections, the cost per ton of CO₂ reduced increases to over \$3,100 per metric ton. As such, the State's EV mandate and the ACC II rules clearly fail a cost-benefit test for carbon reductions. (387)

521. COMMENT: The State raised the gas tax to cover loan payments, which puts a burden on the people. The State must ensure that EVs pay their part. (406)

522. COMMENT: The rules do not address if vehicle registration cost will rise to pay for the maintenance highway infrastructure. Other states have done this, with a surcharge on EVs, to maintain roads, but the rules are silent on this. (499)

523. COMMENT: The Department declines to even estimate the costs that will be incurred from motor fuels and petroleum products gross receipt taxes revenues losses by blaming intervening legislative, regulatory, and policy changes that could radically alter any projection. The same thing can be said for infrastructure grants and incentive programs that the Department proudly touts. One cannot have it both ways. Either the grants/incentives need to be excluded or the lost revenue needs to be included. Not to be consistent makes a mockery of the economic impact analysis.

These receipts are over \$2 billion a year. The programs these taxes fund will still need funding. This must be included in any accurate financial analysis. (102)

524. COMMENT: While the notice of proposal notes that the transition to all-electric vehicles will reduce the revenue derived from the gasoline tax, the rulemaking fails to provide any explanation for how that revenue will be replaced. This failure could place the current road and bridge construction program, which depends on the gasoline tax, in jeopardy. (128)

525. COMMENT: The Department has not explained how the State intends to increase taxes to offset the lost gas tax revenue. (219)

526. COMMENT: EVs do not pay road tax, only gas vehicles do. This needs to be fixed first.

(305)

527. COMMENT: The State should start taxing per mile for EVs currently on the road that do not pay additional tax imbedded in gasoline prices. (204 and 593)

528. COMMENT: To replace the revenue lost from gas taxes, the State will likely force people to pay by mile, which will be a privacy nightmare and a violation of the Fourth Amendment if government knows where people are traveling. (170)

529. COMMENT: The rules would force many to purchase ICE vehicles in neighboring states, which could hurt New Jersey through loss of the sales tax. (51)

530. COMMENT: The Department must consider how the loss of ICE vehicle sales in New Jersey will affect the State's economy. For example, the State will lose sales tax revenue, which will go to other states. (181)

531. COMMENT: Mandating EVs will result in people leaving the State, reducing property values and tax revenue. (115)

RESPONSE TO COMMENTS 512 THROUGH 531: The Department acknowledges that revenues from the Motor Fuels Tax and the PPGR tax may decline as ZEV sales increase. See 55 N.J.R. at 1784. As the Department explained in the notice of proposal, intervening legislative, regulatory, and policy changes in the next two decades could greatly alter any revenue production, and the Department neither controls nor can predict such changes. *Id*. To the extent that the comments suggest that the Department should make changes to the Transportation Trust Fund, those comments are beyond the scope of the Department's authority and this rulemaking.

Used Vehicle Market and ICE Vehicles

532. COMMENT: This regulation would not directly affect used vehicle sales, but would help to increase the number of used EVs available on the secondary market as the new vehicle market transitions to EVs, providing affordable clean vehicles to the majority of drivers in the State. (291)

533. COMMENT: A key part of the ACC II program is that the State needs to accelerate the sale of new EVs to create a viable used car market. The majority of Americans and New Jerseyans buy their cars in the used car market. Selling more new EVs provides the opportunity for people to get behind the wheel of an EV, whether it is new or whether it is used. (493)
534. COMMENT: By allowing the continued sale of used ICE vehicles, consumers will still be able to choose them and low-income households will still have access to affordable ICE vehicles. (376)

535. COMMENT: Used ICE vehicles are dirtier than new ones, while EVs get cleaner as they get older because cleaner energy resources are deployed. (329)

536. COMMENT: The Department should explain how steering consumers into the higher priced used car market, or purchasing out of State, helps consumers in the State. Every new car dealer sells used cars and many sell more used cars than new cars. Consumers do not want to pay higher prices for used cars. The restriction on the new car market and resulting increased pricing will redirect sales towards the used car market. The increased demand for used cars will increase those prices too. Faced with either unpleasant choice or higher prices, consumers may revert to keeping their older vehicles, resulting in other safety and emissions production issues not contemplated by ACC II. Today, the average age of a motor vehicle on the road in New Jersey is 12.2 years. But if consumer choice becomes limited pursuant to the ACC II rule and new cars and trucks become less affordable, then efforts to improve EV sales will be frustrated because consumers will hold onto vehicles longer. (27)

537. COMMENT: The rule will have a downward impact on the used car market. With fewer new ICE cars available, and with people holding on to their ICE cars longer, the used car market will see spikes in prices. It is a simple supply and demand response. People with less income, who could only afford a used car, may now need to buy an even older car, or be priced out of the market entirely. Older cars have more repair problems thus harming this population even further. The used car market is not an acceptable alternative for those who can no longer afford a new car because of the rules. The Department should have done an analysis on the used car market and how it will impact LMI, disadvantaged communities, seniors, the young, and the middle class. (113)

538. COMMENT: The rules will dramatically increase the price of used vehicles, so it is a nowin scenario for consumers. (518 and 663)

539. COMMENT: Many households rely on purchasing used cars and a shift to EVs and hybrid vehicles could limit the availability of affordable options in the used car market. (485) 540. COMMENT: According to a recent survey, about half of Americans say they are not interested in buying electric cars. Motorists who are interested in an EV and cannot afford one or are ambivalent may assume they will have the choice to buy a new ICE vehicle. Automakers will be anxious to sell their line of EVs and further minimize their selection of ICE vehicles, impacting supply. If EVs do not sell and ICE vehicle supply becomes limited, as the State experienced during the pandemic, selection and availability problems will ensue along with higher acquisition costs due to this State government mandate. (118)

541. COMMENT: The Department should not adopt the rules because people will only keep their ICE vehicles longer and/or buy ICE vehicles in another state. (7, 36, 51, 136, 188, 122, 196, 278, 281, 322, 518, 543, 588, 598, 546, 617, 639, 716, 639, and 518)

542. COMMENT: No one will ever sell their existing ICE vehicle for no other reason than an insurance policy. (519)

543. COMMENT: The ACC II rules will require that beginning in calendar year 2025, when model year 2026 vehicles start to be sold, one-third of new cars sold in New Jersey must be an EV. This mandate will limit the supply and drive up the costs of all ICE vehicles. (168) 544. COMMENT: The rules will cause ICE vehicle costs to increase because they will be in more demand and lower supply. Residents are already struggling financially and cannot afford more bad policies that limit options or impose penalties for keeping a less expensive item. (398)

545. COMMENT: The rules will cause an increase in the price of ICE vehicles, which might be the Department's desired outcome but for those who have no desire of purchasing an EV, the rules will be more harm than good. (94)

546. COMMENT: Banning gas cars will cause the price of ICE vehicles to skyrocket, hurting the poor, teenagers, and young people just starting out. It will also gradually make it harder to get parts for classic ICE vehicles. (712)

547. COMMENT: For those who cannot afford an EV, the rules will make it more difficult for them to obtain the car parts for their ICE vehicles because manufacturers will eventually stop making them. (623)

548. COMMENT: The rules will cause the cost of diesel fuel to increase, which will make building anything in the State unaffordable and have other ripple effects, such as impacts on pumping stations and treatment plans that have backup generators that run on diesel. (170) RESPONSE TO COMMENTS 532 THROUGH 548: The Department acknowledges that with any change in emission standards, there is the potential for some consumers to decide to purchase used, rather than new vehicles, or delay the purchase of new vehicles. However, the Department cannot objectively predict whether or how many people may keep their ICE vehicles longer. The mobile source emissions model used for estimating environmental benefits of the ACC II program (U.S. EPA MOVES) predicts vehicle ownership over time based on historical trends. Should the New Jersey vehicle population become older, if consumers decide to keep ICE vehicles for longer than predicted, there would be some impact on emission reductions. However, there is no practical way to predict and model this behavioral change ahead of an actual documented trend.

However, as CARB noted, the Federal emissions standards and the CARB LEV III emission standards (adopted by New Jersey) have been harmonized "and may continue to be harmonized if that trend continues regarding CARB's LEV IV standards." CARB FSOR Appendix A, at 15-16. As such, even if there is a greater proportion of used vehicles in the State or drivers keep their ICE vehicles longer, any decrease in emissions reductions benefit is expected to be slight. Further as CARB noted, "the used vehicle market is not necessarily a localized market that depends on vehicles supplied solely from the State." FSOR Appendix A, at 16. The used vehicle market is an interstate market, with vehicles "sold through various channels, including auctions that are open to parties from any state...." *Ibid*. This "helps to equilibrate used vehicle prices across the country." *Ibid*.

Domestic Manufacturing

549. COMMENT: For the foreseeable future, the cleanest, most reliable, and most affordable transportation fuels will continue to come from petroleum-based gasoline and diesel, which is the most cost-effective form of energy. Managing future emissions will necessitate continuing to use petroleum-based fuels more efficiently; particularly because affordable energy is essential to continuing economic growth and prosperity. Domestic refiners are making the cleanest transportation fuels in the world at costs affordable for Americans across the economic spectrum. Americans also continue to use these fuels more efficiently, in a manner that ensures continued health while advancing potential for upward economic mobility.

The State's proposed *de facto* ban on ICE vehicles risks premature refinery capacity reductions. The rules put at long-term risk the State's reliable fuel supply and threatens union

and non-union energy manufacturing jobs in the State, with the effects being borne the most by lower-income residents. The State has been steadily losing refining capacity, with almost 300,000 barrels per day lost with the closures of three refineries between 2010 and 2013, making the region even more dependent on fuel imports from countries with lower environmental and labor standards. A decade later, New Jersey cannot afford to risk further loss of refining capacity. The adoption of ACC II unfortunately could lead to such a result as it would be a clear signal to the refiners and their investors that their businesses – and the jobs they create – are not valued or wanted. The refining industry has only recently recovered from COVID-related demand destruction that significantly impaired the sector's financial results. Like any other business, refineries need to know they will have a decent prospect of a return on their maintenance and capital project investments. Refineries plan out a timeline for major maintenance and capital projects that require hundreds of millions of dollars of investment over the span of several years.

Given the timeframes and amount of money required for refinery maintenance and capital projects, overly aggressive, aspirational regulations that essentially look to eliminate liquid transportation fuels can impact near term refining business decisions. When faced with negative signals like adoption of the ACC II regulation, investors would often rather see refiners forgo projects and, in some cases, prematurely shut down assets rather than take the risk that aspirational mandates, coupled with adverse market cycles, may prevent a return on their massive expenditures. Such a scenario is exactly what happened in California, which has resulted in unreliable and extremely costly fuel imports to meet demand that exceeds the state's

fuel manufacturing capabilities, sending consumer prices skyrocketing and leaving them significantly higher than many other parts of the nation.

New Jersey - and the East Coast at large - cannot afford to lose any more refining capacity. The region that has lost 70 percent of its indigenous refining capacity since 2009. As a result, the region now relies on foreign fuel imports to meet nearly 20 percent of its needs and Gulf Coast refiners for over half of regional fuel demand, primarily through the Colonial Pipeline. The remaining East Coast refining capacity can only supply approximately 15 percent of the region's fuel needs. Gas lines that materialized in the aftermath of the Colonial Pipeline cyber-attack and recent concerns over potential winter heating oil shortages already provide dire warnings of the consequences of lost refining capacity. These warnings should be particularly concerning because the State is incapable of realistically achieving 100 percent light duty electric vehicle sales by 2035. The rules would continue the trend of making the region more reliant on fuel imports from countries with lower environmental and labor standards. (342) 550. COMMENT: The ACC II program would force reliance on BEVs, which will place unnecessary risks on and harm energy and economic security. The U.S. is now a net exporter of crude oil and petroleum products, a position of energy security not seen since 1949. China has a dominant position in the global supply chain for critical mineral extraction, processing, and battery production. States adopting ACC II are effectively trading away our hard-earned energy security and leaving our economy more dependent on and financially beholden to countries that control minerals required to manufacture EV batteries. (167)

551. COMMENT: The rules will destroy an American industry and transfer energy sources and industrial market overseas. (583)

552. COMMENT: All this will do is enrich China, destroy Africa, and make everyone in America poorer and more miserable. Electric everything will not work. Oil is the power of the world. (391)

RESPONSE TO COMMENTS 549, 550, 551, AND 552: The Department disagrees that the ACC II rules are a *de facto* ban on ICE vehicles. As explained in the Response to Comments 16 through 44, the ZEV portion of the ACC II rules require manufacturers to produce and deliver for sale in New Jersey an increasing number of new ZEVs as part of their light-duty vehicle fleets. Manufacturers may partially meet their obligations with PHEVs, which have an internal combustion engine. The ACC II rules include certain exemptions at N.J.A.C. 7:27-29A-3. Moreover, the ACC II rules do not apply to used vehicles. The Department projects that roughly 40 percent of the light-duty vehicles in New Jersey will be electric by 2035. That percentage is not expected to approach 100 percent until 2050 or beyond. The Department cannot predict how the overall markets for oil-based products, which depends on many factors, such as global economic growth, political stability in oil-producing regions, and global exchange rates, will change over the coming decades, and what impact those changes will have on New Jersey's refineries and their employees. It is worth noting that the production of gasoline only makes up a portion of New Jersey's refining capacity. According to the EIA, New Jersey's two refineries "produce a wide range of refined petroleum products, including motor gasoline, distillate fuel oil, aviation jet fuel, and petrochemical feedstocks." Other products, such as petrochemicals, would not be impacted by this rulemaking.

Consumer Choice

553. COMMENT: 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. Technology-driving policies like ACC II and the Advanced Clean Trucks (ACT) program help to close the gap between supply and demand for zero-emission commercial vehicles. 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. (230 and

377)

554. COMMENT: Market-enabling policies like the Advanced Clean Trucks (ACT) program and ACC II rules 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. (230 and 377)

555. COMMENT: New Jersey, by electing not to join the ACC II program in full, would have detrimental impacts on consumer choice in the State. Failure to adopt ACC II would result in fewer clean vehicle choices available for New Jerseyans. But if the State adopts the standards, New Jerseyans will have access to the latest zero-emission vehicle makes and models available. To ensure that there is an equitable transition and distribution of these vehicles and drivers reap the health and economic benefits that they provide, an increased number of ZEVs in New

Jersey's new vehicle market will help to increase the number of used ZEVs in the market over time. As ACC II affects only the new vehicle market, the sooner that New Jersey implements ACC II and these new ZEVs are on New Jersey's roads, the sooner that these clean vehicles will enter the used vehicle market, providing opportunities for all New Jerseyans to purchase ZEVs. (292)

556. COMMENT: The transition to EVs is occurring. Automakers have already invested over \$210 billion in investments here in the United States to support this transition, while many major automakers have also announced increased EV model availability and in some cases complete phaseouts of gasoline vehicles within the next 15 years. ACC II helps to accelerate this transition and guarantee that New Jerseyans will be able to purchase the latest clean vehicles they want here in New Jersey. Failure to adopt these regulations means that New Jerseyans would miss out on the air quality, public health, and economic benefits. (291)

557. COMMENT: The adoption of the ACC II regulation will increase the number of ZEVs or hybrid vehicles delivered to New Jersey dealerships. (680)

558. COMMENT: Adopting the ACC II program will increase consumer choice for New Jersey residents and drive the ZEV market. (535)

559. COMMENT: The EV market is established and growing nationally and the adoption of the ACC II rules will provide certainty to the auto market by strongly signaling that New Jersey residents want more EV options. EVs may become more widely available in our neighboring states that adopt ACC II more quickly, if New Jersey does not adopt the ACC II rules this year. This may force consumers interested in purchasing an EV as their next vehicle to look out of State and prevent some consumers from being able to take advantage of tax credits and rebates

available in State. Additionally, the acceleration of the new EV market will help create an accelerated used EV market, making EVs much more affordable. (461)

560. COMMENT: The EV market is established and growing nationally and adopting ACC II in New Jersey will only strengthen that market. (462)

561. COMMENT: ACC II is a critical component of a larger strategy to address the market failure of climate change. By establishing specific thresholds and deadlines, ACC II provides a degree of market certainty that private investment requires and will help lessen the monopoly power of fossil fuel interest. The program design is aligned with decisions by major car companies to transition from ICE vehicles to EVs within the same timeframe. (376)

562. COMMENT: The ACC II program will gradually move the market towards safer, cleaner, and cost-saving technology, such as EVs and plug-in hybrids. (18)

563. COMMENT: The rules are supported because they will make more EVs available. (71)

564. COMMENT: The ACC II rules pertain to the automotive sector, where safety, efficiency, and emission standards are nothing new and certainly nothing bad. Examples, such as seatbelts, airbags, catalytic converters, no lead in gasoline, were all criticized at the time as being mandates and market interference, but the end result has been a cleaner, safer, and higher quality vehicle fleet available to consumers, resulting in substantial benefits. The ACC II program is categorically the same as these examples to improve the vehicles everyone drives. There is also a choice of whether to continue polluting and affecting the climate or living in a future with less NO_x and PM pollution and less smog, as well as responsibly addressing the climate crisis. (213) 565. COMMENT: There are costs and benefits of transition, and it is important to draw that circle broadly and widely and consider all benefits that are typically not reflected in current

markets. There are times and places for good regulations. This is the time and place for this regulation. New Jersey must signal to the auto market that the State is committed to the EV transition. Adopting ACC II will ensure that a variety of new EVs is available to New Jersey customers. Automakers are more likely to send EVs to states that have adopted the ACC II regulation. New Jersey is not alone. There are other states that have adopted and are on track to adopt this policy that make up a huge percentage of the car market in the United States. It is important to understand that pursuant to this rulemaking, the used ICE vehicle car market would continue for some time. Most of the cars that are purchased in the State of New Jersey are used cars. (234)

566. COMMENT: Automakers are ramping up the number of EV models and pricing options. Without the adoption of ACC II in New Jersey, electric cars will go to other neighboring ACC II states in the region and other countries with EV sales mandates. This will reduce New Jersey dealership options, EV availability, and sales. (265)

567. COMMENT: Each year since 2014, about 1.35 times as many new EVs were sold as the year before. If that continues, by 2032, all new vehicles sold in New Jersey would be EVs. The major vehicle manufacturers have announced that the majority of cars they plan to produce will be ZEVs by 2035. The market will have more choice driven by the auto manufacturers themselves. (277)

568. COMMENT: Adopting ACC II will produce good-paying American jobs, reduce consumer costs, improve public health, reduce carbon emissions, and send a strong signal across the EV supply chain that robust demand for electric automotive technologies will continue, laying the groundwork for further industry expansion. The full EV supply chain is preparing to support

increased transportation electrification and New Jersey's adoption of ACC II will help ensure the regulatory certainty needed to protect today's investments that will put the transportation sector on a path to a zero-emission future. (79)

569. COMMENT: The ACC II rules would provide certainty while requiring manufacturers to increase the production of ZEVs with the ultimate goal of 100 percent ZEVs by 2035. (402) 570. COMMENT: Having the certainty that the rules are coming will ensure that New Jersey does not lose out on EVs, especially with the early compliance values. Further, the pace of EV innovation, cost reductions, and investment, coupled with the public health and welfare imperatives to address criteria air pollution in the accelerating impacts of climate change support New Jersey's adoption of ACC II. (339)

571. COMMENT: The rules are ambitious but achievable. ACC II was developed by policymakers after extensive engagement with stakeholders, including industry, and a robust technical feasibility and cost/benefit analysis. The rules will offer benefits of consumer assurance measures, such as minimum battery warranties and durability standards, and long-term market certainty. Moreover, the ACC II standards provide much needed certainty to guide long-term investments for all market stakeholders and participants. Unambiguous regulatory requirements for ZEV sales are key to orient capital investment in the vehicle industry and support long-range infrastructure planning by charging providers, utilities, and grid operators. (671)

572. COMMENT: Consumer protection starts with accountability and enforceability. Automakers need to be held accountable for the quality of the vehicles sent to the market. This is echoed by ACC II. Manufacturers will have to produce a range of ZEV types to meet various consumer needs, including affordability, and demonstrate quality that is comparable to internal

combustion engines or vehicles. The goal of 100 percent of new light-duty EV sales by 2035 is a pivotal decision for the State that deserves additional support to fuel the transition. (329)

573. COMMENT: The supposition that the market should dictate decision ignores the lives lost and the illness caused by fossil fuel pollution. ACC II ensures a managed transition to the inevitable reality and acknowledges that the health of New Jerseyans are at stake. (127) 574. COMMENT: Not adopting ACC II will put New Jersey at a competitive disadvantage compared to other states that have adopted ACC II and will be a disserve to all New Jerseyans and the public interest. (376)

575. COMMENT: The Department should not adopt the rules because consumers should be allowed to choose whether to buy electric. Some commenters cite specific concerns including the loss of competition in a free market, the perceived advantage to particular manufacturers (opposition to a monopoly), the perceived advantage to a particular technology (and exclusion of other reduced and/or zero-emission technologies), collateral impacts on related industries and/or jobs, and/or the desire to allow EVs to phase-in based upon consumer interest and affordability. (12, 13, 14, 15, 22, 23, 28, 32, 33, 35, 39, 43, 50, 51, 55, 61, 63, 66, 76, 77, 81, 83, 84, 97, 98, 99, 101, 110, 111, 144, 115, 121, 123, 132, 135, 136, 142, 143, 152, 163, 167, 171, 176, 177, 178, 180, 182, 184, 186, 187, 193, 195, 205, 214, 223, 226, 233, 235, 236, 246, 252, 253, 257, 261, 267, 268, 269, 273, 282, 285, 295, 296, 301, 318, 322, 324, 332, 333, 336, 343, 361, 363, 369, 370, 374, 385, 386, 390, 392, 393, 396, 401, 406, 408, 413, 418, 425, 426, 427, 431, 440, 441, 442, 443, 444, 447, 499, 454, 455, 456, 457, 460, 464, 471, 475, 478, 483, 502, 504, 508, 509, 513, 516, 517, 519, 524, 542, 543, 544, 552, 561, 568, 570, 575, 576, 580, 581, 582, 584, 589, 592, 594, 595, 596, 597, 599, 601, 602, 603, 605, 609, 613, 616, 617, 618, 622, 624, 625,

627, 639, 641, 646, 654, 658, 661, 662, 672, 674, 675, 682, 697, 698, 693, 694, 699, 704, 710, 712, 714, 715, 716, 722, 723, 725, 726, and 728)

576. COMMENT: Although a clean environment is supported, the Department must look at every factor, including consumer choice, impact on automotive enthusiasts, and the need for competition for competitive prices and innovation as opposed to the potential monopoly that could result from only EVs. (620)

577. COMMENT: True progress will come from private sector innovation in the future, not idealistic government mandates that imperil our prosperity. (528)

578. COMMENT: The timeline is way too much and too fast. People are warming to EVs on their own and over time, more and more vehicles will become EVs; the car manufacturers are all moving in that direction. The government needs to allow the market to develop on its own. (699)

579. COMMENT: If EVs were so good, the Department would not need a rule to force people to buy them. (441)

580. COMMENT: Any transition should happen through a self-selected and incentive-based approach. Mandates are not the way to reduce vehicle emissions and/or are counterproductive. (131 and 500)

581. COMMENT: By not including construction vehicles, buses, fire trucks, ambulances, dump trucks, plows, small airplanes, as examples, the rules impact only, and, therefore, discriminate against, ordinary citizens who should be left alone. (425)

582. COMMENT: Banning ICE vehicles will punish the most vulnerable and economically challenged members of society. When the government interferes with the market and

disadvantages proven and less expensive legacy technologies, the financial burden is passed to the consumer through inflated new-product costs, infrastructure costs (for example, chargers), and decreased State revenue because of incentive and rebate giveaways. (163)

583. COMMENT: The rules would remove the right of consumers and businesses to make a choice in their purchases. Incremental change is needed, not a rapid change in the form of this forced mandate on the public that will have serious negative social and economic consequences. (319)

584. COMMENT: Consumers demand choice. The market responds to consumer demand. ACC II will simply negate consumer choice by administrative fiat. Realistically, New Jersey will attain a 100 percent EV sales market when consumers elect to buy zero-emission vehicles, not when the government mandates them. New Jersey and the Federal government already offer interested consumers considerable financial incentives to entice them to purchase an electric vehicle. Those incentives help to reduce the purchase price, by providing cash on the hood or providing a tax rebate (as in the case with the Federal incentive program). Despite those incentives, EVs still only account for less than 10 percent of all new vehicle sales in New Jersey. ACC II is wrong for New Jersey because it fails to recognize marketplace realities. EVs are clearly not for everyone, even with all the available incentives. New Jersey already faces an affordability crisis. Removing the freedom of consumer choice and market competition will only drive-up costs and price out many working families and younger workers from the car market. (7)

585. COMMENT: The rules will destroy transportation independence for working class families. (266)

586. COMMENT: Electrification must be accomplished for the good of the planet. However, the State cannot do it through forced adoption and arbitrary, inflexible deadlines. That only passes the cost burden to the most vulnerable communities - the same ones that are the lifeblood of the State's economy, and who are most often damaged by the very pollution sought to be reduced. The economies in this State and the country in general are based on mobility. Data on commutes clearly indicate that individuals expect to travel to reach their job, and that employers likewise expect them to do so. However, for a variety of reasons public transportation is not a realistic option for a large portion of that workforce. The workforce needs cars. More specifically, they need affordable cars. Combustion-based vehicles, despite their other weaknesses, are relatively easy and inexpensive to keep running as they age. This longer-term reliability has resulted in a rich market of used cars for people with limited means to buy and to keep on the road. The mobility of the State's workforce – and by extension the health of the State's economy – depends on the viability of that market. As a result, as the State forces gas cars out of the market and forces electrics in, and the market of inexpensive maintainable cars dwindles, income-limited individuals who cannot afford to buy new will increasingly be faced with a choice: buy a used electric car that, when it breaks, they will not be able to afford to repair; or spend inflated prices far beyond what they can afford on a gas car. Every EV on the road today will experience a battery failure and require replacement. If the State removes the ability of individuals already living paycheck to paycheck to be mobile by inflating the price of their cars, the State may find that the ability of those same people to get to work at all over comparatively shorter distances is dramatically diminished – collapsing already fragile personal economies. (2)
587. COMMENT: EVs do not meet every driver's needs or lifestyle. Consumers demand choice. Yet, ACC II will decrease consumer choice for the vehicles that they want to buy. (9) 588. COMMENT: By limiting the market and, therefore, possible competition, consumers might end up paying more while having fewer choices. Certainly, a mandate on this scale necessitates a thorough conversation with all stakeholders to ensure that it is feasible, effective, and does not have unintended negative consequences for consumers and the market. (8) 589. COMMENT: Not all consumers want EVs. EVs still account for less than 10 percent of all new vehicle sales in New Jersey. According to the Department, as of June 2023, there were 123,551 registered electric vehicles in New Jersey, compared to 91,515 in June 2022. While the number of registered electric vehicles is growing, the number pales in comparison to the sale of non-EVs. New Jersey has 2.5 million registered vehicles. So most registered vehicles are not EVs. That is a consumer choice, but ACC II limits that consumer choice. Our resilient residents are working class New Jerseyans who struggle valiantly to make the most of what they have. The government should not force working class people to buy vehicles they cannot afford to buy, nor should it limit their purchasing options or inconvenience them when they choose an option that is not preferred by the government. Creating a government regulation that limits New Jersey residents' options to buying in New Jersey only the vehicle mandated by government, buying only used vehicles, or traveling outside of the State of New Jersey for the vehicle of their choice, is not the proper role of government. (1)

590. COMMENT: Decisions regarding vehicle technology and choices should be left to the consumers and the competitive forces of the market, rather than being dictated by regulatory bodies. Environmental stewardship is important as well as supporting advancements in

technology that lead to cleaner and more efficient vehicles. However, the ACC II rule imposes undue restrictions on the citizens of New Jersey without adequate consideration for the economic impact and individual freedoms. Consumer autonomy and the free market must be preserved. A more balanced and market-driven approach, rather than a mandate, is the appropriate path forward to address environmental concerns while preserving individual choice and economic prosperity. (10)

591. COMMENT: The ACC II program limits consumer choice and may discourage consumers from replacing older vehicles or force them to buy out-of-State. While electric vehicles have their merits, they are not suitable for every consumer due to factors like price and individual needs. This mandate could limit market competition, potentially leading to higher costs and reduced choices for consumers. A comprehensive dialogue with stakeholders is essential to ensure feasibility and prevent unintended negative consequences. It is crucial to protect the environment and consumers. The Department is urged to reconsider the mandate, prioritizing a balanced approach. (6)

592. COMMENT: The Department should not adopt any rules that would severely limit or outright prohibit consumer choice. Ensuring clean resources and mitigating the effects of the climate crisis are priority policy goals. However, it is critical to the financial security of New Jersey residents that any electrification mandates be properly and thoroughly vetted. Electric vehicle affordability and accessibility must be of paramount concern. Forward-thinking environmental policies, like electrification, are key to reducing the effects of global warming. However, regulations that have drastic effects on the State's economy and residents' lives must be highly scrutinized and carefully reviewed for financial viability before being implemented.

Any rules that significantly limit the accessibility or even legality of owning and buying gas vehicles can be detrimental to New Jersey and its residents. (5)

593. COMMENT: While environmental concerns are of utmost importance, the ACC II rules raise several critical issues that must be carefully considered before adoption. It is essential to determine demand rather than imposing inorganic demand thresholds through government mandates. Government regulations should not artificially create demand thresholds for specific technologies. Instead, the market should naturally dictate the adoption of electric vehicles based on consumer preferences, economic factors, and technological advancements. The automotive industry is already moving towards the production and sale of EVs in response to consumer demand and global emissions goals. It is unnecessary to mandate further commitment from automakers, as they are motivated by market forces. New Jersey should explore and evaluate all available options for decarbonization instead of pursuing an outright ban on certain vehicles within a limited timeframe. A more flexible approach is needed to address diverse consumer needs and preferences. (312)

594. COMMENT: It is fundamentally unfair and unjust for the government to completely outlaw the sale of new gasoline-powered vehicles. More than 90 percent of consumers continue to choose gas-powered cars for a wide variety of reasons, and that option should not be stolen from them by government fiat. Any transition to more EVs or to exclusively EVs should be made through the conscious choice of the motoring public, and all involvement by the State should be through offering positive incentives. If EVs are always better in every circumstance for every motorist, then simply let the market do its work without a ban. If some are not choosing EVs over gas vehicles, then instead address the specific concerns they have.

The commenter states that they are not asking for a level playing field, just opposing a total State government ban on a widespread, reliable technology that has been widely used for a century, one which over 90 percent of New Jerseyans chose last year. If EVs are great for every single person in every single circumstance, then simply let the market speak for itself and let motorists decide for themselves what vehicle makes the most sense for their lives. If the only way a transition to all battery electric vehicles can be done is with a ban on new internal combustion engines, then that should be seen as an indictment of the policy. (70) 595. COMMENT: What is needed is a market-savvy national, indeed international, solution, not a piecemeal state-by-state solution to climate change or a political solution with no real hope of moving the market. The ACC II rules ignore the reality of the marketplace, which is that government can mandate but success is only achieved when consumers embrace. The BEV share of New Jersey's registrations and market share from 2018 through 2023 to date was seven percent in 2022, and 9.1 percent in 2023 (to date). The percentage must jump to 43 percent in 2027. Consumers will decide when New Jersey becomes a 100 percent EV market, not the government. Adopting this rulemaking, when more flexible options are available, is ill-advised. There is no evidence, based on past marketplace performance, that consumers are ready to buy ZEVs or PHEVs anywhere near the numbers mandated pursuant to ACC II. For sales from 2026 through 2035, the rules contemplate an unprecedented and aggressive trajectory of consumer adoption of new technology that is inconsistent with anything we have seen in the past. Indeed, pushing ahead with ACC II without even acknowledging the fact that New Jersey consumer purchases of ZEVs and PHEVs did not keep pace with the substantially lower thresholds in ACC I, raises serious questions about the assumptions that support the analysis behind this

rulemaking. The ACC II rules, proposed by the Department to make only EVs available for sale by 2035, will slow New Jersey's roll toward an all-ZEV future, not accelerate it. Slow and steady wins the race. By imposing stringent and unrealistic mandates on the percent of EVs that manufacturers deliver for sale in New Jersey, the rules will not force more people to buy EVs if they cannot afford one, if they cannot charge at home, or if they do not trust an anemic and unreliable public charging infrastructure. Limiting consumer choice and imposing marketplace mandates that will drive up the price of new cars in New Jersey will only force consumers into the used car market, which is not regulated by ACC II; to hold onto their older cars longer; or out-of-State to purchase the car they want and can afford and register in New Jersey. None of these options will advance the shared goal of increasing ZEV sales. The Department should explain to what extent consumers will be prohibited, starting in 2027, from buying the car in New Jersey that they want to buy, whether their choice is a new ICE, hybrid, or electric vehicle, and in subsequent years as the EV sales requirement increases. (27)

596. COMMENT: The Department states that this mandate is not limiting consumer choice, but it is actually enhancing consumer choice. The Department is wrong. The Department knows they are forcing consumers to buy a product they otherwise would not buy. The Department has done a study, referenced in the rule summary, which lays out a business-as-usual penetration of EVs compared to the penetration under the ACC II rule. There is a large gap in reality. If consumers were willing to purchase EVs then this rule would not be needed. But consumers have rejected EVs at the levels the Department wants so they are making the major decision to take away consumer choice. This draconian mandate in deciding who can drive a car and who cannot and what type of car they can drive is unprecedented and wrong. The consumer market is already

speaking. While about nine percent of new car sales are EVs (far shy of the existing mandate of 22 percent pursuant to the existing regulatory scheme), these sales reflect the early adapters, mainly people who can afford these cars and who like their performance and the fact that they are zero emissions. EVs are good cars if one can afford them. The challenges of implementing these rules will not be resolved in the truncated timeframe this rule envisions or overcome by government mandate. It is extremely arrogant of the Department to think it can dictate the market by fiat. Capitalist markets have succeeded in the past and have been cost efficient because they are market driven and not government mandated. Governments around the world who have failed to recognize the power of markets and who have, instead, set policies demanding consumer actions have failed. (113)

597. COMMENT: Despite a global public relations campaign and hundreds of billions in Federal, State, and local subsidies, electric vehicles simply fall short by every measurable metric. The State's tax-paying residents and businesses should not be mandated through regulations and executive orders to utilize knowingly inferior technology. For example, the SAE International paper co-authored with Car and Driver shows that in testing, EVs are far worse at matching EPA estimates than gas-powered vehicles. This study goes further to compare EPA fuel-economy and range estimates to the results of real-world highway tests, with EVs failing to meet the EPA's range figures on average. In an industry, like heavy construction, where productivity matters, these types of results will further burden small, medium, and large business, as well as dramatically impact residents. (399)

598. COMMENT: Given the advantages of ZEVs and improvements on the way to mitigate the disadvantages, ZEVs are an appealing vehicle choice to some but not all. Vehicle choice has

long been supported. In a free market, automakers market vehicles that meet the needs and wants of motorists and EVs are part of that mix. But the move by global legacy automakers to transition to predominantly offering EVs is not driven by the free market. Instead, it is driven by government policies around the world aimed at mitigating the impact of climate change. This clash on so many levels is bound to create a chaotic and troublesome transition for all concerned. There are engineering challenges and high costs of making and supporting EVs at scale. (118) 599. COMMENT: While the rulemaking acknowledges consumer considerations and potential impacts to vehicle manufacturers, dealers, and the service industry, it fails to show the significant impact that adoption of ACC II would have on individuals and small businesses who, when purchasing a new passenger vehicle, will have very limited options for buying an ICE vehicle in New Jersey. (251)

600. COMMENT: The ACC II rules ban the sale of all new ICE vehicles after 2035. Such a ban does not open choice. If EVs are superior to ICE vehicles, consumers and businesses will adopt them without the need for massive subsidies and mandates that eliminate the ability of consumers to purchase ICE vehicles. The ACC II ZEV mandates will not be reached at the current rate of EV purchases. This raises the important policy question of what the Department intends to do when it becomes clear that consumers are not responding to the mandates and whether the Department intends to adopt even more draconian approaches to force consumers to "choose" EVs. EVs were first developed over a century ago and were quickly made obsolete by ICE technology, which continues to improve. EVs remain a niche technology. If consumers do not wish to purchase EVs, they should not be forced to do so. The rule is an example of heavy-handed government regulation that will benefit only the few, at the expense of the many. (387)

601. COMMENT: If the rules are adopted, new ICE vehicles will be banned, thus limiting consumer options and thwarting environmental progress through innovation, while aggressively mandating the purchase of EVs by consumers, which will adversely impact consumers. (103) 602. COMMENT: The New Jersey EV market in 2021 represented 6.3 percent of automotive sales. No State incentive can realistically increase this to 100 percent in 2035. Adopting ACC II would require 35 percent of all new vehicles sold to be only EVs in 2025, three years from now. As the president of NJCAR recently stated, "Hope is not a plan." The rules are an attempt to force a centralized State controlled, command-and-control economy that will limit consumer choice and threaten to make new cars unaffordable for working and middle-class families, which in turn will threaten affordable mobility for most New Jerseyans. For the vast majority of New Jerseyans, EVs are not an option due to the uncertainty, range anxiety, charging issues, and additional costs associated with EVs. Yet the State plans to force residents to buy taxpayer-subsidized vehicles that are primarily purchased by the wealthy today. (342)

603. COMMENT: The government should allow the free market to work and not artificially prop up EVs through subsidies. (282 and 593)

604. COMMENT: Although climate change is a serious threat, banning ICE vehicles and mandating EVs will only solidify opposition to EVs and the backlash will only delay and stymie EV adoption and efforts to cut carbon emissions. Rather than creating an artificial ban on ICE vehicles, the State should use positive incentives to increase EV adoption and consumer awareness and win public confidence and support first. (554)

605. COMMENT: If the State wants to promote the use of EVs or hybrid vehicles, the effort should be limited to provide incentive to buyers, not penalizing those who choose to buy an ICE vehicle. (295)

606. COMMENT: Instead of banning ICE vehicles, the Department can promote EVs with rebates and/or incentives. (51 and 271)

607. COMMENT: The Department should not mandate all vehicles in 2035 to be EVs and should reconsider using incentives to encourage additional EV usage in the State. (241 and 625) RESPONSE TO COMMENTS 553 THROUGH 607: As discussed in the Response to Comment 15 and the Response to Comments 238 to 258, transitioning to light-duty cars to ZEV technology is critical if New Jersey hopes to reduce greenhouse gas emissions and other air pollutants, which will have public health benefits, protect water and air quality, and safeguard ecosystems in the State. See, for example, 55 N.J.R. at 1773, 1780-81.

Some commenters argue that the market (consumer demand) should dictate when and whether ZEVs become the majority in the light-duty vehicle market, and that currently the majority of consumers are not interested in ZEV technology. However, the EPA, CARB, and the states that have adopted California's motor vehicle standards pursuant to section 177 of the Clean Air Act (known as "Section 177 states") have used emission standards to compel the market to adopt feasible, emission reducing technology measures for decades. Emission standards require manufacturers to produce the vehicles consumers want while using the technology necessary to reduce air pollution, protect public health, and mitigate the harms of climate change.

ACC II ensures "that [ZEVs], including their emission controls, perform properly throughout their life ... and that consumers are not deterred from purchasing them both new and used. [...] The minimum technical requirements a ZEV must meet pursuant to ACC II, in order to be certified by CARB, are very similar to the multi-pollutant exhaust emission standards that CARB and the EPA have been setting for ICE vehicles for decades. The range value, durability, useful life standards, labeling, warranty and recall requirements, data standardization, and charging requirements are all included in the ACC II program to ensure that owners of ZEVs have the same experience and comfort level that the owners of CARB-certified or EPA-certified ICE vehicles have had for decades." See 55 N.J.R. at 1776. Though it is true that consumer demand for ZEV technology is not currently as great as consumer demand for ICE technology, the increasing annual ZEV requirement through model year 2035 is expected to incentivize manufacturers to produce a greater volume of vehicles in more market segments to appeal to a larger number of consumers with varied operational needs and budgets.

The Department recognizes that, so long as consumer choice remains limited, vehicle affordability will remain limited. But as further detailed in the Response to Comments 289 through 419, ZEV vehicles are expected to reach price parity with comparable ICE vehicles as the ZEV sales mandate increases due to technology advances and economies of scale. As more models of new ZEVs become available for purchase, and a greater number of new ZEVs are sold, a greater number of more affordable, used ZEVs will be available on the market. See the Response to Comments 532 through 548. And as a result of the minimum technical requirements of ACC II, the used ZEVs coming on the market after model year 2027 will have greater range for a longer period of time and be subject to the new battery warranty provisions within ACC II.

As discussed in the Response to Comments 608, 609, 610, 611, and 612, a recent study demonstrated that most EVs driven close to 100,000 miles still have at least 90 percent of their original range left. For now, the choice to purchase a new, strictly ICE vehicle remains possible through at least model year 2034. Used ICE vehicles may be purchased indefinitely. And PHEVs (which can be powered by electric or gasoline) will remain a choice pursuant to ACC II indefinitely, because manufacturers may use CARB-certified PHEVs to satisfy a portion of their annual ZEV requirement. See the Response to Comments 45 through 82.

As discussed in the Response to Comments 87 through 115, the Department recognizes that the available makes and models of ZEVs on the market today will continue to increase. CARB's early model year flexibilities were designed to allow time for manufacturers to expand upon their existing product offerings. See the Response to Comments 16 through 44 regarding the ZEV requirement and vehicle values. In short, the purpose of the rules is not to curtail consumer choice, but to spur innovation among manufacturers so that consumers will have greater choices among ZEVs.

Batteries

Degradation

608. COMMENT: Battery degradation over time is a concern. With current technology, both light- and heavy-duty vehicle manufacturers expect battery capacity to incrementally diminish over time. Some heavy-duty chassis manufacturers are only warranting batteries to not fall below 80 percent capacity within two years of purchase. Not only are these batteries very expensive to replace, but a battery electric vehicle that meets the minimum range requirement when new may

fall below operational minimums early in its lifecycle making the unit unusable for its intended task. In addition, cold weather operation may reduce battery efficiency by as much as 40 percent creating a situation where a vehicle is only usable for part of the year. (651)

609. COMMENT: Batteries do not have the dependability of combustion engines, especially when saltwater is involved. (81)

610. COMMENT: EV batteries have a relatively short life. (365 and 441)

611. COMMENT: Battery life declines much more rapidly compared with engine life. (45)

612. COMMENT: The Department has not addressed what happens when an EV battery just stops taking a charge. ICE engines can last a very long time with proper maintenance, whereas a battery will eventually just stop taking a charge no matter how the maintenance. The Department should explain if there have been studies on the lifespan of a battery. (527)

RESPONSE TO COMMENTS 608, 609, 610, 611, AND 612: While the Department recognizes that batteries do degrade over time, recent data show that such degradation is even less than predicted. Recurrent published a study based on real world data collected from approximately 15,000 electric vehicles (https://www.recurrentauto.com/research/how-long-do-ev-batteries-last). The study indicates that only about 1.5 percent of the vehicles in the study needed battery replacements outside of recalls or warranties and many retained 90 percent of their charge at 100,000 miles driven. *Ibid*. In comparison, the most expensive major components that may require repair or replacement on ICE vehicles include the engine and transmission. Major engine repairs can include cylinders, head gasket, and camshaft work. Consumer Reports says that many ICE vehicle engines can be maintained to 200,000 miles, but some models may need major

engine work at less than 100,000 miles (<u>https://www.consumerreports.org/cars/car-repair-maintenance/cars-that-are-most-likely-to-need-an-engine-rebuild-what-to-buy-a3227614920/</u>). Major engine repairs, up to engine replacement, can cost \$5,000 to \$10,000. Likewise for transmissions, some may need major repair or replacement at less than 100,000 miles. J.D. Power says transmission replacement costs for an average vehicle can span \$2,500 to more than \$5,000 (<u>https://www.jdpower.com/cars/shopping-guides/how-much-does-it-cost-to-replace-a-transmission-on-a-car</u>).

Please see the Response to Comments 87 through 115 for an explanation of the minimum durability requirements for a ZEV to qualify as one vehicle value and electric vehicle performance in cold weather.

Mineral Sourcing

613. COMMENT: The U.S. leads the world in refining power. The U.S. is not a world leader in EV, mineral, or battery manufacturing power. China dominates the EV supply chain and currently controls much of the world's lithium supply. The U.S. will be building from the ground up. If the country turns its back on liquid fuels, it will be trading its liquid fuel security for dependence on China's EV economy. Only one North American lithium mine exists, and it faces serious opposition to new mining. Mass vehicle electrification raises other natural resource supply and humanitarian issues, as well. EVs need significant amounts of cobalt. More than half the global supply of cobalt is located in the Democratic Republic of Congo, the majority of which is mined using child labor. Policymakers should address the sustainability and humanitarian issues associated with the cobalt supply before promoting overly aggressive EV

targets. They should also assess the cost impacts on other consumer goods relying on cobalt, such as cell phones, if significant quantities of the resource are re-allocated to EV battery production.

In addition to cobalt, EVs require relatively large amounts of lithium. China controls 70 percent of the world's lithium-ion battery production and the amount required for EVs just to meet Europe's carbon reduction goals would dwarf existing production levels of this scarce, mined resource. The U.S. must ensure security of the lithium supply and battery production as that will be critical in any plan relying on massive vehicle electrification. (342) 614. COMMENT: As the Department considers options to reduce transportation emissions, it should consider and fully analyze the environmental impacts across the country and world in developing the necessary minerals to support the mandated volume of vehicles. (251 and 674) 615. COMMENT: It does not appear that the Department has reflected on the impact of this action in relation to energy security considering that moving to BEVs will force the industry to rely on other countries, such as China, for materials to manufacture BEVs. The Department should consider and fully analyze how the State's adoption of ACC II will impact energy security and how much the technology relies on China and other countries. (115, 223, 251, and

518)

616. COMMENT: Lithium, cobalt, copper, need to be mined in the U.S. to keep the nation's jobs intact and prevent the U.S. from being dependent on other countries. (89)

617. COMMENT: In August, geologists discovered lithium deposits near the Nevada/Oregon border that are estimated to be one of the largest deposits in the world. This will help develop more secure and resilient domestic supply chain. (376)

618. COMMENT: The environmental impact of going all electric must be considered. If minerals for batteries will be mined in the U.S., what will be the environmental impact including impact on groundwater and communities where mining would occur? (674)

619. COMMENT: The Department must consider the location of the lithium and cobalt mines and the sufficiency of supplies of those elements necessary for batteries for EVs. Also, the greater the demand for the elements, the greater the likelihood that their price will rapidly increase, and that some unscrupulous enterprises will make use of child or slave labor. The State should have a plan to protect the shipments of raw goods, such as lithium and cobalt, to protect the supply chain lines. Supplies of the vital elements must also be protected against war, natural disaster, or force majeure. (44)

620. COMMENT: The Department should not adopt the rules because many of the battery components are sourced outside the United States. Some commenters stated this will increase reliance on other countries, cause supply issues, and/or result in increased pollution from transportation. (59, 119, 143, 221, 223, 274, 349, 397, 408, 423, 428, 441, 465, 467, 503, 509, 518, 592, 605, 623, 633, 648, 662, and 674)

621. COMMENT: ZEV technology lacks solid domestic supply chains. Our country has a dominant auto industry and has worked for decades to gain energy independence, to the great benefit of American workers and local communities. The existing supply chain's disbursement around the world makes it more susceptible to interruptions, which could negatively affect New Jersey's economic growth. While Congress has invested recently in onshoring more electric battery manufacturing, it will take decades to fully develop this technology and it would be irresponsible to hit reset now. (14)

622. COMMENT: The Department should not adopt the rules because most of the parts and minerals for EVs are either manufactured or mined in other countries. Some commenters cite specific concerns about the method of the mining, which results in substantial pollution, and equipment used for mining. (21, 33, 124, 153, 196, 246,284, 361, 371, 384, 403, 408, 455, 509, 518, 543, 669, and 717)

623. COMMENT: The Department should not adopt the rules because the manufacturing and production of EVs is bad or worse for the environment. Some commenters cite specific concerns, including the harm to the environment caused by mining for the materials used in EV batteries, as well as the manufacturing process, such as the damage to the land during mining, the limited supply of these resources/resource depletion, and/or worker safety. (21, 22, 23, 24, 29, 33, 36, 43, 45, 63, 75, 78, 80, 110, 115, 125, 129, 147, 153, 158, 164, 166, 176, 182, 194, 196, 218, 235, 239, 243, 267, 279, 284, 287, 298, 309, 316, 320, 333, 347, 350, 361, 365, 367, 371, 380, 384, 393, 403, 413, 423, 439, 442, 445, 447, 449, 455, 464, 465, 476, 481, 485, 502, 509, 518, 524, 527, 529, 531, 556, 558, 588, 624, 633, 639, 641, 643, 663, 664, 669, 678, 679, 691, 689, 717, 721, 725, and 728)

624. COMMENT: The Department should not adopt the rules because the elements used in EV batteries are sourced in places using slave and/or child labor, pay extremely low wages, and/or raise other human rights/humanitarian issues. (21, 89, 101, 124, 147, 176, 182, 246, 298, 361, 380, 384, 397, 408, 428, 476, 485, 556, 588, 628, 639, 641, 664, 678, 715, 717, and 721) 625. COMMENT: As EVs will have to be replaced sooner than ICE vehicles, more mining and more batteries in landfills will result, calling into further question whether all EVs are a net positive for the environment. (527)

626. COMMENT: The pollution and damage from EVs are just starting to be known, compared with the pollution from ICE vehicles that can be improved. (592)

627. COMMENT: Mineral mining threatens water supplies. Lithium uses 500,000 gallons of water per ton processed; copper uses 100,000 gallons per ton. Spent water used in processing is then unclean. These substances are not renewable and are vastly in short supply. EVs displace abundantly available gas with limited supply substances and displace drilling with massively costly mining. (540)

628. COMMENT: Current high density battery technologies rely on limited raw materials, such as lithium. The extraction of lithium creates both environmental and human problems that need to be addressed. Some alternatives, such as hydrogen fuel cell technologies that rely on limited raw materials, such as platinum and palladium, raise similar issues. Innovations in battery technology using more common, safer materials would be helpful, and research and development is under way to replace and exceed these technologies and limits. High energy density batteries dependent upon rare materials could become a thing of the past without any major science breakthroughs as the vehicle fleet becomes dominated by electric vehicles and financing and manufacturing opportunities arise, such as battery leasing, fast swapping systems, and redox flow liquids at the pump. Such approaches could support the continuation of New Jersey's locally operated gas stations as businesses serving the electric vehicle fleet in a new form. (277) 629. COMMENT: Battery technology has advanced considerably but is an environmental disaster currently with respect to the raw materials and there are no great break-throughs on the horizon to address the issues. (198)

630. COMMENT: There are many outstanding questions with regard to the environmental impact of the mass production of EV batteries. (2)

631. COMMENT: There are serious environmental concerns about the precious metals needed. (138)

632. COMMENT: Batteries are made from toxic metals mined out of the country. (359) RESPONSE TO COMMENTS 613 THROUGH 632: While the Department acknowledges that the sourcing of mineral resources required for electric vehicle battery production is an important issue as it relates to ZEV production, supply chain and national security issues must be addressed at a national level. The Federal Inflation Reduction Act (IRA) provides incentives for domestic sourcing of minerals and batteries. The IRA includes the Advanced Manufacturing Production Credit, which is applicable to critical minerals and battery technology, the Clean Vehicle Credit, which aligns the tax credit available to taxpayers who purchase electric vehicles with the sourcing of critical minerals and domestic manufacture of batteries, and an Extension of the Advanced Energy Project Credit, which is applicable to facilities that manufacture electric vehicles and batteries. With the understanding that it takes years to commence a new mining operation, this is a longer-term strategy but one that nevertheless should help alleviate concerns regarding overseas mineral sourcing as demand for ZEVs continues to increase in the future.

In addition, to better address concerns over sourcing of critical minerals and conditions for mine workers, the U.S. Department of State formed the Mineral Securities Partnership (MSP). MSP partners include Australia, Canada, Finland, France, Germany, India, Italy, Japan, Norway, the Republic of Korea, Sweden, the United Kingdom, the United States, and the

European Union (represented by the European Commission). The MSP will support projects

that:

- Demonstrate responsible stewardship of the natural environment;
- Engage in consultative and participatory processes regarding land access and acquisition;
- Commit to meaningful, ongoing consultation with communities;
- Ensure safe, fair, inclusive, and ethical conditions in the community and the workplace;
- Provide economic benefit for workers, and local communities; and
- Ensure transparent, ethical business operations.

(https://www.state.gov/minerals-security-partnership/#Principles).

Due to of the importance of issues related to ZEV batteries, such as mineral resource supply chains, current or future resource pricing, and the sourcing of minerals, the Department will monitor, participate, and coordinate with all Federal efforts to address potential mineral resource concerns. Material recovered from recycling batteries would enable a significant amount of critical materials to be reintroduced back into the supply chain. This circular economy can provide a large portion of the material needed to produce a new EV battery, which would increase the domestic sources for such materials, and reduce the demand for raw material mining (https://theicct.org/publication/recycling-electric-vehicle-batteries-feb-23/). Nonetheless, the manufacture and disposal of ZEV batteries are beyond the scope of this rulemaking. See also the Response to Comments 633 through 645.

Disposal and Recycling

633. COMMENT: The Department should not adopt the rules because of the environmental impact of used batteries and/or EV battery disposal, there is no safe way to dispose of the EV batteries and/or there is no effective plan in place for recycling the EV batteries. (22, 29, 33, 37, 43, 45, 62, 64, 80, 92, 110, 115, 119, 129, 143, 164, 176, 196, 198, 206, 221, 239, 263, 274, 279, 287, 294, 309, 316, 320, 333, 347, 359, 374, 383, 384, 393, 395, 403, 413, 423, 434, 441, 442, 447, 467, 476, 502, 506, 527,529, 531, 558, 559, 578, 605, 611, 624, 642, 643, 648, 669, 670, 674, 678, 688, 689, 720, and 725)

634. COMMENT: At present, a Tesla has approximately 90 pounds of lithium-based batteries, with an estimated life expectancy of eight to 12 years. There must be a disposal plan for all of this environmentally sensitive refuse. (166)

635. COMMENT: The Department must consider the environmental impact of the exponential growth in spent lithium-ion batteries from all of the new EVs. (31 and 348)

636. COMMENT: Switching to EVs will be worse for the environment because no one knows how to clean up hazardous waste created by end-of-life batteries, so they just get buried. (78)

637. COMMENT: Replacement of battery packs is not environmentally friendly. (308)

638. COMMENT: Battery technology leads to more environmentally unfriendly waste. Batteries have a finite life and EVs carry large batteries, which will go to landfills. The batteries contain acids that can add to environmental deterioration. (204)

639. COMMENT: When a 1,500-pound EV battery can no longer be charged it will wind up in a toxic landfill and contribute to ground pollution. (363)

640. COMMENT: Abandoning an EV will more likely release toxic heavy metals and chemicals into the ground compared with a gas vehicle, which at worst would only leak oil or gasoline. (383)

641. COMMENT: At some point all of the batteries will fail and will need to be disposed of, which will create a massive hazardous waste issue because batteries contain chemicals and toxic minerals and cannot be recycled. (115)

642. COMMENT: No one is going to want to buy a used EV and so these vehicles will be dumped in a landfill. (648)

643. COMMENT: Unlike petroleum, the critical minerals in EV batteries can be recycled. The global market for battery recycling alone is expected to grow as an increasing number of EVs approach their end of life. The volume of such feedstocks, currently less than two GWh, could reach 100 GWh by 2030 and 1.3 TWh by 2040. (79)

644. COMMENT: There are many outstanding questions with regard to the environmental impact of the mass disposal of EV batteries (2)

645. COMMENT: New Jersey must have a plan for recycling batteries once the electric vehicle has been fully consumed. (44)

RESPONSE TO COMMENTS 633 THROUGH 645: The Department acknowledges that EV battery disposal, reuse, and recycling are important issues in light of the increased demand in BEVs that will result from the adopted rules. The ACC II rules include "battery labeling requirements [...] which also should support proper and efficient disposal and recycling." CARB FSOR Appendix A, at 14. Thus, the ACC II rules should assist with battery repurposing and eventual recycling back into usable minerals. The Department recognizes that the

development of disposal and recycling for EV batteries is an emerging industry, but by setting an annual ZEV requirement, the Department, California, and the other states that have adopted California's motor vehicle standards are providing the regulatory certainty this industry needs to make the long-term investments that will be crucial to the continued growth and innovation of the disposal and recycling industry. The State of Washington reported in their adoption of the ACC II program that "there are currently 14 recycling plants in the U.S. that are either in planning, pilot, or commercial stages."

In general, EV batteries are lasting longer than previously predicted. According to a recent J.D. Power article, EV batteries are expected to last up to 20 years. See https://www.jdpower.com/cars/shopping-guides/how-long-do-electric-car-batteries-last#:~:text=Generally%2C%20EV%20car%20batteries%20last,management%20systems%20an/// d%20charging%20restrictions. In addition, please see the Response to Comments 608, 609, 610, 611, and 612 referencing a Recurrent study of real world results showing typical battery capacities greater than 90 percent at 100,000 miles.

There are approximately 13 companies in North America that are already participating in the recycling of EV batteries. CalEPA. (2022). Lithium-Ion car battery recycling advisory group final report. California Environmental Protection Agency. <u>https://calepa.ca.gov/lithium-ion-car-battery-recycling-advisory-group/</u>.

Fires and Safety

646. COMMENT: The Department should not adopt the rules because EV batteries are dangerous and/or the fire hazard risks and damages associated with EV battery fires and resulting danger and harm to citizens are too great and/or have not been addressed. Some commenters cite

specific risks, including spontaneous combustion of batteries, batteries igniting from exposure to floodwater and/or brine used in the winter and/or saltwater, EV fires in garages, parking structures and high-density complexes, batteries igniting in accidents, and/or the need to use massive amounts of water to fully extinguish EV battery fires, as well as longer time to extinguish and increased health and safety hazards faced by first responders when fighting EV fires. (11, 22, 24, 65, 80, 89, 92, 104, 109, 115, 147, 182, 193, 200, 216, 218, 261, 263, 272, 298, 309, 316, 328, 333, 346, 365, 372, 395, 403, 425, 428, 433, 439, 467, 447, 449, 484, 503, 506, 516, 519, 528, 529, 537, 538, 558, 586, 593, 609, 619, 625, 633, 648, 665, 670, 678, 689, 691, and 725)

647. COMMENT: The State has not explained how it plans to handle the issue of battery fires. From storage to transport to charging, a new fire hazard will be introduced into every area of the State, without the increased equipment, training and personnel needed to protect against and handle these fires. New technology is bound to have setbacks along with recalls, which could have tragic consequences. (142)

648. COMMENT: The Department should adopt the rules but should also address the fire dangers associated with batteries in EVs. (106)

649. COMMENT: EV batteries present a problem for emergency personnel responding to car crashes. As the battery is within the safety cage of a car, the battery may contact the frame and become electrified in a crash. Emergency personnel can hit it if they have to cut the car apart to get to the person trapped. This poses safety concerns for the rescuers, as well as those trapped. (365)

650. COMMENT: EVs are highly dangerous in accidents because a fire cannot be put out and they can explode. (259)

651. COMMENT: The Department must consult with fire departments about possible EV battery fires, since extinguishing the fires is more difficult than extinguishing a fire from an ICE vehicle. (181 and 447)

652. COMMENT: The increase in EV use will affect fire companies insofar as they will need to purchase or retrofit fire trucks to extinguish fires as a result of lithium battery. These fires burn hotter and last much longer than a traditional combustible engine. The State may need to offer grant funding to communities to purchase fire equipment to extinguish lithium batteries. (44)

653. COMMENT: EV car batteries are under repeated recalls due to malfunctioning,

overheating, and catching on fire. (365)

RESPONSE TO COMMENTS 646 THROUGH 653: As referenced in CARB's rulemaking

documents, AutoinsuranceEZ conducted an analysis, using data collected by the National

Transportation Safety Board, the U.S. Department of Transportation Bureau of Transportation

Statistics, and recall data from a multi-agency U.S. government website

(<u>https://www.recalls.gov/</u>), to calculate the number of vehicle fires by fuel type in 2022 with the following results:

Fuel Type	Fires per 100k vehicles	Total fires
Hybrid	3,475	16,051
Gasoline	1,530	199,533
Electric	25	52

(https://www.autoinsuranceez.com/gas-vs-electric-car-fires/)

By scaling down, to make the numbers more straightforward, the analysis shows that for every 1,000 gasoline vehicles, 15.3 may catch on fire. For every 1,000 electric vehicles, only 0.025

may catch on fire. In summary, the risk of fire in a gasoline vehicle is 60 times greater than the risk of fire in an electric vehicle.

The AutoinsuranceEZ analysis also looked at vehicle recalls for fire risk. For the year 2020, 1,085,800 gasoline vehicles were subject to recall for fire risk from electrical shorts, fuel leaks, and ABS (anti-lock braking system) overheating. During the same time, 32,100 hybrids and 152,000 electric vehicles were subject to recall for battery issues. There are frequent recalls for fire risk on gasoline vehicles, including some with warnings to park the vehicle outside and away from buildings and some with warnings to not drive the vehicle. Gasoline vehicles are subject to frequent fire risk recalls but receive relatively little media coverage because it is more the norm than newer technology electric vehicles subject to greater scrutiny.

The Highway Loss Data Institute (<u>https://www.iihs.org/</u>) published a Bulletin (Vol. 38, No. 11: April 2021) comparing the risk of noncrash vehicle fires in electric vehicles with their internal combustion engine vehicle counterparts. To clarify, this study looked only at vehicles for which the manufacturer offered both an electric and non-electric version of essentially the same vehicle. They concluded, "[o]bserved noncrash fire claim frequencies were similar for the electric vehicles (0.19 claims per 1,000 insured vehicle years) and conventional counterparts (0.20 claims)." In contrast, the AutoinsuranceEZ study, above, which used data across all vehicle types, found that gasoline vehicles overall have a higher fire risk than electric vehicles.

The Australian Department of Defense funds a private company, EV FireSafe, to compile statistics on global EV usage and fire risk. EV FireSafe provides quarterly reports. The latest report is found here:

https://www.evfiresafe.com/_files/ugd/8b9ad1_01aa449ee5074086a55cb42aa7603f40.pdf. As of

June 30, 2023, they have recorded only 393 verified electric vehicle fires worldwide since 2010. While the total number of electric vehicles on the road worldwide is not precisely known, some sources calculate at least 26 million vehicles based on sales data from recent years. In 2022 alone, electric vehicle sales exceeded 10 million, accounting for 14 percent of all new car sales globally. A total of 393 verified electric vehicle fires out of a population of 26 million electric vehicles is a fire risk of 0.0015 percent, or 4 out of 260,000.

Commenters also express concern about the difficulty in extinguishing electric vehicle battery fires. The Department acknowledges that this is an issue that is being examined around the world. Between the development of battery chemistry less likely to undergo, or even immune to, thermal runaway, and the integration of better voltage and temperature monitoring systems by vehicle manufacturers, the Department believes that the source of fires will be reduced over time. Additionally, though this is beyond the scope of the rulemaking, training and appropriate equipment for fire fighters and first responders can better address the ability to extinguish vehicle battery fires in the interim. Tesla has published extensive training materials for first responders (https://www.tesla.com/firstresponders), including how to safely handle battery fires. The National Fire Protection Association also has detailed information and first responder training available on their website (https://www.nfpa.org/EV).

Air Toxics

654. COMMENT: The Department regulates the emissions of air toxics in New Jersey. A revised air toxic rule was adopted just a few short years ago. The adoption of the ACC II rule proposal will result in the emissions of air toxics and subsequent exposure to New Jersey citizens that will increase throughout New Jersey with time as the number of lithium-ion battery powered

automobiles increases. Lithium-ion batteries can undergo uncontrollable thermal runaway as a result of manufacturing defects, thermal protection software failures, accidents, and as seen recently during Hurricane Ian in Florida, flooding. When a lithium-ion battery undergoes thermal runaway, it cannot be extinguished, only slowed down with thousands of gallons of water. The following document analyzed the emissions of air toxics from EV battery fires, and also analyzed the fire water contamination:

https://plus.empa.ch/images/2020-08-17 Brandversuch-

Elektroauto/AGT 2018 006 EMob RiskMin Undergr Infrastr Final Report V1.0.pdf.

Inhalation Exposure from lithium-ion battery fires include the following chemical substances: hydrogen fluoride, phosphoric acid, phosphine, PAHs, cobalt aerosols, nickel aerosols, and manganese aerosols. Cobalt and nickel are carcinogens and are readily dispersed into the environment through the air and through water if fire suppression is required using water. The Department has failed to address in the social, economic, and environmental impact statements the emerging problem of air toxics and ground water contamination from lithium-ion traction batteries undergoing thermal runaway. The Department must take into account how many tons of air toxics and carcinogens will be released into the environment and the cumulative health risk to New Jersey citizens by 2050 when nearly 5,000,000 batteries are projected to be in use. Runoff from firefighting operations may affect drinking water. Air toxics will affect overburdened communities. Also, municipalities must have emergency plans in place in case a parking garage with hundreds or thousands of EVs catches fire. Local and State governments will have to address increasing numbers of battery fires. It is incumbent upon the Department to

evaluate this issue for the safety and welfare of New Jersey residents and its environment. For these reasons the Department should withdraw this application. (317)

655. COMMENT: EVs are not as safe as ICE vehicles because when they catch fire, they emit toxic fumes. (182)

RESPONSE TO COMMENT 654 AND 655: As the Department noted in the Response to Comments 646 through 653, the risk of an EV spontaneously igniting is far less than the risk of a gasoline vehicle fire. Advances in battery technology are continuing to create safer batteries that decrease this risk. If we apply the historical risk of EV fires to future EVs, even if an unrealistic assumption, the number of EV fires is still so few as to have an insignificant impact on air toxics in New Jersey on a Statewide scale. As with any catastrophic event like a fire where toxic chemicals are involved, there may be an impact in the immediate vicinity. However, the minimal risk of EV fires, coupled with the inability to predict where and when such fires may occur makes it impossible for the Department to meaningfully assess any impact on air toxics in New Jersey. The same principle applies to any potential localized soil or groundwater contamination. Additionally, adoption of the ACC II program will reduce the emissions of toxic air contaminants that result when fossil fuel is combusted in internal combustion engine vehicles. See CARB ISOR at 134.

Electromagnetic Fields

656. COMMENT: Lithium-ion batteries are dangerous and emit electromagnetic fields. (44 and 593)

RESPONSE: Commenters have expressed concern as to the effects of electromagnetic fields (EMF) in electric vehicles. The European Commission conducted a study, under a project called

EM Safety. Several European nations participated in the study. Detailed results are available at: https://www.sintef.no/projectweb/em-safety/. The overall project conclusion is that EMF exposure to drivers and passengers in an electric vehicle is well below health standards for EMF exposure as established by the International Commission on Non-Ionizing Radiation Protection. The EM Safety project also concludes that exposure to some chemicals in gasoline and combustion engine exhaust poses a greater cancer risk than EMF exposure in either electric or combustion engine vehicles. Consumer Reports also looked at EMF exposure in hybrid vehicles (which use a battery and electric motor for propulsion along with an internal combustion engine) compared to internal combustion engine vehicles

(https://www.consumerreports.org/cro/news/2010/08/mythbuster-emf-levels-in-

<u>hybrids/index.htm</u>). Consumer Reports concluded, "In this series of tests, we found no evidence that hybrids expose drivers to significantly more EMF than do conventional cars. Consider this myth, busted."

Environmental Justice

657. COMMENT: The definition of an "overburdened community" includes low-income population. The Department should hold a separate hearing under the Environmental Justice rules to address the economic and financial stressors this rules will impose on overburdened communities. (319 and 499)

658. COMMENT: In tandem with ramping up electric vehicle sales, we must ensure that these vehicles are powered up by truly green renewable energy at the grid and community level, not perpetuate the operation of fossil fuel plants located in low-income communities of color --

communities that have born the burden that others benefit from to this day. This is an injustice that must end. (265)

659. COMMENT: The Department should champion sustainable policies that curtail fossil fuel consumption, advance renewable energy initiatives, and protect the well-being of marginalized populations. By addressing these issues proactively, the State cannot only combat climate change but also save billions in healthcare costs, especially for vulnerable communities and new immigrants. (307)

660. COMMENT: The Department must break the patterns of climate injustice and prioritize sustainable policies that reduce fossil fuel consumption, promote renewable energy, and safeguard the well-being of marginalized communities. Given the escalating health-related challenges and potential increases in fossil fuel use, taking action now cannot only mitigate climate change but also save billions of dollars in healthcare costs, particularly in vulnerable populations and newly arriving immigrant communities. The Department's support and leadership in addressing these critical issues are crucial for a more equitable and sustainable future for all New Jerseyans. (511)

661. COMMENT: Rising temperatures are evident, but its effects on human health are of particular concern as the climate crisis is arguably affecting the health and well-being of urban populations. Existing patterns of climate injustice should be put to a halt, and for government representatives to adapt sustainable policies and design systems that prevent climate degradation and promote climate change adaptation. One of the government's greatest expenditures is healthcare. Health negative impacts are projected to escalate, with the potential substantial increase in fossil fuel use. Correspondingly, taking action to cut fossil fuel use and climate

pollution could yield hundreds of billions of dollars in avoided health harms in marginalized populations and newly arriving immigrant communities. (400)

RESPONSE TO COMMENTS 657, 658, 659, 660, AND 661: As explained in the Response to Comments 238 through 258, the ACC II rules are expected to reduce transportation emissions and thereby reduce stressors in overburdened communities. As explained in the Response to Comments 289 through 419, the Department recognizes that more is needed to ensure that overburdened communities enjoy equal access to clean transportation through programs, such as electric ride hailing and ride sharing. Although the Department is constrained by the identicality requirements of the Clean Air Act, the Department will continue to work with the DCA, BPU, EDA, and other agencies to holistically evaluate a variety of regulatory and non-regulatory approaches to addressing emission and equity issues in overburdened communities.

National Standards Versus State Standards

662. COMMENT: States have the obligation and authority to ensure continued progress occurs on reducing greenhouse gas emissions and other air pollutants, regardless of Federal action (or inaction). Providing long-term certainty to the industry, as the proposed rules do, will be important not only today, but in future political environments where Federal inaction on climate could occur again. In fact, several auto manufacturers—including Ford, Volkswagen, BMW, Honda, and Volvo—support California's right to set its own more-stringent-than-Federal auto pollution standards, and the rights of states to also adopt these rules. (292)
663. COMMENT: With no equivalent Federal policy at this time, expeditious and ambitious State action is imperative. (201)

664. COMMENT: While electrification is generally a good idea, the Department should consider waiting to adopt the rules until California receives a waiver from the EPA. (549) 665. COMMENT: The Department should refrain from adopting the California ACC II rule, which has not been approved by the EPA, and consider alternatives that could result in achieving the societal goals of reducing carbon emissions in a way that is faster and more cost effective for the people of New Jersey. (251)

666. COMMENT: Before adopting ACC II, the Department must conduct a thorough analysis comparing the environmental and health benefits of the ACC II rules to those achievable pursuant to the new Federal rules announced in April 2023. The Department should not rush into implementing ACC II without a comprehensive assessment. (113 and 312)

667. COMMENT: The Department never studied the more stringent EPA plan recently proposed. If a comparison of the two plans means the Department chooses to not adopt ACC II, New Jersey would be subject to the EPA plan, which addresses emission concerns while protecting consumer choice and vehicle affordability. The Department cannot make a fair determination on which path forward is better for New Jersey consumers until it compares the benefits of the Federal rules with the ACC II benefits. The Department should refresh its analysis of the relative costs and benefits associated with the choice between following California or rejoining the majority of states that operate pursuant to the Federal rules. (27) 668. COMMENT: A successful EV transition will require more flexibility than can be afforded by the ACC II program. Adopting the Federal emissions program when soon finalized with State

ZEV goals supported by legislation is likely a smarter and more successful approach. And

reality-based transparency with any approach will be welcome and will likely produce more widespread public support. (118)

669. COMMENT: The State of New Jersey is faced with a binary choice: adopt California's ACC II plan or revert to the Federal Clean Car rule. The Federal Clean Car rule imposes new emission standards on manufacturers for all vehicles but does not create purchasing requirements that limit consumer choices. New Jersey is not California. The Department should not blindly accept the California proposal. Instead, the Department should withdraw the proposal in favor of maintaining consumer choice. (1)

670. COMMENT: Adopting the rules will turn New Jersey into the mess California is. (306) RESPONSE TO COMMENTS 662 THROUGH 670: The Department reviewed the expected impacts of New Jersey's incorporation by reference of California's ACC II regulation and determined that the rulemaking is necessary and appropriate to reduce emissions of greenhouse gases and mitigate the impacts of climate change and criteria pollutants on air quality and public health. The Department recognizes the potential benefits of a national program and supports the Federal government's efforts to impose more stringent multi-pollutant exhaust emissions standards for light-duty and medium-duty vehicles. See 88 FR 29184 (May 5, 2023). At the time of this adoption, however, the EPA has not adopted final regulations and, therefore, the Department has determined to move forward with the ACC II rules to obtain the emissions and health benefits expected to result. Moreover, as explained in the notice of proposal (55 N.J.R. at 1783), the EPA's proposed rules and the ACC II rules are different in approach; the ACC II rules have requirements that will benefit consumers, particularly related to batteries and charging, that the EPA did not include in its proposal. By adopting the rules now, the Department is complying

with the Clean Air Act's lead-time requirement to ensure that the rules are enforceable for model year 2027, if, and when, California receives a waiver. As explained in the notice of proposal and provided at N.J.A.C. 7:27-29A.2(c), the rules "will not be enforceable in New Jersey unless or until such time as California receives a waiver from the EPA, pursuant to 42 U.S.C. § 7543, as published in the Federal Register, for the applicable engine standard, vehicle standard, or other emission requirement." 55 N.J.R. at 1775.

New Jersey-Specific Analysis

671. COMMENT: The Department repeatedly relies on California assessments without having completed New Jersey-specific analysis including, but not limited to, grid readiness, availability of charging infrastructure, and impact of cold weather conditions on the range of EVs. For example, in the "Consumer Considerations and Charging Infrastructure Needs" section of the proposal, the Department repeatedly references the California Air Resources Board's Initial Statement of Reasons (ISOR) assessment – which was developed specially for California. As another example, the Department relied on California's Standardized Regulatory Impact Assessment which only considered potential costs on California individuals and businesses, rather than completing New Jersey-specific analysis. For credibility and transparency, the Department should complete State-specific analysis and give stakeholders an opportunity to comment before moving forward. (647)

672. COMMENT: The rulemaking fails to provide a detailed analysis of the Department's evaluation of California's program and its consideration of all available facts. Rather, general

statements are made that appear to assume positive impacts of the California program. However, what is best for California is not necessarily what is best for New Jersey.

The rulemaking further addresses indirect economic impacts to consumers, yet largely defers to projections and analysis conducted by the California Air Resources Board (CARB) for ACC II. However, this analysis was performed by CARB specific to vehicle owners in California – costs of the proposed rule to consumers in New Jersey were not adequately addressed. (251) 673. COMMENT: Data show nothing done in New Jersey would have a measurable effect on global warming so the Department must explain how it justifies the EV mandate. The Department should provide the public with hard numbers along with New Jersey-specific impact studies. New Jersey is not California. (116)

674. COMMENT: New Jersey has elected to fall in "lock step" with California, assuming they were correct in all of their judgments. New Jersey did not undertake its own independent analysis of the technical, financial, practical, and lifestyle impacts of this mandate. (350) RESPONSE TO COMMENTS 671, 672, 673, AND 674: The Department conducted the social and economic analysis required by the APA. See N.J.A.C. 1:30-5.1(c). The Department analysis, which included a number of assumptions. Nevertheless, the Department determined that the bulk of CARB's assumptions were applicable in New Jersey and, thus, appropriate for New Jersey's analysis. For example, one commenter argues that the Department failed to consider New Jersey-specific charging infrastructure as an impact on consumers. The Department determined that differences in charging infrastructure between New Jersey and California did not invalidate the applicability of CARB's analysis and conclusions that the Department cited. The Department

additionally included a discussion of New Jersey-specific legislation and a New Jersey-specific report produced by the BPU to address New Jersey-specific charging infrastructure status and future needs. See 55 N.J.R. at 1782-83. Thus, the Department adjusted its analysis when and where needed.

Legal

<u>Authority</u>

675. COMMENT: California officially adopted the ACC II regulations on November 30, 2022, allowing for other states to also move to adopt them pursuant to the Federal Clean Air Act and State law. New Jersey has such authority pursuant to existing State law and should use that authority to implement the ACC II rules. Specifically, N.J.S.A. 26:2C-8(a) gives the Department the "power to formulate and promulgate, amend and repeal codes and rules and regulations preventing, controlling and prohibiting air pollution throughout the State or in such territories of the State as shall be affected thereby," meaning that the Department has the authority to adopt ACC II or any other rule that prevents harmful air pollution in New Jersey. See also 42 U.S.C. § 7507 (providing that states "may adopt and enforce for any model year standards relating to control of emissions from new motor vehicles ... if ... such standards are identical to the California standards"). (292)

676. COMMENT: The Department should not adopt the rules because it impedes freedom of choice. Some commenters cite specific concerns ranging from opposition to this action being taken by the executive branch (as opposed to the New Jersey Legislature or the voting public) to the opinion that this action is beyond the authority of the government. (12, 13, 14, 19, 20, 22,
28, 29, 30, 34, 35, 36, 39, 44, 50, 59, 69, 76, 77, 83, 84, 86, 87, 88, 91, 95, 99, 101, 104, 105, 110, 115, 117, 121, 132, 133, 134, 135, 141, 148, 153, 154, 155, 157, 158, 159, 163, 177, 181, 182, 185, 187, 194, 195, 200, 208, 214, 215, 216, 225, 226, 228, 233, 236, 239, 240, 242, 246, 247, 253, 254, 261, 264, 267, 268, 269, 273, 282,284, 285, 289, 296, 297, 300, 303, 314, 318, 320, 321, 322, 326, 327, 333, 341, 348, 349, 361, 363, 370, 378, 380, 381, 386, 388, 390, 392, 395, 401, 403, 404, 407, 413, 415, 417, 418, 425, 426, 430, 431, 436, 439, 440, 441, 442, 444, 446, 447, 449, 450, 451, 452, 453, 454, 456, 457, 464, 478, 496, 499, 502, 508, 513, 517, 518, 524, 530, 531, 538, 542, 543, 551, 553, 557, 561, 565, 568, 572, 573, 575, 577, 580, 589, 593, 595, 596, 599, 600, 601, 603, 614, 618, 619, 622, 627, 631, 632, 635, 643, 646, 649, 652, 654, 661, 668, 669, 672, 674, 682, 683, 689, 693, 694, 697, 698, 699, 704, 708, 710, 714, 723, 725, and 728)

677. COMMENT: The rules will infringe on citizens' freedom to travel, especially if EVs are the only type of vehicle allowed to be registered. (190)

678. COMMENT: Based upon 600 interviews among voters in New Jersey that were conducted from March 8 through 12, 2023, more than two-thirds of New Jersey respondents support the Governor getting approval from the State Legislature to ban the sale of new gas- and diesel-powered vehicles in the State. Just 12 percent of voters support the Governor moving unilaterally to accomplish this policy. Also, 60 percent of respondents support New Jersey implementing its own rules on EVs rather than being forced to follow the rules of California. (126)

679. COMMENT: A policy change this broad and this significant should be done through the legislative process, by officials directly elected by the public, rather than through the regulatory

process. A change this drastic over this short a timeline was not considered as a possibility by the Legislature when they opted to follow California's lead in reducing tailpipe emissions decades ago. (70 and 113)

680. COMMENT: In 2003, the Legislature invoked the State's authority pursuant to the Federal Clean Air Act and formally adopted the California Low Emission Vehicle program in the State, specifically providing for the Department to apply the California emissions program to all new passenger vehicles and light duty trucks sold in New Jersey on or after January 1, 2009. See P.L. 2003, c. 266 (N.J.S.A. 26:2C-8.15 et seq.). However, this law defines the "California Low Emission Vehicle program" as the "second phase of the low emission program being implemented in" California. The ACC II program is substantially and substantively different from the program authorized by the New Jersey Legislature. The program adopted by the Legislature envisioned a lower emission ICE vehicle along with a small EV (or ZEV) mandate. It is the program currently in place today. The Legislature did not know and could not contemplate that the California program would be supplanted by the ACC II, which totally changed its emphasis from low emissions ICE vehicles to one that seeks to ban ICE vehicles. Therefore, the adoption of these rules was not authorized by the Legislature and, thus, the Department is obligated to go to the Legislature, as it did in 2003, for authorization to adopt ACC II. Even if the Department is found to have authority to adopt ACC II, it is clear that the rules are not consistent with legislative intent when they authorized the California program in 2003. The Department should seek approval from the Legislature before adopting the rules. (113) 681. COMMENT: In 2003, the Legislature passed the California car mandate and gave the executive the authority to adopt a ZEV mandate. In a breathtaking delegation of legislative

authority, the Department was not required to follow the APA. In 2013, the Legislature repealed that provision of the law. This is the established law in New Jersey. (168)

682. COMMENT: Adoption of the ACC II program would continue to improperly and illegally delegate significant New Jersey policy decisions to another state, with different demographics, different geographies, different economic issues, and different policy concerns. If the rules are not adopted, the State is subject to the EPA rules. Although there are concerns about the EPA rules as well, the Federal government is part of the nation's constitutionally created system with supremacy over state actions in many areas, especially as it relates to commerce. Most states, comprising 60 percent of cars sold in the United States, are regulated by the EPA rules for cars and light duty trucks. There are checks on the system and it is part of a national system. The same cannot be said for California, which is a separate sovereign state and often an outlier in policy issues. California does not value manufacturing or business and has higher taxes, higher utility rates, and the highest gasoline and fuel prices in the country. Although California's rules are out of the State's control, New Jersey nevertheless would be obligated to follow them through the ACC II rules, which appears to be an unlawful delegation of authority to another state. California's rules are set up to benefit California at the expense of the Section 177 states. New Jersey cannot predict how ACC II will play out and who will benefit and who will not. By opting into the California program, the Department is opting into any changes they make in the future, even if New Jersey would be harmed or would object. (113)

683. COMMENT: The Department proposes to adopt the current California ACC II rule by reference with only minor cosmetic changes. Importantly, the rulemaking dictates that "all amendments, supplements, repeals, or other changes to those provisions that California makes to

the incorporated rule shall also be effective in New Jersey on the effective date cited by California." This is particularly concerning because future revisions will have limited review and analysis. New Jersey should establish its own policy direction, and not hand over current and future policy decisions to another jurisdiction. (647)

684. COMMENT: New Jersey should retain jurisdiction over its policies to address its air quality rather than incorporate by reference California standards. As stated in the proposal, this would render any future amendments made to those specific sections of the California Code of Regulations that were incorporated by reference to be automatically applied in New Jersey. In essence, New Jersey would be ceding its authority to California, which could create a situation where regulated entities in New Jersey may not receive notice with regard to (or an opportunity to review and comment on) future changes to the regulations. (251)

685. COMMENT: The proposed changes at N.J.A.C. 7:27-29A.7(b), while being an efficient method of rule change for the Department, nevertheless violate the New Jersey State Constitution. This specific regulation violates the sovereignty of the State of New Jersey and cedes New Jersey sovereignty to the state of California. Prospective incorporation directly violates the Article II election clause of the State's constitution because New Jersey citizens cannot participate in electing the California Governor, California Legislators, or participate in California propositions. Further, prospective incorporation violates Article V, Section IV, paragraph six of the State's constitution, which requires agency rulemaking activities, including rule revisions to follow New Jersey's Administrative Procedures Act. The rulemaking should be withdrawn because it is unconstitutional. (317)

686. COMMENT: Pursuant to N.J.A.C. 1:30-2.2, in order to incorporate by reference, the

source material must be one of the listed sources in the subchapter or be a source approved by the Director of the Office of Administrative Law and the Chief Administrative Law Judge of the Office of Administrative Law, as defined at N.J.A.C. 1:1-2.1. As the California regulation is not one of the listed sources in the subchapter, the Department should explain whether it obtained approval to incorporate by reference, the California ACC II regulatory waiver, notes, comments, appendices, diagrams, tables, forms, figures, publications, and cross-references as supplemented or amended. The Department should also explain where a concerned citizen may review the approval that the Department previously obtained from the Director to incorporate the ACC II and all of the supporting documents into this rule proposal. If the Department has not obtained approval from the Director of the Office of Administrative Law, then this rule proposal should be withdrawn because it violates the New Jersey Administrative Procedures Act. (317) 687. COMMENT: Pursuant to N.J.A.C. 1:30-2.2(b), any section of a source incorporated by reference shall be made available for public inspection by the adopting agency. The Department has not made available for public inspection the incorporated CCR, California Vehicle Code, notes, comments, appendices, diagrams, tables, forms, figures, publications, and cross-references the Department relied upon to develop this rulemaking. Further, the rules do not include language as to where and how a copy of the sections of the CCR, California vehicle code, and all supporting documents can be obtained pursuant to N.J.A.C. 1:30-2.2(c)2. By not including language about the availability or making available for public inspection the California regulations and all supporting documentation either in an appendix to this rulemaking or on the Department's website, the rulemaking violates the New Jersey Administrative Procedures Act and should be withdrawn. (317)

RESPONSE TO COMMENTS 675 THROUGH 687: New Jersey's Air Pollution Control Act gives the Department broad authority to promulgate rules "preventing, controlling and prohibiting air pollution throughout the State," including air contaminants from motor vehicles. N.J.S.A. 26:2C-8 and 8.1. The statute defines "air pollution" to include "the presence in the outdoor atmosphere of one or more air contaminants in such quantities and duration as are, or tend to be, injurious to human health or welfare, animal or plant life ..." N.J.S.A. 26:2C-2. The GWRA finds and declares that greenhouse gases "increase temperatures in the atmosphere" and that "if steps are not taken to reverse these trends, the effects on human, animal and plant life on Earth may be catastrophic." N.J.S.A. 26:2C-38. The Legislature further declares that a comprehensive strategy to reduce greenhouse gas emissions 80 percent below the 2006 level by the year 2050 is in the public interest. N.J.S.A. 26:2C-38. Likewise, the GWRA declares that the State should implement cost-effective measures to reduce emissions of greenhouse gases. N.J.S.A. 26:2C-45. As noted in the notice of proposal, the purpose of the Department's adopted rules is to reduce emissions of air pollution that is injurious to human, animal, and plant life namely, NO_x and PM2.5, and greenhouse gases. See 55 N.J.R. at 1780. Thus, the Department has legislative authority to incorporate by reference California's ACC II regulation.

As discussed in the Response to Comments 533 through 607, the EPA, CARB, and the states that have adopted California's motor vehicle standards have been adopting emission standards for decades. Pursuant to the Clean Air Act (CAA), New Jersey has only two options for vehicle emissions standards: compliance with the Federal standards or compliance with the California standards. Section 177 of the Clean Air Act (CAA) provides that "any State which has plan provisions approved under [Part D of Subchapter I of the Act] may adopt and enforce for

any model year standards relating to the control of emissions from new motor vehicles ..." 42 U.S.C. § 7507. The threshold requirement of Section 177 is that a state "has plan provisions approved under this part [D]." Such approved plan provisions are not limited to states with nonattainment plans (Section 172) but include, for example, states that have achieved attainment but have approved maintenance plans (Section 175A) or have other approved plan provisions related to their being within the Ozone Transport Region (Section 184). Once the threshold is met, the CAA plainly gives states the discretionary authority to determine what California "standards relating to the control of emissions from new motor vehicles" to adopt, subject only to the identicality and lead time requirements. This authority is granted directly and exclusively to states. New Jersey has nonattainment and maintenance plan provisions approved by the EPA. The Department is also complying with the identicality requirement of Section 177 of the CAA, which is intended to prevent states that adopt a California vehicle emission standard from requiring or causing a manufacturer to create a motor vehicle or engine that is different than the motor vehicle or engine certified in California under the California standard, as well as the twoyear lead time requirement.

As discussed in greater detail in the Response to Comment 690, the APA sets forth public notice and comment procedures before an agency adopts any rule. N.J.S.A. 52:14B-1 et seq. The Department has followed the APA requirements in adopting these rules. The Department is, therefore, authorized to adopt California's ACC II regulation pursuant to State law, Section 177 of the CAA, and the APA.

The Office of Administrative Law's (OAL) Rules for Agency Rulemaking allow an agency to incorporate sections of sources by reference, which may include future supplements

and amendments. See N.J.A.C. 1:30-2.2. By including the prospective incorporation by reference provision at N.J.A.C. 7:27-29A.7, the Department is ensuring that the ACC II rules, incorporated by reference with future supplements and amendments, remain consistent with the relevant CCR provisions and, thus, consistent with the Federal Clean Air Act. The Department has, on numerous occasions, incorporated the regulations of another state into its rules. For example, see N.J.A.C. 7:27-28A, Model Year 2027 or Later Heavy-Duty New Engine and Vehicle Standards and Requirements and N.J.A.C. 7:27-31, Advanced Clean Trucks Program.

It is true that an agency that incorporates an authority by reference must provide language advising "[w]here and how a copy of the section may be obtained." N.J.A.C. 1:30-2.2(c)2. The Department provided the citation to a duly promulgated California regulation and Motor Vehicle Code, both of which are publicly available. Accordingly, the Department met the regulatory requirement.

Major Questions Doctrine

688. COMMENT: The Department should withdraw this rulemaking because it violates the major questions doctrine test established by the United States Supreme Court in the recent *West Virginia et al. v. Environmental Protection Agency et al.*, 142 *S. Ct.* 2587, 57 *U.S.* (2022), decision. The Court ruled that under the major questions doctrine, the EPA did not have the authority to force stationary sources of air pollution to use generation shifting to fight climate change under Section 111(d) of the Clean Air Act. In the Department's proposal, generation shifting (shifting emissions from the tailpipe to the electrical grid) is being proposed for mobile sources by banning the sale of fossil fueled internal combustion engines and piggybacking on an obscure provision of the CAA that allows California to propose stricter mobile source emissions

than the national standards. Congress included the California waiver in the CAA because they recognized that due to the unique topography of mountains and sea, California would need additional tools to attain the air quality standards for smog that national emission standards could not do. Congress surely did not at the time envision that this provision would be used by other state governments to ban the sale of fossil fuel automobiles to fight climate change. This rulemaking will be found unconstitutional because it imposes vast changes on society through the rule making process rather than the legislative process. (317)

689. COMMENT: Please explain how New Jersey will follow the U.S. Supreme Court decision in *West Virginia et al. v. Environmental Protection Agency et al.*, 142 *S. Ct.* 2587, 57 *U.S.*

(2022), decided June 30, 2022. (44)

RESPONSE TO COMMENTS 688 AND 689: In *West Virginia*, the Supreme Court concluded that the EPA had asserted "extravagant" authority to shift electricity generation from regulated, existing fossil-fueled plants to new wind and solar plants, based on "the vague language of an ancillary provision ... that was designed to function as a gap filler and had rarely been used in the preceding decades." 142 *S.Ct.* at 2609-10. By contrast, as explained in the Response to Comments 533 through 607 and the Response to Comments 675 through 687, the EPA, CARB, and the Section 177 states that have adopted California's motor vehicle standards have been adopting emission standards for decades pursuant to clear Congressional authority. The ACC II rules do not ban ICE vehicles, nor do they shift generation. Rather, the rules regulate emissions of classes of new motor vehicles based on evolving technology, consistent with California's and the Section 177 states' long-standing authority pursuant to the Clean Air Act.

Administrative Procedure Act

General

690. COMMENT: Establishing California's ACC II program in New Jersey by incorporating California's regulations by reference is wrong and inconsistent with the Administrative Procedures Act (APA). Incorporating another state's rule by reference deprives the public in New Jersey of the right to provide input and the opportunity to comment. Most likely no one in New Jersey was involved in California's rulemaking procedure. (319 and 499) RESPONSE: The APA sets forth public notice and comment procedures before an agency adopts any rule. N.J.S.A. 52:14B-1 et seq. The Department followed the APA requirements by providing a 60-day comment period on the notice of proposal to adopt the ACC II rules by incorporating by reference the applicable provisions of the California Code. The notice included a Summary and explanation of the proposed rules, the rules proposed to be adopted, the specific legal authority pursuant to which the adoption is authorized, and the required descriptions of the expected impacts. See N.J.S.A. 52:14B-4. The Department held a public hearing after providing the public with 30 days' notice of the hearing date and accepted written comments as well, and through this adoption document is responding to all comments received. The Department, therefore, complied with the APA requirements for rulemaking. See also the Response to Comments 675 through 687 for a discussion of incorporation by reference.

Agriculture Industry Impact Statement

691. COMMENT: The impact statement on agriculture excluded an important impediment of the rule, which is the economic impact on the industry due to increased operating cost. The possible

benefits from a mandate for EVs by 2035 only in New Jersey, and not in the entire region or country, will have little to no impact on the local climate. However, the rule will have an immediate economic impact on farmers when the rules are implemented. Agriculturalists acknowledge weather as an obstacle to production and farmers have continued to adapt practices since the beginning of domestication of animals and cultivation of plants to improve conditions for crops and livestock. Weather changes are not a new issue for the farming community. The problem with the ACC II rules is a mandate that will have a significant impact with little time for agriculture adapt. The proposed regulations will disproportionately affect farmers compared to other industries who use vehicles. Farms are dependent on used trucks and trucks that last for many years since many will use vehicles only during the growing season. This fact gives feasibility to request an exemption from the proposed rules for agriculture, similar to precedent rules that help farmers remain viable in New Jersey. (241)

RESPONSE: Pursuant to the requirements of the APA, the Department conducted an agriculture industry impact analysis "setting forth the nature and extent of the impact of the proposed rule on the agriculture industry." N.J.A.C. 1:30-5.1(c)6. The Department included a discussion of the impacts of climate change on the industry as part of the agriculture industry impact (55 N.J.R. at 1789) and the social impact (55 N.J.R. at 1781) included in the notice of proposal. Further, the issue of economic impact on consumers, as it relates to the adopted rules, was thoroughly addressed in the economic impact provision of the notice of proposal. See 55 N.J.R. at 1784. ACC II applies only to the purchase of new light duty vehicles and does not require anyone, including farmers, to stop using an existing ICE vehicle or affect any heavy-duty ICE vehicles or

other gasoline or diesel fueled farm machinery. Further, the Department expects the used ICE vehicles that the farming community tends to rely on will remain available for years to come. As noted in the Response to Comments 532 through 548, the used vehicle market is an interstate market, which helps to equilibrate used vehicle prices across the country. In short, the Department anticipates that used ICE vehicles will remain available until such time as the economies of scale and technology advance to ensure that the farm community can purchase ZEVs that meet their operational needs in the used and new vehicle market.

Housing Affordability Impact Statement

692. COMMENT: The Department has not considered that the cost of electricity is part of housing costs in the State. The Department only addresses the increased cost associated with installing an EV charger in a person's home and does not discuss how the increase in utility rates will impact housing affordability. The proposed rules have the potential to have a major ripple effect on the cost of housing and these statements are short-sighted since they do not account for the inextricable link between the cost of utilities and housing affordability. If there is no legislation or other policy plan to offset the inevitable increase in electric rates for homeowners and renters, which will be associated with the increased adoption of EVs and associated electric grid upgrades, this cost will alter what type of housing is affordable to some, particularly those who earn a lower income. Lower income ratepayers pay a greater percentage of their income toward utility bills, and mandating EVs in the State will have a definitive impact on the type of housing they will be able to afford. The Department is turning a blind eye to this issue when it stated that there is no significant impact on housing affordability aside from the cost of a ratepayer-subsidized EV charger. (394)

RESPONSE: As noted, the Department included the cost of charging infrastructure in its housing affordability impact analysis. See 55 N.J.R. at 1789. The Department did not include the cost of the electricity needed to charge a vehicle because that is not a housing cost, it is a transportation cost. The costs to charge ZEVs were considered as part of the total cost of ownership (TCO) and accounted for in the economic impacts.

To the extent that commenters argue that electric rates should be included as part of a housing affordability analysis, BPU, not the Department, is responsible for the equitable distribution of utility rates between classes of ratepayers.

Economic and Social Impact Statements

693. COMMENT: The Department did not consider the full scope of material facts and provide an accurate description of the potential economic impacts on New Jersey residents. For example, EV charging stations will also likely be assessed what is known as Demand Charges. These are additional charges assessed by the electric distribution companies to large energy users who use a greater amount of energy during peak hours. EV charging companies have lobbied to forego or reduce these charges assessed by the electric distribution companies (EDCs). If they were successful in reducing or waiving Demand Charges, Demand Charges would not disappear; rather, it would require all ratepayers to subsidize the Demand Charges, regardless of whether they use EV charging. If Demand Charges are subsidized by all ratepayers, this will result in an additional increase to utility bills. The Department cannot adequately discuss the economic impact of EVs without acknowledging the increase to utility bills associated with infrastructure upgrades and the potential for subsidization for Demand Charges.

This analysis of potential for electric rate increases is notably missing from the Department's "Indirect Economic Impacts" to Consumers. In this section, the Department has only taken into account those consumers who purchase EVs. The rules will also impact consumers who do not purchase EVs since there will be corresponding increases to electric rates to account for any ratepayer subsidization of the electric grid, EV charging infrastructure, EV charging, and EV purchasing. All costs associated with utility upgrades to the electric grid will ultimately be borne by New Jersey ratepayers. In its Social Impact statement, the Department references the need for the State to "monitor[] potential ratepayer impact for any upgrades or buildout needed." 55 N.J.R. at 1782-83. Yet, no further details or an estimated economic impact are offered. Most importantly, the Department does not state that it is anticipated that electric rates will increase, and in fact have already increased, in order to fund the referenced upgrades and buildout. All infrastructure upgrades will in fact result in an increase to electric rates. The impact statement is predominantly silent on the financial costs and impact of EVs and the necessary electric infrastructure to make the transition to EVs a reality. Therefore, the Department did not consider the full scope of material facts and provide an accurate description of the potential social impacts on New Jersey residents.

Rate Counsel has recommended in other proceedings related to EV rates that the BPU require EDCs to adopt an "EV Tariff" which would ensure that those who utilize the electric grid for EV charging also pay for most, if not all, of the upgrades and demand charges that are necessary for that charging. Before adopting these rules, the Department should work with other State agencies, including the BPU, to minimize the economic impact of EV charging and purchases to consumers who do not own, lease or drive an EV.

The Department also suggests that the cost of driving an ICE will increase in the coming years in comparison to the costs associated with driving an EV. Yet, this analysis does not take into consideration that the cost of electricity will increase in order to accommodate EV-related subsidization and infrastructure upgrades. (394)

694. COMMENT: The rulemaking would ban the fossil fuel vehicles that consumers overwhelmingly now choose, mandating that they buy an electric vehicle if they ever want a new car. But it assumes that this mandate will impose no costs on consumers because although it admits increased costs to manufacturers will be passed on to consumers in the form of higher price, it argues that "[c]onsumers of battery electric vehicles are likely to see a cost savings over a 10-year cost of ownership period." This assumption runs counter to the best evidence on calculating the cost of consumer mandates. If an electric vehicle is equivalent to a gasolinefueled vehicle alternative, and it costs less over a 10-year ownership period, consumers would choose the electric vehicle without any mandate. Research shows that consumers consider longterm costs when purchasing vehicles and generally give those long-term costs full, or nearly full weight. (Allcott, 2014; Busse, 2013). So, if electric vehicles are equivalent and provide a lower long-term cost of ownership, no mandate is necessary because consumers will purchase them to benefit from their lower cost. (Allcott & Sunstein, 2015). The rulemaking acknowledges that the rules will fail unless consumers in New Jersey embrace ZEVs on a much larger scale than they have to date and at an accelerated pace. But the rulemaking fails to explain how taking popular choices away from consumers could possibly help them, and imposes new risks on them that electric vehicles could cost substantially more or otherwise not meet consumer needs. (139) 695. COMMENT: The Department should be acting to protect the environment, rather than

contemplating bans that will reduce residents' quality of life, freedom, and prosperity. The rules could certainly stand to undergo to a cost benefit analysis before it upends the daily life of every person in New Jersey. (124)

RESPONSE TO COMMENTS 693, 694, AND 695: Pursuant to the requirements of the APA, the Department conducted a social and economic impact analysis that "describes the expected social impact of the proposed rulemaking on the public, particularly on any segments of the public proposed to be regulated, and including any proposed or expected differential impact on different segments of the public" and "describes the expected costs, revenues, and other economic impact upon governmental bodies of the State, and particularly any segments of the public proposed to be regulated." N.J.A.C. 1:30-5.1(c). Generally speaking, the Department relied on the regulatory analysis and a number of the assumptions made by CARB. However, the Department did not do so indiscriminately. As discussed in the Response to Comments 671, 672, 673, and 674, the Department reviewed CARB's robust analysis and assumptions, and adjusted its analysis for New Jersey. Projections about future costs (that is, batteries, metals, electricity) and behavior (that is, the pace of ZEV sales) are, by definition, a forecast of the impacts of the rules based upon the best information currently available.

The Department recognizes that electricity rates may be impacted by the rules. And as discussed more thoroughly in the Response to Comments 420 through 465, the exact impacts felt by ratepayers are difficult to determine and depend on a number of inter-related factors, including ZEV owner behavior, the current state of capital investments by utilities, and the ebbs and flows of the overall global energy market. Electric rates could increase or decrease for any number of reasons in the future as many market factors play a role in rates.

As required by the APA, the Department has provided commenters with the opportunity to provide feedback and critiques of its analysis. The Department carefully considered the feedback and critiques, as is the purpose of a comment period, and is satisfied that the analyses conducted by the Department provided a reasonable forecast of the costs and benefits.

Regulatory Flexibility Statement

696. COMMENT: The Regulatory Flexibility Statement only states that there is no vehicle manufacturer that will be impacted since they do not have fewer than 100 employees. This is an incorrect and incomplete analysis of the impact to small businesses since it does not take into account that small businesses may be more negatively impacted by an increase in electricity costs than larger businesses. As utility rates rise to accommodate greater electric grid buildout and potentially even a subsidization of Demand Charges associated with EV charging, this will impact the expenses for small businesses. As utility costs rise, small businesses will be the first to experience a financial hardship and potentially go elsewhere for lower overhead costs. The Department must include this as part of its analysis regarding impacts to small businesses. (394) RESPONSE: Pursuant to the requirements of the APA, the Department conducted a regulatory flexibility analysis that provided a reasonable forecast of the direct impacts of these rules on small businesses in the State. As set forth in the Response to Comments 420 through 465 and the Response to Comments 693, 694, and 695, electric rates could increase or decrease for any number of reasons in the future as many market factors play a role; the exact impacts felt by ratepayers, including small businesses, are difficult to determine and depend on a number of

inter-related factors, including ZEV owner behavior, the current state of capital investments by utilities, and the ebbs and flows of the overall global energy market.

Also, any requests for rate increases as a result of investments in EV infrastructure would be phased in over time with other costs. Ultimately though, it is the purview of BPU, not the Department, to ensure equitable distribution of rates among various classes of ratepayers. Federal Standards Statement

697. COMMENT: The Department has not provided the statutorily required Federal Standards Statement analysis for the ACC II proposal. Instead, it obfuscates that a Federally approved California waiver that New Jersey can voluntarily adopt is somehow a Federally approved standard. It is not a Federal standard for the purpose of the New Jersey statutes. The Department also has not included the required jobs analysis, again obfuscating with unrelated greenhouse gas job studies. The Department must determine an estimate of how many jobs will be gained or lost as a result of the adoption of this rulemaking as is required by State statute. (317) RESPONSE: As explained in the notice of proposal, the CAA (a Federal statute), grants the State of California the authority to adopt stricter emission standards than the national standards set by the EPA, so long as California obtains a waiver from the EPA. As the adopted rules will not be enforceable until the EPA (a Federal agency) approves the standard, it is a Federal standard for purposes of the requirement at N.J.S.A. 52:14B-1 et seq. Although the Department determined a Federal standards analysis was not necessary, the Department explained in the notice of proposal that the ACC II program (as proposed) would be more strict than the EPA's current multipollutant emission standard. Therefore, the Department included the Federal standards analysis

that would have been required pursuant to N.J.S.A. 52:14B-1 et seq., had the ACC II rules exceeded a Federal standard or requirement. 55 N.J.R. at 1787-88.

Pursuant to the requirements of the APA, the Department conducted a Jobs Impact analysis that provided a reasonable forecast of the impact of the rules on employment in the State. 55 N.J.R. at 1788-89. The Department forecast job losses, mainly in the vehicle repair and maintenance industry, as well as retail gasoline sales. However, those job losses are forecast to be offset by other industries that will see employment gains. Industries that will experience growth over the next 10 years include those providing charging infrastructure, the electric power, and clean vehicle technology (parts). As required by the APA, the Department has provided commenters with the opportunity to provide feedback and critiques of its analysis. After careful consideration of the feedback, as is the purpose of a comment period, the Department is satisfied that it provided a reasonable forecast of the job impacts, particularly given the economic variability involved.

Commerce Clause

698. COMMENT: Prohibiting the registration in New Jersey of a new vehicle purchased out-of-State appears to conflict with and violate the Commerce Clause. (319 and 499)
699. COMMENT: The Administration's statement that people "can go to another state" to buy an ICE vehicle is an insult to New Jersey residents and businesses. There is also the question of the legality of that statement. After 2035, when new ICE vehicles cannot be delivered for sale in New Jersey, can a person go out-of-State, buy a new ICE vehicle, and register it in New Jersey?

If the Department's position is that the new ICE vehicle cannot be registered in New Jersey, there could be a constitutional commerce clause issue. (113)

700. COMMENT: The Department cannot effectively ban out-of-State purchases because of the Interstate Commerce Clause. (219)

701. COMMENT: Americans have the right to travel freely without interference from the Government. The Department must demonstrate how the electric vehicle legislation will not violate interstate commerce. (44)

RESPONSE TO COMMENTS 698, 699, 700, AND 701: As explained in the Response to Comments 466 through 511, pursuant to N.J.A.C. 7:27A-29A.3(a), all new light-duty vehicles registered in New Jersey are required to be CARB-certified regardless of where they are purchased. A new vehicle purchased out-of-State may be registered in the State if is certified by CARB. The Clean Air Act authorizes California to enact stricter emission control standards for certain new motor vehicles and new motor vehicle engines, if California receives a waiver from the EPA. 42 U.S.C. § 7543. As explained in the notice of proposal (55 N.J.R. at 1774), the Clean Air Act also authorizes qualifying states like New Jersey to adopt and enforce the same emission control standards for which California has received a waiver. 42 U.S.C. § 7507. When Congress, specifically, authorizes state action, it is not subject to the Commerce Clause.

See the Response to Comments 720 and 721 regarding registration.

<u>Antitrust</u>

702. COMMENT: When organizations agree to work together to punish disfavored views or industries, or to otherwise advance environmental, social and governance goals, the coordinated behavior may violate antitrust laws and harm American consumers. (109)

RESPONSE: As explained in the notice of proposal (for example, 55 N.J.R. at 1774) and Response to Comments 675 through 687, the Clean Air Act authorizes qualifying states, like New Jersey, to adopt and enforce the same emission control standards for which California has received a waiver. To the extent that the commenter asserts that adopting the ACC II rules may violate the Sherman Act, state regulations are exempted from the Sherman Act under the state actions doctrine. Therefore, the Department does not believe adopting ACC II violates antitrust laws. As explained in the Response to Comments 289 through 419 and the Response to Comments 533 through 607, the ACC II rules are not expected to harm New Jersey consumers but rather, to spur innovation, provide more choice to consumers, and lower costs due to technology advances and economies of scale.

World Trade Organization

703. COMMENT: Thailand reviewed the World Trade Organization notification by the United States of the rulemaking. The ACC II rules may not be based on international standards for enforcement, which could result in trade barriers between countries. The pollution is not only from the tailpipe but pollution starting from the electricity production process used in electric vehicles should be considered. It is important to consider pollution from the entire lifecycle of electric vehicles, including the manufacturing process, for comprehensive evaluation. (311) RESPONSE: As explained in the Response to Comments 553 through 607 and the Response to Comments 675 through 687, the EPA, CARB, and states that have adopted California's motor vehicle standards have been adopting emission standards for decades; New Jersey is authorized to opt in to California's ACC II program. As explained in the Response to Comments 259

through 283, the Department expects significant net emissions reduction benefit when considering well-to-wheels emissions.

Direct Sales

704. COMMENT: To encourage New Jersey residents to purchase EVs and increase transportation innovation and consumer choice, the State needs to facilitate EV market growth and remove unnecessary barriers to successful implementation of ACC II. One such barrier is prohibiting the direct sale of EVs, which may force customers to go through additional hurdles to purchase, register, and obtain their vehicle if sold online from a licensed location out-of-State. The State is strongly urged to permit direct-to-consumer vehicle sales by manufacturers that have not previously offered a dealership franchise. (671)

RESPONSE: In New Jersey, all automotive manufacturers are subject to the Franchise Practices Act (FPA), which requires auto manufacturers to distribute their new motor vehicles through dealerships. See N.J.S.A. 56:10-1 et seq. Although the FPA generally prohibits manufacturers from selling a new motor vehicle directly to a consumer, direct sale by a manufacturer of only zero emission vehicles is permitted if certain conditions and requirements set forth in the statute are met. See N.J.S.A. 56:10-27 and 27.1. Any changes to the FPA require legislative action and are outside the scope of this rulemaking.

Mid-Term Review

705. COMMENT: The Department should incorporate a mid-term review mechanism into the regulatory framework. This mid-term review would serve as an essential tool for evaluating the

effectiveness of ACC II and allow for a thoughtful reassessment of its implications for New Jersey's environmental goals, economic landscape, and the welfare of its residents. The review is essential to assess whether emission reductions are being achieved, enable adjustments based on environmental and technological changes, facilitate a comprehensive cost-benefit analysis, and compare the Federal rules to ACC II to determine which is the most beneficial. (3) 706. COMMENT: If New Jersey will not withdraw the notice of proposal, then the proposal should be amended to require a mid-term review to assess progress and revisit whether the costs of sticking with ACC II outweigh the benefits of reverting to an increasingly stringent Federal Clean Car rule. (1 and 9)

707. COMMENT: To meet the pragmatic timeline in transitioning an entire gas infrastructure to accommodate for EVs while trying to address the concerns of climate change, President Biden signed Executive Order No. 14037, which sets a goal that 50 percent of all new cars and passenger trucks sold in 2030 be zero-emission vehicles. It would be wise for New Jersey to either commit to a mid-term review of ACC II, where progress could be assessed and the question of adhering to ACC II or reverting to the Federal Clean Car rule would be advisable. Without forgetting the detrimental impact of the carbon emissions that gas-powered vehicles cause, the Administration would be prudent to reconsider this mandate. New Jersey should implement a plan that protects both the environment and the consumer. (8)

708. COMMENT: If the Department decides not to analyze the Federal Clean Car rule and publish the results before adopting the ACC II rules, the Department should commit to a mid-term review in 2026 and written report with specific recommendations based on an assessment of ACC II compliance, the State's ability to achieve the levels of ZEV sales mandated pursuant to

the California rule and a follow up comparison of the ACC II rule versus the new, more stringent Federal Clean Car rule. The report would make recommendations to the Legislature and new governor about what must be done to comply or whether reverting to the Federal program would better serve the shared goals of transitioning to a zero-emission future. A mid-term review mechanism would not change the standards for or compliance with ACC II. Therefore, it would not be inconsistent with the requirements of Section 177 states. It would however allow the State a mid-term review opportunity of its own, based on real conditions in the State to determine if ACC II works for New Jersey consumers, residents, and businesses. As the Federal rules increase stringency, the balance between costs and benefits of implementing ACC II in New Jersey will shift. Precedent for such a review mechanism in New Jersey previously existed under the original New Jersey Clean Car law. The Legislature repealed N.J.S.A. 26:2C-8.19 after Governor's McGreevey, Codey, Corzine, and Christie failed to ever appoint the 15-member Low Emission Vehicle Review Commission which, among other things, was to evaluate New Jersey's continued participation as a California Low Emission Vehicle (CALEV) state. Membership representation included the Assembly, Senate, academic, and business leaders. A similar commission should be established as part of ACC II and that Department should commit to a mid-term review in 2026 with a formal structure to facilitate stakeholder engagement. (27) 709. COMMENT: The proposed manufacturer mandates for ZEV, with limited options for plugin hybrid vehicles (PHEVs), could result in unintended consequences. There is uncertainty on whether the State's electricity system (generation, grid and storage, recharging infrastructure) can be expanded to support the ZEV growth rate. Further, there is uncertainty in what future retail electricity prices will be for ZEVs. There is also uncertainty on future pricing and

availability of BEVs. These implementation uncertainties could lead to increased risk of program failure and/or higher costs for New Jersey consumers. The Department should add required routine program reviews to the proposed regulations with metrics that would trigger program adjustments if markets do not develop as expected. The following metrics should be included in the regulation and trigger program adjustments as warranted: ZEV sales; ZEV vs. ICE vehicle price; battery metals supply; electricity system expansion (generation, storage, grid, recharging); electricity price to consumers, including transparency on the increase in price resulting from ZEV power demand; and fueling/charging infrastructure. (647)

710. COMMENT: The Department seems to recognize several realities in its notice of proposal but does not discuss a backup plan for when its optimistic viewpoint does not come to fruition. With all the interdependent moving parts that comprise this transition, mess and expense is certain to follow. The Department should learn a lesson from the State's offshore wind projects to generate green electricity. Expenses have increased dramatically, the supplier is threatening to back out of the project, and public support has drastically changed for the worse. The Department should publish a backup plan in the rules, unless the Department's plan is to throw ACC II at the wall and see if it sticks. (118)

RESPONSE TO COMMENTS 705 THROUGH 710: As explained in the Response to Comments 662 through 670, the Department recognizes the potential benefits of a national program and supports the Federal government's efforts to impose more stringent multi-pollutant exhaust emissions standards for light-duty and medium-duty vehicles. See 88 FR 29184 (May 5, 2023). At the time of this adoption, however, the EPA has not adopted final regulations and the

Department has determined to move forward with the ACC II rules to obtain the emissions and health benefits expected to result.

The Department will continue to monitor the EPA's rulemaking and review applicable Federal standards when adopted. The Department will also continue to monitor updates to CARB's ACC II rulemaking, which are not enforceable until after California receives a waiver from the EPA, and will continue to evaluate the benefits and costs of the ACC II rules for New Jersey and the challenges and successes of implementation in the state. Even without a mid-term review mechanism in the rules, the Department may repeal or amend the rules, subject to the Clean Air Act's identicality requirement, in accordance with the APA.

State Vehicles

711. COMMENT: The Department should not adopt the rules, since the government has not yet banned the purchase of ICE vehicles within its fleets. Some commenters cite specific concerns ranging from the recent purchase of ICE vehicles for the Governor's Office to a perceived exemption for government vehicles. (92, 207, 255, 276, 319, 412, 425, 499, 551, and 698) 712. COMMENT: The State Police determined that the best way to protect the Governor is to have him ride around in a brand new big black SUV with an internal combustion engine. However, the Governor has determined that the best way to protect the 9.2 million residents of the State is to ride in an EV. Until the Governor recognizes that the safety of 9.2 million of us are as important as his own, the rule should be withdrawn. (168)

713. COMMENT: The State should lead by example and practice. Before adopting this mandate,
the State should first change its fleet of cars and light trucks, thereby learning and developing the
necessary infrastructure to electrify and charge a large number of vehicles. (319 and 499)
714. COMMENT: State official vehicles should follow the mandate and lead by example. (181)

and 380)

715. COMMENT: Raising consumer awareness for success of the program can happen in many ways. For example, public and workplace chargers and hydrogen stations are an excellent means of raising consumer awareness. State and local fleet purchases of EVs also substantially raise awareness, particularly if these vehicles are used in high visible areas, such as Department of Transportation road crews, police, and fire. Additionally, State-led programs may also be necessary to support the ZEV requirements. (457-1)

716. COMMENT: EVs are not convenient for everyone, including the Department whose vehicle fleet is primarily ICE and whose employees do not have access to sufficient charging stations. But EVs will be mandated for the rest of us under the proposed rule. (113)

717. COMMENT: The vast majority of consumers have little understanding about the capabilities and advantages of EVs, the wide range of available models, and the nature of the charging experience. Effective strategies will build consumer awareness and interest in EVs. (202)

718. COMMENT: Before mandating EVs, all State, county, and municipal vehicles should have converted to EVs to as an example to the motoring public. (374)

719. COMMENT: State, county, and local vehicles should not be exempt from the rules. (544)

RESPONSE TO COMMENTS 711 THROUGH 719: As the Department explained in the notice of proposal, State and local governments are also consumers of vehicles. 55 N.J.R. at 1784. As such, government agencies will also continue to transition their fleets to ZEVs consistent with the goals of N.J.S.A. 48:25-3.

Specific Provisions

Registration

720. COMMENT: The proposed rules at N.J.A.C. 7:27-28A.3(a) would prohibit the registration of new ICE vehicles after 2035, in contrast to statements made by the Governor and representatives of the Governor's Office that the rules would prohibit the sale of new ICE vehicles in New Jersey. The Department must correct this error by amending the rules on adoption to prohibit the sale or purchase of new ICE vehicles in New Jersey or by re-proposing the rules. (168)

721. COMMENT: For individuals who purchase ICE vehicles out-of-State, will they be able to register the vehicle in New Jersey? (181 and, 412)

RESPONSE TO COMMENTS 720 AND 721: The APA and implementing rules require an agency to provide notice of proposed rulemaking. See generally N.J.S.A. 52:14B-1 et seq.; N.J.A.C. 1:30-1. The OAL rules specify the requirements for a notice of proposal. N.J.A.C. 1:30-5.1. The notice of proposal clearly explains that the portion of the ACC II rules concerning the annual ZEV requirement is an obligation that must be met by manufacturers of passenger cars and light-duty trucks. 55 N.J.R. at 1774-75. The notice of proposal also sets forth the text of the rules as proposed and now adopted. N.J.A.C. 7:27-29A.3(a) as proposed and adopted states that

"[e]xcept as set forth at (b) and (c) below, on or after January 1, 2027, no person who is a resident of this State, shall sell, lease, import, deliver, purchase, acquire, register, receive, or otherwise transfer in this State, or offer for sale, lease, or rental in this State, a new 2027 or subsequent model-year passenger car, light-duty truck, or medium-duty vehicle, unless the vehicle has been certified by CARB."

N.J.A.C. 7:27-29A.3(a) does limit the registration in New Jersey for new, model year 2027 or subsequent new model year vehicles to only those vehicles that are CARB-certified. That is not the same as prohibiting the registration of new ICE vehicles beginning with model year 2035. As explained more thoroughly in the Response to Comments 16 through 44, it is theoretically possible that one or more manufacturers would have enough vehicle values banked to continue producing a small portion of strictly ICE vehicles in model year 2035 and beyond. Also, as long as those ICE vehicles are CARB certified, N.J.A.C. 7:27-29A.3(a) would not prohibit their registration in New Jersey in 2035 (or any subsequent year that an ICE vehicle is CARB certified).

Delivered For Sale

722. COMMENT: CARB's wrongheaded approach to enforcement of the ACC II rule means that automakers are off the hook once they drop cars off for sale at dealerships in New Jersey, regardless of whether those vehicles sell or are ever placed in service. As the CARB mandate allows automakers to garner credits when they deliver the car for sale at a dealership, automakers are allowed to shift the burden of discounting or further incentivizing these vehicles to the dealer. By allowing automakers to dump expensive ZEVs on dealer lots without any obligation to price

or incentivize the vehicle to sell places a major financial burden on local businesses and will ultimately frustrate ZEV sales.

The Department should exercise its implied authority pursuant to Section 177 of the Federal Clean Air Act to adopt its own enforcement standard by awarding ZEV credits only when a qualified vehicle is titled or registered to an end user in New Jersey, not just delivered for sale. Public policymakers in New Jersey have a strong argument that such a provision would constitute an enforcement mechanism or procedure, rather than an emissions standard, that would promote EV sales (not just EV dumping) in New Jersey.

Section 177 of the Federal Clean Air Act requires that standards adopted by New Jersey be "identical" to California standards. However, an important legal distinction must be drawn between the applicable "standard"—the ZEV mandate itself—and any mechanisms to enforce it. As with Section 209(a) preemption, the Clean Air Act requires that the "standard" be identical to qualify pursuant to CAA § 177, not the mechanisms for enforcing the standard. In this case, the change of language from "delivered for sale" to "sold or leased" or "placed in service" affects the method of implementing and enforcing the standard but leaves the underlying standard unchanged. The percentage of ZEV pursuant to the New Jersey provision would remain identical to that in the California regulation. Extensive legal analysis suggests that it remains an open question as to whether a court would find New Jersey's adoption of a revision to the California ZEV standard requiring actual sales of vehicles, as opposed to delivery of vehicles for sale, is preempted pursuant to the Clean Air Act. Clearly, public policymakers in New Jersey have a strong argument that such a provision would constitute an enforcement mechanism or procedure, rather than an emissions standard.

It is also important to note that this change would not result in any requirement to produce a "third vehicle," or otherwise run contrary to the intent and purpose of either CAA § 209 or § 177 – which is to prevent manufacturers from having to produce different vehicles to meet differing state standards. In contrast, the State's unique enforcement mechanism likely will bolster actual sales in New Jersey of the same vehicles being delivered for sale in California. Accordingly, the proposed revision to New Jersey's ZEV regulation does not affect the identicality of New Jersey's underlying ZEV standard to that of California and, thus, remains subject to a waiver of preemption pursuant to Section 177. (27)

RESPONSE: The Department recognizes the concern that manufacturers may deliver vehicles that dealerships struggle to sell. However, it is in the manufacturers' best interest to have their vehicles sold and the path to that goal to is produce vehicles that customers want to purchase. Likewise, it is in the dealers' best interest to work collaboratively with manufacturers to get those vehicles that they know will sell best to the customers in their market. If a manufacturer's vehicles are never sold, its bottom line will be negatively impacted despite any gains from receiving ZEV values for deliveries to New Jersey dealerships. Therefore, the Department is adopting the rules as proposed.

Medium-Duty Vehicles

723. COMMENT: N.J.A.C. 7:27-29A would adopt by reference CARB's Low-Emission Vehicle IV (LEV IV) requirements at 13 CCR 1961.4 for chassis-certified medium-duty vehicle (MDV) and associated in-use testing requirements. Those Class 2b and 3 MDV (that is, vehicles with 8,500-14,000 pounds 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 New Jersey. The commenter has the same technical concerns that were expressed to CARB with adopting in-use testing requirements and standards which CARB had developed for their Heavy-Duty (HD) Omnibus Low Oxides of Nitrogen (NO_x) rule for HD engine certification and compliance and applying them directly to chassis-certified MDV in LEV IV.

More recently, the EPA proposed the Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles, which include new NOx certification and in-use standards for MDV. (See <u>https://www.govinfo.gov/content/pkg/FR-</u> <u>2023-05-05/pdf/2023-07974.pdf.</u>) CARB and HD manufacturers also recently entered into an agreement that includes a commitment by CARB to align its 2027 HD Omnibus Low NO_x regulation with EPA's 2027 HD NO_x regulation recently finalized as part of the Clean Trucks Plan. (See <u>https://ww2.arb.ca.gov/news/carb-and-truck-and-engine-manufacturers-announce-</u> <u>unprecedented-partnership-meet-clean-air</u>.). While the agreement for alignment on 2027 HD standards does not directly address the MDV ACC II concerns, it does offer insight into possible additional alignment paths which could address those concerns. (719)

724. COMMENT: One of the most significant obstacles to transitioning a fleet is the lack of availability of suitable medium- and heavy-duty ZEVs. For example, manufacturers have failed to produce an electric chassis for Class 7 and 8 (GVWRs over 26,001 and 33,001 pounds) vocational applications. ZEV cost is also a significant issue for fleets, particularly public. Medium- and heavy-duty ZEVs can cost 40 to 100 percent more than a comparable diesel engine

model. An over-the-road all electric Class 8 truck will cost nearly a million dollars. New dieselpowered trucks can be purchased for half that price. Much of any municipal fleet is made up of specialty equipment like hydro excavators, asphalt patchers, pavers, grinders, road graders, dozers, generators, welders, snowplows, compressors, etc. Depending on the circumstances, this equipment can routinely be expected to operate up to 24 hours per day during snow removal events or emergency situations and may be required to park at job sites where charging is not available. These are among the most energy intensive units in a city fleet, but are unlikely to have viable ZEV replacements any time in the near future. (651)

RESPONSE TO COMMENTS 723 AND 724: The ACC II rules apply to passenger cars, lightduty trucks, and medium-duty vehicles, as these terms are defined at 13 CCR 1900, which have been incorporated by reference at N.J.A.C. 7:27-29A.7. See N.J.A.C. 7:27-29A.1, 29A.2, and 29A.3. Heavy-duty vehicles and other vehicles or equipment are not subject to the ACC II rules, but heavy-duty vehicles may be subject to the Advanced Clean Trucks rules adopted by the Department on April 21, 2023. See 55 N.J.R. 1005(a) (May 15, 2023).

In adopting California's LEV IV standards, as with all other California standards, the Department is constrained by the identicality requirements of the Clean Air Act and is, therefore, unable to make any changes that would create a separate standard. If California amends its rules, the Department's rules would be amended at the same time in accordance with N.J.A.C. 7:27-29A.7. See the Response to Comments 675 through 687.

Clarifications and Updates of Miscellaneous Provisions

725. COMMENT: It appears, from the language of the proposed rules at N.J.A.C. 7:27-29A.7(c), that California Title 13 Section 2222 provisions would become effective 60 days after the adoption of the proposed rules. 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 Department should 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, that is, January 1, 2027, or later depending on the adoption date of the proposed rules. (293)

RESPONSE: It is true that N.J.A.C. 7:27-29A.7(c) states that in the event there are inconsistencies between the provisions of the CCR incorporated by reference and N.J.A.C. 7:27-29A, the provisions of the CCR shall prevail. However, the provisions at adopted N.J.A.C. 7:27-29A.2 are not "inconsistent" with the CCR. Adopted N.J.A.C. 7:27-29A.2 sets forth the scope and applicability of the Department's rules. And the Department made clear throughout the notice of proposal that the ACC II rules will be applicable in New Jersey beginning with the 2027 model year. The rule states that "The New Jersey Advanced Clean Cars II program shall apply to all model year 2027 or later motor vehicles that are passenger cars, light-duty trucks, and medium-duty vehicles subject to the California Advanced Clean Cars II program and delivered for sale in New Jersey on or after January 1, 2027." See N.J.A.C. 7:27-29A.2(b). As a result, the provisions incorporated by reference at adopted N.J.A.C. 7:27-29A.7, including 13 CCR 2222, will only apply to model year 2027 or later motor vehicles that are passenger cars,

light-duty trucks, and medium-duty vehicles. It would also not require CARB-certified aftermarket parts for Federally certified vehicles legally registered in the State of New Jersey at any time.

726. COMMENT: For an effective transition of the aftermarket parts and repair industry in the State of New Jersey 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; (2) implementation of a revised parts data management system/catalogs will be needed to select the correct part for a particular vehicle; (3) repair shops, parts retailers, and warehouses will need to sell down their current parts inventory; (4) many vehicles registered in the State of New Jersey do not have California emissions certification, so there is a need for Department guidance; (5) New Jersey 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; and (6) there is a need to clarify the responsibilities for aftermarket parts warehouses located in the State of New Jersey who sell aftermarket catalytic converters to businesses located outside the State of New Jersey. (293)

RESPONSE: With respect to tasks one through four and six, the Department agrees with the commentor that industry outreach (including education, guidance, and time) is necessary for a successful transition to the use of CARB-certified aftermarket catalytic converters. Pursuant to the Response to Comment 725, the first model year affected by the aftermarket catalytic converter provisions is 2027. New vehicles are subject to a catalytic converter warranty period

of eight years or 80,000 miles (whichever comes first); thus, the anticipated need for CARBcertified aftermarket catalytic converters is many years in the future (likely 2033 or beyond). This will allow time for the Department to implement the outreach strategies mentioned by the commenter. The Department would be pleased to work with the commenter and other industry stakeholders in coming years to prepare for this future requirement.

With respect to task five, the Department is not aware of any such reporting requirements noted by the commenter. The Department has carefully reviewed 13 CCR 2222, as incorporated by reference at N.J.A.C. 7:27-29A.7, to be sure it does not contain any reporting requirements.

727. COMMENT: The multi-billion-dollar aftermarket industry for ICE and diesel vehicle parts continues to grow. The Department should not regulate the aftermarket performance industry. (543)

RESPONSE: The Department is not imposing any new requirements on the aftermarket parts industry. It has been the case for decades that aftermarket emission control devices must perform similarly to the original equipment parts and that aftermarket performance modifications may not make any pollutants emitted from the vehicle worse than the original certified configuration. See U.S. EPA Memorandum 1A, dated June 25, 1974

(https://www.epa.gov/sites/default/files/documents/tamper-memo1a_0.pdf) and its subsequent updates such as November 23, 2020 (https://www.epa.gov/sites/default/files/2020-12/documents/epatamperingpolicy-enforcementpolicyonvehicleandenginetampering.pdf). The

Department's incorporation by reference of 13 CCR 2222 at N.J.A.C. 7:27-29A.7 only requires that model year 2027 and newer vehicles subject to the ACC II regulation be repaired with
CARB-approved parts to ensure that such vehicles continue to meet their CARB-certified emission levels.

Federal Standards Statement

N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c. 65), requires State agencies that adopt, readopt, or amend State rules that exceed any Federal standards or requirements to include in the rulemaking document a Federal standards analysis.

The Federal Clean Air Act (CAA) (42 U.S.C. §§ 7401 et seq.) granted the State of California the authority to enact stricter emission standards than the national standards set by the EPA. See 42 U.S.C. § 7543. The CAA also authorizes qualifying states to adopt and enforce emission standards for which California has received a waiver, if the state gives two years' lead time. See 42 U.S.C. § 7507. Thus, once the EPA grants California's request for a waiver for the ACC II regulations, pursuant to 42 U.S.C. § 7543, the more stringent emission standards incorporated by reference will be a Federally authorized standard. If, however, a waiver is not granted, the proposed rules will not be applied or enforced pursuant to N.J.A.C. 7:27-29A.2. Given the framework of the CAA, the proposed rules would not exceed a Federal standard once a waiver is granted. Thus, no further analysis is necessary.

Although the Department determined a Federal standards analysis is not necessary because the rules will either be Federally authorized or will not be enforced until Federally authorized, the Department recognizes that the ACC II program is more strict than the EPA's current multi-pollutant emission standard. The Department has determined that it is critical to reduce greenhouse gas emissions to mitigate the impacts and effects of climate change. In New

Jersey, passenger vehicles and light-duty trucks are the largest contributors to greenhouse gas emissions from the transportation sector. By adopting the ACC II program, the State will achieve greater emission reductions, which should result in greater health and environmental protections, than a business-as-usual scenario under the EPA's current multi-pollutant emission standards.

The direct costs of the ACC II rules will be borne by manufacturers, who will face an increase in incremental costs to produce ACC II compliant vehicles versus the production of vehicles compliant with EPA's existing emission standards. Nonetheless, a manufacturer's costs to design and produce vehicles that comply with the more stringent, ACC II emissions standards will only need to be incurred one time and will not recur each time a Section 177 state adopts the ACC II standards. Consumers of battery electric vehicles are likely to see a cost savings over a 10-year cost of ownership period. Whereas consumers of fuel cell electric vehicles and plug-in hybrid vehicles are not anticipated to achieve a net savings over time. Though the State may experience deceases in revenue, as a result of the decrease in sales of internal combustion engine vehicles, intervening legislative, regulatory, and policy changes related to vehicle sales and fuel taxes in the next two decades could reverse that trend. Car dealerships and the automotive repair industry in New Jersey will also have to make adjustments to their business models including investments in infrastructure, such as charging stations, that will result in increased costs. And some businesses in the State, like gasoline retail stations will see a decrease in sales, while other businesses, like businesses that supply engine components to manufacturers and ZEV infrastructure installers, will likely see an increase in sales. To the extent costs are incurred, the Department has determined that these costs are justified due to the need to reduce emissions from the light-duty vehicle sector and transition to zero-emission vehicles.

As CARB explained in its ISOR, "[m]anufacturers have made significant improvements in battery technology, which has enabled more vehicle offerings in more segments and increasing capabilities. [...] Additionally, technology costs have fallen significantly, namely battery costs, over the last 10 years and are expected to continue to drop over time. This will make ZEVs cost-competitive with gasoline vehicles in the 2030-2035 timeframe, if not sooner. [... T]he market is clearly poised for massive transformation. Every light duty vehicle manufacturer has made commitments to electrify their product line." ISOR at pp. 36-37. For these reasons, the Department is confident that the increase in ZEV sales required by the ACC II program is achievable.

As explained in the notice of proposal Summary, the adopted rules are intended to be a first step in a comprehensive plan to lower greenhouse gas emissions in the State in order to mitigate the impacts of climate change. The Department has determined that the ACC II program is essential if the State is to successfully decarbonize light-duty vehicles. Further, the Department anticipates the benefits of the rulemaking to be an increase in the quality of life and protection of human health and the environment.

Amendments to the LEV Program at N.J.A.C. 7:27-29

The Department's amendments at N.J.A.C. 7:27-29 at the conclusion of calendar year 2025 would not exceed a Federal standard. In fact, the Federal standard would be in effect for at least one calendar year before the ACC II program would become operative. Thus, no further analysis is necessary.

Clarifications and Updates of Miscellaneous Provisions at N.J.A.C. 7:27-14, 15, 28A, and 31

The amendments at N.J.A.C. 7:27-14 and 15 merely update a reference to an EPA memorandum; therefore, no Federal standard analysis is required. The amendments at N.J.A.C. 7:27-31 clarify that exemptions to California's ACT program should have been incorporated by reference when the Department originally adopted the rules. Since EPA granted California's request for a waiver for the ACT program rules, pursuant to 42 U.S.C. § 7543, the ACT program is a Federally authorized standard. Accordingly, no Federal standard analysis is required. The amendments at N.J.A.C. 7:27-28A establish a New Jersey-specific ABT program consistent with California's Low NO_x Omnibus rules. Once the EPA grants California's request for a waiver for the Low NO_x Omnibus rules, pursuant to 42 U.S.C. § 7543, the more stringent emission standards incorporated by reference will be a Federally authorized standard analysis is required is not granted, the rules will not be applied or enforced; therefore, no Federal standard analysis is required.

ENVIRONMENTAL PROTECTION

AIR QUALITY, ENERGY, AND SUSTAINABILITY

DIVISION OF AIR QUALITY

Advanced Clean Trucks Program and Fleet Reporting Requirements

Proposed Amendment: N.J.A.C. 7:27A-3.10

Proposed New Rules: N.J.A.C. 7:27-31 and 33

Authorized By: Shawn M. LaTourette, Acting Commissioner, Department of Environmental Protection.

Authority: N.J.S.A. 13:1B-3(e), 13:1D-9, 26:2C-1 et seq., particularly 26:2C-8.1 et seq., 26:2C-37 et seq., and 48:25-1 et seq.

Calendar Reference: See Summary below for explanation of exception to calendar requirement.

DEP Docket Number: 05-21-03.

Proposal Number: PRN 2021-036.

A **public hearing** concerning this notice of rule proposal and the proposed State Implementation Plan (SIP) revision will be held on May 20, 2021, at 9:00 A.M. The hearing will be conducted virtually through the Department of Environmental Protection's (Department) video conferencing software, Microsoft Teams. A link to the virtual public hearing and a telephone callin option will be provided on the Department's NJ PACT: Protecting Against Climate Threats website at <u>https://www.nj.gov/dep/njpact/</u>.

Submit comments by close of business on June 18, 2021, electronically at <u>www.nj.gov/dep/rules/comments</u>. Each comment should be identified by the applicable N.J.A.C. citation, with the commenter's name and affiliation following the comment.

The Department encourages electronic submittal of comments. In the alternative, comments may be submitted on paper to:

Alice A. Previte, Esq.

Attention: DEP Docket No. 05-21-03

Office of Legal Affairs

New Jersey Department of Environmental Protection

401 East State Street, 7th Floor

Mail Code 401-04L

PO Box 402

Trenton, NJ 08625-0402

If you are interested in providing oral testimony or submitting written comments at the virtual public hearing, please email the Department at <u>monica.miranda@dep.nj.gov</u> no later than 5:00 P.M. on May 17, 2021, with your contact information (name, organization, telephone number, and email address). You must provide a valid email address, so the Department can send you an email confirming receipt of your interest to testify orally at the hearing and provide you with a separate option for a telephone call-in line if you do not have access to a computer that can connect to Microsoft Teams. Please note that the Department will take oral testimony at the hearing in alphabetical order of the testifying person's last name. Further, this hearing will

be recorded. It is requested (but not required) that anyone providing oral testimony at the public hearing provide a copy of any prepared remarks to the Department via email.

The proposed new rules and amendments will become operative 60 days after they are adopted by the Commissioner of the Department (see N.J.S.A. 26:2C-8). This notice of proposal may be viewed or downloaded from the Department's website at <u>www.nj.gov/dep/rules</u>.

The agency proposal follows:

Summary

As the Department has provided a 60-day comment period on this notice of proposal, this notice is excepted from the rulemaking calendar requirement pursuant to N.J.A.C. 1:30-3.3(a)5.

The Department is proposing new rules, as part of a comprehensive strategy, to implement relevant provisions of the Global Warming Response Act (GWRA), N.J.S.A. 26:2C-37 et seq. The GWRA requires New Jersey to reduce greenhouse gas emissions and short-lived climate pollutants. Specifically, greenhouse gas emissions must be reduced to 80 percent less than the 2006 level of Statewide greenhouse gas emissions by 2050 (80x50 goal). As part of an overall strategy to meet the 80x50 goal, Governor Murphy issued Executive Order No. 100 (2020) (EO No. 100), which directs the Commissioner of the Department to, among other things, reform and modernize the Department's air and land use rules to mitigate the effects of climate change and to gather information to inform future climate-related rulemaking. In

response to EO No. 100, then-Commissioner McCabe issued Administrative Order 2020-01 (2020) (AO No. 1), https://www.nj.gov/dep/njpact/, which directs the Department to propose rules that reduce emissions of carbon dioxide (CO₂) and short-lived climate pollutants, as well as identify the rules and programs that should be updated to better respond to the challenges presented by climate change. Accordingly, the Department will propose multiple sets of rules, including rulemakings from the Division of Air Quality that are intended to reduce CO₂ and short-lived climate pollutants from the transportation, electric generation, and commercial and industrial sectors.

Through this rulemaking, the Department will reduce emissions of CO₂ and other climate pollutants from the transportation sector by incorporating by reference California's Advanced Clean Trucks (ACT) regulation, which will require manufacturers of vehicles over 8,500 pounds gross vehicle weight rating (GVWR) to participate in a credit/deficit program intended to increase the percentage of zero-emission vehicles sold in New Jersey. In addition, this rulemaking will require a one-time reporting in order to obtain information that will inform future decisions concerning further emission reductions from the transportation sector. The Department held stakeholder meetings on February 25, 2020, and September 10, 2020, to discuss this proposed rulemaking. The public information meeting materials are available on the Department's website at <u>https://www.nj.gov/dep/njpact/</u>.

The portions of the Summary that follow are organized by topic; consequently, some provisions of the new rules, such as the definitions, may be discussed in several places in the Summary.

Global Warming Response Act, 2019 Energy Master Plan, and 2050 Report

In 2007, New Jersey's Legislature passed the GWRA, which recognized that climate change, primarily caused by emissions of heat-trapping greenhouse gases, poses a threat to the earth's ecosystems and environment. See N.J.S.A. 26:2C-38. Additionally, the Legislature recognized that reducing emissions of greenhouse gases was not only possible, but necessary, to prevent further detrimental impacts on human, animal, and plant life. *Id.* A dozen years later, the Legislature amended the GWRA to acknowledge the role that short-lived climate pollutants play in climate change and to require the State to develop programs to reduce emissions of both greenhouse gases and short-lived climate pollutants through a comprehensive strategy. See P.L. 2019, c. 197. The GWRA's two long-term goals are to reduce greenhouse gas emissions to the 1990 level of Statewide greenhouse gas emissions by 2020 (2020 goal), and to achieve the 80x50 goal.

The State achieved the GWRA's 2020 goal for a reduction in emissions to 1990 levels principally through ongoing efforts to reduce emissions in the electric generation sector. See New Jersey Department of Environmental Protection, *Environmental Trends, Greenhouse Gas Emissions Chapter*, September 2020, p. 2, <u>https://www.nj.gov/ dep/dsr/trends/ghg.pdf</u>. Reaching the 80x50 goal, however, will require "substantial reductions in [greenhouse gas] emissions in [all sectors, but especially in] the transportation, residential and commercial, and electric generation sectors." New Jersey Department of Environmental Protection, *New Jersey's Global Warming Response Act 80x50 Report*, October 15, 2020, Executive Summary, p. vii, https://www.nj.gov/dep/climatechange/docs/nj-gwra-80x50-report-2020.pdf (2050 Report).

"In 2006, net emissions totaled 120.6 [million metric tons (MMT)] CO₂e, setting the 80x50 net emission goal at 24.1 MMT CO₂e by 2050." *Id.* at p. v. "[Carbon dioxide equivalent (CO₂e)] is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO₂e signifies the amount of carbon dioxide (CO₂) which would have the equivalent global warming impact, based on their relative global warming potential (GWP)." 2050 Report, p. v, Fn 1. In 2018, New Jersey's Statewide emissions were estimated to be 97.0 MMT CO₂e. *Id.* Thus, New Jersey must reduce its annual emissions by roughly 73MMT CO₂e by 2050. Given the breadth of emission reductions required, meeting the 80x50 goal will require planning and collaboration over time and across economic sectors, levels of government, and through public-private ventures. See 2050 Report, Executive Summary; see also *2019 Energy Master Plan: Pathway to 2050*, Executive Summary,

https://nj.gov/emp/docs/pdf/2020 NJBPU EMP.pdf (2019 EMP).

Recognizing the need for a comprehensive strategy, Governor Murphy directed multiple State agencies to develop or update reports and implement policies to mitigate climate change and strengthen resilience. Pursuant to Executive Order No. 28, the New Jersey Energy Master Plan (2019 EMP) was updated for 2019. The updated 2019 EMP included extensive modeling that resulted in the identification of seven overarching strategies the State should pursue in order to meet the 80x50 goal of the GWRA, as well as the goal of the 100 percent clean energy by 2050 set forth in the 2019 EMP. See 2019 EMP. Pursuant to the GWRA, the Department released the 2050 Report on October 15, 2020. The 2050 Report builds on the 2019 EMP by analyzing New Jersey's emissions reductions to date, evaluating plans presently in place for

further reducing emissions, and presenting a set of strategies across seven emission sectors for policymakers to consider in formulating legislation, rules, policies, and programs to ensure that New Jersey achieves the 80x50 goal. See 2050 Report, Executive Summary, p. v.

Both the 2019 EMP and the 2050 Report highlight the fact that reaching the 80x50 goal and the goal of achieving 100 percent clean energy by 2050 will require transformation in all economic sectors through the collaboration and planning of multiple State agencies, as well as the private sector, over the next three decades. See 2050 Report, Introduction, and Executive Summary; and 2019 EMP, Executive Summary and Conclusion, p. 231. Thus, the strategies and recommendations of the 2019 EMP and 2050 Report are intended to build on one another over time and across sectors. The strategies and recommendations are not intended to be read as a checklist of actions, with each individual rule or policy yielding a quantifiable number of emissions reductions to be credited toward the 73MMT CO₂e emission reductions needed by 2050.

For example, as New Jersey moves toward the increased electrification of buildings and transportation, it must consider multiple factors, including, but not limited to, the added demand for electric supply; the sources of electricity generated in New Jersey and for use in New Jersey through the regional transmission organization, known as PJM; emerging technologies; and the costs associated with technologies and infrastructure. Of course, each of these factors is variable, which requires that reporting and modeling be updated periodically. For this reason, the Board of Public Utilities and the Department, in collaboration with multiple other State agencies, will regularly update the strategies and recommendations in the 2019

EMP and the 2050 Report to consider: the State's progress in reducing emissions; current modeling; emerging pathways and technologies; and a reassessment of priorities. See 2050 Report, Introduction, p. 3; 2019 EMP, Executive Summary, p. 18. Until then, the proposed rules will serve as one of the initial steps New Jersey will take toward meeting the 80x50 goal.

Advanced Clean Trucks Program, N.J.A.C. 7:27-31

General

The 2050 Report observed that while it will be important to reduce greenhouse gas emissions in all sectors, reductions in the transportation, residential and commercial, and electric generation sectors, in particular, are needed to meet the 80x50 goal. Indeed, of the estimated 97.0 MMT of CO₂e emissions in the 2018 New Jersey Statewide inventory, 40.6 MMT were attributed to the transportation sector. See 2050 Report, p. 11. For that reason, the 2050 Report enumerates ongoing efforts by multiple State agencies to decrease emissions in the transportation sector by increasing the use of zero-emission technologies, including, but not limited to, efforts to accelerate sales of zero-emissions vehicles (ZEVs) of all weight classes and to increase the number of vehicle charging stations throughout the State. See 2050 Report, pp. 14-16. The 2019 EMP and the 2050 Report also identify pathways to meet the goal of decreasing emissions from the transportation sector; one recommendation is the decarbonization of medium- and heavy-duty vehicles. See 2050 Report, p. 21. The Department proposes new N.J.A.C. 7:27-31, Advanced Clean Trucks Program, to further this goal. The proposed rules incorporate by reference the portions of the California ACT regulation, found at 13 CCR 1963.0 et seq., in the California Code of Regulations (CCR) that require manufacturers of

vehicles over 8,500 pounds gross vehicle weight rating (GVWR) to participate in a credit/deficit program intended to increase the percentage of future medium- and heavy-duty vehicle sales by certain manufacturers to be zero-emission vehicles.

Pursuant to the proposed rulemaking, each manufacturer selling medium- and heavyduty vehicles in New Jersey is required to generate enough credits to offset its deficits. Credits may be generated through direct sales of a manufacturer's own ZEVs in New Jersey. Alternatively, a manufacturer that sells medium- and heavy-duty vehicles in New Jersey could offset its deficits in a given year by purchasing (or otherwise obtaining) ZEV credits generated by another manufacturer's sales of ZEVs in New Jersey. The deficits attributable to a manufacturer are based on the total number of its sales of medium- and heavy-duty vehicles in New Jersey. As set forth in the proposed rulemaking, the deficits incurred each year that must be offset by credits will begin in 2025, and increase every year through 2035, thereby increasing the total number of ZEV sales in the State. Accordingly, the proposed rulemaking is a necessary component of a comprehensive approach to reduce emissions from the transportation sector.

The California Air Resources Board (CARB) adopted the ACT regulation "to accelerate the widespread adoption of zero-emission vehicles (ZEVs) in the medium-and heavy-duty truck sector." CARB, Staff Report: Initial Statement of Reasons, October 22, 2019 (CARB ISOR), <u>https://ww2.arb.ca.gov/rulemaking/2019/advancedcleantrucks</u>; 13 CCR 1963(a). As described above, the first part of the ACT regulation requires an increasing percentage of future mediumand heavy-duty vehicle sales by certain manufacturers to be ZEVs. The second part includes reporting requirements for medium- and heavy-duty vehicles to inform prospective emission

reduction strategies. See CARB ISOR, p. ES-3. The Department notes that the CARB documents associated with the proposal and adoption of the ACT regulation frequently refer to "mediumand heavy-duty vehicles." Though the Department's proposed rulemaking does not define, or use, the term medium- and heavy-duty vehicles, the Department uses this catchall phrase throughout this rulemaking in the same manner it is used in the relevant CARB regulatory documents. Specifically, medium- and heavy-duty vehicles encompass all vehicles with a gross vehicle weight rating over 8,500 pounds.

Proposed N.J.A.C. 7:27-31.2, Purpose, and 31.4, Incorporation by reference, make clear that the Department is proposing to incorporate by reference only those portions of the ACT regulation pertaining to the requirements that manufacturers increase their sales of zeroemission medium- and heavy-duty vehicles. With respect to this portion of the ACT regulations, the Department intends to establish a regulatory program in New Jersey with an identical purpose to California's ACT regulation that will be enforceable when California receives a waiver from the EPA for its ACT regulations, and that waiver is published in the Federal Register. Specifically, the proposed New Jersey ZEV sales requirements, incorporating by reference 13 CCR 1963.1, applies to all manufacturers that sell vehicles in New Jersey in weight Classes 2b-3 through 8, except that manufacturers with fewer than 500 annual medium- and heavy-duty vehicle sales in New Jersey are exempt, as set forth at 13 CCR 1963(e).

Pursuant to 13 CCR 1963.2, which the Department proposes to incorporate by reference as part of the New Jersey ACT program, regulated manufacturers incur deficits for each medium- and heavy-duty vehicle sold into New Jersey. As set forth at 13 CCR 1963.1(b), deficit

calculations in New Jersey are based upon sales percentages that increase annually pursuant to the sales percentage schedule at Table A-1. The deficits must be offset by retiring credits that can be generated by producing and selling ZEVs or near-zero-emission vehicles (NZEVs). Pursuant to proposed N.J.A.C. 7:27-31.3, Applicability, New Jersey's rules will differ from California's only to the extent that deficits would not begin to be incurred until the 2025 model year (MY), and manufacturers could not begin to generate credits prior to the 2024 MY.

N.J.A.C. 7:27-31.4, Incorporation by reference

As noted above, the Department is incorporating a portion of California's ACT regulation by reference in order to implement a nearly identical program in New Jersey. Proposed N.J.A.C. 7:27-31.4, Incorporation by reference, identifies the specific provisions of the CCR that are to be incorporated by reference into this new subchapter, as well as the minor language changes necessary to effectively implement the program in New Jersey.

To maintain consistency with the relevant provision of the CCR, proposed N.J.A.C. 7:27-31.4 dictates prospective incorporation by reference of the California regulation. This means that upon the operative date of the Department's rules or the operative date of California's ACT regulation, whichever is later, all amendments, supplements, repeals, or other changes California makes to the incorporated rule shall also be effective in New Jersey on the effective date cited by California. Additionally, the Department intends that when an applicable provision of the CCR is incorporated by reference, the incorporation includes all documents and notes associated with that provision, unless specifically excluded by the Department's rules.

Equally important, proposed N.J.A.C. 7:27-31.4 provides that if there is an inconsistency between the New Jersey rules and the California rules incorporated by reference, the California rules control. Of course, the incorporation by reference of the California regulation does not affect the Department's authority to enforce any other State requirements.

Proposed N.J.A.C. 7:27-31.4 incorporates by reference 13 CCR 1963, 13 CCR 1963.1, 13 CCR 1963.2, 13 CCR 1963.3, 13 CCR 1963.4, and 13 CCR 1963.5. As set forth at proposed N.J.A.C. 7:27-31.4(g), (h), (i), and (j), the Department has revised specific text from the list of CCR provisions to be incorporated by reference, where necessary, to indicate New Jersey-specific program requirements. For example, language in the CCR referencing "California," "executive officer," and "CARB" is replaced with "New Jersey" and "Department" where necessary to specify the appropriate reporting and enforcement authority. The reference to penalty provisions in California's Health and Safety Code is likewise replaced with a citation to the corresponding penalty provisions in the Department's Administrative Code at N.J.A.C. 7:27A-3. Additionally, model year "2021," as it pertains to the generation, banking, and trading of credits is revised to reflect model year "2024" as discussed further below.

N.J.A.C. 7:27-31.1, 31.2, and 31.3, Advanced Clean Trucks Purpose, Applicability, Definitions, and General Requirements, 13 CCR 1963

Proposed N.J.A.C. 7:27-31.2, Purpose, indicates the Department's intent to adopt a regulatory program in New Jersey with a purpose identical to California's ACT regulation. The Department's incorporation by reference at N.J.A.C. 7:27-31.4 includes California's stated

purpose, at 13 CCR 1963, to reduce emissions of greenhouse gases, oxides of nitrogen (NO_x), and fine particles (PM2.5) through the acceleration of ZEV sales. Once the ACT program is implemented in New Jersey, the Department anticipates that the increase in ZEV and NZEV medium- and heavy-duty vehicles in New Jersey will result in significant reductions of greenhouse gases and other air pollutants as discussed in the Environmental Impact below.

Pursuant to 13 CCR 1963, California's ACT regulation applies to any vehicle manufacturer who certifies vehicles over 8,500 pounds GVWR for sale in California. Proposed N.J.A.C. 7:27-31.3 and 31.4 clarify that the applicability in New Jersey includes any vehicle manufacturer who produces vehicles over 8,500 pounds GVWR for sale in New Jersey, except that: (1) 13 CCR 1963(e) (incorporated by reference into the proposed rules) exempts manufacturers from the deficit requirements if their annual sales in a given year do not exceed 500 medium- and heavy-duty vehicles; and (2) regulated manufacturers in New Jersey will not begin to accrue deficits prior to model year 2025. The Department proposes a delayed model year applicability date to ensure compliance with the two-year lead time requirement at Section 177 of the Clean Air Act, 42 U.S.C. § 7505. In the event that the adoption of these rules is not finalized in order to be operative by January 1, 2022, the Department will modify the rules on adoption to commence with model year 2026.

The ACT regulation, at 13 CCR 1963, defines specific terms that are used throughout the California rule. These definitions generally pertain to the types and classes of vehicles subject to the regulation (or excluded from the regulation). These terms include "class 2b-3" through "class 8," "excluded bus," "near-zero-emission vehicle," "tractor," "vehicle," "yard tractor," and

"zero-emission vehicle." The ACT regulation defines each class of vehicle (Class 2b-3 through 8) by its GVWR in pounds. For example, Class 2b-3 encompasses any on-road vehicle with a GVWR that is between 8,501 and 14,000 pounds. This provision of the regulation also defines "class groups," which group together one or more classes of vehicles based on their weight and whether they are classified as tractor or non-tractor. ZEVs are defined broadly to encompass any vehicle technology that produces no greenhouse gases or criteria pollutant exhaust emissions. The ACT regulations define NZEVs to include only those vehicles that employ battery technology to reduce their emissions.

The ACT regulation, at 13 CCR 1963, also defines technical terms, such as "all-electric range," "gross vehicle weight rating," and "model year." These terms are necessary to clarify the ACT program's scope and vehicle certification requirements. Likewise, basic terms necessary to establish the mechanics of the regulatory program, such as "manufacturer," "NZEV credit," and "ZEV credit" are defined. The Department proposes to incorporate the ACT regulation's definitions by reference pursuant to N.J.A.C. 7:27-31.4, but also proposes to define New Jersey-specific terms at N.J.A.C. 7:27-31.1, Definitions. The proposed definitions of acronyms "GVWR," "NZEV," and "ZEV" are duplicative of definitions of "gross vehicle weight rating," "near-zero-emission vehicle," and "zero-emission vehicle" at 13 CCR 1963, and are provided in order that the Department proposes to define "California Air Resources Board," "CCR" and "Department," since those terms do not appear in the California regulation, but are necessary to distinguish between California and New Jersey provisions; additionally, for the

same reason, the Department notes that where "State" is used in the proposed rules, it refers to the State of New Jersey pursuant to the Office of Administrative Law Code's standards.

Finally, based on the Department's prior experience implementing its Low Emission Vehicle program, N.J.A.C. 7:27-29, the proposed rules define two additional terms to avoid ambiguity in interpreting and applying the California ACT regulation being incorporated by reference. Specifically, 13 CCR 1963.2 provides in relevant part, "A manufacturer may generate ZEV credits for each ZEV produced and delivered for sale in California for the manufacturerdesignated model year. ZEV credits are earned when a new on-road vehicle is sold to the ultimate purchaser in California." The Department proposes to define "person" and "ultimate purchaser" consistent with CARB's rationale that credits should not be given for vehicles that are merely sitting on dealer lots; credits will be earned only when the vehicle is sold to a person in good faith, for purposes other than resale. See CARB, Proposed Amendments to The Proposed Advanced Clean Trucks Regulation, p. 10, April 28, 2020

(<u>https://ww3.arb.ca.gov/regact/2019/act2019/ 30daynotice.pdf</u>) (CARB 30-day notice). The proposed definition of "ultimate purchaser" excludes dealers or other entities whose only interest in the vehicle is for resale. "Person" is defined because it appears in the proposed definition of ultimate purchaser.

Advanced Clean Trucks Deficits, 13 CCR 1963.1

The Advanced Clean Trucks program operates through a system of credits and deficits. As set forth at 13 CCR 1963(d), General requirements, proposed to be incorporated by reference, a manufacturer must retire ZEV or NZEV credits equal to or exceeding the deficits

they accrue for each model year. As set forth at 13 CCR 1963.1, proposed to be incorporated by reference, regulated manufacturers incur deficits based on the manufacturer's annual sales volume of medium- and heavy-duty on-road vehicles produced and delivered for sale in California beginning with model year 2024. As explained above, under the Summary of proposed N.J.A.C. 7:27-31.3, deficits will not begin to accrue for manufacturers subject to proposed N.J.A.C. 7:27-31 prior to model year 2025. Other than the delayed implementation date, the deficit calculation through the Department's proposed rules are identical to the ACT regulation. As set forth at 13 CCR 1963.1, the deficit for each vehicle sold is calculated based on multiple variables, including model year, vehicle weight class group, and whether the vehicle is considered a tractor. The number of deficits each manufacturer incurs increases from model year 2025 until model year 2035, for class 2b-8 non tractors, and from model year 2025 until model year 2032 for class 7 and 8 tractors. The heavier weight classes of vehicles incur more deficits, based on a weight class modifier. CARB explained that the "weight class modifiers are adjustment factors that were selected to keep credits and deficits approximately equitable from an emissions standpoint," since heavier vehicles are associated with higher emissions. CARB ISOR, p. 44. The weight class modifiers vary from 0.8 for the lightest vehicles to 2.5 for the heaviest. The Tables, at 13 CCR 1963.1, are incorporated by reference and provide the applicable ZEV sales percentage schedule based on model year, class group, and weight class modifiers.

Advanced Clean Trucks Credit Generation, Banking, and Trading, 13 CCR 1963.2

To remain in compliance with the rules, a regulated manufacturer must retire credits equal to or exceeding the deficits it accrues. The proposed rules provide several options for retiring credits. See 13 CCR 1963.2, proposed to be incorporated by reference. One option is for a manufacturer to generate credits from selling ZEVs or NZEVs. As set forth at 13 CCR 1963.2(a) and (b), ZEV and NZEV credits are earned only when a new on-road vehicle is sold to the ultimate purchaser. This means that vehicles delivered for sale in New Jersey, but not yet registered to an ultimate purchaser in New Jersey, would not qualify for ZEV or NZEV credit under the proposed Advanced Clean Trucks Program. As with the accrual of deficits, the credit value that may be earned for the sale of a ZEV is tied to the vehicle's weight class, as set forth in Table A-2 at 13 CCR 1963.1. As explained by CARB, "this approach provides flexibility for manufacturers to produce more ZEVs in one group to avoid making a small number of ZEV sales in other groups." CARB ISOR, at III-9. It is important to note that credit calculations for NZEV sales differ from ZEV credit calculations. So, for example, credit for an NZEV sale is discounted based on the all-electric range of the vehicle. Further, the value of an NZEV credit is not permitted to exceed 75 percent of the credit calculated for a ZEV of the equivalent class. If a manufacturer is unable to generate enough credits to offset its deficits from direct sales, the manufacturer may trade and/or purchase credits from another manufacturer. Furthermore, a manufacturer may bank credits for future use. However, banked credits will have a limited lifetime, which is based upon the model year as set forth at 13 CCR 1963.2.

Though California's ACT regulation allows credits to be banked as early as 2021, proposed N.J.A.C. 7:27-31.3 and 31.4(j) provide that early credits may not be banked sooner

than the 2024 model year. The Department has determined that it would be preferable to accept only those credits from ZEVs that have been certified pursuant to California's zeroemission powertrain certification procedures that will go into effect in 2024. Additionally, the Department is incentivizing the purchase of medium- and heavy-duty ZEVs sold in New Jersey between 2021 and 2024 by providing grants to the ultimate purchasers of medium- and heavy-duty ZEVs from the Volkswagen Mitigation Trust Fund and auction proceeds from the Regional Greenhouse Gas Initiative. Since the incentive funding will stimulate the purchase of medium- and heavy-duty vehicles produced by regulated manufacturers, the Department does not believe that it is also necessary to allow credits to be generated from these subsidized purchases. See CARB ISOR, pp. IX-1 to -2. Of course, under the California regulations proposed to be incorporated by reference, manufacturers are prohibited from double counting credits. Specifically, sales of Class 2b-3 vehicles that are eligible to earn credits under the ACT regulation and another program can be used to generate credits under only one program.

Advanced Clean Trucks Compliance Determination, 13 CCR 1963.3

Pursuant to 13 CCR 1963.3, proposed to be incorporated by reference, an annual compliance determination is made based upon model year credits and deficits. Specifically, a manufacturer must retire enough credits to offset the deficits incurred in a given model year. As noted above, excess credits generated in a given model year may be banked for future use, starting in 2024. However, credits must be retired in the order of model year expiration, since banked credits have a limited life. In other words, credits for older model years must be retired before credits for newer model years. In addition, credits must be retired in order of their credit

type and weight class group, as specified at 13 CCR 1963.3(c). If a manufacturer is unable to retire credits in an amount at least equal to its deficits, the manufacturer is required to make up the deficit in the next model year; however, the carry-over deficit cannot be satisfied with NZEV credits. Other compliance requirements related to tractor volume, NZEVs, and tractor deficits are detailed at 13 CCR 1963.3, which the Department proposes to incorporate by reference with no changes.

Advanced Clean Trucks Reporting and Recordkeeping, 13 CCR 1963.4

The California ACT regulation, at 13 CCR 1963.4, proposed to be incorporated by reference, specifies the information regulated manufacturers must report. For manufacturers selling vehicles in California, reports must be submitted starting with model year 2021. Pursuant to N.J.A.C. 7:27-31.3 and 31.4(j), reports submitted by manufacturers selling vehicles in New Jersey will start with model year 2024 since New Jersey will not allow manufacturers to generate credits prior to model year 2024. The Department proposes to incorporate by reference the remainder of 13 CCR 1963.4, which details the mechanics of the reporting credit transfers and declarations, timelines, and retention requirements, with no changes.

Advanced Clean Trucks Enforcement, 13 CCR 1963.5

Pursuant to 13 CCR 1963.5, proposed to be incorporated by reference, a manufacturer may be subject to an audit of its records of vehicle sales, and those records identified at 13 CCR 1963.5(a)(3) will be open to the public for inspection. If the Department determines that information used to obtain a credit was false, the credit will be invalidated. In addition,

violations of the annual compliance determination are subject to penalties. Pursuant to N.J.A.C. 7:27-31.4(i), the applicable penalty provisions may be found at proposed amended N.J.A.C. 7:27A-3.10.

N.J.A.C. 7:27-33, Fleet Reporting Requirements

As discussed above, the Department proposes to incorporate by reference the provisions of California's ACT regulation that require an increasing percentage of future medium- and heavyduty vehicle sales by certain manufacturers to be ZEVs. In addition to the ZEV sales requirement for manufacturers, the ACT regulation included a second component described as a "one-time reporting of information from large entities including retailers, manufacturers, and government agencies, about contracted services requiring the use of trucks and shuttles in addition to their medium- and heavy-duty vehicle fleet [and] information about cars from these same fleets to inform similar strategies to accelerate light-duty ZEV adoption." CARB ISOR, p. ES-3. The Department does not propose to incorporate by reference the second part of California's ACT regulation regarding a one-time reporting requirement. The Department is, however, proposing new N.J.A.C. 7:27-33, Fleet Reporting Requirements, which are largely based on, and in some places identical to, the text of the reporting requirements in California's ACT regulation.

Like California's ACT regulation reporting requirements, pursuant to proposed N.J.A.C. 7:27-33.2, Purpose, the purpose of the Department's proposed new subchapter is to gather information about the operations of entities that own and/or use medium- and heavy-duty vehicles in the State, so that the Department will be better informed if it takes future actions to accelerate the sale and use of zero-emission vehicles in the medium- and heavy-duty weight

classes. As explained by the CARB, the fleet reporting portion of the ACT regulation may lead to complementary regulations that "ensure that fleets purchase [the zero-emission vehicles required to be manufactured under ACT] and place them in service where suitable to meet their needs." CARB, Advanced Clean Trucks Fact Sheet, last updated June 25, 2020

(https://ww2.arb.ca.gov/sites/default/files/2020-06/200625factsheet ADA.pdf), and the

reporting from large entities that is required by the ACT regulation will help determine which entities "could become the point of regulation … and help … determine any appropriate exemptions and flexibilities" necessary for future rules. CARB ISOR, p. ES- 3. Accordingly, the Department is proposing a similar one-time fleet reporting requirement with many of the same components contained in the reporting requirements of California's ACT regulation. While there are many similarities, as outlined below, there are also a few key differences between the reporting requirements of California's ACT regulation and the Department's proposed rules. *N.J.A.C. 7:27-33.3, Applicability*

Pursuant to N.J.A.C. 7:27-33.3, Applicability, only those entities falling within the five categories are required to submit a report. Three of those categories include large entities. Although "large entity" is not a defined term, the Department's proposed rules will take the same approach as the reporting requirements of California's ACT regulation by including in the large entity category (1) State and local government agencies; (2) Federal government agencies; and (3) large for-profit and non-profit enterprises, such as retailers, manufacturers, restaurants, refuse companies, and other types of large employers. Applicability under these three categories

is also conditioned on the entity having one or more vehicles over 8,500 pounds GVWR operating in New Jersey.

At proposed N.J.A.C. 7:27-33.1, Definitions, the Department defines "government agency" as any government agency or public entity with taxing authority, which is comparable to the definition in California's ACT regulation. The proposed definition of "local government" is based on New Jersey statutes that confer contracting authority on local municipal and county governments, public schools, and county colleges. In terms of the for-profit and nonprofit large employers that will be required to report pursuant to proposed N.J.A.C. 7:27-33.3, there is no definition. Rather, entities "with gross annual revenues greater than \$50 million in the United States for the 2021 tax year, including revenues from all subsidiaries, subdivisions, or branches, that operated a facility in New Jersey in 2021 and had one or more vehicles over 8,500 pounds GVWR under common ownership or control that were operated in New Jersey in 2021" will be required to report. This language is identical to the corresponding applicability provision in California's ACT regulation, except that references to California have been replaced with references to New Jersey. Further, to ensure there is no confusion about the entities intended to be captured under the proposed subchapter, the Department proposes to define "subsidiary," "facility," "common ownership or control," and "gross annual revenue" the same as in California's ACT regulation.

"Gross vehicle weight rating" or "GVWR" is a defined term that allows the Department to specify the vehicles for which it is collecting information. "GVWR" means the value specified as the maximum design loaded weight. The proposed definition of "weight class bin" divides the

classes of vehicles over 8,500 pounds into weight classes starting with "class 2b-3," which are vehicles that have a GVWR between 8,501 and 14,000 pounds, and ending at "class 7-8," which are vehicles that have a GVWR greater than 26,000 pounds. The proposed definitions of the classes are based upon California's ACT regulation.

The other two categories of entities the Department seeks to collect information from are fleet owners with 50 or more vehicles with a GVWR over 8,500 pounds that operate a facility in New Jersey, and brokers that dispatch 50 or more vehicles with a GVWR over 8,500 pounds that operate a facility in New Jersey. The Department is proposing to adopt definitions for the terms "fleet" and "fleet owner," as set forth in California's ACT regulation, excluding the Californiaspecific references. The proposed definition of "fleet" clarifies that a fleet includes vehicles under common ownership or control. And both definitions ("fleet" and "fleet owner") underscore the fact that the fleet reporting rules are applicable to rented or leased vehicles, as well as owned vehicles. Indeed, the definition of "fleet owner" specifies when the lease holder or the lessee is responsible for submitting a report. The Department proposes to define the term "broker" as a person who has broker authority from the Federal Motor Carrier Safety Association and, for compensation, arranges, or offers to arrange, the transportation of property by an authorized motor carrier. While this is similar to the definitions set forth in California's ACT regulation, the Department proposes to separately define "motor carrier," rather than combine the two terms. A "motor carrier" is defined as a person that transports passengers or property for compensation. A motor carrier, or person who is an employee or bona fide agent of a carrier, is not a broker when it arranges or offers to arrange the transportation of shipments that it is authorized to

transport and that it has accepted and legally bound itself to transport. Finally, "facility" is defined the same as in California's ACT regulation. The proposed term "facility category" includes numerous categories of a facility's primary purpose, as discussed at greater length below, and is based on the text of California's ACT regulation. The proposed definitions at N.J.A.C. 7:27-33.1 ensure the applicability provisions are New Jersey-specific and maintain consistency with California's reporting requirements pursuant to the ACT regulation.

Proposed N.J.A.C. 7:27-33 also follows the ACT regulation format by specifying those entities, facilities, or vehicles that are exempt from the reporting requirement. However, the proposed rules depart from the ACT regulation in that the proposed rules do not exempt schools, school districts, or transit agencies from the reporting requirements. Unlike CARB (see CARB ISOR p. IV-24), the Department has not collected sufficient data on these entities' operations previously. Thus, the data submitted by these entities pursuant to the proposed rules would be a new data set, which will help to inform future rulemaking or policy decisions. In addition, unlike CARB, the Department has not exempted light-duty vehicles from the reporting requirements of transportation network companies. As will be discussed below, the Department does not intend to collect any information regarding light-duty vehicles; therefore, there is no reason to provide an exemption. The proposed rule exempts military tactical vehicles, vehicles awaiting sale, and emergency vehicles -- exemptions that are identical to California's ACT regulation. Based on these exemptions, the proposed definitions of "vehicles awaiting sale" and "emergency vehicle" correspond to the definitions in California's ACT regulation, except that the Department has omitted the California-specific references.

N.J.A.C. 7:27-33.4, General Requirements

Like California's ACT regulation, the Department's proposed N.J.A.C. 7:27-33.6, General entity information reporting, outlines the general requirements for entities that must submit a report under the proposed subchapter. The most notable difference between the proposed rule and California's ACT regulation is the date of that data to be collected. The California ACT regulation was adopted in 2020 and seeks to collect data from 2019. Because the proposed new rules are not anticipated to be operative until late 2021 or 2022, data from 2019 would be stale. Further, the Department determined it would not be appropriate to rely on data from 2020, given the effect of the COVID-19 pandemic on the economy. Thus, the Department proposes to collect data from calendar year 2021, in order to gather information that it believes will more accurately represent the operations of these entities moving forward. The proposed submission date is April 1, 2022, to allow time for entities to gather the data from the previous tax year.

Additionally, proposed N.J.A.C. 7:27-33.4 contains requirements for reporting methods. The Department intends to collect data electronically through a web portal. The portal will provide an electronic form of questions with data fields to be completed by each reporting entity. As with California's ACT regulation, the information submitted will be public, though the Department's rules do allow for a claim of confidentiality to be made pursuant to the procedures set forth at N.J.A.C. 7:27-1. Because the rules recognize that some vehicles are held under common ownership or control and/or may be held under a corporate structure that includes joint venture or parent/subsidiary relationships, the proposed rules allow one entity to submit a single report for all of the commonly owned and/or controlled vehicles, or allow each entity to report

independently, so long as all vehicles are covered by the various reports. The proposed rules also include definitions for the terms "corporate parent" and "subsidiary," which mirror the definitions in California's ACT regulation, so that there is no ambiguity about the entities subject to the fleet reporting requirements. Finally, proposed N.J.A.C. 7:27-33.4 makes clear that entities with brokerage and/or motor carrier authority that are subject to the subchapter must submit a report, even if they do not own the vehicles.

N.J.A.C. 7:27-33.5, Recordkeeping requirements

Consistent with other air rules at N.J.A.C. 7:27, proposed N.J.A.C. 7:27-33.5 requires entities that submit reports to retain the records, including any data and analysis relied on to compile the report, for a period of five years after submission and to respond to requests from the Department for clarification within 14 days.

N.J.A.C. 7:27-33.6, General Entity Information Reporting

Proposed N.J.A.C. 7:27-33.6, General entity information reporting, lists the basic identifying information each entity will be required to report. This information includes, but is not limited to, business name; responsible official information; taxpayer identification number; total revenue; the type of operational authority (that is, broker or motor carrier), if applicable; the number of contracts, if directly performing work or if delegating work to a third party; and the quantity of vehicles owned and operated in New Jersey without a home base in the State. The categories of information sought in this segment of the reporting requirements generally mirror the corresponding section of California's ACT regulation, but there is a difference regarding the Department's use of the term "responsible official." Specifically, the Department

does not define "responsible official" at proposed N.J.A.C. 7:27-33.1, because the term is defined at existing N.J.A.C. 7:27-1.4, Definitions, which applies to the entire chapter. The existing definition is similar to the California definition. Entities subject to the proposed subchapter should be aware of the existing definition and longstanding special obligations of a responsible official pursuant to N.J.A.C. 7:27-1, General Requirements, when submitting information to the Department. The proposed rules define "business" and "person," since the proposed reporting requirements reference both. The Department proposes to define both terms broadly, as the information the Department seeks to collect should be comprehensive.

N.J.A.C. 7:27-33.74, Vehicle Usage By Facility Information Reporting

Proposed N.J.A.C. 7:27-33.7, Vehicle usage by facility information reporting, is modeled on the corresponding section in California's ACT regulation, 13 CCR 2012.2. The proposed rule specifies the detailed vehicle and facility information that the Department will collect under fleet reporting requirements. As noted above, the goal of the proposed fleet reporting requirement is to gather information about the use of medium- and heavy-duty vehicles in New Jersey (whether owned or operated), so that the Department will be better informed if it decides to take future actions, such as the promulgation of rules that require fleet owners, brokers, and/or large entities to purchase ZEVs. To this end, proposed N.J.A.C. 7:27-33.7 is broken down into two principal subsections: (1) information pertaining to each vehicle's home base (N.J.A.C. 7:27-33.7(b)); and (2) information pertaining to the vehicles operated from each vehicle's home base (N.J.A.C. 7:27-33.7(c)). Proposed N.J.A.C. 7:27-33.7(a) does not include a specific request for information. Instead, N.J.A.C. 7:27-33.7(a) provides general direction concerning the type of information being

sought in subsections (b) and (c), as well as the method of reporting when a vehicle operated in New Jersey is not assigned to a particular location in New Jersey.

To enable it to better understand the basic operations of medium- and heavy-duty fleets in New Jersey, the Department proposes to collect information on each vehicle's home base. The proposed definition of "vehicle home base" is the same as the definition of the term in the California's ACT regulation. Specifically, the Department seeks information about where the reporting entities are parking their medium- and heavy-duty vehicles when they are not in use. For this information to be useful, the Department needs greater detail than a street address. Accordingly, the proposed rule asks for information pertaining to the nature of the vehicle's home base, by requiring the entity to report on the type of facility that serves as the vehicle's home base. The Department proposes to define "facility" and "facility category" identical to the definitions of those terms in California's ACT regulation. While "facility" refers to a physical address, "facility category" provides context. The information provided will illustrate which medium- and heavy-duty vehicles are being parked (and, therefore, starting and ending their daily operations) at warehouses, restaurants, hospitals, truck yards, or other establishments. In addition, the reporting entity will be required to provide information regarding the fueling infrastructure (if any) at the vehicle's home base locations, and whether there are trailers present at facilities being used as the vehicle home base for a tractor.

The second principal area of information that proposed N.J.A.C. 7:27-33.7 focuses on gathering is the types of vehicles being housed at the vehicle home base. Like California's ACT regulation, the proposed rule requires that the entity submit information that includes vehicle

body type, weight class bin, and fuel type. The entity reporting can choose to enter the information for each individual vehicle or use one of the three categories (body type, weight class, fuel) to group the vehicles for purposes of information submission. The proposed definition of "vehicle body type" is identical to the definition in California's ACT regulation. The proposed definition of "weight class bin" is almost identical to the definition in the California ACT regulation, but the Department has excluded the "light duty" weight class bin, because the Department has chosen to limit its data collection to medium- and heavy-duty vehicles. The proposed rule requires the entity to report information for a vehicle or vehicle group expressed as of a percentage of that group meeting certain criteria. The criteria include, but are not limited to, daily mileage, annual mileage, on-site refueling, trailer towing, GPS tracking, hours on-site, and age of vehicles.

When responding to questions about vehicle mileage, reporting entities are not to include "backup" vehicles (that is, vehicles not used in everyday or seasonal operations) in the calculations. The proposed definition of "backup vehicle" is the same as the definition of the term in the California ACT regulation.

Additionally, entities may respond to questions concerning mileage based on annual or quarterly data. If an entity believes that a period shorter than quarterly should be used for analysis, the entity will be required to describe the reasoning for the alternative period of analysis. Brokers are only required to report vehicle usage that is dispatched under contract. Here too, the Department has proposed a definition for "dispatched" that mirrors the text of

California's ACT regulation. When dispatched, a vehicle has a specific purpose or destination. Thus, the definition would limit the mileage information that a broker would need to report.

N.J.A.C. 7:27A-3.10, CIVIL Administrative Penalties for Violations of N.J.A.C. 7:27-31 and 33

At N.J.A.C. 7:27A-3.10, the Department proposes new civil administrative penalties for violations of proposed new N.J.A.C. 7:27-31 and 33. Existing N.J.A.C. 7:27A-3.5 authorizes the Department to impose a civil administrative penalty for a violation of any provision of N.J.A.C. 7:27, the Air Pollution Control Act (Act), or any rule promulgated, or administrative order, operating certificate, registration requirement, or permit issued pursuant to the Act, even if the violation is not otherwise included at N.J.A.C. 7:27A.

The proposed penalties at N.J.A.C. 7:27A-3.10(m)31 and 33 are consistent with existing penalties for similar violations of other Department rules. For example, the Department determined that the failure to make records available pursuant to 13 CCR 1963.4, as proposed to be incorporated by reference, and N.J.A.C. 7:27-33.5(a), is similar to the requirement to submit at N.J.A.C. 7:27-29.11(a) and (b).

Under the Grace Period Law, N.J.S.A. 13:1D-125 to 133, a person responsible for a minor violation is afforded a period of time by the Department to correct the violation in order to avoid being subject to a penalty. Based upon the criteria set forth at N.J.S.A. 13:1D-129, the Department has determined which of the proposed penalties at N.J.A.C. 7:27A-3.10(m) are minor, and, thus, subject to a grace period, and which are non-minor, and, thus, not subject to a grace period. Generally, the Department has determined that those violations that do not

result in excess emissions (and, therefore, pose minimal risk to the public health, safety, and the environment), and do not materially and substantially undermine or impair the goals of the regulatory program, are classified as "minor." Under the existing rules, a minor violation can be ineligible for a grace period if the conditions at N.J.A.C. 7:27A-3.10(s) are not met.

Social Impact

The Department anticipates that the proposed rulemaking will have a positive social impact in New Jersey. The proposed new rules and amendments are among the initial steps the Department and other State agencies will take to mitigate the impacts of climate change by reducing greenhouse gas emissions and the other climate pollutants and forcers that are driving climate change, as well as collecting data that will assist the Department in future rulemaking efforts intended to further reduce emissions from the transportation sector. In addition to reducing greenhouse gas emissions, the incorporation by reference of the California ACT regulation is expected to have an ancillary positive social impact by reducing co-pollutants that have an adverse impact on air quality and human health.

Climate Change

The recently released *2020 New Jersey Scientific Report on Climate Change* is the Department's first effort to compile scientific material in a comprehensive report detailing both the effects and the impacts of climate change. See New Jersey Department of Environmental Protection. 2020. *New Jersey Scientific Report on Climate Change*, Version 1.0 (Eds. R. Hill, M.M. Rutkowski, L.A. Lester, H. Genievich, N.A. Procopio) Trenton, NJ 184 pp. While the report

examines climate change at the global and regional level, its purpose is to explain the current and anticipated effects and impacts in New Jersey. See *Id*. at 3. In fact, one of the report's findings is that New Jersey is uniquely vulnerable to climate change due to multiple factors, including its coastal location, population density, and geography. See *Id*., Executive Summary.

The 2020 Report on Climate Change devoted more than 100 pages to an enumeration of both the effects and the impacts of climate change, which are inextricably linked. Likewise, the social, environmental, and economic impacts of the proposed new rules and amendments, which are intended to mitigate climate change, are interrelated. Rather than recite the more than 100 pages of the 2020 Report on Climate Change detailing the effects and impacts of climate change, which serves as the foundation for the Department's Social, Environmental, and Agricultural Industry impact statements, the Department sets forth a number of highlights below.

Causes of Climate Change

 CO_2 and other naturally occurring greenhouse gases trap heat; thus, these gases absorb some of the sun's solar energy keeping the earth's atmosphere warmer than if those gases were not present. See 2020 Report on Climate Change, pp. 3-5 and 14. Without this warming effect, the earth would be uninhabitable. See *Id*. Based on studies of ice cores from Antarctica, scientists have determined that concentrations of CO_2 in the earth's atmosphere have been fairly stable for 800,000 years. 2020 Report on Climate Change, p. 14-15. Around the time of the Industrial Revolution, however, the level of CO_2 in the atmosphere began to steadily
increase as a result of human activities. *Id*. Concentrations of CO₂ in the earth's atmosphere have gone from a steady rate of around 300 parts per million (ppm) to over 400 ppm. Due to the warming effect of CO₂ and other greenhouse gases, this increase in concentration has increased, and will continue to increase, global temperatures, resulting in climate change. See *Id*. at 15. Climate scientists worldwide agree that the substantial increase in heat-trapping greenhouse gases in the Earth's atmosphere from fossil fuel production and combustion, as well as land degradation are the principal causes of climate change. See *Id*., p. vi. And though CO₂ is the most abundant greenhouse gas, scientists have recently begun to study the role of other short-lived climate pollutants/forcers, such as hydrofluorocarbons, methane, and black carbon in climate change. See *Id*. at 25-26. It is now understood within the scientific community that while these pollutants and forcers tend to have shorter atmospheric lives, they also have much higher warming potentials making them significant contributors to climate change. See *Id*.

Below are just some of the current and anticipated effects of climate change.

Effects of Climate Change

Climate change, resulting from the increase in greenhouse gases and other highly warming climate pollutants and forcers, affects temperature, precipitation, sea-level rise, and ocean acidification. See 2020 Report on Climate Change, p. 28.

The documented increased temperatures driven by climate change will have many impacts, chief among them being "more intense heat waves and less intense cold waves." 2020

Report on Climate Change, p. 34. "Temperature increases are felt more strongly in New Jersey because of the high urbanization of the State, which results in large expanses of asphalt and concrete instead of forests, fields, and other open spaces that can provide cooling effects." *Id.* at viii. Increased temperatures also contribute to increased water vapor in the earth's atmosphere and the warming of oceans. See *Id.* at 36. Though these are not the only factors influencing precipitation patterns, they enhance the conditions for more frequent extreme precipitation events. See *Id.* at 36-42. In New Jersey, the effect may increase flooding or drought conditions, depending on the season and/or local geography. See *Id.*

Warming ocean temperatures and the melting of glaciers and polar ice sheets also contribute to sea-level rise. Indeed, for many reasons, sea-level rise within New Jersey's coastal areas is increasing at a higher rate than globally. See *Id.* at 44. As the seas rise, so too will the number of days New Jersey experiences tidal flooding. See *Id.* at 44-46. Increased levels of CO₂ in the Earth's atmosphere also mean increased levels of CO₂ in the oceans. See *Id.* at 49. As "CO₂ dissolves in seawater, ... a chain reaction [begins] leading to more acidic conditions" known as ocean acidification. *Id.* at 49. This change in the ocean's pH affects the availability of certain minerals, and by extension, the marine species that rely on the existing pH balance for survival. See *Id.* at 49-55.

In short, climate change affects the environment in a variety of ways. As discussed throughout this notice, the effects of climate change on the environment have a multitude of social costs, economic expenditures, and environmental damages. Below are a few of the

impacts that are predicted to occur under low-, moderate-, and high-emissions scenarios set forth in the 2020 Report on Climate Change.

Impacts of Climate Change

Air Quality

The EPA sets national ambient air quality standards (NAAQS) for six criteria pollutants. One of these health-based standards is for ground level ozone. New Jersey is classified as nonattainment for the ozone standard, which means the level of ozone measured at designated monitors around the State exceeds the Federal standards. See 2020 Report on Climate Change, p. 61. "The primary climate change impacts on ozone formation are expected to result from changes to meteorological conditions, often referred to as the ozone-climate penalty." *Id.* at 62. The ozone-climate penalty refers to a phenomenon in which the level of ozone precursors in the atmosphere may remain stable or even decrease, but warming temperatures offset those improvements, such that ozone formation remains unchanged. Thus, the work New Jersey has done, and continues to do, to reduce ozone precursors may be less effective at reducing ground-level ozone as temperatures continue to rise due to greenhouse gas emissions, like CO₂, and short-lived climate pollutants, like black carbon. See *Id.* at pp. 61-62 and 25-26.

Increased concentrations of ground level ozone have been linked to a number of health impacts, including, but not limited to, eye irritation, aggravated asthma and other respiratory distress, and premature death. See *Id.* at 63-64. Additionally, there is some evidence that the health impacts of increased ozone may be elevated when combined with other climate-related

impacts, such as the higher temperatures that occur during heat waves. See *Id.* at 66. This is particularly significant for New Jersey's urban areas where high temperatures are often accompanied by high levels of other local air pollutants. See *Id.* at 66.

Climate change impacts air quality in other ways. The increased heat waves and drought caused by climate change can lead to greater wildfire risk. See 2020 Science Report on Climate Change at p. 67. The particulate matter and other pollutants from wildfires that burn in New Jersey and those that burn in upwind states can negatively impact New Jersey's air quality. See *Id.* at 66-67. Climate change also increases exposure to other aeroallergens, such as pollen (longer growing season), dust particles (droughts and dust storms), and mold (severe weather events). *Id.* at 68-69.

In short, climate change will result in increased respiratory and cardiovascular health problems, particularly among vulnerable populations, such as the very young, very old, and those suffering from asthma or allergic illness. See *Id.* at 61-69.

Water Resources

The effects of climate change (temperature, precipitation, sea-level rise) may impact water quality and supply in New Jersey. See 2020 Report on Climate Change, p. 71. For instance, increasing temperatures translate into longer growing seasons, which leads to higher water demand. Added water use for agriculture could put stress on New Jersey's groundwater resources and diminish the supply. See *Id.* at 71-73. The quality of groundwater sources in New Jersey may also suffer adverse impacts from climate change as increased periods of

precipitation can lead to contamination of groundwater supplies. Similarly, sea-level rise can lead to saltwater intrusion of coastal groundwater supplies causing increased levels of salinity. See *Id.* at 73-75. Water quality concerns extend beyond groundwater supplies. New Jersey's surface water resources may also be threatened by rising air and water temperatures, increased extreme weather events, and sea-level rise, all of which could result in increased salinity, which existing water treatment plants are not designed to handle. See *Id.* at 75.

In sum, climate change may result in a reduction in the amount of water necessary to meet the State's needs and require more extensive resources to treat the remaining water supply.

Agriculture

The effects of climate change, particularly precipitation levels, changes in temperature, and the concentration of CO₂ in the atmosphere, will impact crop and animal farming. See 2020 Report on Climate Change, p. 81. As discussed in greater detail in the Agriculture Industry Impact, insects, weeds, and pathogens are expected to thrive in warmer, wetter weather, which is in stark contrast to the decrease in productivity anticipated for many of New Jersey's crops and livestock, who may be unable to adapt to the environmental effects of climate change. See *Id.* at 81-83. On the whole, climate change is anticipated to have a negative impact on New Jersey's agricultural industry as it may diminish the variety of crops and livestock that are cultivated in New Jersey for sale and consumption both locally and regionally. *Forests, Wetlands, and Carbon Sequestration*

The effects of climate change, including precipitation levels, changes in temperature, and the concentration of CO₂ in the earth's atmosphere, have already begun to impact ecosystems in New Jersey's forests and wetlands. See 2020 Report on Climate Change, pp. 85-113. Warmer temperatures mean that some pest species will grow faster, travel further, and live well into warmer winters, all the while putting pressure on tree species unprepared for the onslaught. See *Id.* at 90-91. In New Jersey, the pine beetle is a prime example of this phenomenon. See *Id.* at 91. Warmer temperatures have allowed this pest to increase its numbers and range, creating conditions ripe for "massive mortality events covering tens of thousands of acres of New Jersey's pine forests." *Id.* at 91. Likewise, warmer temperatures and the potential for prolonged periods of drought may affect the composition of the tree species in New Jersey's forests. These conditions favor species that are more tolerant of drought and sandy soils, while existing hardwood trees will become stressed. See *Id.* at 85-90. Moreover, "[i]ncreases in temperature, and the hot, dry periods that result, may intensify the danger of wildfires by drying out vegetation and soil" in New Jersey forests. *Id.* at 93.

Some of New Jersey's freshwater wetlands are under threat because of climate change impacts, such as changes in precipitation, sea-level rise, and increased temperatures. See 2020 Report on Climate Change, p. 95-98. Tidal wetlands in New Jersey face similar threats to their existing ecosystems due to the effects of climate change. See *Id.* at 98-108. Sea-level rise contributes to the erosion of existing tidal wetlands and an increase in marsh migration. Increased frequency, severity, and duration of precipitation events will also contribute to the erosion of some tidal wetlands. See *Id.* at 104-107. The erosion and diminishing of New Jersey's

freshwater and tidal wetlands will result in the loss of plant and animal habitats, loss of natural flood control resources and depletion of the State's natural buffers that help to protect coastal communities from storms. See *Id.* at pp. 95 and 99.

New Jersey's forests and wetlands serve as carbon sinks. See 2020 Report on Climate Change, p. 111. Specifically, these resources work as natural carbon capture systems, removing CO₂ from the atmosphere and helping New Jersey lower its net emissions. See *Id*. As explained above, the loss of forests and wetlands due to climate change will hinder New Jersey's ability to offset carbon emissions through these carbon sinks, and in the case of forests destroyed by pests, such as the pine beetle or wildfires, forests could become net carbon emitters. See *Id*. at 112.

In sum, climate change will have a negative impact on the State's plant and animal life, reducing habitats and diminishing the quality of recreational and cultural endeavors available within the State.

Rule Impacts: ACT Program and Fleet Reporting Requirements

Though the proposed new rules and amendments, standing alone, will not eradicate climate change, they are important first steps in a larger strategy intended to mitigate the effects and impacts of climate change. Efforts to mitigate the effects and impacts of climate change will require long-term commitments across all levels of government and sectors of the economy to increase the State's overall resilience while simultaneously facilitating climate pollutant reductions. This proposed rulemaking will accomplish two things: (1) incorporate by reference

the California ACT regulation, which requires each vehicle manufacturer to sell zero-emission trucks as an increasing percentage of their annual sales in the State; and (2) gather information from owners and operators of fleets of medium- and heavy-duty vehicles within the State to inform future rulemaking efforts. By transitioning from gasoline and diesel combustion engines to zero-emission engines, the proposed rulemaking will reduce emissions of CO₂, NO_x, and PM2.5, including one of PM2.5's highly warming components, black carbon.

As discussed above, CO₂ is one of the main contributors to climate change, while black carbon and other short-lived climate pollutants have also been linked to climate change due to their high global warming potential (GWP). 2050 Report, p. 109. Reducing emissions of CO₂ and short-lived climate pollutants from the transportation sector will mitigate the effects and impacts of climate change, which have been described at length above. Naturally, "[a]chieving these emissions reductions is predicated on decarbonizing electric generation [by deploying] renewable energy." New Jersey Department of Environmental Protection, New Jersey's Global Warming Response 80x50 Report, October 15, 2020, 10, Act p. https://www.nj.gov/dep/climatechange/docs/nj-gwra-80x50-report-2020.pdf. Thus, "the net emissions reductions projected from transportation" will be achieved simultaneous with the transition of the electric grid (regionally and within the State) away from fossil fuel. Id.

The Department anticipates that "[d]ecarbonizing medium- and heavy-duty vehicles provides additional benefits by locally reducing criteria pollutants and carcinogens such as black carbon, which are released in greater concentrations in heavily trafficked corridors that are typically in or near environmental justice communities." 2050 Report, p. 22. Reducing PM2.5

(and its components, like black carbon) is particularly beneficial given that diesel combustion contains "numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene."

https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health.

The effects of NO_x and PM2.5 on public health have been widely and extensively studied by the EPA and others. For instance, elevated levels of NO_x cause damage to the mechanisms that protect the human respiratory tract and can increase a person's susceptibility to, and the severity of, respiratory infections and asthma. Long-term exposure to high levels of NO_x can cause chronic lung disease. Other health effects from exposure to NO_x, include shortness of breath and chest pains. Further, long-term exposure to low concentrations of nitrogen dioxide (NO₂), a component of NO_x, also causes adverse health effects, including lung irritation and aggravate lung diseases, such as asthma. See USEPA, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, Regulatory Impact Analysis (August 2016), 6-6 6-6, to at pp. https://nepis.epa.gov/Exe/ZyPDF.cgi/P100P7NS.PDF?Dockey=P100P7NS.PDF.

Studies have also shown that reducing PM2.5 may lead to reduced incidence of premature mortality and morbidity Integrated Science Assessment (ISA) for Sulfur Oxides-Health Criteria (Final Report, Sep 2008), USEPA, Washington, DC, EPA/600/R-08/047F; USEPA. Integrated Science Assessment for Oxides of Nitrogen-Health Criteria (Final Report, July 2008), USEPA, National Center for Environmental Assessment Washington, DC, EPA/600/R-08/071; and

USEPA. Integrated Science Assessment (ISA) for Particulate Matter (Final Report, Dec 2009), USEPA, Washington, DC, EPA/600/R-08/139F.

Finally, by collecting data on entities that own or operate fleets of medium- and heavyduty vehicles within the State, the Department will be able to make informed decisions concerning future rulemaking efforts to reduce emissions from the medium- and heavy-duty vehicle sector. Informed rulemaking will have a positive social impact on the community being regulated, because it will allow the Department to develop rules that will be effective based upon the unique qualities of fleet operations within the State.

Economic Impact

The Department anticipates that the proposed rulemaking will have a net positive economic impact. Although the proposed rulemaking will result in increased compliance costs, the Department expects a net savings when decreased fuel consumption, lower maintenance costs, and avoided costs when estimating the social cost of carbon are considered.

Monetized value of CO₂ emission reductions

As discussed in the Social and Environmental Impact statements, climate change impacts are significant and far-reaching. Among the significant direct and indirect environmental changes the State will experience are "increases in temperature, variability in precipitation, frequency and intensity of storms, sea-level rise, ocean acidification, and the associated impacts to ecological systems, natural resources, human health, and the economy." 2020 Report on Climate Change, p. vi.

The economic costs of greenhouse gas emissions can be expressed using the social cost of carbon (SC-CO₂). "The SC-CO₂ is the monetized damages associated with an incremental increase in carbon emissions in a given year." Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, August 2016 (2016 IWG TSD Update), p.3, https://www.epa.gov/sites/production/files/2016-12/documents/sc co2 tsd august 2016.pdf. "The SC-CO₂ is intended to provide a comprehensive measure of the net damages—that is, the monetized value of the net impacts from global climate change that result from an additional ton of CO₂." National Academies of Sciences, Engineering, and Medicine 2017. Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide. Washington, DC: The National Academies Press (2017 NAS Report), p.5, https://doi.org/10.17226/24651. The damages include "changes in net agricultural productivity, human health, property damages from increased flood risk, and the value of ecosystem services due to climate change." 2016 IWG TSD Update, p.3. As the SC-CO₂ provides a dollar valuation of the damages caused by one ton of carbon pollution, the SC-CO₂ can also be used to represent the monetary benefit of reducing carbon emissions by providing an estimate of the avoided cost of future damages.

In 2018, New Jersey's Legislature determined as part of its findings relative to nuclear energy that "[t]he social cost of carbon, as calculated by the U.S. Interagency Working Group on the Social Cost of Carbon in its August 2016 Technical Update, is an accepted measure of the cost of carbon emissions." N.J.S.A. 48:3-87.3(b)(8). Likewise, the 2019 Energy Master Plan (EMP) and

the Department's 2018 CO₂ Budget Trading Program rules notice of proposal used the U.S. Interagency Working Group on Social Cost of Greenhouse Gases (IWG) supported SC-CO₂ values to consider the avoided social costs of actions taken to reduce greenhouse gas emissions. Considering all of these factors, the Department has determined that the techniques used to estimate the 2016 IWG SC-CO₂ values are based on the most current science and, therefore, are appropriate when estimating the monetary benefits of avoided greenhouse gas emissions.

The Department further notes that the Intergovernmental Panel on Climate Change (IPCC) has stated that the 2016 IWG SC-CO₂ estimates are likely underestimated due to the omission of significant impacts that cannot be accurately monetized, including important physical, ecological, and economic impacts. See IPCC, 2018: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5 degrees Celsius above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press (2018 IPCC Special Report), p.150-51,

https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15 Full Report High Res. pdf.

As noted in the 2016 IWG TSD Update cited above, the models used by the IWG did "not include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature" at that time, and that in the IWG's judgement "these

limitations suggest that the SC-CO₂ estimates are likely conservative." *Id.* at 20-21. While the Department understands there is uncertainty regarding the precise potential future impacts of climate change, the Department agrees with the IPCC and the IWG's own guidance. Therefore, the monetary benefits set forth below are believed to be conservative, and the avoided greenhouse gas emissions achieved through this rulemaking will likely result in greater economic benefits.

The SC-CO₂ "for a given year is an estimate, in dollars, of the present discounted value of the future damage caused by a 1-metric ton increase in CO₂ emissions into the atmosphere in that year, or equivalently, the benefits of reducing CO₂ emissions by the same amount in that year." 2017 NAS Report, p.5. The SC-CO₂ is year specific and is highly sensitive to the discount rate used to discount the value of the damages in the future due to CO₂ emissions. The SC-CO₂ increases over time as social-ecological systems become more stressed from the aggregate impacts of climate change and future emissions cause incrementally larger damages. Table 1 below shows the increase of SC-CO₂ values over time for each discount rate used by the Department.

Year	5%	3%	2.5%
	Average	Average	Average
2025	17	56	83
2030	19	61	89
2035	22	67	95
2040	26	73	102
2045	28	78	108
2050	32	84	115

Table 1: Social Cost of CO₂, 2025-2050 (in 2018 dollars per metric ton of CO₂)

(Values derived from the 2016 IWG TSD Update)

According to the 2016 IWG TSD Update, "the range of discount rates reflects both uncertainty and, at least in part, different policy or value judgements." *Id.* at 19. When modeling the economic impact of climate change, a higher discount rate decreases the value today of future environmental damages. The Department's SC-CO₂ estimates are calculated using the 2.5, three, and five percent discount rates determined by IWG to "reflect reasonable judgments under both descriptive and prescriptive approaches." Interagency Working Group on Social Cost of Carbon, United States Government, *Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866*, February 2010 (2010 IWG TSD), p.23, https://www.epa.gov/sites/ production/files/2016-12/documents/scc tsd 2010.pdf.

Following IWG recommendations, the Department's estimates of avoided SC-CO₂ benefits are presented as a range of values using the 2.5, three, and five percent discount rates. See 2016 IWG TSD Update. Additionally, the Department expresses all monetary values in 2018 dollars to estimate the economic impacts of the proposed rulemaking to be consistent with California.

Advanced Clean Trucks Program

As the proposed rulemaking is based on the portion of California's ACT regulation that requires manufacturers to increase the percentage of future sales of medium- and heavy-duty ZEVs, the Department relied on the methodology provided by CARB, the original architect of the rules, to estimate the emission reductions of the rules based on increased sales of mediumand heavy-duty ZEVs in New Jersey. These estimates were scaled to fit New Jersey's demographics and vehicle usage. As a result, the Department estimates cumulative total CO₂

reductions from 2024 through 2040 to be 2.6 MMT. And the corresponding total avoided SC- CO_2 benefits are estimated as \$60 million (five percent discount rate), \$179 million (three percent discount rate), and \$253 million (2.5 percent discount rate).

Fleet Reporting Requirement

Unlike the proposed changes requiring manufacturers to increase the percentage of future sales of medium- and heavy-duty ZEVs, the proposed fleet reporting requirements will not result in direct emission reductions. Rather, the fleet reporting requirements will inform future strategies intended to lower emissions of greenhouse gases and other climate pollutants.

Monetized value of improved human health

Advanced Clean Trucks Program

In addition to the estimated economic benefits of lower greenhouse gas emissions and avoided global warming as calculated by the SC-CO₂, the Department expects the proposed rules will provide additional benefits in the forms of avoided premature deaths and avoided costs associated with treating health conditions caused by exposure to pollution. Specifically, the Advanced Clean Trucks program will reduce black carbon, NO_x, and PM2.5 emissions, resulting in human health benefits, such as fewer instances of premature mortality, fewer hospital and emergency room visits, and fewer lost days of work. Relying on EPA studies, CARB quantified the health risk from exposure to particulate matter (see CARB, Standardized

Regulatory Impact Assessment, August 8, 2019 (CARB SRIA), p.19 and n.37,

https://ww3.arb.ca.gov/regact/ 2019/act2019/appc.pdf.), and ascribed the following monetary values associated with each avoided premature death and health incident: premature deaths (\$9.4 million); hospitalizations for cardiovascular illness (\$56,588); hospitalizations for respiratory illness (\$49,359); and emergency room visits (\$810.00). See CARB SRIA. The Department used CARB's standard values to monetize the expected health outcomes. By multiplying each incident by the standard value used by CARB, the Department estimates that implementation of the ACT program will result in monetized benefits from avoided premature deaths and avoided health incidents from 2024 through 2040 equal to roughly \$882 million expressed in 2018 dollars.

This estimate likely underestimates the true avoided health costs from removing particulate matter from the air, as there are a number of additional health concerns linked to exposure that may not result in death, hospitalization, or an emergency room visit. For example, PM2.5, polycyclic aromatic hydrocarbons (PAHs), nitrogen dioxide, and black carbon have been associated with deficits in intelligence, memory, and behavior. PAHs, which are a component of black carbon and PM2.5, have been associated with developmental delay; reduced IQ; symptoms of anxiety; depression; and inattention; attention deficit hyperactivity disorder (ADHD); and reduced size of brain regions important for processing information and impulse control. See American Journal of Public Health, *Healthy Air, Healthy Brains: Advancing Air Pollution Policy to Protect Children's Health*, March 13, 2019, by D.C. Payne-Sturges et. al, <u>https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2018.304902</u>. Black carbon and

PM2.5 have also been associated with asthma exacerbation. See Science of the Total Environment, *Acute effects of black carbon and PM2. 5 on children asthma admissions: a timeseries study in a Chinese city*, by Hua, J., Yin, Y., Peng, L., Du, L., Geng, F., & Zhu, L. (2014), Vol. 481, pp. 433-38. It was estimated that nationwide in 2008, \$4 billion in direct medical costs and nearly \$5 billion in indirect costs, such as lost productivity resulting from parents' caring for sick children, could be attributed to asthma. Applying a range of attributable fractions (10 percent to 35 percent), the best estimate of childhood asthma costs in 2008 that could be associated with environmental factors was \$2.72 billion. Health Affairs, *Reducing the Staggering Costs of Environmental Disease in Children, Estimated at \$76.6 Billion in 2008*, 2011, by L. Trasande & Y. Liu in Health Affairs, <u>https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2010.1239</u>. *Fleet Reporting Requirement*

Unlike the proposed rules requiring manufacturers to increase the percentage of future sales of medium- and heavy-duty ZEVs, the proposed fleet reporting requirements will not result in direct emission reductions. Rather, the fleet reporting requirements will inform future strategies intended to lower emissions of greenhouse gases and other climate pollutants.

Summary of Costs

Advanced Clean Trucks Program

The purpose of the proposed ACT program and fleet reporting requirement is to increase the number of medium- and heavy-duty ZEVs sold in New Jersey relative to the

baseline. Currently, medium- and heavy-duty ZEVs have higher upfront capital costs for the vehicle and infrastructure investments, but lower operating costs over time resulting in lower overall costs for truck transportation in New Jersey. These costs can be roughly estimated by adjusting cost estimates developed by CARB in its Advanced Clean Trucks analysis. See CARB SRIA. CARB values were scaled to reflect VMT in New Jersey and to account for additional regulations and incentives that are exclusive to California for this category of vehicles. In addition, CARB acknowledged that manufacturers will use ZEVs to partially comply with a separate rule, the Phase 2 greenhouse gas standards

(https://ww3.arb.ca.gov/regact/2018/phase2/finalatta.pdf? ga=2.124782280.330462755.1607

<u>374204-2117763012.1584544522</u>), thus partially offsetting the actual cost of complying with the ACT regulation. After carrying forward these assumptions, the Department estimates the cost to comply in New Jersey is approximately \$1.6 billion from 2024 through 2040 compared to the baseline scenario. However, when decreased fuel consumption and lower maintenance costs are considered, the Department estimates a net savings of \$72 million.

The cost categories and components included in this analysis are:

- Manufacturer: zero emission vehicle, internal combustion vehicle that complies with CARB's Phase 2 greenhouse gas standards (cost avoided), ZEV Certification
- Fuel: gasoline, diesel, electricity, hydrogen fuel cost
- Infrastructure: charging station costs including infrastructure and maintenance
- Maintenance: vehicle maintenance costs, maintenance bay upgrades
- Midlife: Battery replacement costs

• Other: sales tax, Federal excise tax, registration fees, reporting, transitional costs, and workforce development.

Based on its cost analysis, CARB found "deploying ZEVs will decrease costs to the California economy primarily due to lower fuel costs." CARB SRIA, p. 48. The Department assumes similar savings in New Jersey, even in the absence of California's Low Carbon Fuel Standard program, which enables vehicle manufacturers to earn credit from producing low carbon vehicles. As in California, vehicle manufacturers selling into New Jersey are expected to see increased costs in producing ZEVs when compared to fossil-fuel alternatives. However, the proposed rules are expected to reduce the costs of complying with the Phase 2 greenhouse gas standards since ZEVs produced to comply with the ACT program can also be used to comply with the Phase 2 greenhouse gas standards, thus, partially offsetting increased manufacturing expenses. ZEV certification costs are not expected to significantly contribute to the overall costs of compliance. As CARB explained, "[i]t is not straightforward to predict how these costs and cost-savings would be passed on to consumers. Vehicle pricing is complex, and different manufacturers could use different strategies to pass on these costs. It is possible that manufacturers may pass on incremental ZEV costs through the ZEVs themselves, through the rest of their [internal combustion engine] fleet, or some combination thereof." CARB SRIA, p.32.

The majority of the cost savings included in the Department's estimate are from reduced fuel use. CARB estimates that "ZEVs are 2 to 5 times as efficient as similar vehicles with internal combustion engines technologies." CARB SRIA, p. 36. Assuming fuel and electricity prices increase along similar pathways in New Jersey to those predicted in California,

the Department expects the total cost savings associated with decreased fuel consumption to be approximately \$1.3 billion. Compare <u>https://www.eia.gov/petroleum/ and</u> <u>https://www.eia.gov/electricity/</u>) (historical EIA data indicates a positive correlation between fuel and electricity prices in California and New Jersey). These savings will increase over time as ZEV adoption increases and technology improves vehicle efficiency. The predicted fuel savings are expected to be greater than the increased purchase price of ZEVs, even if manufacturing costs were fully passed through to purchasers.

The necessary infrastructure to charge/fuel electric vehicles is assumed to be privately owned and maintained by vehicle owners/operators. Operators will be required to purchase charging/fueling stations and perform any necessary upgrades to the site. CARB assumes charging/fueling station costs vary between \$5,000 and \$50,000 per unit, depending on vehicle class. Charging/fueling stations also require regular maintenance; these costs are included in the infrastructure estimates.

The Department also anticipates additional expenses associated with maintenance that will be borne by vehicle operators and firms that support them. Servicing electric vehicles requires specialized equipment and training. Bays needed to service ZEVs may require upgrades. However, following CARB's analysis, the Department estimates that the lifetime cost of maintaining a ZEV will be lower than a comparable gas or diesel vehicle. This holds true even after the midlife cost of replacing a battery is incorporated into the estimate. The remaining costs, including lost revenue from gasoline and diesel fuel taxes, are not expected to have a major economic impact on the State of New Jersey. Costs to the Department are anticipated to

be minimal, although it is anticipated that one new full-time employee will be needed to implement the ACT program, assist with education, monitor compliance, and analyze reported data.

Fleet Reporting Requirements

CARB estimates the cost to comply with the reporting requirements of California's ACT regulation is less than 0.1 percent of the overall cost of complying with the ACT rules. Additionally, CARB estimates a one-time expense of \$200,000 to establish the fleet reporting system for the rules. The Department anticipates similar costs for its reporting system development.

Environmental Impact

The Department anticipates that the proposed rulemaking will have a positive environmental impact. By establishing requirements for medium- and heavy-duty vehicle manufacturers to sell zero-emission trucks and buses as an increasing percentage of their annual sales in the State, the proposed rules will reduce emissions of CO₂ and the short-lived climate pollutant, black carbon, as well as the criteria pollutants, NO_x and PM2.5. It is important to reduce CO₂ and black carbon (a component of PM2.5) emissions from all mobile sources because the transportation sector is responsible for more than 40 percent of New Jersey's total net CO₂e emissions. Thus, the proposed rulemaking will serve as one of a number of significant initial steps toward mitigating the adverse environmental effects and impacts of climate change.

Emission Reduction Calculations: ACT Program

As explained above, New Jersey is proposing to incorporate by reference California's ACT regulation. Accordingly, the Department estimated the projected emission reductions of greenhouse gases, NO_x, and PM2.5 from implementation of the ACT regulation in New Jersey by scaling the benefits calculated by CARB in its rulemaking. Specifically, the Department relied upon the emission benefits described in CARB's analysis for ACT, and then scaled the results by multiplying the ratio of New Jersey's medium- and heavy-duty vehicle miles traveled (VMT) by California's medium- and heavy-duty VMT. When CARB estimated the environmental impacts of the ACT regulation, it reported the benefits based on reductions in CO₂e rather than CO₂ emissions alone. "CO₂e describe[es] different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO₂e signifies the amount of [CO₂] which would have the equivalent global warming impact, based on their relative global warming potential." 2050 Report, p. v, FN 1. Accordingly, the Department has done the same. Also, because CARB chose an analysis year of 2040, the Department has estimated the emissions benefits for that year and cumulatively from 2024 through 2040.

California estimated the emission benefits of implementing its ACT regulation in California through 2040. Those benefits were estimated to be 2.9 million metric tons (MMT) per year CO₂e, 27.9 tons per day NO_x (8,700 tons per year NO_x), and 0.85 tons per day PM2.5 (270 tons per year PM2.5). See CARB 15-day-notice document: Attachment C – Updated Costs and Benefits Analysis for the Proposed Advanced Clean Trucks Regulation, Table I-1 on pp. 3 and 5 (<u>https://ww3.arb.ca.gov/regact/2019/act2019/30dayattc.pdf</u>).

In order to estimate emission benefits of implementing the ACT program in New Jersey through 2040, the Department scaled California's benefits to New Jersey's VMT. The scaling factor of New Jersey medium- and heavy-duty VMT divided by California medium- and heavyduty VMT is 0.150. See Tables PS-1, VM-2 and VM-3 in Federal Highway Administration (FHWA) Highway Statistics for 2018 (<u>https://www.fhwa.dot.gov/policyinformation/</u>

<u>statistics/2018/ps1.cfm</u>). Consistent with the scope of the California ACT regulation, the VMT estimates are for medium- and heavy-duty vehicles that do not include buses.

By applying the VMT scaling factor to the California benefits, the Department estimates the benefits of the ACT rule once implemented in New Jersey will be 4.2 tons per day NO_x (1,300 tons per year NO_x) in 2040, 0.13 tons per day PM2.5 (40 tons per year PM2.5) in 2040, and 0.44MMT/year CO₂e in 2040. In addition, the cumulative total CO₂e benefits from 2024 through 2040 for New Jersey are estimated to be 2.6 MMT CO₂e. Unlike criteria pollutants, such as NO_x and PM2.5, greenhouse gas emissions, such as CO₂, accumulate and remain in the atmosphere for decades, and in some cases on the order of hundreds of years. Thus, the cumulative reductions provide a more complete picture of the long-term benefits. As discussed previously, a component of PM2.5 known as black carbon also contributes to global warming. While there is not yet scientific consensus about the exact GWP of black carbon, CARB relies on a GWP of 910 times that of CO₂ over 100 years. See 2050 Report, p. 133. Assuming that the black carbon fraction of PM2.5 from these vehicles in 2040 is 0.25 and that the GWP for black carbon is 910 times that of CO₂, the global warming benefits of black carbon for the ACT rule are an expected reduction of 0.008 MMT/year CO₂e in 2040 for New Jersey.

Emission Reduction Calculations: Fleet Reporting Requirements

The proposed fleet reporting requirements will not result in direct emission reductions. Rather, the fleet reporting requirements will inform future strategies intended to lower emissions of greenhouse gases and other climate pollutants.

Impacts on Climate: ACT Program and Fleet Reporting Requirements

As discussed above, CO₂ is one of the main contributors to climate change. Reducing emissions of CO₂ and other short-lived climate pollutants will mitigate the environmental effects and impacts of climate change. The effects and impacts of climate change on the environment were carefully researched and published in the Department's 2020 Report on Climate Change. See New Jersey Department of Environmental Protection, *2020 New Jersey Scientific Report on Climate Change*, June 30, 2020,

<u>https://www.nj.gov/dep/climatechange/docs/nj-scientific-report-2020.pdf</u>. While the science behind climate change is largely tied to the environment, the effects of climate change on the environment have a multitude of social costs, economic expenditures, and environmental damages. Thus, the substantive findings of the 2020 Report on Climate Change are discussed extensively in the Social Impact above. To avoid repetition, the Department has highlighted only a few of the environmental impacts of climate change here:

 Increased air pollution, particularly in densely populated urban areas. See 2020 Report on Climate Change, p. x.

- Stress on the quantity of New Jersey's water supply, in addition to water quality impairments. See *id*. at p. x.
- Blueberries and cranberries may be unable to adapt to changes in the environment, reducing their productivity and making them unsuitable crops for New Jersey. See *id*. p. xi-xii.
- Loss of animal and plant habitat, including, but not limited to, rare native plant species, vulnerable bird species (for example, the American Goldfinch, New Jersey's State bird), and commercially valuable marine life (for example, summer flounder). See *id.* at p. xii-xv.

In short, the proposed ACT program will reduce emissions of CO₂ and other short-lived climate pollutants, as part of a comprehensive strategy to mitigate the effects and impacts of climate change. Additionally, the fleet reporting requirements will inform future strategies intended to accelerate the use of ZEVs, thereby mitigating the impacts of climate change. Accordingly, both of the proposed rules are anticipated to have a positive environmental impact.

Rule Impacts on Other Pollutants: ACT Program and Fleet Reporting Requirements

The Department expects this proposed rulemaking to not only mitigate the impacts of climate change, but to also reduce the negative effects of other air pollutants, such as NO_x, PM2.5, and a component of PM2.5, black carbon. The NO_x emission reductions will contribute to reductions in ground-level ozone concentrations in New Jersey and elsewhere within the State's nonattainment areas. Further, as diesel trucks are replaced with electric, the toxic

particles associated with diesel PM2.5 will be reduced. The health benefits that result from reducing emission of PM2.5, which will result in improved local health outcomes in communities that are disproportionately affected by environmental degradation, are quantified in the Economic Impact below. Likewise, the health benefits of reducing NO_x and PM2.5 emissions are discussed more generally in the Social Impact statement, below.

It is important to note that black carbon is a component of PM2.5, which impacts local air quality and health, particularly in the State's urban areas, including increased risk of cancer risk and respiratory ailments. Though New Jersey's 2018 Greenhouse Gas Inventory did not include estimates for black carbon since it is not a gas, estimates from the 2050 Report showed that nearly 60 percent of black carbon emissions come from on-road diesel-fueled heavy-duty vehicles and on-road light-duty gasoline-fueled vehicles. See 2050 Report, pp. 109 and 135.

Thus, replacing medium- and heavy-duty vehicles that run on gasoline and diesel with ZEVs, as part of the ACT program, will have a positive impact on the environment by reducing Statewide air pollutants like NO_x and PM2.5, as well as local pollutants like black carbon. Though the fleet reporting requirements will not result in direct emission reductions, the rules will inform future strategies intended to mitigate the impacts of climate change by accelerating the use of zero-emission vehicles.

Federal Standards Statement

N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c. 65), requires State agencies that adopt, readopt, or amend State rules that exceed any Federal standards or requirements to include in the rulemaking document a Federal standards analysis.

ACT Program

In January 2020, the New Jersey Legislature passed legislation requiring the establishment of goals for the increased use of plug-in vehicles, including "goals for vehicle electrification and infrastructure development that address medium-duty and heavy-duty onroad diesel vehicles and associated charging infrastructure, similar to the State goals for light duty vehicles." N.J.S.A. 48:25-3(10). The New Jersey Legislature found that plug-in electric vehicle technology has improved significantly for vehicles of all types; that plug-in electric vehicles with longer ranges are now widely available at a lower cost and present a viable alternative to vehicles fueled by fossil fuels; that more plug-in electric vehicle makes and models will be introduced in the State motor vehicle market over the next several years; that vehicle electrification offers a wide range of benefits, such as improved air quality, reduced greenhouse gas emissions, and savings in motor vehicle operating costs for vehicle owners; that increased use of plug-in electric vehicles can contribute significantly to the attainment of existing State air pollution and energy goals, including the objectives of the Global Warming Response Act, P.L. 2007, c. 112 (N.J.S.A. 26:2C-37 et seq.) and the State's Energy Master Plan. See N.J.S.A. 48:25-1. In July 2020, New Jersey reaffirmed its commitment to grow the market for zero-emission medium- and heavy-duty vehicles by signing a multi-state memorandum of understanding (MOU), which is a commitment by the signatories to coordinate their actions to

achieve significant vehicle sales goals. See 2050 Report, p. 14;

https://ww2.arb.ca.gov/sites/default/files/2020-07/Multistate-Truck-ZEV-Governors-MOU-20200714.pdf.

The Federal Clean Air Act (CAA) (42 U.S.C. §§ 7401 et seq.) granted the State of California, which has some of the worst air pollution in the nation, the authority to enact stricter emission standards than the national standards set by the EPA. See 42 U.S.C. § 7543. The CAA also authorizes qualifying states to adopt and enforce emission standards for which California has received a waiver, if the states give two years' lead time. See 42 U.S.C. § 7507. Thus, once the EPA grants California's request for a waiver for the ACT regulation, pursuant to 42 U.S.C. § 7543, the Advanced Clean Trucks program that the Department proposes to incorporate by reference will be a Federally authorized standard. If, however, a waiver is not granted, the rules will not be applied or enforced pursuant to N.J.A.C. 7:27-31.3. Given the framework of the CAA, the ACT program rules would not exceed a Federal standard once a waiver is granted. Moreover, the findings of the New Jersey Legislature, and New Jersey's commitment through the MOU, favor adoption of the California standard. Thus, no further analysis is necessary.

Fleet Reporting Requirements

As discussed above, New Jersey is committed to increasing the use of zero-emission vehicles in all weight classes in order to lower emissions of greenhouse gases and other climate pollutants contributing to climate change. The information gathered pursuant to the proposed fleet reporting requirements will assist the Department by informing future strategies that may

be implemented to increase use of zero-emission vehicles over 8,500 pounds gross vehicle weight rating. Because there are no comparable rules or Federal standards, no Federal standards analysis is required for the fleet reporting requirements.

Jobs Impact

The Department anticipates that the proposed rulemaking will have a small, net positive impact on job retention or creation in the State. As part of its economic analysis, CARB estimated the impact of the ACT Regulation on the total employment in California across all industries. CARB estimated a slightly positive job impact from 2025 to 2040. According to CARB, "[a]s the requirements of the Proposed ACT Regulation go into effect the industries generally realizing reductions in production cost or increases in final demand see an increase in employment growth. This includes the truck transportation, construction, and manufacturing sectors and upstream industries." CARB SRIA, p.61. CARB also anticipated that "[t]he largest decrease in employment results from the public sector, which is estimated to realize a decrease in fuel and sales tax revenue and registration fees. The oil and gas extraction industry and automotive repair and maintenance industry see a decreased employment growth rate due to a reduction in final demand for their goods and services." Id. On net, CARB estimated an increase of employment of roughly 8,000 jobs, less than 0.04 percent of baseline California employment. Adjusting for the size of New Jersey's employment as of October 2020, this would represent roughly 1,300 jobs in 2040, resulting in a positive impact on job creation and retention in the State.

The Department believes that the proposed rulemaking will result in economic growth of the State's clean energy sector. Achieving the 80x50 goal will require an economy-wide transition to clean energy. The Department anticipates that the proposed rule will create jobs and spur advances in clean energy and zero-emission electric vehicle technology and infrastructure. The 80x50 Report noted that "deeper investment" in electrifying transportation and building electric vehicle infrastructure will "create hundreds of new jobs, resulting in New Jersey's clean energy economy, and the reduction of co-pollutants that can disproportionately impact public health in low-income and minority environmental justice communities." See 80x50 Report, p. x. The 2019 EMP similarly noted the "economy-wide financial benefits, all of which point to building a thriving innovation-based economy in the state" by electrifying the transportation sector. 2019 EMP, p.62.

The 2020 Clean Energy Employment Report, released December 10, 2020 by the United States Climate Alliance, <u>http://www.usclimatealliance.org/jobsreport</u>, states, "Other major areas of growth prior to the COVID-19 pandemic included the grid modernization and storage sector and alternative transportation. Employment in these sectors grew by a respective 32 percent and 18 percent between 2016 and 2019, together equating to roughly 41,800 new jobs across the U.S. Climate Alliance states." The Alliance report further states, "Hybrid electric vehicle companies grew their workforce by about 15 percent (or 7,273 jobs) between 2016 and 2019. Electrical vehicle companies were the second largest employer; these companies grew by 22 percent, or 8,721 additional workers from 2016 through 2019. Plug-in hybrid vehicles were also a large component of the alternative transportation sector. Companies working with this

sub-technology accounted for just over 25,000 workers—a growth rate of just over 29 percent between 2016 and 2019, or roughly 5,700 new workers in three years."

Agricultural Industry Impact

The Department anticipates that the proposed rulemaking will have a positive impact on the agricultural industry in New Jersey by reducing emissions of CO₂ and other climate pollutants/forcers, and therefore, reducing atmospheric concentrations of the gases and other forcers that are driving climate change. In 2020, the Department published a report entitled, "2020 New Jersey Scientific Report on Climate Change." Within the report is a section that outlines the existing and anticipated impacts of climate change on the agricultural industry in New Jersey. See 2020 Report on Climate Change, pp. 81-83. The term "agriculture" is defined broadly in the report to include crops, livestock, and nursery plants. See 2020 Report on Climate Change, p. 81. Though many factors can affect agriculture, the report focuses on alterations in temperature CO₂ concentrations, and availability of water, which can be attributed to climate change. See 2020 Report, p. 81. These alterations include:

- Increased temperatures, which can:
 - \circ $\;$ negatively impact the flavor and visual appeal of crops.
 - result in conditions that are no longer suitable for specialty crops, such as cranberries and blueberries.
 - result in a larger number of insects, whose lifespans are elongated.
 - lead to an increased use of pesticides, which may cause other adverse environmental impacts.

- negatively impact livestock production (such as milk production).
- Increases in the concentration of CO₂, which can:
 - o lead to increases in weeds competing for crop resources.
 - lead to an increased in the amount and frequency of herbicide use, which may cause other adverse environmental impacts.
- Changes in water availability, which can:
 - Lead to longer dry periods, increasing the need for irrigation and increasing the cost of production.

See 2020 Report on Climate Change, pp. 81-83. In other words, climate change is expected to have major impacts on the growth and productivity of New Jersey crops and livestock due to an increase in dry spells, heat waves, and sustained droughts. "Crop yields are expected to decrease [and become] stressed due to agricultural pests and weeds as winter temperatures continue to rise. All of this will increase pressure on farms, which will likely result in an increased use of herbicide and pesticide use." 2020 Report on Climate Change, p. 83. For this reason, the proposed rulemaking should have a positive impact on agriculture in this State by reducing the extent of significant losses attributable to climate change.

Regulatory Flexibility Analysis

As required by the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Department has evaluated the reporting, recordkeeping, and other compliance requirements that the proposed rules would impose upon small businesses. The Regulatory Flexibility Act

defines the term "small business" as "any business which is a resident in this State, independently owned and operated and not dominant in its field, and which employs fewer than 100 full-time employees." Based upon this definition, the proposed rulemaking may impose compliance, recordkeeping, and reporting requirements on small businesses. These requirements and their associated costs are discussed in the Summary and Economic Impact above. In light of the impacts from emissions from medium- and heavy-duty vehicles that are not ZEVs or NZEVS, as discussed in the Social and Environmental Impact statements, the Department does not propose an exemption or accommodation for small businesses.

ACT Program

The Department is not aware of any vehicle manufacturer that is resident in New Jersey that employs fewer than 100 full-time employees. However, small businesses involved in selling medium- and heavy-duty vehicles could be affected by the rules to the extent that manufacturers will expect dealers to place the medium- and heavy-duty ZEV and NZEV vehicles in their vehicle sales inventory. Dealerships may experience some cost increases associated with sales of ZEVs and NZEVs, since in some cases these vehicles represent a technology that a dealership has not previously handled. Accordingly, the proposed rules may require new training for sales personnel. The Department does not anticipate any additional paperwork requirements for dealers associated with the proposed rules.

Fleet Reporting Requirements

Under the proposed fleet reporting requirements, owners of fleets, as defined in the

rule, will be required to submit a report to the Department, which will include information related to vehicle identification, vehicle operations, and facility locations within New Jersey.

The Department anticipates that a minority of businesses subject to the fleet reporting requirements will employ fewer than 100 full-time employees. The amount of time necessary to complete these reporting requirements will depend on the number of vehicles and locations, as well as the current recordkeeping practices. The Department expects that such small businesses already have personnel who keep records on vehicle identification and operations, as well as facility locations. While the Department acknowledges that those businesses will need to allocate time for personnel to compile and submit the information required, those businesses with electronic recordkeeping practices will likely have to spend less time completing the report. The Department estimates that businesses with a single facility category and few or no vehicles, or fleets maintaining electronic records of their vehicle operations, are likely to complete their reporting requirements in a few hours. Businesses with a moderate to large number of facilities and/or vehicles may need a longer period to complete their reporting. But the Department anticipates that the fleet reports will be submitted through a web portal using an electronic form that guides the user through the questions, thereby minimizing the burden on small businesses. Moreover, the proposed fleet reporting requirements are a onetime obligation. Overall, the Department finds this to be minimal effort at minimal cost for the regulated entity. Moreover, the information submitted by the regulated entities will be used to inform future rulemaking and policy. Thus, it is in the best interest of a regulated entity to ensure that the Department has accurate information pertaining to their business.

Housing Affordability Impact Analysis

In accordance with N.J.S.A. 52:14B-4, the Department has evaluated the proposed rules to determine their impact, if any, on the affordability of housing. The proposed rules establish: (1) a program requiring manufacturers of vehicles over 8,500 pounds GVWR to sell an increasing percentage of zero-emission vehicles; and (2) reporting requirements for owners and operators of fleets that include medium- and heavy-duty vehicles. Given the limited applicability of the proposed rules, the Department has determined that the proposed rules are unlikely to impact housing affordability or the average costs of housing in the State.

Smart Growth Development Impact Analysis

In accordance with N.J.S.A. 52:14B-4, the Department has evaluated the proposed rules to determine their impact, if any, on housing production in Planning Areas 1 or 2, or within designated centers, under the State Development and Redevelopment Plan. The proposed rules establish: (1) a program requiring manufacturers of vehicles over 8,500 pounds GVWR to sell an increasing percentage of zero-emission vehicles; and (2) reporting requirements for owners and operators of fleets that include medium- and heavy-duty vehicles. The proposed rules do not impact land use development of any kind, including that of residential housing. Therefore, the rules are unlikely to evoke a change in housing production in Planning Areas 1 or 2, or within designated centers, under the State Development and Redevelopment Plan.

Racial and Ethnic Community Criminal Justice and Public Safety Impact

In accordance with N.J.S.A. 52:14B-4(a)(2) and N.J.S.A. 2C:48B-2, the Department has evaluated this rulemaking and determined that it will not have an impact on pretrial detention, sentencing, probation, or parole policies concerning adults and juveniles in the State. Accordingly, no further analysis is required.

Full text of the proposal follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]):

CHAPTER 27

AIR POLLUTION CONTROL

SUBCHAPTER 31. [(RESERVED)] ADVANCED CLEAN TRUCKS PROGRAM

7:27-31.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

"California Air Resources Board" or "CARB" means the agency, or its successor agency, established and empowered to regulate sources of air pollution in the State of California, including motor vehicles, pursuant to section 39003, California Health & Safety Code, 1999, as amended or supplemented.

"CCR" means the California Code of Regulations.
"Department" means the New Jersey Department of Environmental Protection.

"GVWR" shall have the same meaning as the term "gross vehicle weight rating" as

defined at 13 CCR § 1963(c).

"NZEV" shall have the same meaning as the term "near-zero-emission vehicle" as

defined at 13 CCR § 1963(c).

"Person" means any individual or entity and shall include, without limitation, corporations, companies, associations, societies, firms, partnerships, and joint stock companies, and shall also include, without limitation, all political subdivisions of any states, and any agencies or instrumentalities thereof.

"Ultimate purchaser" means, with respect to any vehicle, the first person who in good faith purchases a new motor vehicle for purposes other than resale and registers it with the New Jersey Motor Vehicle Commission.

"ZEV" shall have the same meaning as the term "zero-emission vehicle" as defined at 13 CCR § 1963(c).

7:27-31.2 Purpose

This subchapter establishes, in New Jersey, a program to reduce emissions from onroad vehicles over 8,500 pounds GVWR by incorporating the requirements of the California Advanced Clean Truck regulation, and is intended to accelerate sales of zero-emission vehicles over 8,500 pounds GVWR.

7:27-31.3 Applicability

(a) Upon publication, in the Federal Register, of the final notice of California's receipt of a waiver from the United States Environmental Protection Agency, pursuant to 42 U.S.C. § 7543, for the Advanced Clean Truck Regulation, set forth at 13 CCR §§ 1963 through 1963.5, this subchapter shall apply to:

1. Any manufacturer that produces on-road vehicles over 8,500 pounds GVWR manufactured in model year 2025 and subsequent model years for sale in New Jersey on or after January 1, 2025.

2. Beginning with the model year 2024, any manufacturer that produces on-road vehicles over 8,500 pounds GVWR may generate, bank, and trade ZEV and NZEV credits pursuant to 13 CCR § 1963.2, as incorporated herein by reference.

7:27-31.4 Incorporation by reference

(a) Unless specifically excluded by this subchapter, when a provision of the CCR is incorporated by reference, all notes, comments, appendices, diagrams, tables, forms, figures, publications, and cross-references are also incorporated by reference.

(b) Supplements, amendments, and any other changes including, without limitation, repeals or stays that affect the meaning or operational status of a California rule incorporated by reference, brought about by either judicial or administrative action and adopted or otherwise noticed by the State of California, shall be paralleled by a similar change to the New Jersey rule, so that the New Jersey rule will have the same meaning and status as its California

counterpart. To satisfy the identicality requirement of the Clean Air Act, at 42 U.S.C. § 7507, all new California regulations related to sales requirements for manufacturers of on-road ZEVs and NZEVs over 8,500 pounds GVWR manufactured after model year 2025 are also incorporated into this subchapter by this automatic process.

(c) In the event that there are inconsistencies or duplications in the requirements of the provisions incorporated by reference from the CCR and the rules set forth in this subchapter, the provisions incorporated by reference from the CCR shall prevail.

(d) Nothing in the provisions incorporated by reference from the CCR shall affect the Department's authority to enforce statutes, rules, and permits, or any orders administered or issued by the Commissioner.

(e) On or after (the operative date of this new subchaper or the operative date of California's regulations, whichever is later), new California rules, amendments, supplements, and other changes, brought about through administrative or judicial action, automatically incorporated through the prospective incorporation by reference process, shall be effective upon publication in the California Regulatory Notice Register and operative on the operative date cited by California in the relevant California Regulatory Notice Register notice, unless the Department publishes a notice of proposal repealing the adoption in New Jersey of the California regulation in whole or in part, and/or proposing to otherwise amend the affected New Jersey rules.

(f) The following provisions of the CCR are incorporated by reference within this subchapter, except as provided at (g), (h), (i), and (j) below:

Table 1

Provisions Incorporated by Reference

California Code of Regulations (CCR)

Title 13

Chapter 1

Motor Vehicle Pollution Control Devices

Article 2

Approval of Motor Vehicle Pollution Control Devices (New Vehicles)

- Section 1963 Advanced Clean Trucks Purpose, Applicability, Definitions, and General Requirements
- Section 1963.1 Advanced Clean Trucks Deficits
- Section 1963.2 Advanced Clean Trucks Credit Generation, Banking, and Trading
- Section 1963.3 Advanced Clean Trucks Compliance Determination
- Section 1963.4 Advanced Clean Trucks Reporting and Recordkeeping
- Section 1963.5 Advanced Clean Trucks Enforcement

(g) In all provisions of CCR Title 13 incorporated by reference, replace "California" with "New Jersey," except at 13 CCR 1963(c)(11), (12), and (13), wherein the terms "excluded bus,"

"executive officer," and "gross vehicle weight rating" or "GVWR" are defined.

(h) In all provisions of CCR Title 13 incorporated by reference, replace "Executive officer" and "CARB" with "Department," except at Section 1963(c) Definitions.

(i) At 13 CCR Title 1963.5(4) incorporated by reference, replace "Health and Safety Code section 43212" with "N.J.A.C. 7:27A-3."

(j) In all provisions of CCR Title 13 incorporated by reference, replace the year "2021" with the year "2024," except at 13 CCR § 1963.2(g).

SUBCHAPTER 33. [(Reserved)] FLEET REPORTING REQUIREMENTS

7:27-33.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

"Backup vehicle" means a self-propelled motor vehicle designed for on-highway use that is used intermittently to maintain service during periods of routine or unplanned maintenance, unexpected vehicle breakdowns, or accidents, but is not used in everyday or seasonal operations.

"Broker" means a person who has broker authority from the Federal Motor Carrier Safety Association and, for compensation, arranges, or offers to arrange, the transportation of property by an authorized motor carrier.

"Business" means an occupation, profession, or trade; a person, partnership, or corporation engaged in commerce, manufacturing, or a service; or a profit-seeking enterprise or concern.

"Common ownership or control" means being owned or managed day-to-day by the same person or entity. Vehicles managed by the same directors, officers, or managers, or by

corporations controlled by the same majority stockholders are considered to be under common ownership or control even if their title is held by different business entities. Common ownership or control of a Federal government vehicle shall be the primary responsibility of the unit that is directly responsible for its day-to-day operational control.

"Corporate parent" means a business that possesses the majority of shares in another business, which gives them control of their operational procedures.

"Dealer" means any person actively engaged in the business of offering to sell, soliciting, or advertising the sale, buying, transferring, leasing, selling, or exchanging of new motor vehicles and who has an established place of business.

"Department" means the New Jersey Department of Environmental Protection.

"Dispatched" means provided direction or instruction for routing a vehicle(s), whether owned or under contract, to specified destinations for a specific purpose(s), including, but not limited to, delivering cargo, passengers, property, or goods, providing a service, or assisting in an emergency.

"Emergency vehicle" means any publicly owned vehicle operated by a peace officer in the performance of their duties, any authorized emergency vehicle used for fighting fires or responding to emergency fire calls, and any publicly owned authorized emergency vehicle used by an emergency medical technician or paramedic or any ambulance used by a private entity under contract with a public agency.

"Established place of business" means a place actually occupied, either continuously or at regular periods, for business use.

"Facility" means any property with one or more unique physical addresses.

"Facility category" means a classification of different facility types based on a facility's primary purpose. Facility categories are defined as the following:

1. "Administrative/office building" means a building or structure used primarily for day-to-day activities that are related to administrative tasks, such as financial planning, recordkeeping, billing, personnel, physical distribution, and logistics, within a business.

2. "Distribution center/warehouse" means a location used primarily for the storage of goods that are intended for subsequent shipment.

3. "Hotel/motel/resort" means a commercial establishment offering lodging to travelers and, sometimes, to permanent residents.

4. "Manufacturer/factory/plant" means a location with equipment for assembling parts, producing finished products, intermediate parts, or energy products.

5. "Medical/hospital/care" means an institution engaged in providing, by, or under the supervision of, physicians, inpatient diagnostic, and therapeutic services or rehabilitation services by, or under the supervision of, physicians.

6. "Multi-building campus/base" means a property typically operated by a single entity with several buildings, often serving multiple purposes.

7. "Restaurant" means a business establishment where the primary purpose is serving meals or refreshments that may be purchased.

8. "Service center" means a facility that supports a business operation that generates revenue by providing a specific service or product, or a group of services or products, to a customer.

9. "Store" means an establishment that sells goods or a variety of goods and services to the general public.

10. "Truck/equipment yard" means an establishment that primarily stores or dispatches trucks and equipment, such as a garage or parking lot.

11. "Any other facility type" means any facility that is not included in this section.

"Fleet" means one or more self-propelled on-road vehicles under common ownership or control of a person, business, or agency. This includes vehicles that are rented or leased from a business that regularly engages in the trade or business of leasing or renting motor vehicles without drivers where the vehicle rental or leasing agreement for the use of a vehicle is for a period of one or more years.

"Fleet owner" means, except as modified at paragraphs 1 and 2 below, either the person registered as the owner or lessee of a vehicle by the New Jersey Motor Vehicle Commission, or its equivalent in another state, province, or country, as evidenced on the vehicle registration document carried in the vehicle.

1. For vehicles that are owned by the Federal government and not registered in any state or local jurisdiction, the owner shall be the department, agency, branch, or other entity of the United States, including the United States Postal Service, to which the

vehicles in the fleet are assigned or which have responsibility for maintenance of the vehicles.

2. For a vehicle that is rented or leased from a business that is regularly engaged in the trade or business of leasing or renting motor vehicles without drivers, the owner shall be the rental or leasing entity if the rental or lease agreement for the use of a vehicle is for a period of less than one year, otherwise the owner shall be the renter or lessee.

"Government agency" means any Federal, state, or local governmental agency, or any other public entity with taxing authority.

"Gross annual revenue" means the total revenue, receipts, and sales reported to the Internal Revenue Service for a consecutive 12-month period.

"Gross vehicle weight rating" or "GVWR" means the value specified by the manufacturer as the maximum design loaded weight of a single vehicle.

"Lease" means any commercial transaction recognized under the laws of this State as a means of creating a right to use a good, and includes renting. It also includes offering to rent or lease.

"Local government" is one or a cooperating combination of the entities defined as a contracting unit under the Local Public Contracts Law, N.J.S.A. 40A:11-2(1); a board of education under the Public School Contracts Law, N.J.S.A. 18A:18A-2.a; or a county college under the County College Contracts Law, N.J.S.A. 18A:64A-25.2.b.

"Motor carrier" means a person that transports passengers or property for

compensation. A motor carrier, or person who is an employee or bona fide agent of a carrier, is not a broker when it arranges or offers to arrange the transportation of shipments that it is authorized to transport and that it has accepted and legally bound itself to transport.

"Motor vehicle" or "vehicle" means every device in, upon, or by which, a person or property is, or may be, transported other than by muscular power, excepting such devices that run only upon rails or tracks and motorized bicycles.

"On-road" means operated on the roadways of the State, excluding equipment that is not commonly operated on a roadway, except when that equipment is used for roadway construction and repair.

"Person" means any individual or entity and shall include, without limitation, corporations, companies, associations, societies, firms, partnerships, and joint stock companies, and shall also include, without limitation, all political subdivisions of any states, and any agencies or instrumentalities thereof.

"Subhauler" means a for-hire motor carrier who enters into an agreement to provide transportation services on the behalf of another motor carrier or broker.

"Subsidiary" means a company controlled by another company.

"Vehicle body type" means commonly used vehicle body descriptions to be used in responding to questions about the fleet of vehicles including the following: beverage truck, boom/bucket, box reefer, box dry van, bus-school, bus-shuttle, bus-other, car/SUV, car carrier, concrete mixer, concrete pump, crane, drill rig, dump, flatbed or stake bed, garbage

front loader, garbage side loader, garbage packer, garbage roll-off, other, pickup bed, service body, sweeper, tank, tractor day cab, tractor sleeper cab, tow, vacuum, water, van-cargo, van-step, van-passenger, or on-road yard tractor.

"Vehicle home base" means the location where a vehicle is domiciled, such as a business location where a vehicle is typically kept when not in use. For vehicles that are kept at a personal residence or kept at a location that is not operated by the entity when not in use, the vehicle home base shall be the location where the vehicle is dispatched from or where the vehicle is repaired or maintained.

"Vehicles awaiting sale" means vehicles in the possession of dealers, financing companies, or other entities that do not intend to operate the vehicle in New Jersey or offer the vehicle for hire for operation in New Jersey, and that are operated only to demonstrate functionality to potential buyers or to move short distances while awaiting sale for purposes such as maintenance or storage.

"Weight class bin" means a list of vehicles categorized by GVWR. The weight class bins are one of the following:

"Class 2b-3" means a motor vehicle designed for on-road use with a GVWR from
8,501 pounds to 14,000 pounds. The types of vehicles in this category generally include
full-size pickup trucks, smaller utility trucks, cargo vans, and passenger vans.
"Class 4-6" means a motor vehicle designed for on-road use with a GVWR from

14,001 pounds to 26,000 pounds.

3. "Class 7-8" means a motor vehicle designed for on-road use with a GVWR greater

than 26,000 pounds.

7:27-33.2 Purpose

The purpose of this subchapter is to collect information to understand the use cases of zero-emission vehicles with a GVWR of more than 8,500 pounds in New Jersey and to inform potential future strategies to accelerate the sales of zero-emission vehicles in these weight classes in the State.

7:27-33.3 Applicability

(a) The provisions of this subchapter apply to each of the following entities:

1. Any entity with gross annual revenues greater than \$50 million in the United States for the 2021 tax year, including revenues from all subsidiaries, subdivisions, or branches, that operated a facility in New Jersey in 2021 and had one or more vehicles over 8,500 pounds GVWR under common ownership or control that were operated in New Jersey in 2021.

2. Any fleet owner that, in the 2021 calendar year, had 50 or more vehicles with a GVWR greater than 8,500 pounds under common ownership or control and operated a facility in New Jersey;

3. Any broker or other entity that, in the 2021 calendar year, dispatched 50 or more

vehicles with a GVWR greater than 8,500 pounds into or throughout New Jersey and

operated a facility in New Jersey;

4. Any New Jersey government agency, including State and local government, that

had one or more vehicles over 8,500 pounds GVWR that were operated in New Jersey

in 2021; and

5. Any Federal government agency that had one or more vehicles over 8,500 pounds

GVWR that were operated in New Jersey in 2021.

(b) The following entities, facilities, and vehicles are exempt from the reporting requirements of this subchapter:

1. Military tactical vehicles and military tactical facilities owned or operated by the

United States Department of Defense and/or the United States military services;

- 2. Vehicles awaiting sale; and
- 3. Emergency vehicles.

7:27-33.4 General requirements

(a) An entity subject to this subchapter shall submit the information specified at N.J.A.C.

7:27-33.6 and 33.7 to the Department by April 1, 2022, through the web portal to be

established on the <u>www.stopthesoot.org</u> website.

(b) All submissions to the web portal shall include a certification(s) as provided at N.J.A.C.7:27-1.39.

(c) All information submitted to the Department pursuant to this subchapter shall be public information, unless the person submitting the information asserts a confidentiality claim and the Department determines that the information is entitled to confidential treatment in accordance with N.J.A.C. 7:27-1.8 through 1.30.

(d) Subsidiaries, parent companies, or joint ventures may independently report information for each vehicle over 8,500 pounds. Alternatively, the corporate parent or joint venture business may report on behalf of its subsidiaries, as long as the information for all vehicles over 8,500 pounds is reported for each subsidiary, corporate parent, and joint venture.

(e) An entity subject to this subchapter and has brokerage and/or motor carrier authority shall submit a report, even if no vehicles are owned by the entity.

(f) Information pertaining to vehicles that are under common ownership or control may be submitted separately by each fleet owner.

(g) Vehicle data must be reported as the fleet was comprised on a date of the fleet owner's choosing, so long as that date falls between January 1, 2021, and December 31, 2021.

7:27-33.5 Recordkeeping requirements

(a) An entity subject to this subchapter shall maintain the records used to compile responses to N.J.A.C. 7:27-33.6 and the data and analysis period used for N.J.A.C. 7:27-33.7 for a period of five years after the reporting deadline. Records shall include the following:

1. For owned on-road vehicles, mileage records and dates from records, such as maintenance logs, vehicle logs, or odometer readings, or other records with the information that the reporting entity used to determine its response;

2. For on-road vehicles not owned, but dispatched by the entity, dispatch records and dates, contracts, or other records with the information that the reporting entity used to determine their responses;

- 3. Vehicle registration for each owned vehicle operated in New Jersey; and
- 4. Contracts with entities, or contracts with subhaulers, or other records with the information that an entity used to determine their responses.

(b) An entity subject to this subchapter, shall respond to requests for clarification of reported information within 14 days of receiving the request from the Department.

7:27-33.6 General entity information reporting

(a) An entity subject to this subchapter shall report the following general information, as applicable:

- 1. Entity name and fictitious business name;
- 2. Mailing address including street name or PO box, city, state, and zip code;
- 3. Name of the designated responsible official;
- 4. Designated responsible official's email address;
- 5. Designated responsible official's phone number;
- 6. Name of corporate parent or governing body;

7. Federal Taxpayer Identification Number of corporate parent or other entities with

which the reporting entity has vehicles under common ownership or control;

8. For a government entity, the jurisdiction;

9. Federal Taxpayer Identification Number;

10. Primary six-digit North American Industry Classification System code;

11. For a non-governmental entity, the total annual revenue for the entity in the

United States for 2021;

12. Broker authority under the Federal Motor Carrier Safety Administration;

13. The operating authority numbers, including motor carrier identification number,

United States Department of Transportation number, and International Registration Plan number;

14. The number of entities with whom the reporting entity had a contract to deliver items or to perform work in New Jersey using vehicles over 8,500 pounds GVWR in 2021;

15. The estimated number of subhaulers, vehicles operated by subhaulers, and the number of vehicles operated by subhaulers that operated under the reporting entity's motor carrier authority; and

16. The number of vehicles with a GVWR over 8,500 pounds the reporting entity owned and operated in New Jersey in 2021 that do not have a vehicle home base in New Jersey.

7:27-33.7 Vehicle usage by facility information reporting

(a) An entity subject to this subchapter shall report general information about the vehicle home base of all on-road vehicles as specified at (b) below and information about vehicle operating characteristics for vehicles domiciled or assigned to each vehicle home base as specified at (c) below. Vehicles that accrue a majority of their annual miles in New Jersey, but are not assigned to a particular location in New Jersey, must be reported as part of the headquarters or another location where the vehicles' operation is managed.

(b) An entity subject to this subchapter shall report the following information for each vehicle home base:

- 1. Facility address including street name, city, state, and zip code;
- 2. Facility type category as listed at N.J.A.C. 7:27-33.1;
- 3. Name of responsible official;
- 4. Responsible official's email address;
- 5. Whether the facility is owned or leased by the entity;
- 6. What type of fueling infrastructure is installed at the facility;

7. Whether the refueling infrastructure was initially installed on or after January 1,

2010; and

8. The types of trailers the reporting entity pulls, if it has tractors assigned or domiciled at this facility.

(c) For each vehicle home base, an entity may report the information specified at (c)1 through 6 below, grouped by vehicle body type, as listed at N.J.A.C. 7:27-33.1, and weight

class bins and fuel types, as specified by the Department. Alternatively, an entity may complete responses for each individual vehicle and include the vehicle's body type, weight class bin, and fuel type. If applicable, an entity shall separately report vehicles dispatched under their brokerage authority. When responding, each vehicle shall only be counted once for each response. An entity subject to this subchapter shall report the following information:

1. Number of vehicles in each vehicle group;

2. The percent of the vehicles in each vehicle group with operating characteristics including, but not limited to: daily mileage, usage patterns, refueling, trailer towing, and other such characteristics as specified by the Department;

3. The average annual mileage for a typical vehicle in this vehicle group;

4. The average length of time a typical vehicle in this vehicle group is retained by the reporting entity after acquisition;

5. Whether the reporting entity is the fleet owner for this group of vehicles, or if they are dispatched under the reporting entity's brokerage authority; and

6. The start and end date of the analysis period selected by the reporting entity pursuant to (d) below.

(d) An entity shall use annual or quarterly data averaged for work days during the period selected to determine responses or alternatively may select a different time period. For example, if an entity selects annual data to determine vehicle daily mileage, the entity must average the annual mileage accrued based on the number of workdays that year.

1. A shorter analysis period may be used if the reporting entity deems it more representative of periods of high vehicle utilization when answering questions about typical daily operation. For example, if a reporting entity with seasonal workload fluctuations determines that a week or month during the busy season is representative, average the data records for that week or month when determining a response.

2. If an alternative analysis period is used, the reporting entity must be prepared to describe their reasoning at the request of the Department pursuant to N.J.A.C. 7:27-33.5(b).

(e) Responses for items at (c)1 through 5 above for a vehicle group at one location may be repeated for the same vehicle group at another vehicle home base if the respondent determines that the operation at that location is substantially similar to another location.

(f) A broker shall provide information about vehicle usage that is dispatched under contract. For example, if a broker hires a truck to move a load, only the miles driven under that contract are required for the response. If known, the broker may voluntarily report information about the miles driven outside the contract.

CHAPTER 27A

AIR ADMINISTRATIVE PROCEDURES AND PENALTIES

SUBCHAPTER 3. CIVIL ADMINISTRATIVE PENALTIES AND REQUESTS FOR ADJUDICATORY HEARINGS

7:27A-3.10 Civil administrative penalties for violation of rules adopted pursuant to the Act

(a) - (*l*) (No change.)

(m) The violations of N.J.A.C. 7:27, whether the violation is minor or non-minor in accordance with (q) [through], (r), (s), or (t) below, and the civil administrative penalty amounts for each violation are as set forth in the following Civil Administrative Penalty Schedule. The numbers of the following subsections correspond to the numbers of the corresponding subchapter [in] at N.J.A.C. 7:27. The rule summaries for the requirements set forth in the Civil Administrative Penalty Schedule in this subsection are provided for informational purposes only and have no legal effect.

CIVIL ADMINISTRATIVE PENALTY SCHEDULE

1. – 30. (No change.)

31. [(Reserved)] The violations of N.J.A.C. 7:27-31, Advanced Clean Truck Program, and the civil administrative penalty amounts for each violation, per vehicle, are as set forth in the following table:

Fourth

		Secon				and Each
		Type of	First	d	Third	Subseque
		<u>Violatio</u>	<u>Offens</u>	<u>Offens</u>	<u>Offens</u>	nt
<u>Citation</u>	Rule Summary	<u>n</u>	<u>e</u>	<u>e</u>	<u>e</u>	<u>Offense</u>
N.J.A.C. 7:27-31.4	Claiming credits for a zero	NM	\$2,50	\$5,00	\$12,5	\$30,000
	emission vehicle or near zero		0	0	00	
	emission vehicle not sold to an					
	ultimate purchaser in New					
	Jersey					
N.J.A.C. 7:27-31.4(g)	Failure to meet Compliance	NM	\$2,50	\$5,00	\$12,5	\$30,000
	Determination as required at 13		0	0	00	
	CCR § 1963.3					
N.J.A.C. 7:27-31.4(g)	Failure to report sales	М	\$500	\$1,00	\$2,50	\$7,500
	information as required at 13			0	0	
	CCR § 1963.4(a)					
N.J.A.C. 7:27-31.4(g)	Failure to report credit transfers	М	\$500	\$1,00	\$2,50	\$7,500
	as required at 13 CCR §			0	0	
	1963.4(b)					

Fourth

		Secon				and Each	
		Type of	First	d	Third	Subseque	
		<u>Violatio</u>	<u>Offens</u>	<u>Offens</u>	<u>Offens</u>	nt	
<u>Citation</u>	Rule Summary	<u>n</u>	<u>e</u>	<u>e</u>	<u>e</u>	<u>Offense</u>	
N.J.A.C. 7:27-31.4(g)	Failure to report class 2b – 3	М	\$500	\$1,00	\$2,50	\$7,500	
	credit declaration as required at			0	0		
	13 CCR § 1963.4(c)						
N.J.A.C. 7:27-31.4(g)	Failure to retain records as	М	\$500	\$1,00	\$2,50	\$7,500	
	required at 13 CCR § 1963.4(d)			0	0		
N.J.A.C. 7:27-31.4(g)	Failure to make records	М	\$500	\$1,00	\$2,50	\$7,500	
	available as required at 13 CCR §			0	0		
	1963.4(c)						

32. (No change.)

33. [(Reserved)] The violations of N.J.A.C. 7:27-33, Fleet Reporting Requirements, and the civil administrative penalty amounts for each violation are as set forth in the following table:

						Fourth
						and Each
		Type of	First	Second	Third	Subseque
		<u>Violatio</u>	<u>Offens</u>	<u>Offens</u>	<u>Offens</u>	nt
<u>Citation</u>	<u>Class</u>	<u>n</u>	<u>e</u>	<u>e</u>	<u>e</u>	<u>Offense</u>
N.J.A.C. 7:27-33.4(a)	Failure to submit	NM	\$2,000	\$4,000	\$10,00	\$30,000
					0	
N.J.A.C. 7:27-33.4(a)	Omission of required	М	\$500	\$1,000	\$2,500	\$7,500
	information specified at					
	N.J.A.C. 7:27-33.6 and					
	33.7					
N.J.A.C. 7:27-33.4(b)	Failure to certify	М	\$2,000	\$4,000	\$10,00	\$30,000
					0	
N.J.A.C. 7:27-33.5(a)1	Failure to maintain	М	\$500	\$1,000	\$2,500	\$7,500
through 4	records					
N.J.A.C. 7:27-33.5(a)	Failure to make records	М	\$500	\$1,000	\$2,500	\$7,500
	readily available					
N.J.A.C. 7:27-33.5(b)	Failure to respond to an	М	\$500	\$1,000	\$2,500	\$7,500
	information request					

						Fourth
						and Each
		Type of	First	Second	Third	Subseque
		<u>Violatio</u>	<u>Offens</u>	<u>Offens</u>	<u>Offens</u>	nt
<u>Citation</u>	<u>Class</u>	<u>n</u>	<u>e</u>	<u>e</u>	<u>e</u>	<u>Offense</u>
	from the Department in					
	a timely manner					

(n) – (u) (No change.)

ENVIRONMENTAL PROTECTION

AIR QUALITY, ENERGY, AND SUSTAINABILITY

DIVISION OF AIR QUALITY

Advanced Clean Trucks Program and Fleet Reporting Requirements

Adopted Amendment: N.J.A.C. 7:27A-3.10

Adopted New Rules: N.J.A.C. 7:27-31 and 33

Proposed: April 19, 2021, at 53 N.J.R. 588(a).

Adopted: November 1, 2021, by Shawn M. LaTourette, Commissioner, Department of

Environmental Protection.

Filed: November 22, 2021, as R.2021 d.146, with non-substantial changes not requiring

additional public notice and comment (see N.J.A.C. 1:30-6.3).

Authority: N.J.S.A. 13:1B-3(e), 13:1D-9, 26:2C-1 et seq., particularly 26:2C-8.1 et seq., 26:2C-37

et seq., and 48:25-1 et seq.

DEP Docket Number: 05-21-03.

Effective Date: December 20, 2021.

Operative Date: December 31, 2021, in accordance with N.J.S.A. 26:2C-8.a.

Expiration Dates: Exempt, N.J.A.C. 7:27;

January 22, 2027, N.J.A.C. 7:27A.

Recognizing that climate change poses a severe threat to New Jersey's environment, human health and welfare, security, and economy, the New Jersey Legislature enacted the

Global Warming Response Act (P.L. 2007 c. 112; P.L. 2018 c. 197) (GWRA), which requires the State, through coordinated actions across the public and private sectors, to reduce emissions of greenhouse gases and other climate pollutants to at least 80 percent below their 2006 levels by the year 2050. This is known as the State's 80x50 Goal. The Department is adopting the new rules and amendments herein as part of a comprehensive strategy to implement relevant provisions of the GWRA and is doing so, in accordance with the New Jersey's Global Warming Response Act 80x50 Report, October 15, 2020,

https://www.nj.gov/dep/climatechange/docs/nj-gwra-80x50-report-2020.pdf (80x50 Report) that the Department was required to submit to the Legislature pursuant to the GWRA.

This rulemaking will enable the State to reduce emissions of carbon dioxide (CO₂) oxides of nitrogen (NO_x), and fine particulate matter (PM2.5) from the transportation sector by incorporating by reference the State of California's Advanced Clean Trucks (ACT) regulation, which requires manufacturers of vehicles over 8,500 pounds gross vehicle weight rating (GVWR) to participate in a credit/deficit program intended to increase the percentage of zeroemission vehicles (ZEVs) sold in New Jersey. In addition, the adopted rulemaking requires a one-time reporting to enable the Department to obtain information that will inform future decisions concerning further emission reductions from the transportation sector.

Summary of Hearing Officer's Recommendation and Agency's Response:

The Department held a virtual public hearing on this rulemaking on May 20, 2021, at 9:00 A.M., through the Department of Environmental Protection's (Department) video conferencing software, Microsoft Teams. Peg Hanna, Assistant Director for the Division of Air

Quality, served as hearing officer. Thirty-two people provided oral comments at the public

hearing. After reviewing the written comments received during the public comment period,

the hearing officer recommended that the Department adopt the proposed rulemaking with

the modifications described below in the responses to comments and in the Summary of

Agency-Initiated Changes. The Department accepts the hearing officer's recommendations.

A record of the public hearing is available for inspection, in accordance with applicable

law by contacting:

Department of Environmental Protection

Office of Legal Affairs

401 East State Street, 7th Floor

Mail Code 401-04L

PO Box 402

Trenton, New Jersey 08625-0402

This notice of adoption document can also be viewed or downloaded from the Department's website at <u>http://www.nj.gov/dep/rules/adoptions.html</u>.

Summary of Public Comments and Agency Responses:

The Department accepted comments on the notice of proposal through June 21, 2021.

The following individuals provided timely written and/or oral comments:

1. James Appleton, on behalf of New Jersey Coalition of Automotive Retailers

2. Mary Barber, Director of Regulatory and Legislative Affairs of the Environmental

Defense Fund

- 3. Brett Barry, on behalf of Clean Energy
- 4. Gary Bear
- 5. Eric Benson, on behalf of Clean Water Action and other organizations: BlueWaveNJ;

Food and Water Watch; Make the Road Action; Our Revolution Monmouth

- 6. Bill Beren, Transportation Chair for the Sierra Club of New Jersey
- 7. Matthew Bewley, volunteer with Sierra Club
- 8. Uchenna Bright, on behalf of Environmental Entrepreneurs
- 9. Denise Brush
- 10. Patrick Campbell, on behalf of Cummins Inc.
- 11. Ray Cantor, on behalf of the American Fuel & Petrochemical Manufacturers,

American Petroleum Institute, Bus Association of New Jersey, Chemistry council of New Jersey,

Consumer Energy Alliance, New Jersey Business and Industry Association, New Jersey Chamber

of Commerce, New Jersey Food Council, New Jersey Gasoline, C-Store Automotive Association,

and New York Shipping

12. Ray Cantor, New Jersey Business and Industry Association

13. John Carlson, on behalf of DSM North America, eBay, Etsy, IKEA, and Unilever

14. Candace Carpenter, as Vice President, Legal and Government Affairs of Hexagon

Agility, Inc.

15. Elizabeth Cerceo

16. Lee Clark, New Jersey League of Conservation Voters

17. Walter Clarke

- 18. James Cobb, New York Shipping Association, Inc.
- 19. Rachel Dawn Davis, Public Policy and Justice Organizer with Waterspirit
- 20. Eric DeGesero, Fuel Merchant's Association of New Jersey
- 21. Eve Gable-Frank, ChargEVC
- 22. Michael Egenton, New Jersey State Chamber of Commerce
- 23. Robert Erickson
- 24. Gustav Escher, Center for Regenerative Community Solutions
- 25. Zachary M. Fabish, on behalf of the Sierra Club and its New Jersey members
- 26. Dawn Fenton, Volvo Group North America
- 27. Timothy French, Truck and Engine Manufacturers Association
- 28. Kim Gaddy, South Ward Environmental Alliance
- 29. Daniel Gage, NGVAmerica (South Jersey Industries agrees with the comments

provided by NGVA)

- 30. Jacqueline Gelb, Navistar, Inc.
- 31. Michael Giaimo, American Fuel and Petrochemical Manufacturers and the American

Petroleum Institute

- 32. Amy Goldsmith, New Jersey State Director for Clean Water Action
- 33. Hunter Griffin, New Jersey Business and Industry Association
- 34. Richard Gupton, Agricultural Retailers Association
- 35. Kathy Harris, Natural Resources Defense Council, incorporating by reference the

comments of the Coalition for Healthy Ports (CHP)

36. Dennis Hart, Chemistry Council of New Jersey

- 37. Jeanne Herb, New Jersey Climate Change Alliance
- 38. Sharon Herson
- 39. Charles Hockey
- 40. Sherman James, Climate Change Mitigation Technologies LLC
- 41. Jasmine Jennings, Earth Justice
- 42. Claire Johnson, Hyzon Motors Inc.
- 43. Zachary Kahn, Tesla
- 44. Carol R. Katz, Bus Association of New Jersey
- 45. Glen Kedzie, American Trucking Associations
- 46. Anne Kelly, Ceres BICEP
- 47. Dan Kennedy, Utility and Contractors Association of New Jersey
- 48. Lois Kiely
- 49. Henry Knabe on behalf of H.K. Truck Services Inc.
- 50. Gregg Lanez
- 51. Alana Langdon, Nikola Corporation
- 52. Robert Laumbach
- 53. Richard Lawton, New Jersey Sustainable Business Council
- 54. Raymond Lesniak, New Jersey Senator (ret.)
- 55. Brian Lestini on behalf of Steven D. Averbuch, Elizabeth Cerceo, Brian J. Lestini,

Christine D. Berg, and Joan H. Schiller

56. Marsha Love

57. Sarah Mack

58. Lois Maglio

59. Benjamin Mandel and Meredith Alexander, CALSTART

60. Benjamin Mandel on behalf of the coalition comments of Arrival, CALSTART,

ChargePoint, EVgo, Hyzon Motors, Lion Electric, Nikola, Xos Trucks, and Zeem Solutions

61. Debra Coyle McFadden, New Jersey Work Environment Council

62. Michael McGuinness, NAIOP NJ, the Commercial Real Estate Development

Association

63. Andrew McNally, of South Jersey Industries

64. Eric Miller, NJ Energy Policy Director, Natural Resources Defense Council

65. Sean Mohen, Executive Director, Tri-County Sustainability

66. Elvin Montero, Director of Communications and Issues Management for the

Chemistry Council of New Jersey

67. Chris Nevers, Rivian

68. Rebecca Newberry, joint comments submitted on behalf of BlueGreen Alliance and other organizations: New Jersey Work and Environment Council; Jobs to Move America; International Brotherhood of Electric Workers New Jersey; International Brotherhood of Electrical Workers Local 94; NJ State Council Utility Workers Union of America, Teamsters Local 469; Teamsters Joint Council 73; Service Employees International Union 32BJ; New Jersey Education Association; International Federation of Professional and Technical Engineers 194; American Federation of Teachers New Jersey; Health Professionals and Allied Employees, AFT; United Food and Commercial Workers 152; Jersey Renews

69. Jimmy O'Dea, Union of Concerned Scientists

70. Doug O'Malley, on behalf of Environment New Jersey and other signatory

organizations and medical professionals: Ceres; ACEEE; NJ Sustainable Business Council; EDF;

The Nature Conservancy; Tri-State Transportation Campaign; Arrival; Sunowner Inc.; Marla

Guzman; GreenLatinos; Health Care Without Harm; NJ Conservation Foundation; Clinicians for

Climate Action New Jersey; NAACP NJ State Conference; NJ Action Together; Union of

Concerned Scientists; NJ League of Conservation Voters; Steven Averbuch; Catherine Chen

- 71. Doug O'Malley, Director of Environment New Jersey
- 72. Frank M. Pezzolla, Frank's Truck Center, Inc.
- 73. Ed Potosnack, New Jersey League of Conservation Voters
- 74. Jean Publlee
- 75. Eric Raphael, President of Irvin Raphael, Inc.
- 76. Eric Raphael, New Jersey School Bus Contractors Association
- 77. John Reichman, Chair of BlueWave New Jersey's Environment Committee
- 78. Ashley Remillard, Hexagon Agility, Inc.
- 79. Sal Risalvato, New Jersey Gasoline, C-Store, Auto Association
- 80. Alli Gold Roberts, Director of State Policy, Ceres
- 81. Paula Rogovin, Coalition to Ban Unsafe Oil Trains
- 82. Steve Rush, Carbon Express, Inc.
- 83. Michael Seilback, American Lung Association

84. Nicky Sheats, on behalf of the New Jersey Environmental Justice Alliance (NJEJA);

Ironbound Community Corporation was an additional signatory; the NJEJA noted that it

incorporated by reference the comments submitted by the Coalition for Healthy Ports (CHP)

85. Nicky Sheats, New Jersey Environmental Justice Alliance

86. Marcus Sibley, on behalf of NAACP, New Jersey State Conference

87. Jonathan Smith and contributor Nicky Sheats, on behalf of the Coalition for Healthy

Ports and Earthjustice; other organizations signing on in agreement include: BlueWaveNJ; Food

& Water Watch; Make the Road Action; Our Revolution Monmouth; and Union of Concerned

Scientists

88. Kenny Stein, Institute for Energy Research

89. Donald Stern, Indivisible Highland Park

90. Orville Thomas, Lion Electric Co.

91. Berenice Tompkins, on behalf of Jersey Renews and its partner and ally

organizations: Action Together New Jersey; Central Jersey Coalition Against Endless War; Clean Water Action; Drawdown NYC; Environment New Jersey; GreenFaith; Indivisible Highland Park; Make the Road New Jersey; Rutgers Postdoc Union, AAUP-AFT; NJ Work Environment Council; New Jersey Sierra Club; UU FaithAction NJ; Wind of the Spirit; Divest NJ; Metuchen-Edison-Piscataway Branch, NAACP; NAACP ECJ Committee, NAACP; National Council for the Occupational Safety and Health; The Pachamam Alliance

92. Berenice Tompkins, New Jersey Work Environment Council

93. Joe Tompkins, H.A. DeHart & Son

94. Gail Toth, New Jersey Motor Truck Association

95. Anthony Trapasso, President of Belair Transport, Inc.

96. Keith Voos, NAACP, New Jersey State Conference Environmental and Climate Justice

Committee

97. Mark Warner, ChargEVC

98. Sean Waters, Daimler Trucks

99. Chloe Williams, President of B.R. Williams, Inc.

100. Lesniak Institute for American Leadership submitted comments on behalf of 21

individuals who expressed support for the adoption of the proposed rules.

Margot Alten Danielle Amodeo Mary Botteon Nancy Chismar **Christina DeRispiris** Lucy F. Tito Galdo Asha Gangasarran Anna Jacus Elizabeth Jonach Doris Lin John Lynn Elise Margulis E. Neal Brooks Obr Dogan Ozkan M. S. Stephanie Stone Ken Dolsky Debra Ashton Nancy Chismar

101. Lesniak Institute for American Leadership submitted comments on behalf of one

individual who expressed support for the adoption of the proposed rules, but indicated a desire

for rules to address emissions from buses as well.

Linda Banzaca

102. Lesniak Institute for American Leadership submitted comments on behalf of 26

individuals who expressed general concerns about the impacts of current truck emissions and

support for cleaner trucks.

John Bell Ann Briscese Nancy Carringer Rosemarie Ceasar Annette Coomber Heide Coppotelli Nora Coyle Brett Dennison Ken Dolsky Lyn Du Mont Jeff Fromberg Kerry Heck Jann Jasper Laura Long Frances Mackiewicz Elise Margulis Gina Mazza Lisa Mazzola Dogan Ozkan Mike Potter Joann Ramos Caryl Sawyer Corey Schade Naomi Sobo Charlie Starkey Zorina Weber

103. Lesniak Institute for American Leadership submitted comments on behalf of 12

individuals who indicated that they want to ban dirty trucks.

Mike Anuszewski Jane Armstrong Andrew Arneson Dale Barth Renee Becker Susan Collins Ari G. Avinash Kachhy Lilly Knuth Evelyn Lilly Julie Sacco C. Yee

104. Lesniak Institute for American Leadership submitted comments on behalf of 20

individuals who expressed concerns about the current state of the environment.

Carol Davis Holly Hall C. Marie Hlushtchyk Meg Kelly Susan Lantow Janet Laur Cecile Lemay Denise Lytle Barbara Maddalena Nelson Molina Susan Nierenberg D. O'Brien James Olszewski Patti Packer Sandra Parciak **Diane Rohn** Maria Scaglione Mary Shabbott Veronica Sidhu Gigi Vento

105. The Partnership for a Zero Emission Future
106. Sierra Club submitted a form comment on behalf of 578 individuals urging the

Department to move forward with adoption of the proposed rules in calendar year 2021.

107. The Sierra Club submitted a form comment on behalf of four individuals who

personalized their message to indicated that in addition to the adoption of the proposed rules,

the Department should be taking further action to address pollution and/or climate change:

Louise Berkman Daniela Gioseffi Hilary Malyon Eloise Marsh

108. The Sierra Club submitted a form comment on behalf of two individuals who

personalized their message to indicate that adoption of the proposed rules should be

accompanied by financial incentives:

Wendy Gordon Sascha Marbury

109. The Sierra Club submitted a form comment on behalf of one individual who

personalized his message to indicate support for the concept of requiring all electric trucks:

Frederick White

110. The following submitted an identical form comment:

Ruth Adams Debra Ashton Jacquelyn Barth Elliot Beneroff Hayley Berliner Susan Bernard Cori Bishop Anne Bloomenthal Sharon Bolton George Bourlotos Lorraine Brabham

> Marinus Broekman **Rachel Brown** Donna Browne Linda Burger Sharon Callahan **Rebecca Canright** John Cantilli Nicholas and Joanne Cartabona Julia Caspar Jeff Charone Kelly Choi Joe Ciccita Morgan Clark Susan Clark Jarrett Cloud Donna Connor Morgan Cormia Nancy Cormia **Bechi Currier** Linda DeLap Julia DeVito Louis Discepola **Judy Fairless Steven Fenster** Myrna Fichtenbaum Christina Gavin Marian Glenn Roe Goodman Mikhail Grabois **Roger Graham Gregory Grillo** Francis Groff Alan Gross Kenneth Grosso Florence Hadnot Elizabeth Hamblet Amy Hansen Kathy Hart Chris Hazynski Janie Horowitz George Hurst Takako Ishii-kiefer Doris Jackson

> April Jacob Stefanie Johnson John Keim Angela Knable Ashley Kouo **Thomas Koven** Henry Krause Robert Langbein Janet Larson Sara Lazarus Niki Learn Sara Lilja Joanne Linden Joann Linden JoAnn Lopez Mark Lowenthal Denise Lytle Linda Mack Janice Mackanic **Frances Mackiewicz** Sanjeev Majoo Lisa Matthews Jo Ann McGreevy Linda McKillip Christina Mecca Barbara Miller Vincent Mogavero Linda Mullaney Gina Norton Doug O'Malley **Robert Orgera** Barbara Pal Marya Parral John Passante Michael Paxton **Rich Pecha** Joann Pichiarello Maryanne Pilgram Stamatina Podes Justin Powell Lisa Quartararo Edward Ramirez-Wright Jesse Reyes

> Brian Reynolds Michael Richte Dean Robb Maurice Rosenstraus Linda Rossin Sharon Rothe Marjorie Royle Marilyn Russell Corey Schlade John Schreiber **Brian Schwartz** Karen Seidmon Kim Sellon Ken Sharp Janet Sheridan Carol Spillane-Mueller **Marion Steininger** Angela Stuebben **Ronald Sverdlove** Victor Sytzko Joan Thuebel Stephen Troyanovich Walter Tulys **Phillip Unetic** Ann Van Hise Lee Varian Susan Walden Patsy Wang-iverson Natalie Wass Stuart Weinstock **Tina Weishaus** Scott Whitener **Elizabeth Yerkes**

The comments received and the Department's responses are summarized below. The number(s) in parentheses after each comment identify the respective commenter(s) listed above.

ADVANCED CLEAN TRUCKS PROGRAM

Request for Extension of Comment Period

1. COMMENT: Due to the complexity of the rules and the significant impact the rules will have on the State's truck and bus industries, as well as businesses that rely on trucking to distribute and receive goods, an extension of time is requested to submit comments. (11)

2. COMMENT: Additional time is needed to read California's regulatory document because the Department proposes to adopt California's rule by reference and relies on California's analysis, with adjustment made based on New Jersey's relative size and vehicle miles traveled, for its own economic, social, environmental, and other analyses. (11 and 33)

RESPONSE TO COMMENTS 1 AND 2: A 60-day public comment period was provided, consistent with the requirements of the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq. (APA). On May 20, 2021, the Department held a public hearing at which 32 people testified. In addition to publication of the notice of proposal in the April 19, 2021, New Jersey Register, on April 14, 2021, the Department provided additional advance notice of the rulemaking on its website, to media outlets maintaining a press office to cover the State House Complex and other media outlets throughout the State, and by email to the Department's rulemaking listserv. Further, the Department conducted stakeholder outreach during the development of this rulemaking on September 10, 2021, and December 21, 2021. During these sessions, the Department notified stakeholders that it was considering a rule proposal to incorporate California's Advanced Clean Truck regulation by reference. Hundreds of individuals and organizations submitted written and verbal comments, which are summarized and addressed in this notice of adoption. Given the volume of comments submitted in response to the proposal within the 60-day period, the Department believes that there was ample opportunity to provide comments and discuss the

rulemaking. Therefore, an additional period for public comment would be unlikely to result in the Department receiving comments relevant to the proposed rules that raise issues or provide new information, data, or findings that were not previously raised or provided during the development of the proposed rules or during the 60-day comment period.

General Support

COMMENT: The Department should adopt California's ACT regulation. (5, 56, 87, 91, and
 92)

RESPONSE: The Department acknowledges the commenters' support of the rules.

Support; Specific Reasons

4. COMMENT: The proposal is appropriate from both an environmental protection standpoint and a social justice standpoint. The State must take action before it is too late. (57)

5. COMMENT: New Jersey communities need and deserve equitable access to clean air. The World Health Organization has deemed air pollution a public health emergency that has contributed to 8.8 million premature deaths each year. During the global health pandemic, studies have shown that repeated exposure to air pollution is also linked to an 11 percent increase in mortality for those infected with COVID-19. Medium- and heavy-duty (MDHD) vehicles disproportionately contribute to ongoing climate and air pollution crises. The State must act now to begin to clean and electrify the MDHD vehicle sector. Once purchased, most MDHD vehicles remain on the road for many years. If New Jersey is going to turn the tide on climate change and vehicular air pollution, it must begin replacing the dirtiest trucks as soon as

possible. The public health and scientific communities are in agreement that there is a need to move much quicker to solve the ongoing air pollution and climate crisis. New Jersey needs to build on its landmark climate laws by adopting the California ACT regulation. This will save lives, create new green jobs and mitigate the impacts of climate change. The New Jersey Department of Environmental Protection must move forward this year with the adoption of California's ACT regulation. (106)

6. COMMENT: The proposed rules will significantly decrease toxic air and climate pollution from New Jersey's transportation sector, which will make communities healthier and help the State reach the goals laid out in the GWRA and Multi-State Medium- and Heavy-Duty Zero-Emission Vehicle Memorandum of Understanding. For the health and safety of New Jersey communities and its climate, please adopt California's ACT regulation as soon as possible. (110)

7. COMMENT: The Department should adopt the proposed rules for a variety of reasons,

including improvements to air quality, reductions in negative health impacts generally, reductions in negative health impacts for overburdened communities more specifically, and/or reductions in negative environmental impacts. (100)

8. COMMENT: The number of 18-wheeler trucks that roar down Route 322 through the middle of Glassboro every day, driving too fast and leaving plenty of air pollution in their wake, is surprising. Things are worse in northern New Jersey port cities like Newark, Elizabeth, and Bayonne. But there is a lot of truck transportation in all directions through New Jersey, whether it is headed east to Atlantic City, west to Camden and Trenton, or up and down the east coast on the New Jersey Turnpike. All of those trucks emit diesel pollution, which adversely affects the health of New Jersey residents, leading to high rates of asthma and other lung related

diseases. The Department should adopt the Advanced Clean Truck regulation from California to promote conversion of diesel trucks to electric. Implementing the Advanced Clean Truck regulation will lower our carbon footprint and protect the health of New Jersey residents and their families. (9)

9. COMMENT: Electric trucks could create good new jobs with the installation of charging stations, vehicle maintenance, and more. In the wake of a public health crisis that is worsened by air pollution and that has left thousands of New Jerseyans unemployed, the State needs policies like this one that can put people back to work tackling climate change and making its communities healthier. (58)

10. COMMENT: The Department should adopt California's ACT regulation. Electrification in the MDHD vehicle sector is critical to attaining New Jersey's clean energy goals and was identified as a priority in the *2019 Energy Master Plan: Pathway to 2050*,

https://ni.gov/emp/docs/pdf/2020_NJBPU_EMP.pdf (2019 EMP), the 80x50 Report, and the regional Multi-State Medium-Duty and Heavy-Duty Vehicle Electrification Memorandum of Understanding. Electrification in the MDHD vehicle sector will also have significant implications for improved public health. If New Jersey is successful in simultaneously increasing the fraction of renewable energy used for electricity generation, the State will see increased benefits from reduced criteria air pollutants. These criteria pollutants have a profound impact on public health, especially for overburdened communities that are often located near high-use travel corridors. (97)

11. COMMENT: The proposed rules will not only improve life for New Jersey residents, but also will be an incentive nationwide for the electrification of transportation and trucks in particular. The proposed rules should be implemented as quickly as possible. (77)

12. COMMENT: The Department's adoption of California's ACT regulation would constitute an important first step in remediating long-standing public health disparities in New Jersey's urban centers. The proposed rules are consistent with the commitments of Governor Murphy and the Department to reduce greenhouse gas emissions to 80 percent below 2006 levels by 2050. (96)

13. COMMENT: The Department should adopt California's ACT regulation because it is a necessary and appropriate exercise of the Department's regulatory authority in order to secure substantial reductions in CO_2 and local air toxic pollution caused by the approximate 250,000 Class 3 through Class 8 diesel trucks registered in New Jersey. These MDHD diesel trucks account for one-third of all transportation sector CO_2 emissions in New Jersey. (40)

14. COMMENT: The Department should adopt California's ACT regulation because it supports New Jersey's drive to reduce emissions and improve the environment. (67)

15. COMMENT: The Department should adopt California's ACT regulation because it will play an invaluable role in ensuring sustained and systematic progress in transitioning New Jersey's MDHD vehicles to zero-emission technologies. Transforming the transportation sector to zero emissions has significant health benefits. Additionally, the economics of electrified heavy-duty vehicles are incredibly compelling for end-users. Customers may recoup their investment in certain MDHD ZEVs through operational savings in approximately two-to-three years. (43) 16. COMMENT: The Department has made significant progress in designing and promulgating a suite of regulations that will greatly reduce pollution from both stationary and mobile

sources. Vehicle emissions account for the largest portion of climate pollution in New Jersey. Additionally, despite being a small percentage of overall vehicles on the road, heavy-duty vehicles are a significant source of greenhouse gas emissions and criteria pollutants. For those reasons, swift adoption of the ACT regulation is critical for New Jersey to meet the climate crisis head-on and improve the health of New Jersey's residents, especially those in the overburdened frontline communities that bear a disproportionate amount of heavy-duty vehicle pollution. Adoption of the proposed rules is both legally and technically feasible today. Ultimately investments in MDHD ZEVs will save the State money and support the growth of the clean energy economy. (64)

17. COMMENT: Adoption of California's ACT regulation is a necessary next step for New Jersey and the other 14 states that committed to a Multi-State Medium-and Heavy-Duty Zero Emission Vehicle Memorandum of Understanding to decarbonize all truck and bus sales by 2050. In response, more than 50 businesses, institutions, and investors -- including several major New Jersey fleet operators -- signed a letter sharing their support for the MOU and the implementation of a medium-and heavy-duty vehicle electrification action plan. By driving market transformation, incorporating the ACT regulations will enable New Jersey and other states to follow through on their commitments and simultaneously help businesses to remain competitive in a market where their customers, investors, patients, students, and employees increasingly expect them to lead on sustainability. (46)

18. COMMENT: The adoption of California's ACT regulation will put New Jersey on a path to reduce greenhouse gas emissions. (89)

19. COMMENT: The Department's proposed rules to incorporate California's ACT regulation are a great step in the right direction of securing clean air for all communities, especially those disproportionately burdened, and helping the State achieve our emissions reductions goals. Black, Hispanic, and Asian Americans are disproportionately exposed to fine particulate matter. The conversion to zero-emission MDHD vehicles, as well as light-duty zero-emission vehicles, would decrease negative health impacts such as premature deaths and asthma attacks in New Jersey. (73)

20. COMMENT: The ongoing shift in the State's economy away from manufacturing and towards warehousing and shipping will increase heavy-duty truck traffic and increase the amount of harmful particulate and greenhouse gas emissions, thereby undermining the State's climate goals. It is, therefore, critical that the Department adopt the proposed rules, even though the California regulations do not go far enough to fully mitigate the impacts of pollution caused by climate change. (6)

21. COMMENT: The Department's adoption of California's ACT regulation will not only reduce greenhouse gases and improve health and air quality, but also will also provide economic benefits. (8, 46, 80, and 90)

22. COMMENT: New Jersey must adopt policies that maximize job creation by providing family supporting, and community-supporting, union jobs. Increasing the number of electric trucks on the road will reduce harmful emissions and create good new jobs. Millions of New Jersey residents are suffering from the damaging effects of living with unhealthy air quality. According to the 2021 American Lung Association's State of the State Report, eight New Jersey counties received an "F" for air quality. The worst of this pollution burden is concentrated

disproportionately in New Jersey's low-income communities and communities of color.

Transitioning MDHD vehicles to zero emissions alternatives is a critical component to a lowemissions future. In addition to their sizable greenhouse gas impact, these vehicles are responsible for an outsized portion of harmful, localized pollution from transportation. (68) 23. COMMENT: The proposed rules will drive innovation and investment in clean technology and manufacturing, create jobs, provide long-term cost-savings to companies, mitigate climate risk, improve public health, and reduce healthcare costs. They will also allow businesses to meet climate goals. (80)

24. COMMENT: The proposed rules will reduce energy consumption and emissions from the transportation sector and help meet Federal air quality standards and greenhouse gas reduction mandates. The California Air Resources Board (CARB) determined that the ACT Regulation will speed the transition to MDHD ZEVs and provide significant benefits to fleet owners, as well as health and environmental benefits. (2)

25. COMMENT: Vehicle electrification creates substantial benefits for numerous stakeholders, including New Jersey residents who do not own plug-in electric vehicles, and especially overburdened communities that will benefit from cleaner air. Electrifying the vehicle fleet, and indeed, doing so rapidly, is, thus, critical to the environmental and economic health of New Jersey. The operations savings realized by fleet owners and consumers who choose electric options will provide a boost to local economies, as those savings will be largely reinvested into local, labor-intensive services. The proposed rules will expand the number of electric truck and bus batteries available for vehicle-to-grid uses, enhancing grid resilience and, thereby, driving down costs. The buildout of electric vehicle infrastructure will also support high-quality jobs.

Further, by adopting California's ACT regulation, New Jersey will benefit from the increased vehicle electrification. As the Department noted in the notice of proposal, "by transitioning from gasoline and diesel combustion engines to zero-emission engines, the proposed rulemaking will reduce emissions of CO₂, NO_x, and PM2.5, including PM2.5's highly warming components, black carbon." Likewise, decarbonizing MDHD vehicles "provides additional benefits by locally reducing criterial pollutants and carcinogens such as black carbon, which are released in greater concentrations in heavily trafficked corridors that are typically in or near environmental justice communities." (25)

26. COMMENT: The proposed rules will help tackle climate, public health, and socio-economic crises together. (92)

27. COMMENT: The Department should incorporate California's ACT regulation. Adopting the rules as soon as possible will help put New Jersey on the path to eliminating truck pollution by 2050 as required under the Multi-State Medium- and Heavy-Duty Zero Emission Vehicle Memorandum of Understanding, and it will make New Jersey a leader as the first state outside of California to adopt the rules. Further, the proposed rules will create jobs, fight climate change, and reduce local pollution, which causes health impacts like asthma. (7)

28. COMMENT: Adopting California's ACT regulation supports cleaner air, a more equitable transportation system, and the State's health-protective climate targets. The ACT regulation will contribute to local benefits and can lead the national dialogue on healthy air. (83)
 29. COMMENT: The rules will significantly decrease toxic air and climate pollution from New Jersey's transportation sector, which will make the State's communities healthier. (24)

30. COMMENT: There is a vast amount of literature documenting the direct health effects of diesel emissions across the globe. Research done at Rutgers and the Environmental and Occupational Health Sciences Institute has contributed to that knowledge, while documenting local effects here in New Jersey. Setting aside the CO₂, other greenhouse gases, and black carbon on climate change, the air pollution and health co-benefits alone from accelerating adoption of zero-emission trucks would justify adoption of California's ACT regulation and implementation of the program. (52)

31. COMMENTS: In the wake of a public health crisis that is worsened by air pollution and that has left thousands of New Jerseyans unemployed, the State needs policies like this one that can put people back to work tackling climate change and making communities healthier. Electric trucks will create good new jobs in electric vehicle infrastructure and other areas. (89 and 91) 32. COMMENT: Adopting California's ACT regulation will increase the number of electric trucks, which will reduce harmful emissions and create jobs with fair wages across the supply chain. As the first State after California to propose the rules, New Jersey has a significant opportunity to become a leader on truck electrification. The Department should adopt California's ACT regulation. (70)

33. COMMENT: By adopting California's ACT regulation in New Jersey at this time, the State will set a market-leading example that will help encourage similar action by other states with clean energy goals. The influence of the proposed rules is, therefore, likely larger than just impacts for New Jersey. (97)

34. COMMENT: Child asthma rates in New Jersey's cities are nearly three times higher than the State average. Cancer risks are elevated in the inner cities as well. There are many reasons for

these health problems, but the MDHD vehicles on New Jersey roads, especially in the cities, are a major factor. (71)

35. COMMENT: New Jersey has some of the highest concentrations of PM2.5 in the U.S. Trucks are a primary culprit when it comes to this local air pollution due to their reliance on combusting diesel fuels. The transition away from polluting trucks must reflect the urgency of the health crisis to which they contribute. (15)

36. COMMENT: The adoption of California's ACT regulation is a reasonable policy solution to meet the goal of improving the health of New Jersey residents while also curbing climate change, which has additional negative health consequences. The proposed rules will significantly lower emissions from MDHD trucks in New Jersey, a significant source of particulate emissions with known adverse effects on health including cancer. (55)

37. COMMENT: The America Lung Association's 2020 State of the Air Report shows that New Jersey continues to have some of the most polluted air in the nation. The proposed rules will improve environmental quality, combat the disastrous effects of climate change, and enhance the health and quality of life for all New Jersey residents. Therefore, the Department should adopt the proposed rules. (54)

38. COMMENT: Exposure to diesel and gasoline emissions are correlated with cancer risk, and people who live near sources of these emissions are at greater risk of certain types of cancer. Cancer is appearing in younger patients, and New Jersey has elevated rates of cancer. The proposed rules will help reduce cancer rates in Jersey City and throughout the State. (50)

39. COMMENT: Medium- and heavy-duty vehicle electrification is especially relevant from an equity perspective. People living in overburdened communities suffer disproportionately from poor air quality. (97)

40. COMMENT: Throughout the State, millions of New Jersey residents are suffering from the damaging effects of living with unhealthy air quality. In the American Lung Association's 2021 State of the State Report, eight counties received an "F" for air quality. Due to a history of discriminatory land use policies and structural racism, the worst of this pollution burden is concentrated in New Jersey's low-income communities and communities of color, with the majority of bus and freight depots located near or within black, indigenous, and people of color and low-income neighborhoods. With the right policies in place, California's ACT regulation will put New Jersey on a path to reduce greenhouse gas emissions, PM2.5, black carbon, and NO_x in port and freight-adjacent communities. (91)

41. COMMENT: Medium- and heavy-duty trucks are a leading source of air pollution that contributes to a wide range of health impacts, including the onset of childhood asthma, impaired lung function, cardiovascular disease, and even premature death. Adopting California's ACT regulation will reduce emissions and improve the health, well-being, and quality of life in environmental justice (EJ) communities. (41)

42. COMMENT: There exists a significant quantity of truck emissions in environmental justice communities. The adoption of California's ACT regulation is a good first step towards addressing the emissions in overburdened communities because it can deliver health benefits to New Jersey communities by reducing harmful air pollution emissions from MDHD trucks. (84)

43. COMMENT: The proposed rules will reduce greenhouse gas emissions and improve air quality. They will improve public health, particularly in overburdened communities. (61)
44. COMMENT: Transportation emissions disproportionally impact low-income communities and communities of color. Adopting California's ACT regulation will accelerate the cost-effective deployment of electric, MDHD vehicles, allow businesses to meet financial and climate goals, and significantly reduce air pollution related health impacts across the State. (80)
45. COMMENT: The proposed rules will result in considerable positive health outcomes, particularly among marginalized populations. Additionally, the proposed rules will reduce noise pollution from trucks, mostly at lower vehicle speeds. Environmental noise, like traffic, is linked to sleep disturbance, stress and decreased cognitive performance, increasing the risks for cardiovascular disease, decreased immune function, mental health decline, among other effects. Environmental justice communities suffer disproportionately from high levels of noise. (37)

46. COMMENT: Pollution reduction will improve mental health in frontline communities, namely for expectant mothers who rely heavily on walking, breathing, exercising, and nature immersion. (19)

RESPONSE TO COMMENTS 4 THROUGH 46: The Department acknowledges the commenters' support of the rules.

Concerns about the Environment

47. COMMENT: The Department should reduce pollution and combat climate change for a variety of reasons, including concerns about air quality; health impacts on plants, animals and/or humans, and/or the physical environment. (104)

48. COMMENT: Air pollution kills. Respiratory diseases, combined with other illnesses, can be fatal. Please pass legislation to clean up the State's air. (48)

RESPONSE TO COMMENTS 47 AND 48: As noted in the notice of proposal Social Impact analysis, the 2020 New Jersey Scientific Report on Climate Change is the Department's first effort to compile scientific material in a comprehensive report detailing both the effects and the impacts of climate change. See 53 N.J.R. at 594, citing New Jersey Department of Environmental Protection. 2020. New Jersey Scientific Report on Climate Change, Version 1.0 (Eds. R. Hill, M.M. Rutkowski, L.A. Lester, H. Genievich, N.A. Procopio) Trenton, NJ 184 pp. While the report examines climate change at the global and regional level, its purpose is to explain the current and anticipated effects and impacts in New Jersey. *Ibid*. Promulgating the adopted rules will be one of the steps the Department and other State agencies will take to mitigate the impacts of climate change by reducing greenhouse gas emissions, as well as collecting data that will assist the Department in potential future rulemaking efforts intended to further reduce emissions from the transportation sector. 53 N.J.R. at 593. In addition to reducing greenhouse gas emissions, the incorporation of California's ACT regulation is expected to reduce co-pollutants that have an adverse impact on air quality and human health. *Ibid*.

Do Not Delay Adoption

49. COMMENT: The proposed rules will help transform the entire freight industry to benefit New Jersey communities, especially those most burdened by air pollution. It is critical that the

Department finalize adoption of California's ACT regulation before the end of this year. The urgency of the climate crisis and the ongoing public health harms inflicted on some of the most vulnerable people of New Jersey are powerful factors in favor of the Department finalizing adoption of the proposed rules without delay. (25)

50. COMMENT: The Department's adoption of California's ACT regulation is a necessary first step to address the pollution that has burdened New Jersey's port- and freight-adjacent environmental justice communities for decades. The New Jersey market is ready for electrification now, and there is no legal or policy reason for the Department to delay adoption of the ACT regulation. (87)

51. COMMENT: The Department should adopt California's ACT regulation without delay because it provides an opportunity to clean the air and support robust economic growth in New Jersey. Accordingly, there are both business and political benefits to supporting the proposed rules. (17)

52. COMMENT: The rules should be implemented before 2025, if at all possible. (96)

53. COMMENT: The Department should adopt the proposed rule, but 2024/2025 is too late.(86)

54. COMMENT: Many of New Jersey's counties suffer from poor air quality, which has led to higher asthma rates among children. Diesel emissions from MDHD vehicles are a major source of emissions and there are already many ZEVs that are available or which will soon become available. Thus, the Department should move forward without delay on the proposed rules. (65)

55. COMMENT: The Department should adopt California's ACT regulation before the end of

the calendar year because it is a critical step in mitigating the economic risks and cost associated with transportation-related air pollution and climate change, and in creating a modern and more equitable decarbonized transportation system in the larger transition to a clean energy economy as envisioned in the State's updated 2019 EMP. (53)

56. COMMENT: State policymakers should not wait for a comprehensive Federal program on MDHD vehicles. States can, and should, adopt California's ACT regulation and other policies, while also advocating for a strong national standard. Given the lead time for Federal policy implementation, it is imperative that states start to act now, given the public health emergency that is created by fossil fuel dependent MDHD vehicles. (70)

57. COMMENT: The Department should adopt California's ACT regulation as an emergency measure now, but certainly no later than a 2025 start date. (81)

RESPONSE TO COMMENTS 49 THROUGH 57: The Department acknowledges the commenters' support of the rules. The Department is required, pursuant to the Clean Air Act (CAA), 42 U.S.C. §§ 7401 et seq., to provide a two-year lead time before implementing a California emission standard. Therefore, the Department is adopting the proposed rules in order that the California emission standard is in place in New Jersey for model year 2025. The current Federal emission standard is less stringent than California's ACT regulation, and even if the EPA were to propose a new Federal emission standard, it is unlikely that any proposed Federal regulations could be adopted and implemented by the EPA in the same model year as the Department's adopted rules. For further discussion, see the Response to Comments 224 through 229.

Defer Adoption of the ACT rule

58. COMMENT: Pursuant to California's ACT regulation, which the Department proposed to incorporate by reference, the term "model year" equates with calendar year. Under the CAA, states may opt-in to California's emission standards if they provide the requisite two-year lead time. In its notice of proposal, the Department indicated that the ACT rule would be implemented beginning with model year 2025. Given the target model year for implementation, the Department can defer action until the 2022 calendar year and still provide the necessary two-year lead time. Thus, the Department should defer action, so that it may reconsider adopting California's ACT regulation, or consider whether the national program, which is expected to be announced by the EPA soon, is a better regulatory option. (18, 26, 27, 45, 49, 76, 82, 93, 95, 99, and 105)

59. COMMENT: The Biden Administration is expected to address emissions from MDHD vehicles in 2021 as part of its actions to address climate change. Consequently, the Department should defer action on the proposed State-level regulations until it can consider the anticipated Federal program. (12, 22, 26, 27, 30, 33, 62, and 79)

RESPONSE TO COMMENTS 58 AND 59: The Department recognizes the potential benefits of a national program and supports the Federal government's efforts to mitigate the effects of climate change. As of the time of this notice of adoption, however, the EPA has not published a proposed regulation. If the EPA does not act swiftly to address emissions from MDHD vehicles, it is unlikely that any proposed Federal regulations could be adopted and implemented in time to regulate the 2025 model year targeted in the Department's adopted rules. The Department acknowledges that the incorporation by reference of California's ACT regulation requires a two-year lead time with respect to the target implementation date, but disagrees that the

Department's actions should be deferred until the 2022 calendar year. Rather than defer action to consider an unpublished and unknown EPA alternative, the Department analyzed the implications of New Jersey's incorporation by reference of California's ACT regulation and determined that this rulemaking is a necessary component of the State's comprehensive approach to reduce emissions of greenhouse gases and local pollutants from the transportation sector.

A National Program Will Better Serve the State

60. COMMENT: The Department should delay adoption of California's ACT regulation. New Jersey would be better served by advocating for next-tier nationwide emission regulations for MDHD vehicles because a national standard will offer the best means to prevent unintended consequences or subversion of environmental goals. (49, 76, 82, 93, 95, 99, and 105)
61. COMMENT: Instead of adopting California's ACT regulation, the Department should focus on crafting coordinated State and Federal policy that supports the transition to ZEVs through robust infrastructure investment and vehicle purchase incentives that will protect New Jersey jobs. (26, 45, 49, 76, 82, 93, 95, and 99)

62. COMMENT: An EPA lower-NO_x program for commercial vehicles and engines would be much more cost-effective at achieving nearer-term air quality goals than New Jersey's proposed rules, which are State-specific. Likewise, a next-tier nationwide emission-reduction regulatory framework for conventionally fueled trucks will be key to establishing a cost-effective bridge to MDHD ZEVs, because a national program will ensure that businesses and municipalities in each state have access to the full range of powertrain and vehicle solutions they are accustomed to purchasing today, will not be forced to pay premium prices for potentially less reliable

products, will not be forced to purchase outside their brand preference, and will not seek to purchase vehicles in neighboring states to avoid regulation. Accordingly, New Jersey (as well as the other MOU States) should work for the implementation of EPA's next-tier MDHD regulations as the best option for achieving their respective air quality goals during the bridge years, before significant ZEV-truck market penetration takes hold. (27)

63. COMMENT: The best approach to achieve New Jersey's goal of reducing the environmental impacts of MDHD is to allow the EPA rules on MDHD vehicle emissions to go into full effect, rather than adopting expensive battery electric vehicle mandates that will dramatically slow fleet turnover and the emissions reductions that are being achieved under the Federal standards. (31)

64. COMMENT: The proposed rules are unique to California's financial and fleet composition. Thus, the Department should work with the EPA to develop a national program to achieve the most effective means of reducing emissions and avoid harming New Jersey's trucking industry.

(45)

65. COMMENT: Realistic national standards and regulations offer the best way to prevent unintended consequences and detrimental implications for State-based stakeholders. The proposed regulations will do little to help reach the goal of a more sustainable economy and have the potential to have negative implications for the adoption of heavy-duty zero-emission trucks in New Jersey. (26)

66. COMMENT: Reducing transportation emissions will be achieved through a comprehensive strategy that takes a regional and national approach that should include alternative fuels and alternative transportation opportunities. If the Department adopts the proposed rules, New

Jersey will likely be at a competitive disadvantage with other states that do not adopt the California standards or that may not be as aggressive in mandating reductions. Until a national program to reduce transportation emissions from MDHD trucks is established, it is premature for the Department to adopt the proposed rules. (22)

67. COMMENT: Rather than incorporating by reference California's ACT regulation, the Department should work with the Federal government on a more holistic, flexible, realistic solution to reducing emissions from the trucking industry. A Federal clean truck rule can be much more effective in New Jersey than ACT because a Federal program would take into account the needs of the states and nation better than California's regulation. To date, no other state has adopted California's ACT regulation. It is important for the northeast region to act in a uniform manner given the significant interstate transportation of the region and the market for vehicles. Additionally, there are better methods than those included in the ACT regulation to reduce emissions of carbon and criteria pollutants. Several factors should be included in policy, including incentives, infrastructure, and an all-technology fuel neutral policy that allows for low carbon fuel options that will result in long-term and immediate reductions. But if New Jersey opts into the California program, it will lose leverage to influence the EPA rules, as well as the benefits inherent in a national program. (12 and 33)

68. COMMENT: The proposed rules' approach to ZEV deployment through the development of a credit/deficit system is ill advised because the costs associated with ZEVs make them an impractical technological option at this time. Instead, the Department should focus on a national standard for low or zero-emission vehicles that would allow low-carbon fuels as this is a more viable strategy for achieving carbon emission reductions. (47)

69. COMMENT: The key to implementing a successful ZEV future for commercial vehicles is through the implementation of a national rule, which New Jersey can help develop. This national rule must include funding to both build out the necessary infrastructure and provide incentives needed to offset the higher initial purchase and life-cycle operating costs of ZEVs. A national program will provide a level playing field among all states and work with all stakeholders to incentivize the market for ZEVs. (1)

70. COMMENT: New Jersey's adoption of California's Advanced Clean Truck regulation will not lead to increased penetration of commercial electric vehicles. New Jersey's commercial vehicle electric charging and fueling infrastructure is not built out to provide customers certainty on where their vehicle can be charged. In addition, New Jersey will need to provide State purchase and infrastructure incentive funding to vehicle customers to encourage adoption and turnover over of existing technology. The Department's goal of increasing electric commercial vehicles is admirable, but the State should delay any regulatory action until the Federal government provides direction later this year on their regulatory scope for MDHD trucks. The delay will provide New Jersey with the opportunity to align with surrounding states to support a national air quality standard that will benefit the entire northeast. (30)

71. COMMENT: The best path forward is through cohesive, national policies in order to facilitate a sustainable marketplace, and help create the necessary charging infrastructure that will ultimately help eliminate emissions from heavy-duty vehicle. National policies offer the most expedient path to the development and adoption of heavy-duty ZEVs. Rather than adopting a sales mandate developed for California's unique conditions, New Jersey would be better served to create a level playing field, advocating for nationwide emissions regulations,

and incentivizing the creation of electric charging infrastructure and the purchase of electric vehicles to help achieve an electric future. (98)

RESPONSE TO COMMENTS 60 THROUGH 71: As stated in the Response to Comments 58 and 59, the Department recognizes the potential benefits of a national program, but there is currently no national program proposed for consideration or comparison. Thus, the Department analyzed the implications of New Jersey's incorporation by reference of California's ACT regulation and determined that this rulemaking is a necessary component of a comprehensive approach to reduce emissions of greenhouse gases and local pollutants from the transportation sector.

As noted in the Response to Comments 74, 75, and 76, the purpose of California's ACT regulation is to accelerate the sales of electric vehicles in the MDHD sector. While the Department's primary objective of incorporating California's ACT regulation is to accelerate ZEV deployment in New Jersey, the adoption of these rules is not an indication that there is no place for low-carbon fuel technology in the interim market. The deployment of ZEV technology is expected to ramp up over time as a percentage of new vehicle sales. The remaining vehicle sales will continue to come from other technology, including next-tier, conventionally fueled vehicles that will not only have lower greenhouse gas emissions, but lower criteria pollutant emissions as well. Rather than viewing lower NO_x technology and ZEV technology as an "either/or" proposition, the Department views both technologies as part of a comprehensive strategy to lower greenhouse gas emissions and address local air pollutants. Both technologies may be pursued simultaneously, with ZEV technology expected to advance long-term greenhouse gas and local air pollutant emission reduction goals and lower NO_x technology

expected to address local air pollutants and greenhouse gas emissions in the near term. To that end, the Department will monitor, participate, and coordinate with any Federal efforts to implement low or zero-emission MDHD and/or low-carbon fuel standards and the incorporation by reference of California's ACT regulation will not serve as a barrier to participation in those policy discussions.

The Department recognizes that as a result of the State's incorporating by reference California's ACT regulation, businesses may have concerns that New Jersey industries will be at a competitive disadvantage. However, the Department does not agree that the solution is to wait for a national standard that will level the playing field. In developing this rulemaking, the Department was aware that neighboring states might adopt California's ACT regulation. Specifically, the Governors of Connecticut, Maine, Maryland, Massachusetts, New York, Pennsylvania, Rhode Island, Vermont, and the Mayor of the District of Columbia are all signatories to a memorandum of understanding that is a commitment to work together to foster a self-sustaining market for zero-emission MDHD vehicles through collaboration and coordination. <u>https://ww2.arb.ca.gov/sites/default/files/2020-07/Multistate-Truck-ZEV-Governors-MOU-20200714.pdf</u>. The Department anticipates that some states whose Governors are signatories to the Memorandum of Understanding will incorporate California's ACT regulation by reference. See Notice of Proposed Rulemaking, 6 NYCRR 218, Emissions Standards for Motor Vehicles and Motor Vehicle Engines;

<u>https://www.dec.ny.gov/regulations/26402.html</u> (State of New York's proposal to incorporate by reference California's ACT regulation); Proposed Rulemaking, Chapter 128, Advanced Clean Trucks Rule; <u>https://www.maine.gov/dep/rules/index.html</u>. Other states that are signatories

may not adopt California's ACT regulation, but will still coordinate with the Department pursuant to the MOU. Moreover, as discussed more thoroughly in the Response to Comment 187, the adopted rules do not include a purchase mandate. Thus, business owners and fleet operators will not be compelled to purchase ZEVs, unless they meet their operational needs; evasive tactics, such as moving to another state, are unnecessary.

Finally, the Department acknowledges the concern that businesses may have some initial hesitation about purchasing MDHD ZEV technology due to higher vehicle and infrastructure costs. But, as noted in the notice of proposal, Economic Impact, the Department estimates that the lifetime cost of maintaining a ZEV will be lower than a comparable gas or diesel vehicle. See 53 N.J.R. at 597. And, as the Department noted in its Jobs Impact analysis, this rulemaking is anticipated to "have a small, net positive impact on job retention or creation in the State." 53 N.J.R. at 599.

72. COMMENT: 2045 is a reasonable target date for the broad deployment of ZEV commercial trucks, wherever feasible. However, a comprehensive and coordinated State and Federal strategy is required to develop and implement the widespread deployment of ZEV trucks. A critical first step in that deployment is the investment and development of the infrastructure necessary to recharge or refuel ZEV trucks, which will involve longer planning and installation timelines and significantly larger public investments than for passenger cars. Another critical step in the successful deployment of ZEV trucks will be the provision of incentive funding to offset that significantly higher price differential. If there are no Federal programs addressing these critical factors, there is a significant risk that New Jersey fleets will simply keep their older

higher-emitting products longer or will buy out of State. The resulting adverse impacts on New Jersey's economy and environment could be severe. (27)

73. COMMENT: The rulemaking fails to recognize the financial barriers to electrification of fleets. Transitioning from diesel powered trucks to electric will require significant vehicle purchase incentives. A sustained incentive program is critical to ensuring early adopter purchases and stabilizing a transitioning market that needs to maintain cost parity with conventional alternatives in the near term. Rapid improvements in ZEV technology in the coming years are also likely to impact fleet residual values of used zero-emissions trucks and buses, as the technology lifecycle is compressed and newer technologies are deployed. Fleet customers must be assured that these products are not left technologically stranded to a point where the return on investment extends out beyond fleet target or useful life of the truck. Otherwise, truck fleets may decide to hold on to their older their trucks longer, delaying new vehicle purchases. (30)

RESPONSE TO COMMENTS 72 AND 73: The Department acknowledges various industries raised financial concerns, which pertain to ZEV infrastructure and the higher price differential based on initial cost. As discussed more fully in the Response to Comments 140 through 147, the Department and other State agencies are currently offering incentives to minimize the additional costs associated with both the initial purchase of MDHD ZEVs, as well as the necessary infrastructure. Federal programs addressing infrastructure and incentives would provide an optimal environment for ZEV deployment. To that end, the Department will monitor, participate, and coordinate with any Federal efforts to incentivize electric vehicles purchases and infrastructure in the MDHD sector and the incorporation by reference of

California's ACT regulation will not serve as a barrier to participation in future Federal funding opportunities.

Though the Department recognizes that incentives and other funding options will significantly facilitate the transition to ZEV technology, it is also important to note that the Department has found, as set forth in the cost summary of the Department's Economic Impact analysis, that while "medium- and heavy-duty ZEVs have higher upfront capital costs for the vehicle and infrastructure investments, [the] lower operating costs over time result ... in lower overall costs for truck transportation." 53 N.J.R. at 597. Thus, the Department's adopted rules are anticipated to be cost-effective in the long-term, regardless of Federal incentives. And as discussed more thoroughly in the Response to Comments 190, 191, 192, 193, 194, 195, and 196, the Department does not anticipate changes in fleet turnover rates as a result of the adopted rules.

Other Low Carbon Technology Will Better Serve the State

74. COMMENT: The proposed rules allow only manufacturers of electric vehicles to participate in the credit/deficit program. This restriction omits a proven and affordable option to reduce greenhouse gas emissions through vehicles fueled by renewable natural gas (RNG). The Department should include vehicles that utilize RNG in its credit/deficit program. (14 and 78) 75. COMMENT: The proposed rules do not include low carbon and carbon negative vehicles, like vehicles fueled by RNG, as a compliance option. The Department should revise the rules to adopt the traditional definition of a NZEV rather than the restrictive definition that was included in California's ACT regulation. Under the California definition, NZEV is limited to electric hybrids. But low- to no-carbon fueled engines, including RNG, are included under the

traditional definition of NZEV. Traditionally defined NZEVs are certified to achieve CARB's optional low NO_x standard of 0.02 g/bhp-hr, which represents a 90 percent reduction in NO_x emissions from the current Federal standards. These vehicles are available for wide-scale deployment now. Indeed, many leading fleets are adopting RNG vehicles. New Jersey can alter California's ACT regulation to improve its effectiveness by allowing greater flexibility, so long as those changes do not include provisions that are more burdensome. (3)

76. COMMENT: The Department should revise the proposed rules to allow near-zero natural gas vehicles powered by biofuels to qualify toward the obligations included in the program. New Jersey can alter California's ACT regulation to meet its needs, so long as those changes do not include provisions that are more burdensome. Allowing greater flexibility and increasing the opportunity for existing near-zero emission trucks would not be considered more burdensome and, therefore, is legal. (29)

RESPONSE TO COMMENTS 74, 75, AND 76: The Department's primary objective in promulgating the adopted rules is the reduction of emissions from the MDHD sector through acceleration of the sale of zero-emission MDHD vehicles in New Jersey. As set forth in the notice of proposal, California's ACT regulation requires an increasing percentage of future MDHD vehicle sales by certain manufacturers to be ZEVs. 53 N.J.R. 588(a). The percentage of new vehicle sales that must use ZEV technology will gradually increase, beginning with MY 2025 (in New Jersey) through 2035. For instance, the percentage of ZEV (or NZEV) credits that a manufacturer must obtain in MY 2025 to offset its deficits for new sales of Class 7-8 tractor vehicles and engines amounts to seven percent of its total sales. Accordingly, the remaining 93 percent of a manufacturer's new vehicle and engine sales in that model year could come from

other technologies, including low-carbon technology, such as RNG, which is already being deployed at scale. Given the primary objective of the adopted rules, a revision to include other technologies is unwarranted.

Additionally, California has adopted a regulation, commonly referred to as the Low NO_x Omnibus rule, that would require conventionally fueled engines and vehicles to meet a lower NO_x emission threshold in order to be a CARB-certified engine. Such a rule would benefit lowto no-carbon fueled engines, including those fueled by RNG, that are already meeting the lower NO_x threshold. Though, at the time of this adoption, the Department has not proposed to incorporate by reference California's Low NO_x Omnibus rule, the Department held a meeting with stakeholders on September 10, 2020, to discuss that possibility.

https://www.nj.gov/dep/njpact/materials.html#NJPACT-co2trucks20200910-am.

77. COMMENT: The proposed rules do not include a provision allowing near-zero natural gas vehicles powered by biofuels to qualify as NZEVS, despite the fact that these vehicles will provide cleaner air. The Department should focus on replacing older, higher emitting vehicles with less-polluting vehicles that are available now. California's rule does not encourage the uptake of these lower-polluting vehicles that will deliver immediate relief and longer-lasting public health benefits. (29)

78. COMMENT: The light duty ZEV mandate that was first established in 1990 was largely ineffective at increasing ZEV sales. The heavy-duty section does not have another 30 years to wait to achieve so little. Renewable natural gas is available now. (29)

79. COMMENT: The Department should avoid adopting the California approach of focusing on electrified vehicle-centric mandates at the expense of commercially available low NO_x

technologies that are being deployed to meet near-term air quality goals. Low NO_x

technologies, coupled with renewable fuels, could deliver earlier and more cost-effective air quality and greenhouse gas reduction benefits than a ZEV-centric approach. Policies should be realistic in nature, and, above all, preserve affordability and consumer choice. Generally speaking, these goals can be best achieved through free markets, as opposed to marketdistorting mandates, subsidies, or the imposition of unrealistic emissions or sales targets. (31) 80. COMMENT: Under California's ACT regulation, which New Jersey proposes to incorporate by reference, new natural gas ultra-low NO_x engines operating on RNG do not qualify as ZEVs or NZEVs. Yet, these engines, which are available today, produce fewer greenhouse gas emissions than diesel-powered vehicles. The average carbon intensity of bio-compressed natural gas sold in California in 2020 was negative, giving RNG the lowest carbon intensity of any in use motor fuel, including fully renewable electric wind or solar. The proposed rules rely on a sales mandate for vehicles that are largely not commercially available, affordable, or proven, and prevents new, ultra-low emission natural gas vehicles from qualifying under the proposed rules. The proposed approach likely will delay achieving more immediate and longer-lasting reductions in harmful pollutants. (29)

81. COMMENTS: Modern, natural-gas engines are designed to operate on traditional fossil natural gas or RNG that is stored on the vehicle as either compressed natural gas (CNG) or liquefied natural gas. These near-zero engines feature NO_x levels that are 90 percent below the EPA standard, particulate matter that are also 90 percent below the EPA standard, CO₂ equivalent 16 percent below the EPA standard. Moreover, when they are used with RNG, they achieve subzero carbon emissions. Modern natural gas engines offer near-zero-emissions and

are also the most mature, proven, and least disruptive alternative power technology available today. On the other hand, MDHD electric vehicles are not ready for large scale adoption. (10) 82. COMMENT: California's ACT regulation does not include "near-zero" technology vehicles, such as those powered by CNG and emerging hydrogen technology. Natural gas vehicles are already in widespread operation in New Jersey today and produce lower carbon emissions than diesel vehicles. (63)

83. COMMENT: Renewable diesel fuel is available to immediately reduce greenhouse gas emissions in New Jersey, whereas other technologies may not be available for 15 to 20 years. The Department should look for additional options for Class 7 and 8 vehicles to bridge the gap between technology that is actually available today and what may be available in the future. Providing incentives to replace older model year vehicles with newer near-zero emission vehicles (that run on renewable diesel fuel) would provide the bridge. (94)

84. COMMENT: Since electric and other ZEVs are not feasible at this time, the Department should not adopt the proposed rules. Instead, the Department should encourage the use of lower carbon fuel technologies like RNG and CNG, which are readily available and affordable now, to reduce carbon and other emissions from MDHD vehicles. (12)

85. COMMENT: The proposed rules should incorporate alternative fuel (low-carbon intensity) vehicles because the fueling infrastructure for CNG vehicles is available in New Jersey right now; the infrastructure for electric vehicles is not available or easily deployed. (63) RESPONSE TO COMMENTS 77 THROUGH 85: As set forth in the Response to Comments 74, 75, and 76, the Department's primary objective in promulgating the adopted rules is the acceleration of the use of MDHD ZEVs in New Jersey, which is an important initial step in the

State's comprehensive strategy to reduce emissions from the transportation sector. Though the adopted rules will require an increasing percentage of future MDHD vehicle sales by certain manufacturers to be ZEVs, the remaining new vehicle and engine sales could come from other low-emission technologies. Accordingly, the rules will not obstruct fleets or businesses from purchasing near-zero vehicles using other technology that is already commercially available, particularly for those market segments in which CARB indicated that ZEV technology is not fully mature.

Notably, the 2019 EMP evaluated multiple energy plan scenarios and their costs, including some with higher and lower transportation electrification rates, as well as variations in the use of biofuels in transportation. See 2019 EMP, Appendix A Integrated Energy Plan: Scenario Results and Cost Estimates. Ultimately the 2019 EMP found that a variation with lower electrification rates and increased use of biofuels would be less costly in the near-term, but, overall, a more costly way to reach the State's emission reduction goals than several other scenarios focused on higher levels of vehicle electrification. See 2019 EMP, p. 278. For these reasons, the pursuit of electrification of the transportation sector is a long-term goal, but that does not preclude policies that promote low NO_x emission technology as an interim measure. Thus, the focus of this rulemaking is electrification of the MDHD sector over the long-term.

For a discussion of the readiness of electric vehicle charging infrastructure, please see the Response to Comments 131, 132, 133, 134, and 135. As the Department noted in that response, deficits under the adopted rules do not begin to accrue under the adopted rules until 2025, and sales percentage requirements ramp up gradually over time, allowing infrastructure installation capacity to increase gradually as the MDHD charging infrastructure market

continues to mature and prices decrease. The Department and other State agencies have made resources available to offset the costs of MHDV charging infrastructure.

Industry has the capacity to adopt MDHD ZEVs on a large-scale in light of the existing product development and infrastructure needs. As noted in the Response to Comments 105, 106, 107, 108, and 109, CARB's market segment analysis evaluated the suitability of current ZEV technology across a wide variety of market segments, and this analysis informed the sales requirements of the adopted rules.

As for the use of newer technology to meet the rules' requirements, hydrogen fuel cell electric vehicles qualify as ZEVs under the adopted rule. As CARB noted in its initial statement of reasons, "ZEVs produce no exhaust emissions of any criteria pollutant under any and all possible operational modes and conditions. The most common ZEVs are battery-electric vehicles (BEVs) and fuel-cell electric vehicles (FCEVs) ... FCEVs use hydrogen stored on board to power a fuel cell in combination with a traction battery that produces electricity to power the electric motor(s)." CARB, Staff Report: Initial Statement of Reasons, October 22, 2019 (CARB ISOR), https://ww2.arb.ca.gov/rulemaking/2019/advancedcleantrucks, p. I-10.

86. COMMENT: All-electric trucking could be vulnerable to power outages in the event of a natural disaster, leading to delayed disaster recovery. Instead of proceeding with the proposed rules, the Department should find ways to bring alternatives like natural gas into the picture as an option, not a mandate. (4)

87. COMMENT: It is highly problematic to force the trucking industry to be reliant on electrical generation. Should the State suffer another major power outage, like the one New Jersey
experienced after Superstorm Sandy, trucking fleets that provide food and product distribution, emergency vehicles, solid waste collection, construction vehicles, and public safety vehicles would be unavailable. Alternative fuels have the benefit of providing a fuel mix and allowing for transportation of goods to occur in the event of a major power outage. (12) RESPONSE TO COMMENTS 86 AND 87: Resilience is an important factor in any discussion related to climate change. As noted in the notice of proposal Summary, multiple State agencies have been working to implement policies to mitigate climate change and strengthen resilience. One of the numerous efforts undertaken was the 2019 EMP, which included modeling that

"maintaining reliability, resiliency, flexibility, and security." See 2019 EMP, p. 286. As the State moves toward increased electrification in all sectors, modeling will need to be updated periodically to ensure the State is pursuing pathways to emission reductions that maintain the core requirements of resilience, reliability, flexibility, and security. This rulemaking, by itself, is not a threat to resilience or reliability because it does not require the MDHD sector to transition to an all-electric fleet. Rather, the adopted rules require a gradual increase in the percentage of new vehicle sales that must be ZEVs.

analyzed various approaches to reach the State's emission reduction goals while also

Operational concerns associated with power shutoffs are an issue for extended outages. CARB addressed concerns with power outages and noted that the concerns extend to all vehicle and fuel types. "This issue is highlighted in a 2019 NREL presentation – natural gas stations need electricity to run compressors to move the gas along pipelines and to compress gas to fuel CNG vehicles, and gasoline and diesel stations cannot pump fuel without electricity. ZEVs have their own trade-offs and benefits but are not the only fuel that faces resiliency issues. Fleets

will make their own decisions on how and whether they will plan to have backup measures, such as on-site energy storage, backup generators, or have larger storage systems onboard the vehicle." CARB, Final Statement of Reasons, March 15, 2021 (CARB FSOR),

https://ww2.arb.ca.gov/rulemaking/2019/advancedcleantrucks, p. 218. Like California's ACT regulation, the adopted rules do not require fleets to purchase ZEVs; consequently, the Department anticipates that only fleets that are comfortable with their resiliency situation would likely purchase ZEVs. Thus, appropriate resilience and reliability will be monitored and maintained by fleets at the operational level and by State agencies at the systemic level. 88. COMMENTS: If the proposed rules will not incorporate a compliance option for low-to-nocarbon fuel engines, the Department should focus on the adoption of a low-carbon fuel

standard. (3)

89. COMMENT: The U.S. government considers biodiesel to be carbon-neutral. Therefore, the Department should consider incorporating biodiesel into the rules. The infrastructure for biodiesel is largely in place, making it more advantageous than the mandate for electric vehicles contained in the proposed rules. (20)

90. COMMENT: On a lifecycle basis, a truck running on renewable diesel can reduce greenhouse gas emissions more than a battery powered medium- or heavy-duty vehicle. Moreover, renewable diesel is a more cost-effective solution for reducing local emissions and improving local air quality. Yet the proposed rules do not allow various technologies to compete in the marketplace. (31)

91. COMMENT: California's ACT regulation, which New Jersey proposes to incorporate by reference, establishes a technology mandate that ignores the important role that other

technologies can play in reducing greenhouse gas emissions. The Department should pursue a more inclusive technology strategy that would accelerate emissions reductions, while also creating more cost-effective solutions. (36 and 66)

92. COMMENT: Rather than incorporating by reference California's ACT regulation, which limits the technological options for achieving greenhouse gas emission reduction, the Department would be in a better position to meet the State's aggressive emission reduction targets with a multi-technology approach. (29)

RESPONSE TO COMMENTS 88, 89, 90, 91, AND 92: As stated in the Response to Comments 60 through 71, the adoption of California's ACT regulation for the purpose of accelerating ZEV deployment in New Jersey is not an indication that the Department perceives no place for lowcarbon fuel technology in the market. As noted in the Department's 80x50 Report, to reach the State's emission reduction goals, "[i]t will be necessary to support a combination of technologies—including electric batteries, hydrogen fuel and renewable biofuels—that best address the end use and purpose of medium- and heavy-duty vehicles." 80x50 Report, p. x. Indeed, "[r]enewable diesel or renewable natural gas can be considered as interim strategies until full electrification is possible." Id. at p. 21. Nonetheless, the primary purpose of this rulemaking is to accelerate ZEV deployment. Though standards for the low-to-no-carbon fuel engines and vehicles described by the commenters were not included or incorporated in these rules, the Department and other State agencies are free to implement other policies, rules, or strategies to incentivize other fuels that may play a role in reducing emissions in the short term. 93. COMMENT: A ZEV policy would have an adverse economic impact on America's agricultural industry, as demonstrated in the October 2020 study commissioned by the

Agricultural Retailers Association. The Department should explore alternatives to reducing greenhouse gas emissions through the promotion of low-carbon renewable and other important domestic energy sources that can help improve the environment while promoting economic growth within the nation's agricultural industry. (34) RESPONSE: See the Response to Comments 88, 89, 90, 91, and 92 as it pertains to the role low-carbon renewable fuels may have in achieving the State's emission reduction goals.

As the Department stated in the notice of proposal Agricultural Industry Impact, this rulemaking is anticipated to have a positive impact on the agricultural industry in New Jersey by reducing greenhouse gases that drive climate change. 53 N.J.R. at 600. The impact of the adopted rules on the agricultural industry in the United States as a whole is beyond the scope of this rulemaking. The Department's adopted rules, which are intended to accelerate the deployment of ZEV technology in the MDHD sector, will apply in New Jersey only – there is no national applicability. Although large-scale adoption of ZEV technology at a national level could have an impact on global commodity prices due to a decreased demand for biofuels, no specific connection to New Jersey's agricultural industry has been presented. New Jersey has no significant agricultural ethanol or bio-diesel production capacity that could be adversely impacted if the adopted rules decrease demand for those fuels.

(https://www.eia.gov/petroleum/ethanolcapacity/ and

https://www.eia.gov/biofuels/biodiesel/production/table4.pdf).

Crops, such as soybeans and corn, are produced in New Jersey for purposes other than ethanol or bio-diesel production. However, any decrease in demand for biofuels in MDHD vehicles in New Jersey would have an immeasurably small effect on global commodity prices

and, as such, would not have a significant adverse effect on the national or State agricultural industries.

Zero-emission Technology

The Market is Ready: Demand

94. COMMENT: Adoption of California's ACT regulation is reasonable given the level of demand that can be observed in the marketplace. (43)

95. COMMENT: There is tremendous pent-up and growing demand for these trucks right now.

A wide variety of private and public entities are applying for Volkswagen Settlement funding for

MDHD ZEVs, and this demonstrates a high level of interest. There may be a shortage of MDHD

ZEV without California's ACT regulation, but there is no danger of a surplus. (40)

96. COMMENT: As economic returns and other benefits become evident, demand for MDHD

ZEVs is expected to swell, making it crucial that New Jersey ensure that sufficient quantities and

types of ZEVs are available. (25)

97. COMMENT: MDHD fleets, such as FedEx and Walmart, have shown a clear desire to adopt ZEVs. But they need to know that there will be ample vehicles to purchase. The proposed rules will provide much needed policy certainty to market participants that may be hesitant to commit to ZEVs without a clear pathway to make the transition. (2)

98. COMMENT: Zero-emission trucks provide savings to fleets. Many trucks are already cost competitive on a total cost of ownership basis. Larger vehicles are expected to achieve parity by 2025, and heavy-duty long-haul vehicles are expected to achieve parity by 2030, even without incentives. (70)

99. COMMENT: An electric truck could pay for itself in about three years through lower fuel and maintenance costs. (71)

100. COMMENT: Many zero-emission trucks and buses already have a lower total cost of ownership than their diesel equivalents, even without incentives. Continued advances in low and zero-emission vehicle technology are expected to make all zero-emission trucks and buses cost competitive by the end of the decade. (46)

101. COMMENT: Companies are investing in electrification because transitioning to EVs can generate cost savings over the life of a vehicle. (80)

102. COMMENT: California's ACT regulation will work. Zero-emission long haul trucks already have lower total cost of ownership than diesel over the vehicle's lifetime. By driving up demand for MDHD ZEVs and the corresponding infrastructure, the proposed rules will result in more innovation and lower future costs. (5 and 68)

103. COMMENT: The proposed rules will be effective in driving up demand for electric trucks, advancing infrastructure, and fostering innovation, and will lead to lower future costs. (32) 104. COMMENT: By adopting California's ACT regulation, New Jersey can effectively begin to transition MDHD vehicles to zero-emission technology before the implementation of a corresponding purchase mandate. Manufacturers have more than met their requirements under the California light-duty ZEV program, generating a surplus of credits to meet their ZEV requirements for light-duty vehicles. Thus, far from failing to meet the ZEV program requirements for light-duty vehicles, manufacturers have been overperforming even without a regulatory purchase mandate. (35 and 87)

RESPONSE TO COMMENTS 94 THROUGH 104: The Department acknowledges the commenters' support of the rules. Based upon the analyses performed by CARB, the Department agrees that the adopted rule's requirements are economically and technologically feasible. As noted in the Response to Comments 122, 123, 124, 125, and 126, by setting a regulatory sales mandate, the Department is providing certainty to vehicle manufacturers, suppliers, and infrastructure manufacturers to make the long-term investments that will be crucial to large-scale deployment of ZEVs. Accordingly, the adopted rules are anticipated to encourage manufacturers to develop and validate new products that will keep pace with the increase in demand.

ZEVs are not Market Ready

105. COMMENT: New Jersey's proposed incorporation by reference of California's ACT regulation will require manufacturers to comply with the sales mandate in model year 2025, which means that manufactures could be forced to comply in 2024 due to their product launch schedules, forcing manufacturers to potentially deliver immature technology that is not fully validated or tested. Any difficulty with technology rollouts may result in customers who are hesitant to make a large capital investment in unproven technologies in the future. (30) 106. COMMENT: The Department has not considered the fact that the battery-powered trucks currently available are neither economically competitive nor practical for any routes requiring cargoes near the maximum load ratings, nor for mid-range or long-haul routes. Real world experience has shown battery electric vehicles to be inappropriate for some applications due to vehicle range, battery performance in different weather scenarios, and battery degradation due to fast charging. The limitations of the technology do not impact only vehicle performance. For

example, long charging times may lead to idle drivers, another economic challenge businesses cannot afford. (31)

107. COMMENT: The proposed rules rely on regulatory standards set in California, which did not consider the diverse needs of market segments in New Jersey. Relying on California's standards may harm New Jersey's businesses and truck owners from a distribution, logistics, and interstate perspective. Moreover, the electric vehicle technology mandated by the standards is not mature. Manufacturers cannot comply with sales mandate if the product does not meet the vehicle owner's needs. (12 and 27)

108. COMMENT: If the proposed rules are adopted, they would be a great hardship to companies who have to buy buses and install charging stations. This cost would be reflected in the bidding process within the school districts. Many questions remain about range and charging for electric school buses, since very few are in operation. These questions will not be resolved by 2025. (39)

109. COMMENT: Many infrastructure projects take place far away from central corridors where public charging might be available. As a result, construction-related businesses will be hesitant to buy and use electric trucks, especially the heavy-duty, longer haul vehicles since recharging them mid-project would require route changes or the demobilization and remobilization of equipment traditionally left onsite for the duration of a project. (47)

RESPONSE TO COMMENTS 105, 106, 107, 108, AND 109: The Department recognizes that there are certain market segments that are not presently suitable for full electrification. However, the adopted rules provide the flexibility necessary to address this issue by allowing manufacturers to bank, purchase, or trade credits earned in the early, ready to electrify sectors to offset any

deficits they may incur as less advanced market segments mature. As CARB explained in its Final Statement of Reasons, its staff "worked closely with stakeholders to develop a market segment analysis that can be found in [Appendix E to the ISOR.]. This analysis assessed 87 market segments in the Class 2b-8 market and assessed their suitability for electrification based on payload issues, daily range, infrastructure access, and space considerations. The analysis found that while many segments present challenges, there are a large number of segments that are well suited for electrification across the medium- and heavy-duty truck market." CARB FSOR, p. 108. CARB also noted that "the suitable market for ZEVs is expected to expand further as ZEV technology improves, access to infrastructure expands and ZEV weights decline." *Ibid*.

Since the adopted rules do not require any individual fleet to purchase ZEVs, poorly suited market segments may wait until manufacturers develop ZEV technology that suits the needs of those fleets. See CARB FSOR, p. 122. In short, manufacturers will need to examine their market segments in New Jersey, identify which segments will be initially most suitable for ZEVs, and plan to develop future ZEVs that are suited to the more challenging market segments in later years. The framework of the adopted rules' credit/deficit system will provide manufacturers with the flexibility to offer competitive products that fleets will want to purchase in the appropriate market segments initially, as well as the time to research, develop, test, and validate products in those market segments that are less mature.

110. COMMENT: A World Resources Institute study found that range was a critical limitation of e-buses for transit operators. Passenger heating and cooling loads and uncertain battery performance can further reduce effective range. (44)

111. COMMENT: In a National Renewable Energy Laboratory (NREL) study evaluating natural gas and battery electric transit buses in service in California, natural gas buses in the study traveled farther, performed more work, and were more reliable than the battery-powered electric buses. Battery-powered electric buses are likely to travel fewer lifetime miles than most studies assume. Low per-vehicle mileage may necessitate increasing bus fleet sizes. Given the heavier payloads and more rigorous work schedule, these issues will only be magnified in the trucking sector. (3)

RESPONSE TO COMMENTS 110 AND 111: The Department recognizes that there are certain market segments that are not presently suitable for full electrification. As discussed more thoroughly in the Response to Comments 105, 106, 107, 108, and 109, the adopted rules were developed to provide manufacturers with the flexibility to offer competitive products that fleets will want to purchase in the appropriate market segments initially, and the time to research, develop, test, and validate products in those market segments that are less mature.

To the extent that there are concerns about the reliability of MDHD ZEVs, the adopted rules require that ZEVs meet the requirements of the Zero Emission Powertrain Certification regulation. Specifically, starting in model year 2024, California's ACT regulation "establishes minimum criteria for the quality and reliability of ZEVs, provides emissions warranty to the vehicle purchaser, ensures information regarding ZEVs and their powertrains are effectively and consistently communicated to purchasers, and accelerates progress towards greater vehicle reparability. CARB anticipates that ZEV technology will continue to rapidly improve thereby increasing reliability, and as the market matures, costs will continue to decrease." CARB FSOR, p. 291. Since New Jersey's incorporation by reference will not be implemented until model

year 2025, all ZEVs sold in New Jersey will be required to meet the quality and reliability standards of CARB's zero-emission powertrain certification requirements.

The Market is Ready: Production

112. COMMENT: At least 70 electric truck and bus models are on the market today and manufacturers are expected to make many more new models available over the next decade.

(8)

113. COMMENT: Several major manufacturers have announced plans to make Class 8 ZEV trucks. Similarly, a number of major legacy and new automakers have unveiled plans to manufacture electric pick-up trucks, most of which will fall in the Class 2B to 3 range. Last year there were 95 models of zero-emission MDHD vehicle models in commercial production, and that number is set to increase to 169 models by the end of this year. Strong regulations that set a clear direction for industry, such as California's ACT regulation, accelerate the pace of innovation and ensure the industry actually makes these vehicles available to consumers. Supported by a strong regulatory framework, the broader industry could easily exceed the targets in the rule. (43)

114. COMMENT: Large manufacturers are already on board to electrify their vehicles. More than 130 MDHD ZEV models have already been certified under the California Hybrid and Zero Emission Truck and Bus Voucher Incentive Program. Many additional zero-emission MDHD vehicle models will be available by model year 2025. According to CalSTART's Zero Emission Vehicle Inventory, 53 companies, including major manufacturers like Daimler, Ford, and Volvo will have over 200 models of MDHD ZEV models available in the U.S. by 2023. Additionally, many major manufacturers have set specific goals to produce more electric vehicles in the near

future. CalSTART anticipates that long-haul MDHD ZEV models will have ranges of over 600 miles by 2023, which should make long-haul electric vehicles feasible. Though batteries add weight to the truck, total payload losses are only about three to 19 percent. This should not be an issue for most shipments, given that average payloads are only 70 percent of maximum capacity. Moreover, New Jersey has been recognized as a high-potential state for truck electrification. (35 and 87)

115. COMMENT: Adoption of California's ACT regulation is a critical precondition for a well-

functioning MDHD ZEV market. (42, 51, 59, 60, and 90)

116. COMMENT: Companies cannot fully address the risks or realize the value of tackling climate change without a robust market for clean transportation solutions and strong carbon reduction policies that send clear, long-term economic signals. (46)

117. COMMENT: A ZEV sales requirement for manufacturers is a proven policy mechanism to increase the availability of electric vehicles. Zero-emission vehicle technology is capable and ready for deployment in heavy-duty vehicles today. (69)

118. COMMENT: The technology is more than ready, and the intent of the proposed rules is to make that technology available. (69)

119. COMMENT: MDHD ZEV technologies are already here. Numerous global manufacturers are moving forward on electric trucks. (64)

120. COMMENT: Adoption of the ACT regulation in New Jersey will take advantage of MDHD market segments that are ready to electrify today, such as transit buses, local delivery vehicles, and refuse trucks. (21)

121. COMMENT: Because California's ACT regulation is designed to be flexible, it will not present an undue burden on manufacturers. By increasing sale requirements over time, the ACT regulation gives manufacturers room to take advantage of technology and cost improvements, transfer credits between manufacturers and vehicle classes, and adjust the possible fluctuations in sales from year-to-year. (2)

RESPONSE TO COMMENTS 112 THROUGH 121: The Department acknowledges the commenters' support of the rules. As several commenters indicated, MDHD manufacturers have already announced plans to produce many new ZEV models. See the Response to Comments 122, 123, 124, 125, and 126 for discussion of how the establishment of a sales mandate provides regulatory certainty to vehicle manufacturers, suppliers, and infrastructure manufacturers to make the long-term investments that will be crucial to large-scale deployment of ZEVs. Further, the Department acknowledges the market analyses submitted by the commenters. For further discussion of model availability and the readiness of ZEV technology, please see the Response to Comments 105, 106, 107, 108, and 109.

Manufacturer Production cannot Meet the Sales Requirements

122. COMMENT: The technology does not currently exist at scale to allow for the conversion of the State's trucking fleets across all vehicle categories in the timeframes required. (12 and 33) 123. COMMENT: The Class 7 and 8 all-electric trucks presently available will not meet the operational requirements of fleets that need to travel greater distances than can be achieved from a single charge. The Department should look for other options for Class 7 and 8 trucks to bridge the gap between what is available now and what may be available in the future. (94)

124. COMMENT: The proposed rules mandate the sale of Class 7 and 8 electric vehicles that are not presently viable, not in widespread commercial production, and for which there is no meaningful charging infrastructure. (3, 20, 29, 47, and 88)

125. COMMENT: Based on the available data, there will not be electric MDHD vehicles available in sufficient quantities to meet the sales mandate of the proposed rules. Even the most well-established electric vehicle manufacturers promising production of MDHD vehicle models have failed to deliver in a manner that meets the current demand and/or have failed to show profitability. The lack of available electric vehicles to meet the sales mandates within the proposed rules will only serve to increase costs to companies and consumers because the rules will force the market, which currently has insufficient capacity, to move too quickly. (88) 126. COMMENT: There are fleets that placed orders for heavy-duty vehicles with a manufacturer in 2018, that are still waiting for delivery in 2021. Based upon this history, the sales mandates included in the proposed rules exceed what is feasible and will only complicate the market. (3)

RESPONSE TO COMMENTS 122, 123, 124, 125, AND 126: ZEV models currently available in certain weight classes are more mature and/or more plentiful than those in other weight classes. See CARB FSOR. Appendix E: Zero-Emission Truck Market Assessment. Further, the Department acknowledges that fleets may be hesitant to purchase ZEVs at scale, unless they have a range of products available from established truck manufacturers. However, based upon the in-depth market segment analysis performed by CARB, which was discussed more thoroughly in the Response to Comments 105, 106, 107, 108, and 109, and the flexible (bank,

purchase, or trade) framework of the ACT regulation, there will be sufficient quantities of ZEV models for manufacturers to meet the sales mandates of the adopted rules.

Compliance with the adopted rules will require significant changes to manufacturers' product offerings and scale of production. However, by setting a regulatory sales mandate, the Department is providing certainty to vehicle manufacturers, suppliers, and infrastructure manufacturers to make the long-term investments that will be crucial to large-scale deployment of ZEVs. Because the adopted rules' sales requirements do not take effect until model year 2025 and ramp up over time, manufacturers should have sufficient lead time to develop and validate new products, as well as give ZEV-suitable fleets time to test new products and make the necessary infrastructure preparations. See CARB FSOR, p 130.

With regard to the specific concerns about the availability of Class 7 and 8 ZEVs, CARB's initial assessment recognized that a portion of these vehicles are used primarily for long-haul trips, which raises concerns about battery life. See CARB FSOR, p. 208. However, this issue was accounted for in the assessment since CARB "assume[d] that electrification in the tractor segment will start with shorter haul applications such as city delivery and drayage first, and then expand to other sectors including regional trucking." *Ibid*. "The approved regulation includes flexibility for manufacturers to produce and sell ZEVs into the market segments they deem to be most suitable for the products they manufacture. Specifically, the regulation provides flexibility for manufacturers to shift sales between weight classes, to bank and trade credits ... and to meet part of their compliance obligation with near-zero-emission vehicle sales that have a minimum all-electric range. [...] In summary, the approved regulation will ensure that manufacturers develop competitive ZEV products at price points that will meet fleet

needs." CARB FSOR, p. 100. Accordingly, the adopted rules provide enough flexibility and time for manufacturers to meet their obligations.

127. COMMENT: Only 240 electric heavy-duty trucks were registered in the United States in 2020. If all states were to adopt California's ACT regulation, 6,804 heavy-duty electric trucks would need to be sold nationwide in 2025. This represents a 28-fold increase in MDHD electric vehicles sales. While 6,800 trucks is not a massive number, it is a massive increase from 240 electric heavy-duty trucks sold today. Given electric truck sales history, this is an implausible increase. (88)

RESPONSE: As discussed more thoroughly in the Response to Comments 122, 123, 124, 125, and 126, the Department is confident that the sales volume that the adopted rules require is feasible. Additionally, it is highly unlikely that there would be a 28-fold increase in MDHD electric vehicles sales nationally, as not all states are currently eligible to adopt California's ACT regulation.

Economies of Scale

128. COMMENT: The proposed rules require truck manufacturers to invest in battery electric truck production. When investment in battery electric truck production approaches the level of investment that has been made in diesel truck production, ZEV trucks will reach price parity with diesel trucks. The proposed rules will generate economies of scale that will drive down costs. (40)

129. COMMENT: The up-front price of vehicles is expected to continue to decline significantly as battery prices decline. Adopting California's ACT regulation will only further that trend by

increasing supply and improving economies of scale in a way that continues to depress prices. (70)

130. COMMENT: The proposed rules will increase supply to meet demand, which will help achieve economies of scale and reduce upfront costs. (2)

RESPONSE TO COMMENTS 128, 129, AND 130: The Department acknowledges the commenters' support of the rules. Currently, MDHD ZEVs have higher up-front capital costs for the vehicle and infrastructure investments. While CARB's analysis did model decreasing incremental costs for MDHD ZEVs over time, CARB did not model lower ZEV component costs due to increased economies of scale resulting directly from the California Regulation. See CARB SRIA, p. 30. Accordingly, the adopted rules may indeed lead to incremental economies of scale, but the Department did not include these savings in its Economic Impact analysis.

ZEV Charging Infrastructure is not Ready to Serve New Jersey

131. COMMENT: The proposed rules should not be adopted because the charging infrastructure necessary to support the vehicles required to be sold under the mandate will take a great deal of time and money. (62)

132. COMMENT: Cost and lead times for construction of sufficient direct current (DC) fast charging and hydrogen fueling infrastructure remain critical technical obstacles to an effective build out. (30)

133. COMMENT: The proposed rules will likely fail to deliver the emission reductions forecast because they largely ignore technological and cost issues and assume that recharging infrastructure will be built at a record pace. (3)

134. COMMENT: There is no data to support the argument that ZEVs will be less costly to operate since many of the vehicles do not exist yet. ZEVs will require additional monetary investments. Likewise, there are enormous challenges associated with the establishment of Statewide heavy-duty vehicle charging infrastructure, including the build out of charge points, mandatory grid upgrades, and the expansion of transmission capacity that must complement these new battery electric vehicle purchases once they are market ready and deployable. (29) 135. COMMENT: The proposed rules fail to address the challenges of developing and installing the requisite charging infrastructure to support zero-emission MDHD battery electric trucks. Charging stations must be located at fleet terminals and other depots where trucks are typically parked, and developing that infrastructure will be a complicated, expensive, and a multi-year undertaking. Moreover, fleets will need to expand the charging infrastructure over time if they plan to deploy additional battery-electric trucks. A viable MDHD ZEV initiative needs to have a primary near-term objective of incentivizing and assisting in the development of an appropriate charging infrastructure to enable the deployment of battery-electric commercial vehicles. Additionally, for fleet applications where fuel-cell electric vehicles may be the better option, hydrogen fueling stations will be needed. The proposed rules do not account for any of these items. (27)

RESPONSE TO COMMENTS 131, 132, 133, 134, AND 135: The Economic Impact analysis in the notice of proposal accounted for the challenges posed by the ZEV infrastructure costs associated with this rulemaking. Specifically, the Department's cost summary analysis found that while "medium- and heavy-duty ZEVs have higher upfront capital costs for the vehicle and infrastructure investments, [the] lower operating costs over time result ... in lower overall costs

for truck transportation." 53 N.J.R. at 597. In reaching this conclusion, the Department relied upon CARB's analysis, which included assumptions pertaining to "the costs of chargers, site infrastructure upgrades, and charger maintenance in the analysis. [CARB] held multiple workgroup meetings to solicit feedback on the cost inputs and used the most up-to-date information wherever possible using real world experience and fleet data." CARB FSOR, p. 211. As noted in the Response to Comment 136, the ZEV sales percentages were based on assumptions of return-to-base operations, not a broader network of public charging. The Department acknowledges that certain segments could accelerate ZEV technology more quickly if there were public charging networks available. But, as noted in the notice of proposal Summary, the adopted rules are one piece of a comprehensive approach to reduce emissions from the transportation sector. 53 N.J.R. at 589. Neither a single rulemaking nor a single State agency can address every aspect of the State's needs as it works to electrify the transportation sector. Thus, the Department and other State agencies must continue to work collaboratively across economic sectors, levels of government, and through public private ventures to expand access to public MDHD charging and assist with the build-out of depot charging. Currently, the Board of Public Utilities (BPU) is soliciting feedback on a Medium- and Heavy-Duty Straw Proposal that proposes a specific role for electric distribution companies (EDCs) in the MDHD ZEV ecosystem. See New Jersey Electric Vehicle Infrastructure Ecosystem 2021 – Medium- and Heavy-Duty Straw Proposal (Straw Proposal),

<u>https://www.nj.gov/bpu/pdf/publicnotice/Notice%20Medium%20Heavy%20Duty%20EV%20Str</u> <u>aw%20Proposal.pdf</u>. The Straw Proposal will help inform all of the relevant agencies' efforts as the BPU develops a pathway forward for the build-out of MDHD electric vehicle charging

infrastructure in the State. Future policies concerning the build-out of infrastructure will be further informed by the information gathered pursuant to the Fleet Reporting Requirements, because it will provide the Department with data concerning the vehicle usage and fueling needs of New Jersey's fleets.

To the extent that there are concerns about the speed at which electric charging infrastructure can be built, the Department notes that deficits do not begin to accrue until 2025, and sales percentage requirements ramp up gradually over time, allowing infrastructure installation capacity to increase gradually. As described above, the Department and other State agencies are working collaboratively to increase charging infrastructure for MHDV fleets. 136. COMMENT: An all-electric truck would not be practical for medium- and long-haul truck routes that exceed the maximum charge capability since there is no heavy-duty truck charging infrastructure within the State or along the interstate corridors. Thus, without significant vehicle and infrastructure incentives, the costs associated with the proposed rules would be insurmountable. (94)

RESPONSE: The Department acknowledges that EV charging capacity does not yet exist to serve those MDHD vehicles that have high daily range requirements or cannot return to base to recharge at night. However, widespread access to public fast charging for MHDV will not be necessary for compliance with the adopted rules. As discussed in the Responses to Comments 105, 106, 107, 108, and 109, CARB's market assessment accounted for the suitability of 87 market segments, based upon multiple factors, including daily range and charging requirements. Using this assessment as a guide, CARB established sales percentages at levels that would not necessitate the availability of widespread fast charging for MHDV. See CARB

FSOR, p. 124. Specifically, "[t]he ZEV sales percentage targets were based on the assumptions of return-to-base operations where infrastructure would be installed by the fleet." *Ibid*. Thus, even if public EV charging capacity is insufficient to serve the long-haul market segment today, manufacturers are still anticipated to be able to meet the sales mandates through the flexible (bank, purchase, or trade) framework of the adopted rules.

Sales Mandates

A Sales Mandate Can Work

137. COMMENT: Fears of excessive MDHD ZEV pre-buy/no-buy are unwarranted, and provide no reason for the Department to withhold, or delay, adoption of California's ACT regulation. As CARB noted, fleets, not manufacturers, decide when to purchase vehicles and this regulation would not encourage them to delay their purchases. Pre-buy situations are unlikely due to the proposed rules, but even assuming they do occur, pre-buy would weigh in favor of the Department moving swiftly to adopt California's ACT regulation, and not the opposite. Pre-buy could theoretically dampen some of the beneficial effects of the MDHD ZEV sales mandate by slightly shifting vehicle purchases to the pre-model year 2025 diesel status quo, but a failure to adopt California's ACT regulation at all would result in a diesel status quo in perpetuity. Meanwhile, delaying the ACT regulation implementation to model year 2026 would essentially create an additional 12 months of the "pre-buy" diesel status quo. Therefore, even assuming pre-buy is an unavoidable phenomenon, which it is not, the Department should rip the bandaid off and implement the ACT Regulation as soon as it can so that the New Jersey MHDV market swiftly overcomes any potential, short-term weakening of the ACT Regulation's benefits from pre-buy. (35 and 87)

138. COMMENT: Adoption of California's ACT regulation is unlikely to lead to pre-buying of dirty, inefficient vehicles in advance of implementation, due to the significant benefits of zeroemission and more efficient vehicles. Pre-buying in response to past criteria pollutant standards was short-lived and small relative to what was estimated – indicating that fears of pre-buying may not come to fruition. (70)

RESPONSE TO COMMENTS 137 AND 138: The adopted rules do not include a purchase mandate and are unlikely to cause substantial numbers of pre-buys by MDHD fleets. Thus, fleets can choose when, or whether, to purchase ZEVs and are not compelled to engage in tactics, such as pre-buys (purchasing non-ZEVs before the adopted emission standards are implemented), holding on to older vehicles longer, or purchasing non-ZEV vehicles out-of-State. In turn, and as a result of the sales mandate in the adopted rules, vehicle manufacturers will have a financial interest in prioritizing production of electric vehicle models that support the most cost effective and operationally suitable cases. See CARB FSOR, p. 100.

A Sales Mandate, Without More, Will Not Work

139. COMMENT: While the proposed rules mandate the sales of ZEVs, they do not account for the entire surrounding ecosystem associated with the deployment of the technology and provide no guarantee that these vehicles will be purchased. (1, 18, 98, and 105) RESPONSE: The Department agrees with the concept of using both a manufacturing sales mandate and a fleet purchase requirement to advance the ZEV market. The Department met with stakeholders on September 10, 2020, and indicated that the Department was considering the possibility of incorporating by reference California's ACT regulation and a parallel regulation that would require fleet owners to purchase ZEVs in an effort to accelerate the transition to ZEV

technology. See <u>https://www.nj.gov/dep/njpact/materials.html#NJPACT-co2trucks20200910-</u> <u>am</u>. To date, California has not proposed the fleet purchase regulation. However, the Department continues to monitor CARB's development of its fleet purchase rules, and will consider comparable rules in the future.

While the Department acknowledges the potential value of a corresponding fleet purchase requirement, the absence of such a regulation is not fatal to the success of a sales mandate. As CARB noted in its initial statement of reasons, California's ACT regulation provides a strong market signal in favor of the accelerated deployment of zero-emission technology. See CARB ISOR, p. III-8. Therefore, a sales mandate alone can provide the certainty manufacturers need to pursue ZEV technology as a long-term business strategy.

140. COMMENT: The proposed rules require manufacturers to sell MDHD ZEVs, but there is no mandate for anyone to purchase those vehicles. Due to the significantly higher costs of purchasing ZEV trucks and installing charging infrastructure, businesses will be hesitant to buy and use trucks, especially if they do not meet a business's operational needs. The Department's rulemaking is too costly to implement as it fails to consider the significant financial incentives needed to make MDHD ZEVs a viable investment for a trucking business. Therefore, businesses will not purchase the ZEVs that manufacturers are mandated to sell. (12 and 33)

141. COMMENT: The proposed rules fail to provide the needed funding for the build-out of the necessary recharging/refueling infrastructure or ZEV purchase incentives. (105)
142. COMMENT: The proposed rules function as a sales mandate without any guarantee that the vehicles will be purchased or providing the necessary funding for the build-out of the

required recharging/refueling infrastructure or vehicle purchase incentives. (49, 75, 76, 82, 93, 95, and 99)

143. COMMENT: Truck customers will not purchase new California vehicles until the vehicles' costs are more in line with the cost of otherwise available diesel trucks and without first being assured that the necessary refueling/recharging infrastructure is in place. (1)

144. COMMENT: Not too long ago, diesel truck and diesel engine manufacturers invested billions of dollars to meet new, more stringent diesel emission standards. The proposed new rules now require manufacturers to sell ZEVs and ultra-low emission products, but they have no component to incentivize consumers or the infrastructure growth necessary to ensure these vehicles are purchased and driven in New Jersey. The proposed rules will result in skyrocketing prices for many MDHD vehicles and disincentivize those that purchase commercial vehicles from buying ZEVs because they invest in vehicles to earn a profit. New truck dealers in New Jersey and throughout the country are currently in a terrible situation due to supply chain issues and shortages caused by Covid-19 resulting in very few trucks to sell. Introducing new rules that would make the future more difficult for the trucking industry is not the answer. (72) 145. COMMENT: Unilateral ZEV sales mandates and nothing more, is not the regulatory platform on which New Jersey (or, as argued to CARB, California) should build its program to accelerate the deployment of MD and HD ZEVs. The core components of an effective MDHD ZEV program include significant public investments in ZEV infrastructure build-out and in ZEVpurchase incentives. The proposed rules do not address, or provide for, the comprehensive and robust charging and refueling infrastructure that will be needed at fleet facilities to operate the mandated ZEVs, the build-out of which will be expensive, complicated, and time-consuming.

Likewise, the rulemaking does not include incentives that must be sufficient to offset all of the

ZEV truck life-cycle costs that will exceed current commercial vehicle costs. (27)

146. COMMENT: Purchasing ZEV or NZEV MD and HD trucks is likely to be very expensive. Larger, national companies with large multistate fleets can take advantage of economies of scale, which allow for the gradual replacement of their fleets. However, smaller businesses with smaller truck fleets are critical to the economy in New Jersey. These are also the same businesses that struggled, and continue to struggle, as a result of the pandemic. Now is not the time for their costs to increase. Additionally, the proposed rules do not deal with key issues relating to the conversion to electric vehicles, namely developing the charging infrastructure and providing incentives for the purchase of ZEV or NZEV MD HD vehicles. In order to purchase electric vehicles, businesses will have to install charging infrastructure geared towards MDHD trucks in their own facilities or depots, which will be challenging, time consuming, and expensive. (22)

147. COMMENT: Without significant incentives for truck purchases, infrastructure, and electricity, the costs of transitioning to ZEVs for the trucking industry would be insurmountable. Electric Class 7/8 trucks and charging stations are four to five times the cost of an equivalent diesel truck and with a loss of payload of approximately 2,000 pounds for batteries. Per the proposed rulemaking, the Department is incentivizing the purchase of MDHD ZEVs sold in New Jersey between 2021 and 2024 by providing grants to the ultimate purchasers of MDHD ZEVs from the Volkswagen Mitigation Trust Fund and auction proceeds from the Regional Greenhouse Gas Initiative. But what incentives will be offered after 2024? Will New Jersey utility companies provide the type of assistance they have in California? (94)

RESPONSE TO COMMENTS 140 THROUGH 147: As discussed more thoroughly in the Response to Comment 139, the Department agrees conceptually with a purchase mandate and continues to consider that possibility, but a purchase mandate is not necessary for the success of the adopted rules. Additionally, the Department analyzed the implications of New Jersey's incorporation by reference of California's ACT regulation and determined that this rulemaking is a necessary component of a comprehensive approach to reduce emissions of greenhouse gases and local pollutants from the transportation sector.

Publicly accessible EV charging does not yet exist to serve certain MDHD vehicle segments that cannot return to base to recharge at night. However, as discussed in the Response to Comments 105, 106, 107, 108, and 109, access to public fast charging for MHDV will not be necessary for compliance with the adopted rules. Still, supporting ZEV adoption and the build-out of the infrastructure for ZEVs will be important to the successful expansion of the ZEV market that does not charge on a return-to-base schedule. Thus, the Department and other State agencies are coordinating their efforts to ensure policies are in place to facilitate the transition to ZEVs. For example, the EDA has implemented the NJZIP program to provide substantial vehicle purchase incentives for MDHD vehicles Class 2b - 6 in the greater Trenton, Newark, and New Brunswick areas. Meanwhile, the Department is offering Statewide vehicle purchase incentives for Class 2b-8, as well as charging infrastructure incentives, based upon the knowledge gained during distribution of other grant funds, like those obtained through the Volks Wagon settlement. Over \$100 million has been awarded thus far for MHDV electrification. The State also exempts electric MDHD ZEVs from sales tax, which provides a further reduction of the upfront purchase price. The BPU recently released its Straw Proposal

for public comment, which will help inform all of the relevant agencies' efforts as the BPU develops a pathway forward for the build-out of MDHD electric vehicle charging infrastructure in the State. See

https://www.nj.gov/bpu/pdf/publicnotice/Notice%20Medium%20Heavy%20Duty%20EV%20Str aw%20Proposal.pdf.

148. COMMENT: This rule proposal is a mandate for manufacturers to sell heavy-duty, ZEVs with no corresponding mandate that the vehicles be purchased. Instead of fleet turnover, this proposed rule will most likely put the last of New Jersey's heavy-duty engine and truck manufacturers out of business. (47)

RESPONSE: As discussed more thoroughly in the Response to Comment 139, the Department agrees conceptually with a purchase mandate and continues to consider that possibility. However, with or without a purchase mandate, the Department does not foresee that the adopted rules will put New Jersey's heavy-duty engine and truck manufactures out of business. As noted in the notice of proposal Summary, California's ACT regulation, as incorporated by reference, applies only to manufacturers whose annual sales exceed 500 MDHD vehicles. See 53 N.J.R. at 590. In short, the adopted rules target only the largest manufacturers. More importantly, the location of a manufacturer's business does not factor into an assessment of compliance because a manufacturer's deficits and credits accrue based on the location of the vehicle's registration by the ultimate purchaser, not the location of the sale. Thus, there will be no disproportionate impact on any New Jersey-based manufacturers.

149. COMMENT: Adoption of the proposed rules will likely fail to deliver the desired results. The proposed implementation of a sales mandate without a fleet adoption mandate ignores

basic market principles. Government cannot simply increase demand by placing a mandate on the supply side of the market. Demand is not dictated by supply. Adoption rates of light duty electric vehicles have slowly, but steadily, increased over the last decade, to about two percent of nationwide sales due in part to Federal incentives, and a little over four percent in California due to additional large-scale State incentives. Other factors include technological advancements and cost reductions. The proposed rules largely ignore these factors and are instead based on a bet that technology will advance at a pace that exceeds the electrification of the light duty sector, that the cost of battery metals decreases, even though the prices of metals are currently trending higher, and that recharging infrastructure is built at a record pace along with major grid upgrades. California proceeded down this same failed path in 1990 when it created a mandate for the sale of light-duty electric vehicles. (3)

150. COMMENT: California has attempted to mandate light-duty vehicle electrification for many years, but its approach has been met with consistent delays, waivers, and only minimal success, despite the state spending hundreds of millions of dollars across multiple programs and agencies to support widespread ZEV market adoption. New Jersey enacted its Clean Car Program in 2004, adopting the California Low Emission Vehicle (LEV) program to reduce criteria pollutant emissions and greenhouse gases emitted by light-duty vehicles. Some 16 years later, less than three percent of total light-duty vehicle sales in New Jersey in 2020 were ZEVqualifying technology. (29)

RESPONSE TO COMMENTS 149 AND 150: As discussed more thoroughly in the Response to Comment 139, the Department conceptually agrees with a purchase mandate, but a purchase mandate is not necessary for the success of the adopted rules. The Department acknowledges

that businesses may have some initial hesitation to purchase ZEV technology due to higher upfront costs. However, as noted in the notice of proposal Economic Impact, the Department estimates that the lifetime cost of maintaining a ZEV will be lower than a comparable gas or diesel vehicle. See 53 N.J.R. at 597-598.

As CARB noted in its initial statement or reasons, "[t]he Proposed ACT Regulation is part of a holistic approach to transform the transportation sector to the cleanest possible technologies. It is a technology forcing measure to accelerate the deployment of zero-emission trucks and buses everywhere feasible. The Proposed ACT Regulation also provides a strong market signal for zero emission technology deployment and would foster a self-sustaining zeroemission truck market through increasing sales of medium and heavy-duty zero-emission trucks and buses." CARB ISOR, p. III-8. Therefore, the Department anticipates that a sales mandate, by itself, will provide certainty to vehicle manufacturers, suppliers, and infrastructure manufacturers to make the long-term investments that will be crucial to large-scale deployment of ZEVs.

In California purchase mandates for light-duty vehicles provided the necessary regulatory and market stability that encouraged manufacturers to make and sell ZEVs in the early market. See Comment submitted by Coalition of Health Ports, citing CARB, Draft: Assessment of Carb's Zero-Emission Vehicle Programs Per Senate Bill 498 (Dec. 17, 2019), https://ww2.arb.ca.gov/sites/default/files/2019-

<u>12/SB%20498%20Report%20Draft%20121719.pdf</u>; CARB, 2019 Zero Emission Vehicle Credits at 3, <u>https://ww2.arb.ca.gov/sites/default/files/2020-10/2019_zev_credit_annual_disclosure.pdf</u> "Through model year 2019, 625,000 ZEVs were sold in California under this program.

"Manufacturers have more than met their requirements under the ZEV program, generating a surplus of credits to meet their ZEV requirements ... [M]anufacturers have actually been overperforming without a regulatory purchase mandate." *Ibid*. Moreover, there is some indication that manufacturers are able to "affirmatively shape [consumer demand] through vehicle availability, marketing, purchase incentives, pricing, and other factors within their control." See Comment submitted by Coalition of Health Ports, citing Letter from Arthur N. Marin, Exec. Dir., NESCAUM to Elaine Chao, Sec'y, U.S. Dep't of Transportation at 10 & exhibits 2 and 3 (Oct. 18, 2018). Hence there are a number of indicators that a sales mandate can drive market forces.

Similarly, New Jersey's Zero Emission Vehicle Program, which has been in effect for 12 years, has caused a steady increase in the number of ZEVs registered in the State. In the last three years alone the number of ZEV registrations has doubled. In addition, the Charge Up New Jersey incentive program (chargeup.njcleanenergy.com) resulted in the purchase or order of 9,000 new EVs since 2020. Thus, the proper combination of regulations, policies, and incentives will drive sales; the lack of a purchase mandate is not fatal to an effort to push sales.

The Department acknowledges that the success of the adopted rules will depend on future conditions. Projections about future costs (that is, batteries, metals) and behavior (that is, the pace of infrastructure) are, by definition, a forecast of the impacts of the rules based upon the information currently available. For example, New Jersey recognizes that the buildout of the infrastructure for ZEVs is important to the success of an expanding ZEV market. However, as discussed more thoroughly in the Response to Comments 140 THROUGH 147, the EV charging infrastructure necessary for the implementation of the adopted rules was

accounted for in the Department's Economic Impact analysis. 53 N.J.R. at 597-98. Currently, there are supply chain issues related to metals needed for batteries. However, the Federal government is working in coordination with the international community and private industry to mitigate these issues. For more information on Federal action on this issue please refer to President Biden's signed Executive Order 14017, which directed the Federal Government to develop a strategic process to address vulnerabilities and opportunities in the supply chains of four key products, including advanced batteries used in electric vehicles. Source:

https://www.energy.gov/articles/fact-sheet-biden-harris-administration-100-day-battery-

supply-chain-review.

151. COMMENT: The Department should not force industry to invest in transitioning to battery-powered vehicles. This is an expense that is covered by New Jersey residents and which will either force startup companies out of business or out-of-State. The Department should encourage a transition and provide options. (4)

152. COMMENT: The regulatory approach in the proposed rules includes a credit and deficit system that will not work in light of the insufficient availability of electric trucks. Instead, New Jersey should promote technology development, as well as facilitate demonstration projects and invest in promising technologies. (88)

153. COMMENT: The proposed rules are wrong and unfair because they rely on mandates and other coercive governmental acts. To reduce climate pollution from transportation, the State should use incentives and grant funding to lower the up-front costs. A growing number of fuel retailers are interested in providing charging services, but are reluctant to invest given the lack of existing customer base. (47 and 79)

154. COMMENT: Rather than rushing to adopt California's ACT regulation, the Department should work with all stakeholders to incentivize the market for MDHD ZEVs, to the same extent as it has done for light-duty ZEVs through the Charge Up New Jersey Program. (72) 155. COMMENT: The credit/deficit program in the proposed rules is an ill-directed approach because New Jersey has few manufacturers of vehicles over 8,500 pounds gross vehicle weight rating (GVWR). The Department should pursue non-regulatory actions, such as: (1) continuing to apply for Federal DERA State Clean Diesel Grant Programs to replace older diesel vehicles; (2) creating tax credit incentives for New Jersey construction companies to invest in clean diesel engines; and (3) tracking the progress on EV technology as it becomes available. The State should consider offering State tax incentives for companies to upgrade their equipment voluntarily. (47)

RESPONSE TO COMMENTS 151, 152, 153, 154, AND 155: "The ACT regulation is needed to drive manufacturers to develop new ZEV products and generate SIP-creditable emissions reductions beyond what is feasible through incentive programs alone. By achieving larger economies of scale, the ACT Regulation will help make ZEV technology more viable across sectors and fleets." CARB FSOR, p. 167.

As discussed more thoroughly in the Response to Comments 122, 123, 124, 125, and 126, the sales mandates in California's ACT regulation were chosen after CARB conducted a market segment analysis to assess the feasibility of ZEV technology. See CARB FSOR, p. 178. Based upon CARB's market segment analysis, the Department is confident that manufacturers will have sufficient model availability to meet the sales mandates of the adopted rules. Although the adopted rules are intended to accelerate the deployment of MDHD ZEVs through

a sales mandate, nothing in the adopted rules prevents the Department or other branches of State government from pursuing complementary strategies, such as demonstration projects or investment in promising technologies. Thus, even as the Department continues to work with stakeholders on funding strategies and expansions of incentive programs, the goal of the adopted rules is to spur manufacturers and other market participants to achieve greater deployment of ZEV technology than incentives alone could accomplish.

As discussed in the Response to Comment 148, California's ACT regulation, as incorporated by reference, will only apply to manufacturers whose annual sales exceed 500 MDHD vehicles. See 53 N.J.R. at 590. So the mandates of California's ACT regulation will apply to a manufacturer if it meets the sales volume threshold and sells a covered vehicle to an ultimate purchaser in New Jersey. Since the adopted rules target only the largest manufacturers, and do not affect startup companies. In fact, companies that do not meet the 500 annual MDHD vehicle sales threshold have the option of opting into the program in order to generate credits, while avoiding the generation of deficits. See 53 N.J.R. at 601. This would allow smaller, start-up companies to generate credits they may then sell to larger companies as another source of income. See CARB ISOR, p. ES-3, III-8. Additionally, because the rules apply to sales in New Jersey, regardless of the manufacturer's location, manufacturers located within New Jersey will not be disproportionately affected by the rules.

The Department recognizes that incentives and other funding options will facilitate the transition to ZEV technology; however, the Department's Economic Impact analysis in the notice of proposal stated that while "medium- and heavy-duty ZEVs have higher upfront capital costs for the vehicle and infrastructure investments, [the] lower operating costs over time

result ... in lower overall costs for truck transportation." 53 N.J.R. at 597. Thus, the adopted rules are anticipated to be cost-effective in the long-term regardless of additional incentives.

For more information on the efforts of the Department and other State agencies to ensure policies and programs are in place to facilitate the transition to ZEVs through nonregulatory means, such as incentives, see the Response to Comments 140 through 147. 156. COMMENT: If the Department's policy objective is to eliminate carbon emissions, it should propose rules that mandate the end-point. Unfortunately, the proposed rules mandate electrification and will put many small businesses in the fueling industry out of business without affording them the opportunity to comply with the policy objective of net zero carbon from the transportation sector. (20)

RESPONSE: Pursuant to the GWRA, New Jersey must reduce greenhouse gas emissions to 80 percent less than the 2006 level of Statewide greenhouse gas emissions by 2050 (80x50 goal). 53 N.J.R. at 589. As noted in the notice of proposal Summary, reaching the 80x50 goal will require substantial reductions in greenhouse gas emissions from all sectors. *Ibid*. This means that the Department and other State agencies must continue to work collaboratively over time and across economic sectors, levels of government, and through public private ventures to implement the policies that will build upon one another as the State methodically advances to meet the 80x50 goal over the next few decades. *Ibid*. Mandating an emission reduction endpoint from a single sector would be tantamount to ignoring the complex interplay among variables, such as electric generation supply, demand, costs, and emerging technology. *Ibid*. The adopted rules will provide certainty to vehicle manufacturers, suppliers, and infrastructure manufacturers to make the long-term investments that will be crucial to large-scale

deployment of ZEVs, which will allow the petroleum fuel industry to transition over time alongside the MDHD OEMs and dealers.

157. COMMENT: The proposed rules are overly burdened with process and are shortsighted when they should be focused on the end result. For example, in summarizing 13 CCR 1963.3, the Department wrote that credits must be retired in order of their credit type and weight class group. If a manufacturer sells one heavy duty Class 8 diesel truck and a comparable number of ZEV medium duty trucks that equitably offset the emissions, it appears that the manufacturer cannot retire the deficit of the heavy-duty Class 8 diesel truck with the medium duty ZEV sales. If the emissions reductions are the same and the only difference is the number of vehicles needed to achieve the same offset, why should it matter what class they come from? If the reason that the Department cannot amend this provision is the adoption of CARB regulations by reference must be all or nothing, then it is all the more reason to scrap the rules and start over. (20)

RESPONSE: CARB explained the importance of the order of the retirement of credits for Class 8 tractors in its initial statement of reasons: "This subsection is necessary for three reasons. First, it ensures tractor credits satisfy a tractor deficit before they can be used to offset other deficits. This is to ensure that tractors are manufactured to support the goal of transitioning drayage trucks to zero emissions by 2035 and in beginning the transition to ZEVs from tractors that operate locally or regionally. Second, using credits that expire first allows flexibility for manufacturers to bank early action credits while preventing, to the extent possible, credits from expiring due to age. Last, because NZEV credits have a cap, the NZEV credits would be used before ZEV credit to allow the more flexible ZEV credits to remain in a manufacturer's

account to be used when needed and continues to ensure that ZEVs must still be manufactured to meet the goals for maximizing the use of ZEVs where feasible." CARB ISOR, pp. IV-17 to 18. The order of credits in an effort to encourage the production of tractors, to promote flexibility, and to ensure credits are used before they expire. Before finalizing its ACT regulation, and in response to comments it received, California determined it was necessary to provide greater flexibility for manufacturers of Class 7 and 8 tractors. See CARB FSOR, pp. 119-120. Thus, the regulation allows manufacturers to use a limited number of non-tractor credits to meet their tractor requirements in an effort to increase flexibility while maintaining the push for the development and production of ZEV tractors. *Ibid*. Given the rationale for the procedures in California's regulation, the Department disagrees with the contention that the rules are overburdened with process.

Implementation Impacts

Positive Impact Forecasts

158. COMMENT: A recent study by Gabel and Associates projected larger CO₂ reductions than identified in the proposed rules for medium-and heavy-duty vehicles. The study projects that the proposed rules will result in a significant increase in electrification of the MDHD vehicle segment with an associated decrease in both fossil fuel use and air emissions. Further, the study estimates that 17.7 percent of the MDHD vehicle population will be electrified by 2035 in response to the proposed rules. Thus, the rulemaking should be recognized as a likely lower bound of the CO₂ emission reductions possible. The real-world CO₂ reduction of the proposed rules may be higher. (97)
159. COMMENT: A study entitled, "Full Market Vehicle Electrification in New Jersey" concluded the net benefits of electrifying the State's transportation sector exceeded the costs by up to a factor of four. The study also quantifies a dramatic improvement in air quality in urban areas and along travel corridors and around ports. Adoption of California's ACT regulation in New Jersey will take advantage of the MDHD market segments that are ready to electrify today and will address the air quality issues that disproportionally affect the overburdened communities in the State. (21)

160. COMMENT: By adopting California's ACT regulation, New Jersey will become the first State, after California, to push forward a regulatory mandate to electrify diesel trucks that spew toxins into our communities. Estimates show that once the ACT regulation goes into effect, it can help reduce carbon emissions by 2.6 million metric tons through 2040. (73) 161. COMMENT: The benefits of zero emission transportation are clear, and the transition in the MDHD sector is vital to improving and protecting health. The American Lung Association's 2020 Road to Clean Air report estimates that the widespread transition to ZEVs (including MDHD trucks included in the ACT program) could generate an annual public health benefit of approximately \$2 billion in New Jersey. Across the greater New York City metropolitan area, the public health benefits of such a transition could reach over \$5 billion annually. (83) 162. COMMENT: The Department estimates emissions reductions of California's ACT regulation, once implemented in New Jersey, in 2040 to be 1,300 tons of NO_x per year and 40 tons per year of PM2.5. Using the EPA's CO-Benefits Risk Assessment (COBRA) tool (a screening tool that estimates the air quality and health benefits of different emissions scenarios), the ACT program's projected emission reductions in New Jersey could save anywhere from \$287.5

million to \$648.4 million per year by 2040, and could include health impacts that result in 3,500 fewer work loss days and more than 672,553 avoided cases of upper respiratory symptoms. (37)

163. COMMENT: From a medical standpoint, it is critical that New Jersey address pollution from MDHD trucks. About 16 percent of local lung cancers are attributable to particulate matter less than 2.5 microns. More than 600,000 adults and 167,000 children in the State have asthma, with asthma hospitalization rates highest in Cumberland, Camden, and Essex County. About one in every four children in Newark have asthma, which is a rate about three times higher than the national average. Those children are hospitalized for asthma at 30 times the national rate. In 2019, two children in Newark died from acute exacerbations of chronic asthma. Communities of color and low-income communities are most affected by truck pollution. Asian American, African American, and Latino residents across the country are exposed to 34, 24, and 23 percent more PM2.5, respectively, from cars, trucks and buses than the national average. The proposed rules are feasible, economical, and represent a timely means of achieving necessary reductions in air pollution and improving public health, especially for the most vulnerable residents. (15)

164. COMMENT: Adopting California's ACT regulation will result in significant health benefits for New Jersey residents. With polluted air comes higher rates of asthma and other severe respiratory diseases, as well as a greater risk of hospitalization, lost work opportunities, and premature death. Preliminary analysis shows that by adopting the ACT regulation New Jersey would prevent \$2.6 billion in public health costs from reduced tailpipe emissions. Further, investing in clean transportation and ZEV infrastructure will promote in-State job growth and

produce good-paying jobs. Clean energy jobs in New Jersey pay 11 percent higher than the State's median wage. Adoption of California's ACT regulation will send a market signal, encouraging public-private partnerships to build a network of charging infrastructure that will create jobs across the State. Additional local business and local job opportunities would also be created by adding renewable energy to the grid, advancements in battery storage capabilities, and grid modernization. Under the proposed rules, New Jersey fleet operators would net an annual savings of \$394 million from reduced fuel and maintenance costs, and a single zeroemission truck or bus would save an average of \$36,000 over its lifetime. (8)

165. COMMENT: MDHD ZEVs are already cost effective. A recent Lawrence Berkeley National Laboratory study used the current global average battery price of \$135.00 per kilowatt-hour to find that, when compared to a diesel truck, a Class 8 electric truck operating 300 miles/day already has a 13 percent lower total cost of ownership per mile, a 3.2-year payback period, and net present savings of about \$200,000 over a 15-year vehicle lifetime. By 2030, battery prices are expected to be as low as \$60.00 per kWh, and electric long-haul truck total cost of ownership could be over 40 percent lower than diesel. M.J. Bradley & Associates estimates that by 2040, MDHD ZEVs in New Jersey would have an average lifetime total cost of ownership saving of \$25,000. (35 and 87)

166. COMMENT: The Department's adoption of California's ACT regulation will result in significant reductions in the health-harming emissions that directly injure residents in freight-adjacent communities. Preliminary results from a forthcoming study by M.J. Bradley & Associates finds that cumulatively, from 2020 to 2050, the MDHD vehicle electrification required by California's ACT Regulation results in 36,000 metric tons of avoided NO_x emissions,

and 192 metric tons of avoided PM emissions. These emission reductions result in 61 fewer premature deaths, 64 fewer hospital and emergency room visits, and 35,597 fewer cases of respiratory health impacts. All told, M.J. Bradley & Associates estimates that adopting the ACT regulation would provide \$8.9 billion of net societal benefit to New Jersey from 2020 to 2050. This figure is derived from the air quality benefits described above, plus the benefits from reduced greenhouse gas emissions and savings to fleet owners and operators by switching to zero-emission MDHD vehicles. (35 and 87)

167. COMMENT: The proposed rules are a necessary first step in protecting port and freight adjacent communities from the health harms associated with PM2.5, black carbon, and NO_x. According to an M.J. Bradley report, MDHD trucks are a greater source of these emissions around port-adjacent communities than passenger vehicles combined. These trucks are generally used in short-haul operations, so their local impact is much greater. (5 and 32) 168. COMMENT: California's ACT regulation is a fundamental component of meeting climate change targets and improving air quality in New Jersey. Based on preliminary findings from a forthcoming analysis (subject to change by M.J. Bradley & Associates), the monetized health benefits of New Jersey's adoption of California's ACT regulation are \$709 million; climate benefits are \$4.6 billion; and the net societal benefit of the rule from 2020 to 2050 is \$8.9 billion. Recent preliminary research also found that in New Jersey, 1,175 premature deaths were caused by vehicle emissions in the study region in 2016 with monetized health damages exceeding \$12 million. The emissions exposure from MDHD vehicles tends to be more concentrated than from passenger vehicles, particularly in communities around ports that are often predominantly low-income and people of color. (70)

169. COMMENT: The proposed rules will result in real reductions in criteria air pollutant emissions including 40 tons of PM2.5. This will generate real health benefits for the State. Based on preliminary findings from a forthcoming analysis subject to change by M.J. Bradley & Associates, the proposed rules, in combination with California's Low NO_x Omnibus rule, could add economic benefits and jobs that pay nearly twice as much as the jobs they replace. (71) 170. COMMENT: Air pollution reaches background levels only at locations that are beyond one quarter mile from a high-volume road. A research team from the Bloustein School of Planning and Public Policy, Rutgers University, as part of a study on the health impacts of the proposed rules, performed a geospatial analysis that consisted of drawing a buffer of 0.5 mile around all of the major National Network roads in New Jersey and calculated the number of people living in census tracts that are all or partially within that buffer area. The population within the buffer area is slightly younger, with a higher non-white population and a 30 percent higher rate of poverty than the State as a whole, and with a per capita income about 13 percent lower than the Statewide per-capita income. The analysis also reveals that New Jersey's overburdened communities are more highly concentrated in areas close to major highways (58 percent of census block groups) than in the State as a whole (50 percent of census block groups). (37) 171. COMMENT: The Department's proposed rules are a great step in the direction of securing clean air for all communities, and helping the State achieve its mission of emissions reductions goals. The proposed rules can greatly help low-income and communities of color, that have for too long been the State's most overburdened communities when it comes to deadly diesel emissions, including black carbon, NO_x, sulfur oxides, and PM2.5.

The conversion to zero-emission MDHD vehicles, as well as light-duty ZEVs, will prevent approximately 200 premature deaths and more than 2,300 asthma attacks in New Jersey. (16) 172. COMMENT: In the grid region containing New Jersey, a battery electric truck has between 58 percent and 84 percent lower emissions than a diesel truck today, depending on the truck type and average vehicle speed. Thus, incorporating the ACT regulation is a critical step towards realizing cleaner air and mitigating climate change through the widespread electrification of trucks. (69)

RESPONSE TO COMMENTS 158 THROUGH 172: The Department acknowledges the commenters' support of the rules. The Department conducted its own Environmental, Economic, Jobs, and Social Impact analyses, which included estimates of the monetized health benefits and emission reductions, 53 N.J.R. at 593 to 600, but acknowledges that commenters have submitted independent studies with respect to the health impacts of local air pollution and greenhouse gas emissions, as well as additional analyses of the potential benefits of the adopted rules. Although the Department's estimates may differ from the specific figures contained in the analyses and studies provided by commenters, the Department agrees that the adopted rules will provide overall social, environmental, job, and economic benefits for residents of the State. And more specifically, the Department anticipates that "[d]ecarbonizing medium- and heavy-duty vehicles provides additional benefits by locally reducing criteria pollutants and carcinogens such as black carbon, which are released in greater concentrations in heavily trafficked corridors that are typically in or near environmental justice communities." 53 N.J.R. at 595, quoting the 80x50 Report, p. 22.

To the extent the comments examine the potential job impacts of the adopted rules in conjunction with California's Low NO_x Omnibus rule or the electrification of the transportation sector as a whole, those comments are beyond the scope of this rulemaking. To the extent the comments discuss labor standards, the income potential of jobs associated with the electrification of all segments of the transportation sector, or jobs related to renewable energy generation and battery storage, those comments are beyond the scope of this rulemaking. Likewise, the estimate of health benefits in New York City is beyond the scope of this rulemaking.

173. COMMENT: There are economic benefits from vehicle electrification. For example, increased electrification of transportation puts downward pressure on electricity rates for all ratepayers. According to the 80x50 Report, failure to swiftly electrify will incur continual and mounting costs: "failing to electrify the vehicle fleet increases the cost of decarbonization from 2035 to 2050 by an average of \$1.6 billion per year." (25)

174. COMMENT: The proposed rules will result in downward pressure on electricity prices as charging of MDHD ZEVs increases utility revenues, resulting in lower rates and lower bills for all ratepayers. (8)

175. COMMENT: Based on preliminary findings from a forthcoming analysis (subject to change) by M.J. Bradley & Associates, the proposed rules will result in average electric bill reductions of \$69.00 per year for commercial customers and \$16.00 per year for residential customers. (70) RESPONSE TO COMMENTS 173, 174, AND 175: As set forth in the Economic Impact analysis, the Department considered incremental vehicle costs, infrastructure upgrade costs for return-tobase operations, fueling costs, maintenance costs, and other costs that are assumed to be the

direct costs of the regulation. 53 N.J.R. at 597. The Department did not include, or quantify, potential electric rate changes as part of the direct costs of the adopted rules. However, as CARB noted, "[e]lectric vehicles are capable of shifting load to off-peak periods and increasing overall demand, both of which help create a more efficient, highly utilized grid. Studies have found that light-duty ZEVs provide a benefit to all utility customers as their electricity utilization drives down rates for all other ratepayers." CARB FSOR, p. 211

Negative Impact Forecasts

176. COMMENT: The problem with the Department's rationale for the proposed rules is that climate change is a global issue not a local air quality issue. The global level of carbon dioxide in the atmosphere is what matters for purposes of climate. The issue is so large that even the projected future carbon dioxide emissions from the entire United States will play only a small role in overall temperature impact. According to data from the Energy Information Administration, New Jersey produces two percent of the total energy-related carbon dioxide emissions of the United States. Medium- and heavy-duty trucks emit about 7.6 percent of carbon dioxide emissions in New Jersey. The proposed rules would reduce these carbon dioxide emissions by approximately 70 percent after 2030, assuming 100 percent carbon dioxide emission-free electricity generation. In other words, the rules would target approximately 0.1 percent of total U.S. carbon dioxide emissions. The climate impact of the rules is too small to mitigate temperature or sea level rise in any meaningful way. Because the actual climate impact is absolutely miniscule, the rules will have no impact on the areas New Jersey has highlighted in terms of air quality, water resources, agriculture, forest, wetlands, and carbon sequestration. (88)

177. COMMENT: This rule proposal has enormous economic impacts, but is expected to result in only 0.44 MMT/year CO₂e in 2040. Cumulatively it will result in only 2.6 MMT CO₂e by 2040. Thus, the rules will reduce carbon emissions from the transportation sector by only 1.1 percent by 2040. If the State's total carbon output is the base, the rules will only reduce carbon emissions by less than 0.5 percent. The proposed rules will disrupt the trucking industry, and, thus, the State's distribution and logistics network, without any significant gain. The Department should find a better way to reduce carbon emissions from the transportation sector. (12)

178. COMMENT: By the Department's own estimates and scaling methodology, all of the costs and market disruptions that will result from a unilateral opt-in to California's ACT regulation will generate less than one percent (0.6 percent) of the required annual reductions in CO₂e. And even that minuscule amount is probably overstated. Either way, it is clear that the Department's proposed opt-in to California's ACT regulation is neither reasonable nor costeffective given the anticipated reductions in greenhouse gas emissions. (27)

179. COMMENT: The proposed rules force businesses to abandon their trucks for electric versions that can add thousands of dollars more to the cost of one new truck without any meaningful contribution to the reduction of emissions as compared to the truck it is replacing. Ignoring the cost and practicality of the proposed rules will not result in meaningful emission reductions while imposing significant cost to the citizens and business interests in New Jersey. (36)

180. COMMENT: Fleet replacement is cost-prohibitive, and if proposed, a regulatory mandate to purchase ZEVs will have a significant impact. For larger construction firms, there is not just

the cost of purchasing trucks and equipment to consider, but also the cost of installing charging infrastructure and the need to produce the electricity. In order to maintain a fleet of trucks and equipment, a contractor could easily need to build a new mini-power plant. (47) RESPONSE TO COMMENTS 176, 177, 178, 179, AND 180: This rulemaking does two things: (1) incorporates by reference California's ACT regulation, which requires certain vehicle manufacturers to sell zero-emission trucks as an increasing percentage of their annual sales in the State; and (2) gathers information from owners and operators of fleets of MDHD vehicles within the State to inform future rulemaking efforts. By requiring transitioning from gasoline and diesel combustion engines to zero-emission vehicles and engines, this rulemaking will not only reduce emissions of carbon dioxide equivalent (CO₂e), it will also reduce emissions of local criteria pollutants like NO_x and PM2.5, including one of PM2.5's highly warming components, black carbon. See 53 N.J.R. at 598. The NO_x emission reductions will contribute to reductions in ground-level ozone concentrations in New Jersey and elsewhere within the State's nonattainment areas. Ibid. Further, as diesel trucks are replaced with electric, the toxic particles associated with diesel PM2.5 will be reduced. Ibid. These health benefits will result in improved local health outcomes in communities that are disproportionately affected by environmental degradation. *Ibid*.

As also noted in the notice of proposal, emissions from the transportation sector are responsible for more than 40 percent of New Jersey's total net CO₂e emissions. 53 N.J.R. at 598. By gathering information about New Jersey's existing fleets through the fleet reporting requirements rules, the Department will be in a better position to determine whether and how best to pursue a fleet purchase mandate and/or other strategies to reduce emissions form the

MDHD sector. The adopted rules are one piece of a comprehensive approach to reduce emissions from the transportation sector. 53 N.J.R. at 589. But more broadly, the State continues to develop, and refine, the mix of policies, rules, and laws that will be needed to mitigate climate change and strengthen resilience in the State. Ibid. In 2007, New Jersey's Legislature passed the GWRA, which recognized that climate change, primarily caused by emissions of heat-trapping greenhouse gases, poses a threat to the Earth's ecosystems and environment. Ibid. Additionally, the Legislature recognized that reducing emissions of greenhouse gases was not only possible, but necessary, to prevent further detrimental impacts on human, animal, and plant life. Ibid. Pursuant to the GWRA, New Jersey must reduce greenhouse gas emissions to 80 percent less than the 2006 level of Statewide greenhouse gas emissions by 2050 (80x50 goal). Ibid. Of course, reaching the 80x50 goal will require substantial reductions in greenhouse gas emissions from all sectors. And though the emission reduction estimates from this single adopted rule may seem relatively small, the Department, and other State agencies, will continue to work collaboratively over time and across economic sectors, levels of government, and through public private ventures to implement the policies that will build upon one another as the State methodically advances to meet the 80x50 goal over the next decades. *Ibid*. Given the magnitude of reductions necessary to meet the 80x50 goal, each effort to reduce greenhouse gas emissions is critical. The ACT regulation is an important initial step in the State's overall strategy.

As noted in the cost summary of the Department's Economic Impact analysis, even though "medium- and heavy-duty ZEVs have higher upfront capital costs for the vehicle and infrastructure investments, [the] lower operating costs over time result ... in lower overall costs

for truck transportation." 53 N.J.R. at 597. Thus, the adopted rules are a cost-effective and a necessary component of a Statewide strategy to meet the 80x50 goal.

181. COMMENT: Rushing to adopt the proposed rules in New Jersey will lead to major unintended negative consequences that will hurt the economy, the environment, and will set back, not advance, New Jersey's goals. (1 and 72)

182. COMMENT: The proposed rules will do little to help reach a more sustainable economy and has the potential to do substantial harm and disruption to New Jersey industry. (45, 76, 82,

93, 95, and 99)

RESPONSE TO COMMENTS 181 AND 182: As set forth in the notice of proposal's impact statements, the Department anticipates that this rulemaking will reduce emissions of the greenhouse gas, CO₂, in addition to having a net positive economic impact. See 53 N.J.R. at 596 and 598. The Department anticipates that the adopted rules will also reduce the negative effects of air pollutants, such as NO_x, PM2.5, and a component of PM2.5, black carbon. 53 N.J.R. at 599. The NO_x emission reductions will contribute to reductions in ground-level ozone concentrations in New Jersey and elsewhere within the State's nonattainment areas. *Ibid*. Further, as diesel trucks are replaced with electric, the toxic particles associated with diesel PM2.5 will be reduced. *Ibid*. These health benefits will result in improved local health outcomes in communities that are disproportionately affected by environmental degradation, which, in turn, are expected to have positive impacts on New Jersey's economy. *Ibid*. As also noted in the notice of proposal, emissions from the transportation sector are responsible for more than 40 percent of New Jersey's total net CO₂e emissions. 53 N.J.R. at 598. And though this

rulemaking will not eliminate CO₂e from the transportation sector, it will serve as an initial step in the State's pursuit of a comprehensive approach to reducing greenhouse gas emissions. *Ibid*.

With respect to the concerns about the State's economy, the Department's economic analysis in the notice of proposal acknowledged that this rulemaking will result in increased upfront capital costs when it comes to vehicle purchase prices and infrastructure. However, the Department expects that fuel savings and lower maintenance costs will lead to lower overall costs over time. See 53 N.J.R. at 597. Further, the Department anticipates that the adopted rules will have a small, net positive impact on job retention or creation in the State. See 53 N.J.R. at 599. For these reasons, the Department regards this rulemaking as a positive contribution to the State's environmental and economic goals.

183. COMMENT: Efforts to prematurely force the rollout of heavy-duty ZEVs in New Jersey could have damaging consequences for the economy and the technology's adoption in the marketplace. (49, 75, 76, 82, 93, 95, 99, and 105)

184. COMMENT: The Department's proposal to incorporate by reference California's ACT regulation is not an effective path forward if the State wants a sustainable marketplace. The rules provide no guarantee that MDHD ZEVs will be purchased, nor does it guarantee the necessary charging infrastructure. Forcing the rollout of heavy-duty ZEVs in New Jersey, at a rate not dictated by market adoption, will have damaging repercussions for the economy and for the long-term adoption of this technology. (98)

185. COMMENT: Electric powered MDHD vehicles that meet California's ZEV standards are still a long way off. Requiring manufacturers to rush ZEV trucks to market before they are ready for production would be a mistake and could force some manufacturers and many dealers, as well

as truckers, out of business. The Department should make sure that there are programs in place that can help businesses and consumers afford these new vehicles before they are required to be introduced. (72)

186. COMMENT: Premature efforts to force the rollout of heavy-duty ZEVs in New Jersey could have damaging consequences for the economy and the technology's adoption in the marketplace. The proposed rules fail to provide the funding for the build-out of the necessary recharging/refueling infrastructure or ZEV purchase incentives. (18)

RESPONSE TO COMMENTS 183, 184, 185, AND 186: As explained more thoroughly in the Response to Comments 105, 106, 107, 108, and 109, CARB developed the adopted rules to provide manufacturers with the flexibility to offer competitive products that fleets will want to purchase in the appropriate market segments initially and the time to research, develop, test, and validate products in those market segments that are less mature. Based upon CARB's market segment analysis and the flexible regulatory framework, the Department is confident that the manufacturers will be able to offer competitive products in the early years while developing product lines for the less mature markets in the later years. As discussed more thoroughly in the Response to Comments 181 and 182, the Department anticipates that the adopted rules will contribute positively to the State's economy.

187. COMMENT: While several of the elements of California's ACT regulation, which is proposed to be incorporated by reference, are directionally consistent with those that the Truck and Engine Manufacturer's Association envisions for the EPA's next-tier nationwide rule, the California ACT regulation would be implemented with unreasonably short timelines,

questionable technical feasibility, unsustainable cost-benefit metrics, and material adverse impacts on new vehicle prices and sales volumes. Commercial fleets have not reacted positively in the past to the deployment of major new emissions-control technologies on an accelerated timeline. As a result, California, and any opt-in states adopting the ACT regulation, are likely to have negative consequences similar to the very significant "pre-buy/no-buy" scenarios that occurred in 2007 with respect to commercial vehicles. (27)

RESPONSE: As noted in the notice of proposal Summary, the adopted rules will not be implemented in New Jersey until model year 2025, providing some lead time for manufacturers as contemplated by the CAA. Equally important, and as noted by CARB, "[t]he approved regulation includes flexibility for manufacturers to produce and sell ZEVs into the market segments they deem to be most suitable for electrification. Specifically, the regulation provides flexibility for manufacturers to shift sales between weight classes, to bank and trade credits, to earn early credits, and to meet part of their compliance obligation with near-zero-emission vehicle sales that have a minimum all-electric range ... In summary, the approved regulation will ensure that manufacturers develop competitive ZEV products at price points that will meet fleet needs." CARB FSOR, p. 100.

The Department recognizes that there are certain market segments that are not yet suitable for full electrification, but California's ACT regulation does not include a purchase mandate. Without a purchase mandate, fleets will not feel compelled to engage in tactics such as pre-buys or no-buys. Likewise, manufacturers will not feel compelled to push sales of a ZEV market segment that is not ready for commercial production. Based upon CARB's market segment analysis and the flexible regulatory framework, the Department is confident that the

sales mandate is technically feasible within the timeframe, alleviating the commenter's concerns about cost-benefit metrics and vehicles prices.

Additionally, the Department acknowledges that EV charging capacity does not yet exist to serve those MDHD vehicles that cannot return to base to recharge at night. However, as discussed in the Response to Comments 105, 106, 107, 108, and 109, CARB's market assessment accounted for the suitability of each market segment based upon range and charging requirements among other factors. Thus, widespread access to public fast charging for MHDV will not be necessary for compliance with the adopted rules. Still, the Department recognizes that the build-out of the infrastructure for ZEVs and supporting vehicle adoption is critical for the success of an expanding ZEV market. As discussed in the Response to Comments 140 through 147, the Department and other State agencies are coordinating their efforts to ensure policies and programs are in place to facilitate development of necessary infrastructure as New Jersey makes the transition to ZEVs.

188. COMMENT: Battery electric trucks are priced significantly higher than conventionally powered trucks and as a result the proposed rules could make all trucks more costly and would reduce overall new MDHD vehicle sales (assuming constant capital expenditures), thereby slowing fleet turnover. (31)

RESPONSE: The Department acknowledges that currently MDHD ZEVs are more expensive to manufacture, which can be attributed, at least in part, to initial research and development costs. See CARB ISOR, p. IX-31. Accordingly, manufacturers may seek to recoup those costs by increasing the prices across all of their offerings, including gasoline- and diesel-fueled truck models, or they may choose to absorb the cost themselves. *Ibid*. As the Department stated in

the notice of proposal, "[i]t is not straightforward to predict how these costs and cost-savings [of electric vehicles] would be passed on to consumers. Vehicle pricing is complex, and different manufacturers could use different strategies to pass on these costs." 53 N.J.R. at 597 quoting CARB document. However, there are additional considerations. First, any given manufacturer's decisions regarding its internal combustion engine's vehicle pricing will happen with or without New Jersey's adoption of the proposed rule. Second, the lower operating costs discussed in the Response to Comments 72 and 73, may provide additional capital to firms operating a mixed ZEV/internal combustion engine fleet that can offset any potential increases in internal combustion engine vehicle prices. Moreover, the "ACT regulation may cause the cost for components specifically designed for medium- and heavy-duty ZEVs to decrease as economies of scale start to emerge in this new market." CARB ISOR, pIX-11. For all of these reasons, and the reasons discussed in the Response to Comments 190, 191, 192, 193, 194, 195, and 196, the Department does not agree that the adopted rule will reduce overall sales of MDHD vehicles. 189. COMMENT: The cost of the credits in the proposed rules will be passed down through the supply chain, hurting gasoline retailers when they purchase motor fuel, auto parts, and general goods from their distributors. Many gasoline retailers are small businesses working on thin markups, these higher costs will be passed on to the general public in the form of higher prices. They will be added to the ever-increasing costs of labor, credit card fees, utility costs, and taxes that are also passed on to the general public. (79)

RESPONSE: As noted in the notice of proposal Summary, the adopted rules provide several options for manufacturers who must meet the credit/deficit requirements. See 53 N.J.R. at 591. One option is for a manufacturer to generate credits from selling ZEVs or NZEVs. *Ibid*. As

explained by CARB, "this approach provides flexibility for manufacturers to produce more ZEVs in one group to avoid making a small number of ZEV sales in other groups." CARB ISOR, at III-9. If a manufacturer is unable to generate enough credits to offset its deficits from direct sales, the manufacturer may trade and/or purchase credits from another manufacturer. 53 N.J.R. at 591. Furthermore, a manufacturer may bank credits for future use. As noted by CARB, in their final statement of reasons, the approved regulation includes flexibility for manufacturers to earn credits and produce and sell ZEVs into the market segments they deem to be most suitable for the products they manufacture. See CARB FSOR, pp. 100-101. The credit and manufacturing flexibility provided by the proposed rule ensures that manufactures are able to optimize production toward the most cost effective and operationally suitable market segments. The credit generation, banking, and trading system is, therefore, anticipated to minimize cost increases to manufacturers. As the Department stated in the notice of proposal, "[i]t is not straightforward to predict how these costs and cost-savings [of electric vehicles] would be passed on to consumers. Vehicle pricing is complex, and different manufacturers could use different strategies to pass on these costs." 53 N.J.R. at 597 quoting CARB SRIA, p. 32. In the same vein, it is not possible to predict how, or even if, a trucking company would pass the costs retailers, or in turn, how those possible costs might be passed to the general public by increasing the costs of consumer goods.

190. COMMENT: The proposed rules will have no practical positive effect on the environment because truck owners can simply purchase new diesel trucks in adjacent states to avoid the higher up-front vehicle expense, and less reliable and accessible infrastructure of ZEVs. (79)

191. COMMENT: If New Jersey incorporates by reference the California ACT regulation as proposed, the result will be huge increases in the cost of a truck; costs that greatly exceed any possible corresponding environmental benefits to New Jersey. Businesses with commercial vehicles will likely keep their old, higher emitting products longer or will buy their vehicles outof-State. (1)

192. COMMENT: If the vehicles subject to the sales mandate of the proposed rules are too expensive, and there is no corresponding incentive to bring the costs more in line with available diesel trucks, consumers will not buy them. Instead, they will likely keep their older, higher-emitting vehicles longer. (72)

193. COMMENT: The proposed rules will not result in the anticipated emission reductions. Contractors can, and do, go out-of-State for their equipment purchases, which will limit the impact of this new regulatory framework, which is ill-conceived given the State's place in the region. (47)

194. COMMENT: The proposed rules do not include the core components of an effective MDHD ZEV program: significant public investments in ZEV infrastructure build-out and in ZEVpurchase incentives. Thus, it will not result in an effective ZEV program for MD and HD ZEVs. The Department's proposed rules will likely have the unintended consequence of slowing the turnover of the MDHD truck fleets in New Jersey. Instead of buying ZEV trucks, fleet customers in New Jersey may simply choose to purchase other less expensive conventionally fueled trucks, shift to purchasing low-mileage used vehicles, or to continue maintaining their existing trucks. This will likely result in corresponding negative impacts on air quality. (27)

195. COMMENT: Under the proposed rules, fleets will be forced to slowly incorporate costly and unproven ZEV technology. Thus, rather than replacing their older, higher emitting vehicles with less-polluting vehicles in the short-term, businesses and fleets are likely to wait to make new purchases until the technology that satisfies the new sales mandate is available. This will be an impediment to more immediate relief and longer-lasting public health benefits. (29) 196. COMMENT: Due to the fact that the proposed rules contain no registration requirement, the program is inherently flawed and will not have the desired impact on the State's trucking fleet but will put in-State dealers of trucks out of business. There are a variety of ways to get around the proposed rules, including purchasing trucks before the mandate occurs, purchasing after the mandate occurs since only a certain percent of vehicles need to be ZEVs, holding on to older vehicles longer and, most significantly, purchasing the vehicle from another state without a vehicle sales mandate. Even if a registration mandate were adopted at a later date, it could easily be circumvented by moving fleets to another state and merely servicing in New Jersey. Thus, the proposed rules will not result in the anticipated emission reductions and will put New Jersey dealers of MDHD vehicles out of business. (12)

RESPONSE TO COMMENTS 190, 191, 192, 193, 194, 195, AND 196: The ACT regulation does not require fleets to purchase ZEVs. Fleets will be able to choose when, or whether, to purchase ZEVs and will choose to do so only if it makes financial and operational sense for them. In turn, vehicle manufactures will have a financial interest in prioritizing production of electric vehicle models that support the most cost effective and operationally suitable cases. In the absence of a purchase mandate, fleets should not be compelled to engage in tactics, such as pre-buys, holding on to older vehicles longer, or purchasing non-ZEV vehicles from another state.

Because the sales mandate starts with a small percentage of overall sales of MDHD vehicles and ramps up over time, New Jersey dealers, like manufacturers, will have an opportunity to prepare for the market changes as they continue to sell conventionally fueled trucks along with ZEV technology trucks.

The Department also acknowledges that businesses may have some initial hesitation to purchase ZEV technology because ZEVs will cost more upfront due to higher initial purchase prices and infrastructure costs. However, as noted in the notice of proposal, Economic Impact, the Department estimates that the lifetime cost of maintaining a ZEV will be lower than a comparable gas or diesel vehicle. See 53 N.J.R. at 597. Additionally, the Department recognizes that the build-out of the infrastructure for ZEVs and supporting vehicle will facilitate the expansion of certain ZEV market segments. As discussed in the Response to Comments 140 through 147, State agencies are coordinating their efforts to ensure policies and programs are in place to facilitate the transition to ZEVs.

For all of these reasons, the Department is confident that the estimated emission reductions in the Environmental Impact analysis will not be frustrated by slower fleet turnover or out-of-State purchases.

197. COMMENT: The State's truck fleet is continuing to evolve and improve. Forty-one percent of New Jersey's fleet of heavy-duty diesel vehicles use the newest generation diesel technology that meets the latest EPA emissions standards for PM and NO_x. The continued utilization of this technology will result in improved air quality. The current strides being made will be adversely impacted by the proposed rules, which may result in consumers deferring replacement of older

vehicles due to cost. One of the unintended consequences of the proposed rules is that, due to costs, consumers may effectively forgo the purchase of low emissions diesel trucks and nearzero-emissions natural gas trucks that have the ability to reduce emissions considerably. (31) RESPONSE: As discussed more fully in the Response to Comments 74, 75, and 76, the primary objective of New Jersey's incorporation of California's ACT regulation is to accelerate ZEV deployment in New Jersey. Rather than viewing lower NO_x technology and ZEV technology as an either/or proposition, the Department believes both technologies may be pursued simultaneously. While ZEV technology is expected to advance long-term greenhouse gas emission reduction goals, lower NO_x technology may address local air pollutants and greenhouse gas emissions in the near term. Of course, it is important to note that "diesel vehicles produce diesel particulate matter which is comprised of black carbon and numerous organic compounds including over 40 known cancer-causing organic substances. While mobile sources comprise a small portion of [California's] PM emissions, they represent a significant portion of [California's] diesel PM inventory. On the other hand, ZEVs produce no tailpipe PM emissions." See CARB FSOR, p. 253.

198. COMMENT: The Department did not address the emission or economic implications of developing additional power generation capacity as part of its proposed rules. There have been estimates, even in the 2019 EMP, that the electrification of the transportation and building sectors will require a doubling or tripling of the State's electrical generation capacity. This will add enormous costs to the State, especially when you then add in the cost of transmission and distribution lines. While it may be possible for any additional power plants that will be needed

to support electric vehicles to be run on renewable energy sources, in all likelihood, they will run on natural gas. It is also possible that the additional power generation will be constructed in urban, environmental justice communities. This would create more localized pollution sources, defeating the Department's intention to decrease localized pollution in environmental justice communities. (12)

199. COMMENT: The proposed rules fail to quantify the cost of infrastructure upgrades necessary to implement the rules. The electricity needed to power the complete electrification of transportation and other sectors is estimated to increase by 60 to 90 percent over the next three decades. This large increase in electricity demand occurs despite significant energy efficiency improvements. Achieving a "Net-Zero America" is estimated cost at least \$2.5 trillion in additional capital investment into energy supply, industry, buildings, and vehicles over the next decade relative to business as usual. An aggressive electrification scenario is estimated to require \$2.6 trillion of energy supply-side capital before 2030, and \$10 trillion by 2050. Electric customers could ultimately be forced to foot much of this bill through their utility bills. These infrastructure costs will increase rategayer's costs if the utilities seek to include these costs in their rate-base. The current average retail price of residential sector electricity in New Jersey is about 16 cents per kilowatt-hour (kWh). New Jersey's electric rates already are more than 22 percent above the national average. If the department moves forward with the proposed rules, these rates could rise even more above the national average. The Department must consider these costs before proceeding. (31)

RESPONSE TO COMMENTS 198 AND 199: As noted in the notice of proposal Summary, increased deployment of ZEVs under the adopted rules could place additional demand on the

existing electric supply. See 53 N.J.R. at 589. As set forth in the Economic Impact analysis, the Department considered incremental vehicle costs, infrastructure upgrade costs for return-tobase operations, fueling costs, maintenance costs, and other costs that are assumed to be the direct costs of the regulation. However, the costs for electrification of the entire transportation and building sectors within the State or at a national scale over the next 30 years, because that is beyond the scope of this rulemaking, as is an "increase [in] ratepayer's costs if the utilities seek to include these costs in their rate-base." While it is possible that utilities will seek to include increased costs in the rate base, it is also possible that ZEV charging could provide a benefit to ratepayers by bringing costs down if charging demand is properly managed by utilities. See CARB FSOR, p. 211.

As the Department stated in the notice of proposal and in its responses to comments, this rulemaking is one part of a comprehensive strategy to reduce greenhouse gas emissions Statewide. To reach the 80x50 goal, the Department and other State agencies, including the BPU, will need to continue to collaborate to ensure the State reduces reliance on fossil fuels for electric generation and supply. Similarly, the Department and BPU will need to update the modeling and strategies outlined in the 2019 EMP and 80x50 Report, including the models that consider the costs. As to the concerns about localized pollution from increased electric generation, recent legislation requires careful analysis before a proposed power plant could be constructed in an overburdened community. See N.J.S.A. 13:1D-157.

200. COMMENT: New Jersey's implementation of the proposed rules will likely result in the relocation of trucking businesses to neighboring states that do not have ZEV mandates for

MDHD trucks. This in turn will result in a loss of jobs and tax revenue in New Jersey that California never considered. Moreover, the Department failed to quantify these losses. (31) RESPONSE: As the Department stated in the Response to Comments 190, 191, 192, 193, 194, 195, and 196, the adopted rules do not include a purchase mandate. Thus, New Jersey businesses are not compelled to relocate to another state. As discussed in the Jobs Impact, 53 N.J.R. at 599, the Department does not anticipate a net loss of jobs (and associated tax revenue) as a result of the adopted rules.

201. COMMENT: When California implemented its light-duty truck standards, there were several provisions, such as the travelling requirement and banking, that benefited California at the expense of every other state. That is one reason why California is far ahead of other states in EV adoption, even though many other states, including New Jersey, adopted the program shortly after California. (12)

RESPONSE: The concerns of California benefiting at the expense of other states due to travel requirements and banking, which initially took place under the Low Emission Vehicle Program for light-duty vehicles, N.J.A.C. 7:27-29, do not apply to the adopted rules for MDHD vehicles because there will be no unified banks that allow for credits transfers between states, and no travel provision allowing credit penalties to be avoided by moving the credits from state-tostate.

202. COMMENT: The prices of metals used in electric vehicle batteries are currently trending higher, yet the proposed rules are based on an assumption that technology will advance at a pace that exceeds the electrification of the light duty sector and that the cost of battery metals decreases over time. (3)

203. COMMENT: While there is demand for electric trucks, the massive amounts of minerals required for the electrification of MDHD vehicles, coupled with long lead times, and large concentration of processing in China will likely make it difficult to quickly drive down the prices of these vehicles to facilitate the sales necessary to comply with the requirements of the proposed rules. The IEA looked at the lead-time (from discovery to production) of energy transition minerals based on 35 projects that came online in the last decade. Lead-times ranged from four years for Australian lithium, seven years for South American lithium, 13 years for nickel sulfide, 17 years for copper, to 19 years for nickel laterite. While demand for these minerals is increasing, it will be difficult to keep up with demand by bringing new supply online with lead-times like these. Additionally, the concentration of mineral processing in a single country, China, is of great concern. Even if there were no geopolitical concerns with China, it is concerning to have so much of the world's processing for minerals necessary for electric vehicles in a single country. (88)

204. COMMENT: The proposed rules raise concerns because they mandate sales of electric vehicles despite supply chain constraints and the availability of certain critical minerals. Massive electrification would require significantly more critical minerals; given the challenges regarding permitting of new mines in the United States, our nation would be overly reliant on foreign nations for minerals needed for mass electrification. (36)

205. COMMENT: Adopting the proposed rules will push electric vehicles into the market before supply and national security issues can be properly addressed. National capacity for extraction and processing of materials for transport show that gasoline and diesel concentration is diffuse

and the U.S. is a leading producer. On the other hand, materials and processing for batteries and electric transport are much more concentrated and dominated by China. (31) RESPONSE TO COMMENTS 202, 203, 204, AND 205: The Department acknowledges that global mineral resource supply chains, production growth rates of such mineral resources nationally or internationally, current or future resource pricing, and the sourcing of mineral resources required for electric vehicle production are important issues, as they relate to ZEV production. However, any increased production resulting from the adopted rules is not likely to have a significant impact on the global market for ZEV components. Moreover, any potential supply chain or national security issues must be addressed at a national level. Thus, the Department will monitor, participate in, and coordinate with all Federal efforts to address potential mineral resource concerns. However, these macro-economic level concerns will require coordination with the international community and private industry through national strategies advanced by the Federal government. Though beyond the scope of this rulemaking, the Department refers the commenters to President Biden's Executive Order 14017, which directed the Biden Administration to develop a strategic process to address vulnerabilities and opportunities in the supply chains of four key products, including advanced batteries used in electric vehicles. Source: https://www.energy.gov/articles/fact-sheet-biden-harris-administration-100-daybattery-supply-chain-review

206. COMMENT: Tailpipe emissions from natural gas vehicles are less than from diesel vehicles. However, on a well-to-wheel basis, natural gas leaks can quickly offset any climate benefit. Also, it is clear that the supply of high integrity, environmentally responsible biomethane is constrained. (70)

RESPONSE: The adopted rules require a portion of MDHD sales to be ZEVs to allow time for the market to mature. Accordingly, the remaining share of sales could come from other technologies, such as natural gas vehicles. For discussion of biofuels' ability to meet the State's decarbonization goals, please see the Response to Comments 88, 89, 90, 91, and 92. Ultimately the 2019 EMP found that high levels of vehicle electrification are the most cost-effective way to reach the State's 80x50 goals. Thus, the Department remains focused on zero carbon transportation technology as the ultimate solution.

207. COMMENT: The Department should examine battery life-cycle issues. More research of the life-cycle costs and impacts of ZEV and ZEV batteries is necessary to fully understand health impacts through their manufacture, use, and disposal. (37)

208. COMMENT: Every transportation technology uses energy and impacts the environment in different ways throughout its lifecycle -- during the production, operation, and disposal of the vehicle. A single reliance on vehicle tailpipe emissions measurements results in a distorted and scientifically incomplete evaluation of the environmental performance of different powertrain technologies that should not be used for regulatory decision making. Before adopting these rules, the Department must quantify the holistic, real-world greenhouse gas emissions associated with battery powered MDHD trucks within the State. Specifically, the Department should consider the environmental implications of battery material sourcing, BEV recharging, and end-of-life battery disposal. Focusing solely on a comparison of tailpipe emissions ignores a real-world consideration that is of central relevance to this rulemaking. (31) RESPONSE TO COMMENTS 207 AND 208: The Department acknowledges that, due to the early state of the electric vehicle market, there is not a complete understanding of the life-cycle costs

and impacts of batteries for ZEVs. However, the concern that the Department failed to provide a lifecycle analysis for battery-powered vehicles is misplaced. While it is true that each technology uses energy and impacts the environment in different ways throughout its lifecycle, the Department's analysis was based on a comparison of the tailpipe emissions from ZEVs and diesel- and gasoline-powered vehicles, which is a traditionally accepted regulatory method of determining direct impacts. It would have been inappropriate to compare the environmental impacts of battery technology, based upon a life-cycle analysis, with the tailpipe emissions from diesel- and gas-powered vehicles.

Moreover, as noted by CARB, it is assumed that on average battery-electric vehicles would need a battery replacement after 300,000 miles based on data from transit buses and light-duty vehicles with cooling systems. This means that high-mileage vehicles, such as Class 8 tractors would need a battery replacement numerous times, while low-mileage vehicles may not need a battery replacement. Class 2b-3 vehicles have fairly low annual mileage and are not anticipated to exceed 300,000 miles over the regulatory analysis, so no battery replacement was assumed. CARB FSOR, p. 216. Following CARB's analysis, the Department estimated that the lifetime cost of maintaining a ZEV will be lower than a comparable gas or diesel vehicle. This holds true even after the midlife cost of replacing a battery is incorporated into the estimate. 53 N.J.R. 598. Thus, battery costs were factored into the Department's economic analysis.

As noted in the Response to Comments 202, 203, 204, and 205, there are important issues related to ZEV batteries, such as mineral resource supply chains, current or future resource pricing, and the sourcing of minerals. However, any increased production resulting from the adopted rules is not likely to have a significant impact on the global market for ZEV

components. Moreover, any potential supply chain issues must be addressed at a national level. Thus, the Department will monitor, participate, and coordinate with all Federal efforts to address potential mineral resource concerns, but the manufacture and disposal of ZEV batteries are beyond the scope of this rulemaking.

Assumptions Used for Impact Analyses

209. COMMENT: A recent study by Ramboll found that New Jersey's electricity mix results in 41 percent more greenhouse gas emissions per unit of electricity generated than in California. Thus, replacing a diesel vehicle with an electric one will result in less significant emission reductions in New Jersey than in California for the same cost. (98)

210. COMMENT: The greenhouse gas emission rates from electric generating units in New Jersey will remain higher than in California through 2040, which encompasses the full phase-in period of California's ACT regulation. Switching an increasing percentage of MDHD vehicles that will be powered by these electric generating units will result in approximately 30 percent less greenhouse gas emission reductions in New Jersey than were calculated by the Department when it used California's analysis and simply scaled for vehicle miles travelled (VMT). Moreover, the difference in the electric grids of California and New Jersey will yield different risks and impacts from power grid interruptions as the percentage of MDHD vehicles increases. (27) RESPONSE TO COMMENTS 209 AND 210: The Department acknowledges that one unit of electricity consumption presently produces more greenhouse gases emissions in New Jersey than it would in California. However, as explained below, the difference is trivial when calculating the greenhouse gas savings from implementation of the adopted rules.

CARB performed an analysis of the relative efficiencies of MDHD diesel and battery electric vehicles and found that in miles per gallon diesel equivalent, battery electric vehicles consume two to five times less energy per mile driven than their diesel-fueled counterparts. See CARB, Battery-Electric Truck and Bus Energy Efficiency Compared to Conventional Diesel Vehicles, 2018, <u>https://ww2.arb.ca.gov/sites/default/files/2018-11/180124hdbevefficiency.pdf</u>) (CARB Energy Efficiency Comparison). In plain terms, the amount of energy from the grid required to propel an electric vehicle is two to five times less than the amount of energy from diesel fuel combustion required to propel a diesel-fueled vehicle. Therefore, if the electricity mix used to power an electric vehicle had the same greenhouse gas intensity as energy from diesel fuel, electric vehicles would still reduce greenhouse gas emissions by a factor of two to five. Hence, 50 to 80 percent of the greenhouse gas savings from electric vehicles are attributable to the efficiency of the electric drivetrain, while the remaining 20 to 50 percent of greenhouse gas emissions are influenced by the greenhouse gas intensity of the electricity mix used to power the vehicle.

Still, the commenters are focused on the difference in the greenhouse gas intensity of the electricity mix generated in California versus New Jersey. To illustrate the relatively small influence of electricity mix emission rates, the Department calculated the difference in greenhouse gas emission reductions for a Class 5 parcel delivery vehicle in California versus New Jersey using the 2019 emission rate estimates from the Ramboll memo and the efficiencies set forth in the CARB Energy Efficiency Comparison. Based on the 2019 electricity mix in the two states, a Class 5 electric parcel delivery vehicle would have 89 percent less greenhouse gas emissions per-mile relative to an equivalent diesel vehicle in New Jersey, whereas in California,

the benefits would be 92 percent. In other words, the difference in the carbon intensity of the electric grids of New Jersey and California, both of which are less carbon-intensive than diesel fuel, would account for only a three percent difference in the total greenhouse gas emission reductions resulting from implementation of the rules in this case.

Of course, the ACT regulation will not be implemented in New Jersey until model year 2025. And since New Jersey and California have similarly aggressive electric grid greenhouse gas intensity targets, the reductions from implementation of the rules are anticipated to increase over time. The 2019 EMP establishes New Jersey's goal of 100 percent clean energy by 2050, with an interim 50 percent Renewable Portfolio Standard already in place for 2030. See 2019 EMP, p. 99. The study provided by the commenter states that "[greenhouse gas] emission rates in New Jersey likely will be higher than in California at least through 2035; therefore, emissions from electricity used to charge vehicles would be higher. Post-2035, the [greenhouse gas] emission rates could be more comparable through the adoption of out-of-state renewables." Truck and Engine Manufacturer's Association Comment, Attachment B (Ramboll memo) p. 8. Since the adopted rules include sales requirements that increase over time, the bulk of total energy consumed by electric vehicles sold to generate credits under the adopted rules will occur after 2035, when New Jersey's grid could reach parity or have lower emission rates than California's grid.

To expand on the illustration above, the Department calculated the estimated greenhouse gas emission benefit from a hypothetical Class 5 electric parcel delivery vehicle in 2025, using projected emission rate estimates from the Ramboll study, and determined it would be 92 percent in California and 89 percent in New Jersey; and in 2035, the estimated

benefits would be equal at 97 percent. These savings rates are converging and increasing toward 100 percent over time, so any remaining differences in electric grid greenhouse gas emissions rates in the two states will become increasingly trivial.

211. COMMENT: The Department has not proposed to adopt California's Truck and Bus regulation, which requires the accelerated turnover of pre-2010 MD and HD vehicles in California. Therefore, the underlying economic dynamics for new MDHD vehicle sales in the two states are fundamentally different. (27)

RESPONSE: The Department interprets the comment as raising a concern that the lower average age of the fleet in California, as a result of the requirements of the Truck and Bus regulation, could potentially suppress the rate of new heavy-duty vehicle sales in California in the late 2020s during the early years of the implementation of the ACT regulation. Further, if new MDHD vehicle sales are lower in California as a result of the Truck and Bus regulation, then New Jersey's adoption of California's ACT regulation could result in a slightly higher share of ZEVs being sold in New Jersey relative to the State's MDHD population during that same timeframe.

While New Jersey may see a slightly higher turnover rate of heavy-duty diesel vehicles than California in the late 2020s, California fleets will necessarily see a relatively higher rate of turnover in subsequent years, as their newer vehicles reach end of life. Ultimately, the average turnover rates will be similar between the two states. Moreover, California's Truck and Bus Regulation does not affect medium-duty (Class 2b and 3) vehicles, or vehicles powered by any fuel other than diesel. Thus, the adoption of California's Truck and Bus regulation in New Jersey would impact only approximately 34 percent of the State's MHDV population that will be

covered as a result of the adopted ACT rules. Given the limited number of vehicles impacted and the long-term sales goals, the Department strongly disagrees with the unsupported assertion that the Truck and Bus regulation will have a fundamental impact on the economic dynamics of the adopted rules.

212. COMMENT: Changing from liquid fuels to electricity to power vehicles will require large infrastructure changes, but the proposed rules do not discuss this challenge other than to note California's analysis. For example, there will be a need to bring large amounts of electricity to fleet owners who will charge large numbers of fleet vehicles in areas where there is currently less electricity demand. And then there is the issue of the charging mechanism. While "megachargers" of one megawatt or more would be capable of charging trucks operating over long distances reasonably quickly, there is presently no standardization of megachargers. Despite the electric infrastructure challenges, the rulemaking does not address whether the Department has considered these issues or the infrastructure challenges that will be specific to New Jersey. (88)

213. COMMENT: The rulemaking fails to recognize a key component that will support the future growth of electric vehicles: widely deployed charging or hydrogen fueling infrastructure. Commercial vehicle fleets will require multiple charging options at varied locations to support high power opportunity charging. For some high demand applications, such as: airport shuttles, drayage, day cab, and short and regional haul application supporting continuous operation, the installation of multiple Fast DC chargers (megachargers) may require megawatt level service upgrades. Infrastructure challenges are particularly acute in the hydrogen supply and distribution network. Most existing stations can dispense less than 500 kg/day or less than 450

diesel gallon equivalents, or enough hydrogen to refuel a conventional line haul truck 1.5 times. (30)

RESPONSE TO COMMENTS 212 AND 213: The Department has considered the infrastructure challenges that will arise as the State's MDHD sector transitions to ZEV technology. As discussed more thoroughly in the Response to Comments 136, widespread access to public fast charging for MDHD vehicles will not be necessary for compliance with the adopted rules because CARB's sales percentages were based on the assumption of return-to-base operations where infrastructure would be installed by the fleet. These costs were included as part of the Economic Impact analysis. See 53 N.J.R. at 597-98. Given this assumption about overnight-depot charging, the Department determined that megachargers will not be needed for compliance with the adopted rules. Similarly, manufacturers will be able to meet ZEV sales requirements without requiring poorly suited, high-demand applications to convert to ZEVs.

Nonetheless, the Department acknowledges that the deployment of ZEVs in certain MDHD market segments would accelerate more quickly if there was a broader network of public charging infrastructure. As part of the 2019 EMP, the BPU analyzed future increases to transmission and distribution costs related to increased vehicle electrification, including MDHD ZEVs. Not only does the 2019 EMP address charging infrastructure costs, but the BPU has also released its Straw Proposal to stakeholders in an effort to determine the best path forward for infrastructure challenges related to medium- and heavy- duty electric vehicles.

214. COMMENT: In the absence of any corresponding ZEV-purchase mandates, any incentives to promote ZEV purchases, or the necessary build-out of a robust changing infrastructure, the

Department cannot rely on California's analysis to assume that the ACT regulation can be successfully implemented in New Jersey. (27)

215. COMMENT: The Department proposes to incorporate by reference California's ACT regulation. However, California has a low carbon fuel standard that allows the State to invest billions of dollars into vehicle incentives. In contrast, New Jersey lacks many of the policies, like the low carbon fuel standard, which California has had in place for years that support the electric vehicle market. (3)

216. COMMENT: If New Jersey incorporates by reference California's ACT regulation, concerns over the favorability of the market environment loom larger than they do in California. New Jersey has far less funding available to support heavy-duty charging infrastructure investments and purchase incentives; the utilities operating in New Jersey have less experience preparing for the impact of the unprecedented demands of heavy-duty vehicles on the grid; and fleets have far less familiarity with operating battery electric trucks in their commercial operations. New Jersey also lacks California's complimentary regulations, such as the advanced clean fleet rule. (26)

RESPONSE TO COMMENTS 214, 215, AND 216: While New Jersey does not have a low carbon fuel standard like California's, New Jersey has several existing and proposed programs that do, and will continue to, provide funding for the costs associated with MDHD electric vehicles. For example, the Economic Development Authority has a program known as the New Jersey Zero Emission Incentive Program (NJZIP) that provides vouchers for the purchase of MDHD electric vehicles. The BPU released its Straw Proposal to seek input on ways for utilities to support MDHD electric vehicles in addition to the existing or forthcoming light duty make-ready
programs available from New Jersey utilities. See

https://nj.myaccount.pseg.com/myservicepublic/electricvehicles and

https://www.atlanticcityelectric.com/SmartEnergy/InnovationAndTechnology/Pages/Electric-Vehicle-Program.aspx. The Department also offers electric vehicle charging equipment grants for fleets through the It Pay\$ to Plug In program, and offers grants for MDHD electric vehicle purchases. These are examples of existing programs in New Jersey, which the Department anticipates will be expanded as the State continues to take steps toward the 80x50 goal. Further, the sales percentage requirements of the adopted rules ramp up gradually over time, allowing infrastructure installation to increase gradually as the MDHD market continues to mature and prices decrease. Notably, the Economic Impact analysis in the notice of proposal did rely on many of CARB's assumptions, but was scaled to reflect the absence of Californiaspecific incentive programs. See 53 N.J.R. at 597.

217. COMMENT: California is geographically larger and more isolated than New Jersey. This would make it more difficult for companies with MDHD fleets to service California from a neighboring state. On the other hand, New Jersey has multiple neighboring states that are close enough to operate fleets in New Jersey by crossing State lines. If New Jersey incorporates by reference California's ACT regulation, companies may forgo the requirements of the regulation in New Jersey by running their businesses out of neighboring states. (31 and 79) 218. COMMENT: If the proposed rules are adopted, the sales mandate will force New Jersey companies to avoid or delay purchasing the new vehicles, which will be more expensive, and include unproven emissions control technologies. Meanwhile, competing companies based outside of New Jersey will operate in New Jersey with upgraded fleets meeting Federal engine

emissions standards with the latest safety and convenience features. Accordingly, out-of-State companies will realize competitive advantages in New Jersey. (45)

219. COMMENT: Unlike California, the majority of New Jersey's freight movements are interstate shipments. If the proposed rules are adopted, out-of-State, petroleum powered, commercial trucks could supplant battery powered trucks, especially in the vital urban areas of northern New Jersey and the Philadelphia metro region. (31)

220. COMMENT: If ACT is adopted, truck dealerships in the State may see their businesses suffer, long-haul fleet operators may choose to move out-of-State, and trucking-related job losses will occur. The Department failed to account for these consequences in its analysis. (27) RESPONSE TO COMMENTS 217, 218, 219, AND 220: Because ACT is not a purchase mandate, New Jersey companies will have no reason to purchase ZEVs or NZEVs that would put them at a competitive disadvantage relative to out-of-State competitors; and therefore, no incentive to move operations out of New Jersey. Companies operating MDHD vehicles in New Jersey need only purchase ZEVs or NZEVs when they believe that it is in their best interest to do so. As discussed more thoroughly in the Response to Comments 122, 123, 124, 125, and 126, the adopted rules were designed to provide manufacturers with the flexibility to produce and sell ZEVs into the market segments they deem to be most suitable and the time to expand to other sectors as the mandates ramp up. Similarly, New Jersey businesses would have no new incentive to delay the retirement of older MDHD vehicles.

221. COMMENT: California admitted in its analysis that manufacturers may shift sales of MDHD vehicles out of state to avoid the requirements of the ACT regulation in California. The risk of

shifting sales is even greater in New Jersey given the number of close neighbors without a similar mandate. Thus, out-of-State dealerships will benefit to the detriment of New Jersey dealerships and the State's tax revenue. (31)

222. COMMENT: If New Jersey incorporates by reference California's ACT regulation, which includes more stringent standards, out-of-State truck dealerships will have an advantage. Moreover, small in-State trucking companies that are already operating on razor-thin profit margins will be financially strained by the sales mandate in the proposed rules. (45) RESPONSE TO COMMENTS 221 AND 222: ACT provides no advantage to out-of-State dealerships because "[d]eficits are incurred when the on-road vehicle is sold to the ultimate purchaser." See 13 CCR 1963.1. For purposes of the adopted rules, the ultimate purchaser is defined as the person who registers the vehicle in New Jersey. See 53 N.J.R. at 601. Because deficits are generated upon sale to the ultimate purchaser in New Jersey, the physical location of the dealership that sells the vehicle has no bearing on deficit generation. Similarly, manufacturers will generate deficits for sales to New Jersey purchasers even if those sales are made through out-of-State dealerships. For these reasons there is no advantage for firms to make out-of-State purchases to offset the added costs. In terms of the impact on in-State trucking companies, the Department has already noted in the Response to Comments 190, 191, 192, 193, 194, 195, and 196, that the adopted rules do not contain a purchase mandate. Since New Jersey companies will have no reason to purchase MDHD ZEVs or NZEVs that would put them at a competitive disadvantage relative to out-of-State competitors, they will have no incentive to move operations out of New Jersey.

223. COMMENT: Given the relative sizes of the California and New Jersey economies, it is not reasonable to assume that New Jersey's economy can absorb and cover the ZEV infrastructure development costs necessary to implement the proposed rules in the same manner and to the same extent as California's economy. (27)

RESPONSE: On a per-vehicle basis, the Department expects that costs to implement the adopted rules will be nearly identical in New Jersey and California. The adopted rules' sales requirements are based on a percentage of total MHDV sales by class in New Jersey and, as such, the costs of implementation are scaled to New Jersey's economy.

224. COMMENT: If the Department adopts the proposal to incorporate by reference California's ACT regulation, New Jersey is in danger of blindly following a current or future California governor's requirements. The proposed rules should be drafted to require the State to independently evaluate future California updates to the ACT regulation prior to a formal decision on whether to implement them in New Jersey. (31)

225. COMMENT: New Jersey differs from California in air quality and fleet composition. By ceding control of New Jersey's air emission program to California, the Department has denied New Jersey residents and local businesses the opportunity to provide input on developing a program that works for the State's unique circumstances. (1 and 72)

226. COMMENT: Under the CAA, New Jersey has two options for vehicle emissions standards: compliance with the Federal standards or require compliance with the California standards. The Department is proposing to incorporate by reference California's ACT regulation, and if adopted, the rules must have no substantive changes from the California rules. Accordingly, the Department will not be allowed to revise the rules to address concerns or circumstances

specific to New Jersey. Moreover, future changes to ACT adopted by California will automatically be incorporated into New Jersey rules. The Department should not tie itself to a regulatory program the details of which it cannot know or control. (12)

227. COMMENT: California's ACT regulations were designed with California's unique needs and air quality conditions in mind. New Jersey's proposal to incorporate by reference California's ACT regulation does not represent an effective solution to reducing New Jersey's emissions because it does not recognize the State's unique fleet makeup, grid conditions, and local utility support. (18, 49, 75, 76, 82, 93, 95, 99, and 105)

228. COMMENT: California's ACT regulation was adopted to address very unique air quality concerns and environmental commitments codified in California law. Further, California's ACT regulation is one part of the California's efforts to electrify vehicles. The Department must understand the regulation in relation to New Jersey-specific conditions or it risks unintended consequences. (26)

229. COMMENT: The ACT regulation was designed with California's unique needs, air quality conditions, and robust financing tools in mind. New Jersey's MDHD fleet vehicle composition and operations are unique. Thus, the ACT regulation will not be an effective solution to reduce New Jersey's emissions. (45)

RESPONSE TO COMMENTS 224, 225, 226, 227, 228, AND 229: Under the CAA, New Jersey has only two choices when it comes to emission standards: the emission standards set by the EPA or those set by California. Neither the California nor the Federal emission standards account for New Jersey's unique fleet composition or air quality conditions. In fact, the Federal emissions standards must accommodate the circumstances of all of the 50 states and the District of

Columbia; as such, they are specifically tailored for none of the states. Given that New Jersey and California share similar climate goals and air quality challenges, the Department has determined that California's ACT regulation is more in line with New Jersey's objectives than are the Federal standards.

While it is true that the adopted rules incorporate by reference a California regulation, it is inaccurate to state that the Department has no ability to revise the rules. The Department retains the ability to repeal the incorporation by reference of these rules in New Jersey in whole or in part, and/or to propose to otherwise amend the affected New Jersey rules to the extent it would not violate the CAA. See 53 N.J.R. at 601, proposed N.J.A.C. 7:27-31.4(e). Additionally, New Jersey and other states that incorporate California's ACT regulation by reference will be in regular communication with CARB about any proposed changes to the California ACT regulation.

As more thoroughly described in Response to Comments 233, 234, 235, and 236, the Department recognizes that the New Jersey and California MDHD fleets differ in makeup and usage patterns. Still, the Department determined that these differences were not significant enough to warrant the development of a new set of estimates and assumptions due, at least in part, to the flexibility built into California's ACT regulation, which places the onus on manufacturers to provide products that will satisfy the market needs of New Jersey.

The Department also recognizes that there are differences in New Jersey's incentives and infrastructure, but as addressed more thoroughly in the Response to Comments 214, 215, and 216, the Department's economic analysis included the costs of infrastructure and excluded incentive funding. Even adjusting for these differences, the Department expects that fuel

savings and lower maintenance costs associated with ZEVs will lead to lower overall costs in the long-term.

230. COMMENT: The Department's economic analysis relied on all of the assumptions of CARB's economic analysis, only scaling for VMT. But even small adjustments to assumptions and modeling (such as fuel costs) could result in a finding of greater costs or reduced benefits.

(31)

231. COMMENT: For purposes of the Department's Economic Impact analysis, which was included in the rulemaking to incorporate by reference the ACT regulation, the Department made very few adjustments to CARB's original analysis of the ACT regulation. While the Department adjusted for vehicle miles travelled and population, it failed to make adjustments for population density, travel patterns and usage, fuel costs, and vehicle ownership. Therefore, the analysis is fundamentally flawed. (12)

232. COMMENT: The Department should conduct a complete and robust State-specific economic analysis to assess the impacts of the proposed rule on New Jersey citizens and businesses to be sure the rule is tailored for New Jersey's unique challenges and opportunities rather than California. (36 and 66)

RESPONSE TO COMMENTS 230, 231, AND 232: The Department conducted an economic analysis that "describes the expected costs, revenues, and other economic impact upon governmental bodies of the State, and particularly any segments of the public proposed to be regulated." N.J.A.C. 1:30-5.1. The Department acknowledges that the Economic Impact analysis in the notice of proposal Summary relied, in large part, on California's regulatory impact

analysis, which included a number of assumptions. Nevertheless, the Department determined that the bulk of CARB's assumptions were appropriate for New Jersey's analysis.

For example, one commenter argues that the Department failed to make fuel cost adjustments, which could result in a finding of greater costs or fewer benefits. The Department acknowledges that both fuel and electricity costs are higher in California. However, the difference between fuel costs and commercial electricity costs and, therefore, the relative energy savings per mile that accrue to a medium- or heavy-duty electric vehicle, are nearly identical in New Jersey and California. Thus, the Department confirmed that had it adjusted for these variables, the impacts on the overall Statewide costs/benefits ratio would have been minimal.

233. COMMENT: In a study by Ramboll, it was shown that New Jersey has a higher percentage of short-haul vehicles than California and that New Jersey fleets are likely to have fewer, longer trips per day than the estimate California used in its analysis. For these reasons, New Jersey should commission an independent and comprehensive analysis of the rules, which would include these factors, to provide a true assessment of the regulatory and economic impacts. (98)

234. COMMENT: Since New Jersey has a different MDHD fleet with a different operational profile and idle frequency than California, it is possible that replacing a diesel vehicle with an electric one will result in fewer NO_x emission reductions in New Jersey than in California for the same cost. (98)

235. COMMENT: The number of VMT generated by out-of-State vehicles in New Jersey is not the same as in California. Likewise, New Jersey's MDHD fleet differs from California's fleet in

population, mix, age, replacement rates, and usage rates. Furthermore, driving and traffic patterns and vehicle utilization differ between New Jersey and California. Rather than account for these, and numerous other factors, in its analyses, New Jersey applied a linear VMT-scaling factor to CARB's regulatory calculations. The Department's simplistic analysis failed to account for relevant factors that would impact the outcome. Thus, the Department's analyses were fundamentally deficient. (27)

236. COMMENT: When the Department proposed to incorporate by reference California's ACT regulation, its analyses relied on the Standardized Regulatory Impact Analysis (SRIA) that CARB prepared for the ACT regulation, which is based on California-specific fleet composition and vehicle penetration assumptions. By relying on CARB's SRIA and the California-specific assumptions, the Department failed to meet the requirements of State law, which requires a thorough, independent analysis of the socio-economic and regulatory impacts. (18, 49, and 105)

RESPONSE TO COMMENTS 233, 234, 235, AND 236: The Department conducted a social and economic impact analysis that "describes the expected social impact of the proposed rulemaking on the public, particularly on any segments of the public proposed to be regulated, and including any proposed or expected differential impact on different segments of the public" and "describes the expected costs, revenues, and other economic impact upon governmental bodies of the State, and particularly any segments of the public proposed to be regulated." N.J.A.C. 1:30-5.1(c).

The Department acknowledges that the Economic, Environmental, and Social Impact analyses in the notice of proposal Summary relied, in large part, on California's regulatory

impact analysis, which included a number of assumptions. As noted in the Response to Comments 230, 231, and 232, the Department made adjustments to only those variables that it expected would have a significant bearing on the socio-economic impacts of the adopted rules' implementation in New Jersey.

The Department considered all of the assumptions made by CARB, and determined that CARB's assumptions concerning fleet make-up and usage patterns were sufficiently reflective of New Jersey's conditions that development of a new set of estimates and assumptions for New Jersey's analysis was not needed. Specifically, and as noted by CARB in its Final Statement of Reasons, California's ACT regulation contains a great deal of flexibility, and ultimately the adopted rules place the onus on manufacturers to provide products that will satisfy the market needs of New Jersey. See CARB FSOR, p. 100. Thus, even if the MHDV ZEV market in New Jersey ultimately evolves somewhat differently than the MDHD ZEV market in California, the flexibility provisions inherent in the adopted rules pursuant to the credit/deficit system ensure that ultimately the final benefits of the adopted rules will outweigh the final costs.

237. COMMENT: When the Department proposed to incorporate by reference California's ACT regulation, its analyses relied on CARB's analyses, and, thus, assumed that future conditions in New Jersey would match future conditions in California. However, there are key potential differences, such as per vehicle marginal costs, financial resources available for incentive programs, fuel and electricity prices, and the mix of battery-electric and hydrogen fuel-cell ZEV trucks. Thus, the Department's analyses were fundamentally deficient. (27) RESPONSE: Any prediction of future conditions will be inaccurate to some degree. The Department made projections about the impacts of the adopted rules based upon the best

available information. Changes in fuel prices are driven by global commodity markets that can affect both California and New Jersey, and changes in electricity prices are based on fuel prices, grid utilization, renewable energy, and other factors that are anticipated to be similar in New Jersey and California. Thus, while it is true that fuel and electricity costs will change and continue to differ between the states, the absolute per-mile fuel cost savings from an electric vehicle in New Jersey will likely continue to be approximately equal to the savings from a comparable vehicle in California.

Likewise, the per-vehicle marginal costs and the mix of battery-electric and hydrogen fuel cell ZEV trucks will be similar in California and New Jersey, since these factors are driven by national and global market trends. With respect to concerns about the differences in California's and New Jersey's incentive programs, please see the Response to Comment 214, 215, and 216. With funding available from electric utilities, the BPU, the EDA, and the Department, New Jersey will have adequate incentive resources in place by the time manufacturers incur deficits under the adopted rules.

238. COMMENT: Adopting another state's program will not address New Jersey's unique needs and circumstances. For example, miles per charge are reduced by nearly half in cold weather. But New Jersey cannot change the program to accommodate New Jersey-specific issues if it incorporates by reference California's ACT regulation. (62)

RESPONSE: For a discussion of the availability of suitable ZEV models in New Jersey, please see the Response to Comments 122, 123, 124, 125, and 126. Broadly, the adopted rules provide a market incentive for manufacturers to produce ZEVs that customers in New Jersey will wish to buy. Thus, to the extent there is a concern about the impact of cold weather in New Jersey,

manufacturers may meet up to 50 percent of their deficit obligation in each category with NZEVs, which may include a fossil-fuel power source, as well as a battery. Due to the availability of heat from the fossil fuel power source, NZEVs are generally able to operate in cold weather without restriction and may prove to be more popular in New Jersey than in California. Similarly, hydrogen fuel cell vehicle operation is relatively unaffected by cold weather. As battery capacity and vehicle range increase with technology improvements, BEVs are expected to experience less range loss as a percent of total range.

239. COMMENT: There are meteorological differences between California and New Jersey that were not factored into the Environmental and Economic Impact analyses. Accordingly, the Department should not have assumed that the vehicle emission reductions in California will yield precisely the same air quality benefits in New Jersey by simply scaling for VMT. (27) 240. COMMENT: A study conducted by Ramboll raises concerns about the air quality benefits that could be achieved if New Jersey incorporates by reference California's ACT regulation. Since New Jersey's nonattainment areas are significantly influenced by the air quality and emissions in neighboring states, California's ACT regulation may have a less meaningful impact in New Jersey than it would in California. Similarly, California's mountain ranges create geographic air quality challenges that New Jersey does not share. (31)

RESPONSE TO COMMENTS 239 AND 240: The Department did not assume that the adopted rules will yield precisely the same air quality benefits in New Jersey, scaled only for VMT. Since a primary factor in the level of human exposure to direct PM_{2.5} emissions is the distance between emission sources and human receptors, the Department adjusted the California air

quality impact values using the USDOT proximity to roadways metric for California and New Jersey in addition to the human population scaling factors.

The Department is aware of the meteorological differences between California and New Jersey, primarily the increased stagnation of air masses, that can significantly affect ambient air concentrations, especially for criteria pollutants that form from chemical reactions of precursors over time. The Department specifically did not quantitatively include the significant additional ACT benefits that would accrue from reductions in ozone and secondary or indirect PM_{2.5} that would be affected by the differences in meteorology between California and New Jersey.

241. COMMENT: Experts from Ramboll Consulting have evaluated whether New Jersey's VMT scaling methodology would yield a reasonable cost-benefit assessment. Ramboll's analysis shows that such a VMT-based scaling methodology cannot yield a reasonable cost-benefit assessment. One of the three key reasons supporting Ramboll's assessment was that trucks in California idle (when assessed on an hours basis) two-times more than trucks in New Jersey, meaning that New Jersey will see only one-half of the greenhouse gas reductions attributable to the elimination of idle emissions from ZEV trucks. (27)

RESPONSE: The Department reviewed the commenter's submission, including the analysis by Ramboll, and did not find the connection between the commenter's assertion of lower greenhouse gas emission reductions in New Jersey and Ramboll's analysis. With regard to idling emissions, Ramboll's analysis did indicate that "Truck electrification is expected to reduce all tailpipe emissions, including idle emissions. Lower per vehicle extended idle activity estimates for combination unit long-haul trucks in New Jersey could result in lower per vehicle

NO_x emission reductions in New Jersey compared to California." Thus, the Ramboll analysis of idling time in trucks in New Jersey versus California was focused on NO_x emissions, not greenhouse gas emissions. Further, the Department understood the Ramboll analysis to attribute the extended engine idling time from California trucks to the differing modeling platforms used by New Jersey and California. Specifically, California generally uses the EMFAC2017 emissions model to calculate benefits for emission inventories, while New Jersey generally uses the MOVES3 emission model. Per Ramboll's analysis, "New Jersey extended idle hours for combination unit long-haul trucks were estimated to be 1.3 hours/day-vehicle. In California's EMFAC2017 model, those trucks which most closely correspond to combination unit long-haul trucks (that is, T7 and T6 California International Registration Plan [CAIRP], Neighboring Out-of-state [NOOS], Out-of-state [OOS], and Tractors) have an average extended idle hours per vehicle of 2.4 hours/day-vehicle based on a calendar year 2028 EMFAC2017 emission inventory. The California estimate is 1.1 hours/day-vehicle longer than the New Jersey estimates. Some of this additional idle time could be a result of the different extended idle definitions in MOVES and EMFAC." Thus, Ramboll's conclusion about the potential impact of New Jersey using the EMFAC2017 model was that the analysis had the potential to overestimate the idling time of a subset of vehicles (combination long-haul trucks), resulting in a potential overestimate of NO_x emission reductions for that small subset of vehicles. Or, Ramboll acknowledges, it is also possible that there would be no difference in the idling time, because both models account for idling time but use different definitions. For these reasons, the Department rejects the concern that the Department's methodology failed to yield a reasonable cost-benefit analysis since both models comprehensively model idling emissions.

242. COMMENT: California's ACT regulation, which the Department proposed to incorporate by reference, is the first of three related regulations, including an Omnibus Ultra-Low NO_x regulation and an Advanced Clean Fleet regulation that California plans to finalize by the end of 2021. Though New Jersey currently proposes to incorporate by reference only the ACT regulation, the Omnibus Ultra-Low NO_x and Advanced Clean Fleet regulations will also soon be required under New Jersey regulations. These regulations will cause significant additional negative economic and environmental consequences in the State. (45, 49, 75, 76, 82, 93, 95, and 99)

243. COMMENT: The Department's rulemaking includes both California's Advanced Clean Trucks regulation, which mandates the sales of ZEVs, and California's Omnibus Low-NO_x Rule, which allows the sale of engines meeting only ultra-low NO_x emission standards and a wide range of other extremely stringent additional requirement. New Jersey is correct in its goals for climate change and clean energy, but adoption of the California rules would be premature and misdirected. (1)

244. COMMENT: The Department's adoption of California's ACT regulation causes serious concerns about the prospect of a future rule that would include a purchase mandate for ZEV or a retirement mandate for existing construction equipment. For small and mid-sized construction firms, fleet replacement is cost-prohibitive, and a regulatory mandate (if proposed in the future) would severely impact them financially. The costly equipment that members of the construction industry purchase to deliver public infrastructure upgrades is purchased with an expectation of a long useful life and some value after retirement. (47)

245. COMMENT: California's ACT regulation is part of a suite of additional rules that the

California Air Resources Board (CARB) has adopted, or plans to adopt, to regulate the emissions from MDHD on-highway vehicles and engines. If the Department adopts the ACT rule, New Jersey will be obligated to opt-in to the entire suite of California's rules. Collectively, these rules raise a number of concerns about feasibility, cost, and implementability. Given the target model year of 2025 for the proposed ACT rule, the Department can defer action until the 2022 calendar year in order to make a full assessment of the wide-ranging impacts that will result from the Department's adoption of all of CARB's other rules concerning emissions from MDHD vehicles and engines. (27)

RESPONSE TO COMMENTS 242, 243, 244, AND 245: These comments are beyond the scope of this rulemaking to the extent that they suggest that the Department should consider the costs of additional California rules that the Department is not currently proposing to incorporate by reference. While it is correct that the Department signaled its intent to consider incorporating other complementary California regulations into its rules when it held stakeholder meetings in September, the Department has not proposed to incorporate those complementary rules. In fact, California has not yet proposed the Advanced Clean Fleet regulation. Should the Department propose to adopt any of the complementary California regulations, the Department will perform economic and environmental analyses specific to those rulemakings.

Sufficiency of Impact Analyses

246. COMMENT: Until the Department analyzes the State-specific impacts of fleet turnover from adopting California's ACT regulation and the ensuing impact on air quality (and take comment on its findings), the Department is without the legal authority to finalize adoption of

California's ACT regulation. Specifically, the Department did not consider: (1) the lifecycle emissions from a battery power vehicle, including battery material sourcing, battery recharging, and end-of-life battery disposal; (2) air quality issues unique to the State, including upwind sources, leakage, and attainment needs; the impact on fleet turnover if the proposed rule makes all trucks more expensive. (31)

247. COMMENT: The Department has not fully considered the potential negative economic impacts associated with California's ACT regulation. Specifically, the Department's economic impact analysis was incomplete and ignored significant costs, including, but not limited to, annual miles driven, costs associated with battery replacement and disposal at end-of-life, financing, recharging time, the impact on truck utilization, infrastructure costs to ratepayers, increased traffic congestion, and lost revenue from fuel taxes. (31)

248. COMMENT: New Jersey law requires that any regulatory proposal like the one at issue must include "a description of the expected socio-economic impacts of the rule, a regulatory flexibility analysis, ...and a job impact statement which shall include an assessment of the number of jobs to be generated or lost if the proposed rule takes effect." N.J.S.A. 52:14B-4(a)(2). The required regulatory flexibility analysis needs to include an assessment of the initial capital costs and annual costs that will result from the proposed rule, along with an analysis of how the proposed rule has been designed to minimize any adverse economic impacts. N.J.S.A. 52:14B-19. The Department has failed to undertake and complete the mandated socio-economic analyses relating to the proposed adoption of California's ACT regulation in New Jersey.

Instead of doing any analysis of its own regarding any of the potential socio-economic impacts from the implementation of the ACT Rule in New Jersey, the Department has relied wholly and exclusively on the Standardized Regulatory Impact Analysis (SRIA) that CARB prepared for the ACT Program as adopted in California. In that regard, the Department also has relied on all of the California-specific assumptions that went into CARB's SRIA. The sum and substance of the Department's analysis was simply to apply a linear VMT-based scaling factor to all of the relevant cost-benefit calculations contained in the SRIA that CARB prepared for its California-tailored ACT regulation. That really amounts to no actual analysis at all. The Department has simply assumed – without undertaking any critical review or independent verification efforts whatsoever – that the methods and conclusions set forth in CARB's SRIA are 100 percent correct and directly transferable to New Jersey. That type of unquestioning wholesale reliance on, and deference to, the regulatory analysis that another state prepared for its own purposes is inherently deficient as the basis for a valid rulemaking. The Department's rudimentary VMT-based scaling analysis is fundamentally deficient because it fails to account for a number of factors and differences between New Jersey and California, including, but not limited to, the population and mix of MDHD vehicles, replacement rates of certain MDHD market segments, out-of-State vehicles, power grids, financial resources, and pollution levels. As a result, that simplistic analysis cannot and does not satisfy the requirements of New Jersey's Administrative Procedures Act. VMT-based scaling of CARB's SRIA, without more, cannot amount to a sufficient rulemaking record for implementing the ACT Program in New Jersey. (27)

249. COMMENT: To compare policies aimed at reducing greenhouse gas emissions, analysts often develop a "cost of abatement," which is a calculation of the cost of the policy divided by the greenhouse gas emission reductions achieved by the policy. It is normally expressed in a dollars per ton figure. The Department should develop and present to the public its estimate of the cost per ton of greenhouse gas abatement through the proposed ACT regulation (on a life-cycle basis), as compared to the same cost of abatement of investing in more fuel-efficient diesel, biodiesel, renewable diesel, propane, and natural gas trucks. (31)

250. COMMENT: Since the Department conducted no independent analysis of the actual amount of air pollution reductions (in tons-per-day) that will result from implementing California's ACT regulation in New Jersey, or of any of the actual associated costs in New Jersey, there is no prospect that the Department's rulemaking record in this case could withstand judicial scrutiny. (27)

251. COMMENT: New Jersey should commission an independent and comprehensive analysis of the rules that would provide a true assessment of the rules' economic and regulatory impacts. (98)

RESPONSE TO COMMENTS 246, 247, 248, 249, 250, AND 251: Pursuant to the requirements of the APA, the Department conducted a social and economic impact analysis that "describes the expected social impact of the proposed rulemaking on the public, particularly on any segments of the public proposed to be regulated, and including any proposed or expected differential impact on different segments of the public" and "describes the expected costs, revenues, and other economic impact upon governmental bodies of the State, and particularly any segments of the public proposed to be regulated." N.J.A.C. 1:30-5.1(c). It is true that the Department

relied on the regulatory analysis and a number of the assumptions made by CARB. However, the Department did not do so indiscriminately. As set forth in greater detail in the Responses to Comments 105 through 109 and 158 through 245, the Department reviewed CARB's robust analysis and assumptions, and adjusted its analysis for New Jersey, based upon the best information available. As required, the Department has provided commenters with the opportunity to provide feedback and critiques of its analysis. Though some commenters have indicated that the Department's analyses underestimated costs and/or ignored relevant factors, other commenters have indicated that the Department underestimated the benefits based upon other factors. The Department carefully considered the feedback and critiques from all commenters, as is the purpose of a comment period, and is satisfied that the analyses conducted by the Department provided a reasonable forecast of the costs and benefits.

Adopt, but Revise and/or Do More to Mitigate Climate Change and Air Pollution

252. COMMENT: The Department should ban dirty trucks for a variety of reasons, including improvements to air quality, reductions in negative health impacts generally, reductions in negative health impacts for overburdened communities more specifically, and/or reductions in negative environmental impacts. (103)

253. COMMENT: The Department should reduce pollution from all trucks for a variety of reasons, including improvements to air quality, reductions in negative health impacts generally, reductions in negative health impacts for overburdened communities, and/or reductions in negative environmental consequences. (102)

254. COMMENT: Diesel fumes lead to high ground level ozone and that leads to costly health care bills. Only electric-powered trucks should be used. (109)

RESPONSE TO COMMENTS 252, 253, AND 254: The Department expects this proposed rulemaking to not only mitigate the impacts of climate change, but to also reduce the negative effects of other air pollutants, such as NO_x, PM2.5, and black carbon, a component of PM2.5, from MDHD trucks in the State. See 53 N.J.R. at 599. However, the adopted rules do not ban the ownership or operation of any particular vehicles in the State. The adopted rules are intended to accelerate the deployment of MDHD ZEVs in the State by requiring a percentage of a manufacturer's new MDHD vehicle sales to an ultimate purchaser in New Jersey to be ZEVs. As discussed in the Response to Comments 105, 106, 107, 108, and 109, the sales percentages and timelines in the adopted rules are feasible based upon the flexibility built into the rules and the existing market for ZEVs.

255. COMMENT: There are potential opportunities for continued study of health impacts. Continued study may aid in enhancing positive health impacts and mitigating of any potential negative health impacts as the Department implements the proposed rules and other related regulations. The Department should identify opportunities to prioritize health and health equity as a driver of implementation, monitor and evaluate health impacts of the proposed rules, and conduct additional studies on overall impacts of the program on the social determinants of health. The Department should use Health Impact Assessments as a way to make health part of the decision-making process in adopting the proposed rule. The Department should also coordinate with HEALTHY NJ 2030, in which the Department of Health launches a new set of science-based, 10-year State objectives with the goal of improving the health of all New Jerseyans. (37)

RESPONSE: The Department welcomes continued third-party study of the health benefits of

electrifying the transportation sector. However, New Jersey has only two choices when it comes to the adoption of emission standards: the emission standards set by the EPA or those set by California. Having estimated the health benefits from California's ACT regulation to be greater than those from the Federal standard, the Department chose to adopt California's standard. The Department's authority to amend the adopted rules is limited by the requirements of the CAA. See 53 N.J.R. at 601, proposed N.J.A.C. 7:27-31.4(e).

256. COMMENT: The State of New Jersey should do everything possible to ensure clean air, including the eventual requirement of electric trucks. The timeline should be one that is both feasible for the companies and consistent with the science. The requirement should be implemented sooner rather than later. (38)

257. COMMENT: The Department should adopt California's ACT regulation, but should take additional actions, including modernizing school and transit bus fleets, moving the timeline for fossil-free to 2030, setting higher miles-per-gallon requirements, upgrading the rail systems, not limiting the rules to electric vehicles, and offering incentives to remove older and/or damaged vehicles from the road. (107)

258. COMMENT: The Department should adopt California's ACT regulation, but provide financial incentives, as well as education to trucking companies on the benefits of electric vehicles. (108)

RESPONSE TO COMMENTS 256, 257, AND 258: The Department acknowledges the commenters' support of the rules. The Department notes that the mandates of the adopted rules will apply to manufacturers of school buses sold in the State in the event that a

manufacturer meets the 500 annual sales volume threshold. As noted in the Response to Comments 140 through 147, the Department and other State agencies are coordinating their efforts to ensure policies, including incentives, are in place to facilitate the transition to ZEVs. Additionally, as noted in the Response to Comment 77 through 85, although battery electric vehicles are the most common ZEV technology operating today, the adopted rules do not exclude other emerging technologies, as long as they meet the emission standard for a ZEV or NZEV. The commenters' remaining suggestions are beyond the scope of this rulemaking. 259. COMMENT: The State should immediately require any new cars sold in this State to be able to get 100 miles on a gallon of gasoline. This is important and needs implementation right now. (74)

RESPONSE: The adopted rules are intended to accelerate the deployment of MDHD ZEVs in the State by requiring a percentage of a manufacturer's new MDHD vehicle sales to an ultimate purchaser in New Jersey to be ZEVs. Given that the adopted rules are not applicable to lightduty vehicles, the comment is beyond the scope of this rulemaking.

260. COMMENT: The Department should require 100 percent clean vehicles by 2035. The proposed rules leave between 25 percent to 60 percent dirty trucks on the road by 2035 depending on the truck vehicle class. This will result in continued pollution of the environment with huge quantities of greenhouse gas emissions, as well as particulate and other gases hazardous to the residents and children of New Jersey, especially along heavy truck routes. An updated rulemaking should include any necessary incentives and regulations to achieve a minimum of 80 percent of the quantity of new motor vehicle sales of a vehicle manufacturer that are ZEVs in 2027 and 100 percent beginning in 2035 and every year following. (23)

RESPONSE: As noted in the Response to Comments 224, 225, 226, 227, 228, and 229, New Jersey has only two choices when it comes to emission standards: the emission standards set by EPA or those set by California. The Department chose California's emission standards for MDHD vehicles because they will provide greater emission reductions than the EPA's current emission standards.

261. COMMENT: California's ACT regulation excludes truck manufacturers that sell fewer than 500 covered trucks per year (in California), as would the New Jersey Advanced Clean Truck Program rules. Yet, the population of New Jersey is far smaller than that of California. It follows that to avoid being lax and avoid substantial pollution, the New Jersey Advanced Clean Truck Program rules' exclusion should be pro-rated to account for the difference in population. (23)

RESPONSE: The Department does not believe the sales volume should be pro-rated in this case. The purpose of the low-volume exemption is to ensure that only the largest manufacturers are subject to the rules. Thus, the ratio of State population to State sales is irrelevant.

262. COMMENT: Though California's ACT regulation is the only avenue available to New jersey regulators in the short term, the rules could be improved by requiring that older vehicles be permanently removed from service on a one-to-one basis when a new ZEV is purchased. Additionally, the new regulations should allow for other zero-emission technologies, such as hydrogen fuel cells and not just battery electric. (6)

263. COMMENT: The Department should adopt the proposed rules. The Department should also pursue other policy-related proposals that aim to restore a more constructive and sustainable dynamic between private enterprise and the public good by measuring and

accounting for the cost and risk of negative externalities that are the byproducts of complex economic and policy system design, redesigning policies and rules in ways that steer economic investment and activity away from an unsustainable or harmful business-as-usual path and toward one in which more sustainable investment and innovation is incentivized and rewarded, and striking an appropriate balance between ambitiously meeting a growing imperative for large-scale change while realistically accounting for the time and cost involved for incumbent business interests to adapt in ways that will minimize the disruptive impact on their respective stakeholders in the near-term. (53)

264. COMMENT: New Jersey is a major transportation corridor with significant port facilities, which means that New Jersey communities are burdened not only by greenhouse gases, but also by criteria pollutants with severe detrimental public health effects. Despite making up only around five percent of New Jersey's vehicles, heavy-duty vehicles are responsible for over 40 percent of NO_x and 60 percent of SO₂ pollution from the transportation sector. Multiple measures are needed to decarbonize the transportation sector and strengthen the ability of businesses to operate sustainably over the long term. Many customers support ZEV shipping policies. However, market failures have impeded progress. The Department should adopt California's ACT regulation, which will be essential to driving the transition to decarbonized transportation alongside other policies, to ensure zero-emission trucks are deployed in the State at a pace and scale that the private sector cannot achieve on its own. (13) 265. COMMENT: In addition to adopting California's ACT regulation, the State should also work to increase the number of electric charging stations and work with environmental justice communities to make sure the State is keeping communities clean. (16)

266. COMMENT: The State should support regional and Federal efforts to accelerate ZEVs and charging infrastructure, low carbon fuels, and more fuel-efficient vehicles in order to eliminate some of the barriers and encourage the expansion of electrification. Additionally, the State should provide rebates and incentives for the purchase of ZEV trucks. (37)

267. COMMENT: The adoption of California's ACT regulation alone will be insufficient to achieve New Jersey's ambitious emission reduction targets. To establish a conducive ecosystem that allows the ACT rule to achieve its desired scale of impact, the Department should also adopt fleet purchase requirements for key "beachhead" segments; create a ramp up to the rules through sustained and sufficient investments in incentives; coordinate with other State agencies to provide significant funding for charging equipment, infrastructure, and hydrogen fueling, as well as rate design; and join the Transportation and Climate Initiative Program to improve the operating economics for zero-emission fleets. (42, 51, 59, 60, and 90) 268. COMMENT: The proposed rules are just the first step for New Jersey in reaching the State's climate goals set forth in the Global Warming Response Act. The proposed rules alone will not reach the climate goals set forth in the Global Warming Response Act. Complementary policies must be implemented to meet climate reduction goals, as well as advance health and environmental equity and create family sustaining careers. (68)

269. COMMENT: Accelerating New Jersey's transition to zero-emission trucks is bolstered by the suite of other policy efforts underway at the Department under the Protecting Against Climate Threats (PACT) process including the Low NO_x Omnibus rules and others, as well as efforts being undertaken by other State agencies like the Economic Development Authority and the BPU. This shows a comprehensive effort by the Murphy administration, the New Jersey

Legislature, and the State's executive agencies to electrify all forms of transportation. As this work progresses, the Department should continue to work with these agencies and the Office of Climate Action to achieve the State's clean energy goals on a rapid timeline. (64)

270. COMMENT: The proposed rules alone will be insufficient to achieve the State's ambitious emission reduction targets. A comprehensive suite of policies and investments are also required to provide clear directional signals to vehicle buyers and manufacturers. Additional actions that need to be taken in concert with this rulemaking include permitting the direct sales of electric vehicles in New Jersey (to bypass the dealer model of car sales), expanding the New Jersey Zero-Emission Incentive Program pilot, joining the Transportation Climate Initiative Program to improve the operating economics for zero-emission fleets, and coordinating with State agencies through the Partnership to Plug In to ensure that New Jersey's public agencies and utilities are prepared to rapidly scale up ZEV infrastructure. (67)

271. COMMENT: In addition to adopting California's ACT regulation, the Department must work with other State agencies to ensure that the buildout of MDHD vehicle charging infrastructure is rapid. The Department should also implement additional rules to address harmful emissions from New Jersey's MDHD vehicle fleet—such as the Advanced Clean Fleets and Low NO_x Omnibus rules—as quickly as possible as well. (25)

272. COMMENT: To ensure that the proposed rules achieve their full desired effect, New Jersey should modify existing regulations to allow for the operation of hydrogen fuel cell electric vehicles (FCEVs) on appropriate bridges and/or tunnels in the region similar to the footprint allowed for CNG vehicles. (51)

273. COMMENT: Adoption of California's ACT regulation will be a key first step. However, a suite of policies is needed to address some of the primary challenges to fleet electrification. The Department needs to implement policies that address the limited EV model availability, especially in the MHDV sector; and lack of control over leased, rented, and/or up/downstream transportation. Adoption of additional policies that accelerate MDHD electrification alongside the ACT regulation can help New Jersey realize the benefits of a clean, energy efficient transportation system even sooner. The Department and State policymakers should also consider incorporation of the California Advanced Clean Fleets rule, the Low NO_x Omnibus rule, and a broad array of ZEV incentives and support for charging infrastructure, which are particularly lacking for MDHDs. (46 and 80)

274. COMMENT: The Department should not delay adoption of the ACT regulation but simultaneously increase the pace of adoption of a comprehensive suite of CARB and South Coast Air Quality Management District (SCAQMD) rulemakings to begin drastically cutting the CO₂ and local air toxic pollution from diesel trucks in New Jersey. The Department should take up consideration of other CARB and SCAQMD rules as quickly as possible. The Department should specifically consider adopting the SCAQMD Indirect Source Rule, the low carbon fuel standard, and California utility fleet charging programs like the Charge-Ready and Fleet-Ready for consideration and adoption. If the Department adopts the ACT regulation and other related rulemakings that are intended to reduce and then eliminate CO₂ and local air pollution emitted by MDHD diesel trucks, then New Jersey can become the East coast center of the battery electric truck industry and achieve substantial reduction in MDHD diesel truck emissions. These

rulemakings, and other actions, are necessary to stop and reverse the worst effects of climate change. (40)

275. COMMENT: California's ACT regulation will not solve climate change or air pollution in the State. The Department should propose the three other rules previously "stakeholdered," as

well. (71)

276. COMMENT: The proposed rules should be adopted. It is important that New Jersey also has complementary policies to make sure that the State achieves its goals of reducing

greenhouse gases and other pollutants. (61)

277. COMMENT: The proposed rules should be seen only as a first step. The State should promulgate an advanced clean train rule in the future. (81)

278. COMMENT: The Department should adopt California's ACT regulation. Additionally, the Department should adopt rules to establish zero-emission zones, and rules specific to emissions from cargo handling equipment, the harbor craft, and warehouses. (28)

279. COMMENT: Electric trucks can deliver good union jobs, but the Department must ensure that the proposed rules preserve existing jobs and create new ones for displaced workers. To ensure that the proposed rules do not result in outsourced vehicle manufacturing, New Jersey should pursue complementary policies to accelerate the development of a domestic and regional low carbon manufacturing supply chain. (92)

280. COMMENT: To enhance the economics of zero-emission MDHD vehicles by reducing fueling costs relative to a conventional diesel vehicle, the Department should adopt complementary programs, like commercial electric vehicle rate design and a clean fuel standard. (43)

281. COMMENT: The proposed rules are a critical starting point, but they are not sufficient to achieve the electrification levels required. In addition to the requirements of California's ACT regulation, the Department should develop a second level of goal-setting organized around key vehicle sub-groups. For example, the Class 4-8 group includes school buses, transit buses, drayage vehicles, refuse trucks, short-haul delivery vehicles, and long-haul delivery vehicles. Each of these sub-segments will electrify at different rates and will require different policies and programs to stimulate consumer interest. Further, it will be crucial to proactively protect against cybersecurity threats to networked MDHD vehicle chargers as the MDHD ZEV market grows. This will likely require collaboration among standards organizations, State agencies, the utilities, MDHD vehicle fleet operators, and especially the vehicle and charging equipment vendors. (97)

282. COMMENT: The Department should adopt California's mandates; however, much more is needed. The State needs to stop relying on fossil fuels, reduce idling, and address increasing local truck traffic. Electric vehicles will eventually have the capability to provide power back to the grid through bidirectional charging. The proposed rules do not consider this technological capability. New Jersey should be the first to establish a standard that also takes into account preventative cyber security measures. (19)

RESPONSE TO COMMENTS 262 THROUGH 282: The incorporation by reference of California's ACT regulation is one part of a comprehensive strategy to lower transportation emissions in the State. 53 N.J.R. at 589. As noted in the Response to Comments 131, 132, 133, 134, and 135, neither a single rulemaking, nor a single State agency, can address every aspect of the State's needs as it works to electrify the transportation sector. Thus, the Department and other State

agencies must continue to work collaboratively across economic sectors, levels of government, and through public private ventures to address ZEV charging infrastructure challenges and to reduce the State's overall emissions.

As discussed in the Responses to Comments 140 through 147, the Department recognizes that the build-out of the infrastructure for ZEVs is important to the success of an expanding ZEV market. Accordingly, the Department and other State agencies are coordinating their efforts to ensure policies and programs are in place to facilitate the transition to ZEVs including identifying a role for utilities in medium-and heavy-duty make-ready infrastructure and designing cost competitive and flexible rates.

The Department has "stakeholdered" a number of the complementary policies, such as the Low NO_x Omnibus rule and a Cargo Handling Equipment rule, that were mentioned elsewhere in the comments. And while the Department will continue to evaluate a range of other rules and policies, including those suggested by the commenters, a discussion of those supplemental and complementary rules and programs is beyond the scope of this rulemaking. 283. COMMENT: It is important that the proposed rules are not so rigid or time locked that the State cannot accelerate the transition to electricity more rapidly if technology or other conditions change. (68)

284. COMMENT: Once adopted, California's ACT regulation should be reassessed every five years for potential increases in electrification rates if sufficient electrified options are available in the MDHD vehicle segments. Eventually, the ACT regulation should establish sales mandate percentages for model years after 2035. Further, the Department should couple the high-level goals of climate change mitigation and public health improvement with more segment-specific

market development policies and programs. The State should have a strategic priority to ensure that the new charging infrastructure needed by the MDHD vehicle segment can be provided in a way that avoids adoption constraints and minimizes costs, including the use of advanced technologies, such as energy storage and cyber-security protection measures. (97) RESPONSE TO COMMENTS 283 AND 284: The Department acknowledges the commenters' support of the rules. The Department notes that New Jersey has only two choices when it comes to emission standards: the emission standards set by the EPA or those set by California. After careful analysis, the Department has determined that California's ACT regulation is more in line with New Jersey's objectives, than are the Federal standards. The Department's authority to amend the adopted rules is limited by the requirements of the CAA. See 53 N.J.R. at 601, proposed N.J.A.C. 7:27-31.4(e). Nonetheless, New Jersey and other states that adopt California's ACT regulation by reference will be in regular communication with CARB about any proposed changes, including those concerning changes in the stringency of sales requirements that would be technologically and economically prudent and reasonable.

285. COMMENT: There is precedent for public funding for the capital expenses of all public transportation providers. On a smaller scale, in 2012 when a requirement to retrofit older buses with diesel particulate filers was adopted, the State of New Jersey funded the filters for all operators. On a larger scale, through the State's Bus Allocation Program, NJ Transit purchases buses for both itself and for private bus companies. If NJ Transit is now purchasing electric buses rather than diesel buses for itself, what does it plan for the Bus Allocation Program? Operators of commuter bus lines are able to sustain those routes only if the farebox revenues exceed their costs. The cost of an all-electric motor coach is about twice as much as

an equivalent diesel bus. Given the range issues, operators will likely also need to expand their fleets. Electric charging stations can cost between \$80,000 and \$150,000 for each station. That does not include the cost to run the power to them, which is several thousand dollars, provided the facility has enough power to supply the charging stations with the proper voltage and amperage. Not only are charging stations and ports expensive, but they require reallocation of existing space used for other essential purposes. Funding will need to be made available to sustain the program, so that private providers of public transportation can continue to operate in whatever new framework is adopted. Monies from the Regional Greenhouse Gas Initiative would be insufficient to fund such a significant purchase of electric buses and the associated infrastructure. Any transition to electric buses must be over a long period of time to allow for the planning, funding, and building of the necessary systems, addressing potential grid issues, availability of equipment and trained technicians, and the gradual elimination of clean diesel buses over time as the State ramp's up to electric buses. A rapid move to the electrification of buses, without appropriate financial assistance, will make operations untenable. (44) RESPONSE: As discussed in the notice of proposal Summary, 53 N.J.R. at 590, certain vehicles are excluded from the deficit and credit generation requirements under the adopted rules. Specifically, California's ACT regulation defines an excluded bus to include most full-size transit and intercity buses. See 13 CCR 1963(c)(11). Thus, specific concerns related to transit buses are beyond the scope of this rulemaking. However, the Department notes that separate legislation establishes requirements for NJ Transit to move toward zero-emission bus purchases beginning in 2024. See N.J.S.A. 48:25-3a(9)(a). To that end, NJ Transit has released a roadmap to a 100 percent zero-emission bus fleet. https://www.njtransit.com/zero-emission-buses. Thus, the

commenter is encouraged to engage with NJ Transit on its plans for electrification of New Jersey's transit bus system.

286. COMMENT: New Jersey needs electric buses in addition to zero-emission trucks. The exhaust emitted by local and intrastate buses have contributed to health issues. (101) RESPONSE: The Department acknowledges the commenter's support for the rules. The adopted rules do include a provision for buses, but as noted in the Response to Comment 285, certain buses, such as full-size transit buses, are excluded from this rulemaking. Though beyond the scope of this rulemaking, separate legislation establishes requirements for NJ Transit to move toward zero-emission bus purchases beginning in 2024. See N.J.S.A. 48:25-3a(9)(a).

Adopt, But Do More to Mitigate Air Pollution in Overburdened Communities

287. COMMENT: Adopting the proposed rules is necessary to reduce emissions and protect overburdened communities, but these rules would ultimately result in only a small percentage of zero-emission trucks on the road in 2035. The Department must do more. The Department must move forward with additional rules, such as the Low-NO_x Omnibus rule and Advanced Clean Fleets rule to further move New Jersey toward zero-emissions. (41)

288. COMMENT: The proposed rules promise to make substantive emission reductions in the MDHD sector. But much more needs to be done to reduce emissions in the New Jersey communities that disproportionately bear the negative impacts of the region's goods-movement industry. The Department should move swiftly to adopt California's ACT regulation while pursuing further emission reductions at Port Newark and goods-movement centers throughout the State through additional policies. Specifically, the Department must continue

to reduce emissions from MDHD vehicles through adoption of California's Low NO_x Omnibus and Fleet Purchase rules. The Department should adopt fleet purchase mandates to direct early fleet electrification in the communities most overburdened by diesel truck emissions. M.J. Bradley & Associates estimates that moving towards 100 percent zero-emission MDHD vehicle sales by 2035-2040, together with the proposed rules, the Heavy-Duty Omnibus Low-NOx Rule, and a cleaner electricity grid, would lower MHDV NO_x emissions by 97 percent and lower PM emissions by 86 percent in New Jersey by 2050. This three-pronged approach would have significant public health impacts, avoiding 325 hospital visits and 303 premature deaths, which is greater than the projected benefits of the ACT regulation and the Low NO_x Omnibus rules combined. The Department should adopt other California rules, such as the Advanced Clean Fleets rule, California's forthcoming regulations that further limit emissions from transport refrigeration units, regulations to lower emissions from cargo-handling equipment, CARB's Ocean-Going Vessels at Berth regulations, CARB's Commercial Harbor Craft regulations, and a measure like the Warehouse Indirect Source Rule, as adopted by the SCAQMD. Additionally, the Department should explore the implementation of zero-emission zones as a potential framework for reducing dangerous emissions generated by the warehousing and distribution functions of Port Newark. The Department should also take efforts to reduce air emissions from locomotives and railyards, whose emissions have a significant public-health impact given their presence inside residential areas like those of the Ironbound. (87) 289. COMMENT: State policy must include mandatory emissions reductions particularly in overburdened people of color communities. Allowing electrification to be powered by fossil fuel plants, which are almost universally located in these communities, would perpetuate the

disparate burdens and harms to these communities. Electrification and charging stations must be powered by 100 percent renewable energy. (5)

290. COMMENT: The Department's adoption of California's ACT regulation is only a first step. The ACT regulation will result in an electrification of approximately 15 percent of all trucks on the road in New Jersey. To meet the State's climate and clean air goals, every truck on the road needs to be a zero-emission vehicle. The Department should take the lead from impacted communities on what additional policies look like to ensure and prioritize a reduction of harmful truck-related air pollution in environmental justice communities. (69)

291. COMMENT: As the proposed rules move forward, it is imperative the State works on increasing the number of electric charging stations throughout New Jersey. The State should also explore complementary policies that help alleviate pollution burdens through implementing additional "zero-emission zones," further electrify heavy-duty machinery near ports and other industrial areas and continue to work with environmental justice communities to include mandatory emission reductions within overburdened communities. (73) 292. COMMENT: The proposed rules should include mandatory emission reductions for low-income, black, indigenous, and people of color communities. Additionally, the Department should adopt complementary rules that address the reduction of cumulative impacts. (89) 293. COMMENT: Every opportunity to reduce health harming emissions in communities of color and low-income communities should be explored. Accordingly, the Department should go above and beyond the proposed rules by taking the lead from environmental justice communities. (15)
294. COMMENT: The Department should include specific language to guarantee emissions reductions for environmental justice communities, and the need to take additional measures to specifically reduce cumulative impacts. (92)

295. COMMENT: The Department should adopt California's ACT regulation. Additionally, the Department should adopt specific goals for MDHD vehicles that operate in overburdened communities. The Department should implement incentives to ensure emissions goals are met. And school bus electrification should be a top priority for incentives in order to limit children's exposure to emissions. (21)

296. COMMENT: The Department should commit to prioritize zero-emission truck deployments and benefits to frontline communities in its subsequent regulations. (64)

297. COMMENT: The Department needs to move faster and more aggressively, especially in our overburdened communities where freight and goods movement are concentrated. Not only should there be mandatory reductions in overburdened communities of color, this electrification should be powered by renewable energy. In addition to adoption of California's ACT regulation, the Department should adopt complementary rules, such as the Low-NO_x Omnibus Rule, the Advanced Clean Fleet Rule, the cargo handling equipment rules, and the harbor craft rules. The Department should mandate and prioritize emission reductions at a faster pace in port and freight-adjacent communities. The Department should implement policies that target and mandate zero-emission zones, corridors, and warehouses where only electric trucks are allowed and are incentivized. This would be particularly essential in overburdened communities. The Department should consider some binding resolutions and other policies that some California communities have done pursuant to Community Benefit

Agreements. The Department should not convert fossil-fuel port trucks to electric, on the backs of low income, independent owner-operators. The Department should reject implementation of the Transportation Climate Initiative in New Jersey. (32)

298. COMMENT: New Jersey needs to adopt California's ACT regulation while also considering a broader suite of policies that go beyond the California Low NO_x Omnibus and Advanced Clean Fleet rules. For example, the Department should consider reducing the upfront cost of zeroemission vehicles and infrastructure through rebate and incentive programs and innovative financing; providing the fueling/charging infrastructure required by increasing numbers of zeroemissions vehicles; ensuring that charging stations are well-suited to maximizing the grid and environmental benefits of zero-emission vehicles; undertaking comprehensive marketing, education, and outreach that leverages the core competencies of different agencies and successfully engages communities, in addition to helping ensure that smaller businesses are able to benefit from this transition; looking closely at worker classification issues and investing in businesses that have employees rather than independent contractors; implementing technology and price signals to ensure efficient operation of the system as a whole; and developing a more comprehensive network of air pollution monitors across the State. Additionally, the Department should design policies to effectively further the transition to zeroemission vehicles need to ensure that communities most impacted by harmful air pollution are prioritized. Specifically, the Department should explore policies that would allow for regulatory actions that would provide clear and mandatory reductions in air pollution levels in environmental justice communities. The Department must make sure it is reaching out to communities to proactively inform them of rulemaking activities and ensure they are soliciting

input from community-based organizations, environmental justice advocates, and other grassroots community leaders as the policies are being developed. The Department must ensure that these groups have a significant, meaningful role in actual implementation. (70) 299. COMMENT: It is important that the Department increase the share of renewable electricity generation to achieve maximum emissions reductions through adoption of ZEVs and to reduce health equity issues caused by pollution exposure shifts from power use areas to power generation locations. (37)

300. COMMENT: While the Department should adopt the proposed rules, which will play an important role in achieving mandatory emissions reductions, the rules are not the only policy necessary to achieve the necessary emission reductions. The State must continue to actively work for mandatory emission reductions in environmental justice communities. Additionally, the proposed rule should never be considered a complementary policy and/or justification for the State entering the Transportation Climate Initiative. (5)

301. COMMENT: The Department should adopt the proposed rules, but should also include specific language on direct action targeting environmental justice communities in order to address environmental racism. (86)

302. COMMENT: While the Department should adopt the proposed rules, the rules do not contain explicit environmental justice community language. There is evidence that in New Jersey, environmental justice communities suffer from a disproportionate amount of pollution when compared to other communities in the State. Therefore, the Department should adopt supplementary policies and rules in a timely fashion to ensure the proposed rules will result in emissions reductions in environmental justice communities without an undue delay. California

recognized the need to adopt policies that directly and explicitly forced emission reductions in environmental justice communities. Thus, the Department should develop and implement supplemental regulations to ensure the proposed rules result in rapid emissions reductions in environmental justice communities. For example, supplemental regulations could require trucking companies that are based in environmental justice communities to use the portion of their fleet that is composed of zero-emission vehicles in those communities; the use of zeroemission trucks could be accelerated in environmental justice communities; consideration could be given to only allowing the use of ZEVs in environmental justice communities; or a fee could be assessed against non-zero-emission trucks that conduct business in environmental justice communities. These are just a few examples of policies that, after they are fully developed, could be implemented to make certain California's ACT regulation delivers emissions reductions in environmental justice communities soon after enactment. Additionally, the Department should implement a policy that calls for power plants that are either located in environmental justice communities, or whose air pollution emissions significantly impact environmental justice communities, to be required to reduce those emissions. This would reduce greenhouse gas co-pollutants, such as fine particulate matter, that are detrimental to the health of residents who live near the plants. These co-pollutants are part of the disproportionate pollution burdens affecting environmental justice communities and, thus, reducing them also diminishes the burdens. The Department should not rely on the Regional Greenhouse Gas Initiative (RGGI) or the Transportation and Climate Initiative to deliver emission reductions to geographically identifiable environmental justice communities since the

former is fully a carbon-trading system and the latter will utilize a carbon-trading system at its core. (84)

RESPONSE TO COMMENTS 287 THROUGH 302: The Department acknowledges the commenters' support of the rules. The Department agrees that more work is necessary to ensure greater direct emissions reductions in overburdened communities and is coordinating with other State agencies and overburdened communities to ensure equity in vehicle and infrastructure incentive programs and accelerate the transition to renewable energy. In addition, actions are being proposed by the BPU to identify a role for utilities in medium- and heavy-duty make ready infrastructure. Pursuant to the Regional Greenhouse Gas Initiative (RGGI) strategic funding plan and the distribution of Volkswagen settlement funds, the Department and other State agencies are focused on working with overburdened communities to ensure equitable benefits from vehicle electrification and will continue to target funding for electrification in such communities and implement policy strategies that maximize benefits and emission reductions in overburdened communities that may have the poor air quality and greatest need. The Department acknowledges the input and concerns about market-based credit trading systems, such as the Transportation and Climate Initiative's regional low carbon transportation policy (TCI), as well as the other recommendations concerning supplementary and complementary rules and policies.

Though these comments are beyond the scope of the current rulemaking, the Department notes that it will continue to evaluate a variety of both regulatory mandates and revenue sources to support incentive programs that can accelerate transportation electrification programs, reduce emissions, and directly address emission and equity issues in

overburdened communities in a collaborative manner. The Department's continued efforts will include, but not be limited to, implementation of the Environmental Justice Law, N.J.S.A. 13:1D-157 et seq., as well as engagement directly with stakeholders to explore additional measures within its authority.

FLEET REPORTING REQUIREMENTS

General Support

303. COMMENT: The Department should adopt the Fleet Reporting Requirements rule. (5, 67, and 87)

304. COMMENT: The Department's proposed Fleet Reporting Requirements rules are a great step in the right direction of securing clean air for all communities, especially those disproportionately burdened, and helping the State achieve its emissions reductions goals.

(73)

305. COMMENT: The Department's proposal to adopt a Fleet Reporting Requirements will provide necessary information to the Department and the public about MDHD fleets in the State. (35 and 87)

306. COMMENT: The proposed, one-time fleet reporting requirement will help inform the development of policies and programs needed to facilitate MDHD ZEV deployment and should be adopted. (97)

307. COMMENT: The Department's efforts to gain information about MDHD vehicle fleets through the Fleet Reporting Requirements will be invaluable if the Department takes further actions to accelerate the deployment of zero-emission vehicles. Fully electrifying the MDHD

vehicle fleet in New Jersey will be aided by effective deployment of and investment in charging infrastructure to serve that fleet. (25)

RESPONSE TO COMMENTS 303, 304, 305, 306, AND 307: The Department acknowledges the commenters' support of the rules.

Lower the Reporting Threshold and/or Require More Frequent Reporting

308. COMMENT: In order to adequately meet the needs of fleet operators, the State needs to understand the makeup, locations, and operations of existing fleets. While California set a precedent for a one-time reporting requirement for private fleet owners with 50 or more vehicles, this reporting threshold is too high to adequately capture existing fleets in New Jersey. The Department should adopt a minimum reporting threshold of 10 vehicles to capture at least a third of New Jersey's MDHD vehicle fleets. Additionally, the Department should be performing annual evaluations to ensure the existing threshold remains adequate. The data gathered through a lower threshold will help New Jersey craft supporting policies and incentives to ensure the success of the ACT regulation, the rapid decarbonization of the sector, and the near-term unlocking of the long-term cost savings our members seek.

(46)

309. COMMENT: The Department's proposal of a 50-vehicle threshold for the Fleet Reporting Requirements will capture only a small fraction of the number of MDHD vehicles in New Jersey, as demonstrated by the Department's data. As such, the Department should lower the threshold of the rules. (5, 25, 35, 68, 69, 70, and 87)

310. COMMENT: The Department should reduce the fleet size for purposes of reporting pursuant to the Fleet Reporting Requirements. The requirements for a fleet should be reduced from 50 trucks to five. (5, 35, 40, 56, 68, 70, and 87)

311. COMMENT: The current 50-truck threshold in the fleet reporting requirement proposal will cover only 33 percent of total MDHD vehicles. It should be lowered to 10 or 15 to capture the most trucks. (28)

312. COMMENT: The Department should adopt the Fleet Reporting Requirements with a significantly lower fleet threshold. (6 and 25)

313. COMMENT: The Department should modify its fleet reporting requirement rules to decrease the reporting threshold to five or more to capture a larger share of the trucks in operation in the State and better reflect New Jersey's fleets. (64)

314. COMMENT: The Department should change the proposed fleet reporting requirements to a five-truck threshold. Right now, only 33 percent of trucks would be captured by the proposed 50-vehicle fleet threshold. (32)

315. COMMENT: The Fleet Reporting Requirements should be revised to lower the threshold to capture the fleets that operate in environmental justice communities. (85)

316. COMMENT: The Department should strengthen the Fleet Reporting Requirements to cover more fleets. (69 and 77)

317. COMMENT: The Department should require all tractors and drayage trucks to submit reports under the Fleet Reporting Requirements. Small fleet owners and contract drivers are the least likely to have information or resources to be able to shoulder the upfront costs of switching to ZE MHDVs, notwithstanding savings over the lifetime of the vehicle. Information

about these vehicles will help the Department and other New Jersey agencies conduct outreach and better direct resources to this segment of the industry. At the very least, the Department should set a reporting threshold of no higher than five vehicles for tractors and drayage trucks to ensure that the majority of trucks serving the Port Authority of New York and New Jersey facilities are covered by the rule. (35 and 87)

318. COMMENT: The Department should require annual fleet reporting. (5)

319. COMMENT: The Department should make the Fleet Reporting Requirements an annual reporting mandate, rather than a one-time requirement. (6 and 32)

320. COMMENT: The Department should modify its Fleet Reporting Requirements proposal to have reporting occur on a more regular basis. (64)

321. COMMENT: The Department should change the one-time-only reporting requirement into an annual or biennial reporting requirement. (40)

322. COMMENT: The Department should consider changing the Fleet Reporting Requirements from a one-time-only reporting system to a periodic reporting system. Between now and 2035—let alone between now and the target deadline for New Jersey's decarbonization goals in 2050—the nature, use, makeup, and charging needs for the State's MDHD vehicle fleets will change significantly. The Department needs to ensure that the data it collects are not only currently useful, but also that the data remain both current and useful as the State's fleet transforms, which means collecting information periodically and longitudinally. (25) 323. COMMENT: The fleet reporting requirements should be annual. Simply put, a one-time reporting requirement does not capture ongoing changes in the market; an annual reporting

requirement will better ensure that the State can capture benefits and make any course correction necessary. (70)

324. COMMENT: The Department should require yearly reporting for the initial period of the ACT Rule's implementation to better track the impacts and benefits of the rulemaking. (35, 68, and 87)

RESPONSE TO COMMENTS 308 THROUGH 324: A 50-vehicle threshold will capture only some of the fleets in New Jersey. However, new N.J.A.C. 7:27-33.3(a)1 requires several other categories of vehicle owners to report information if they have one or more vehicles. Specifically, any entity with gross annual revenues greater than \$50 million in the United States for the 2021 tax year that operated a facility in New Jersey in 2021 must report; as must any Federal, State, or local government agency; and any broker or other entity that dispatched 50 or more vehicles into, or throughout, New Jersey and operated a facility in New Jersey. Acquiring information from all of these entities will help inform any potential future rules. The Department will need time to evaluate the information received in response to the adopted rules. If, after careful analysis, the Department determines that there are gaps in the quality or quantity of information received, the Department may require additional information or convene additional stakeholder meetings before proceeding with any future policy or rulemaking efforts.

Support but Require More Detailed Information on Brokers and Contract Truckers

325. COMMENT: The Department should get more detailed information from brokers. (32) 326. COMMENT: The Department should ask for more detailed information about brokers and contract truckers to better understand their business practices and help devise more equitable

strategies that do not place all of the financial burden of electrification on contract drivers, who make up over 75 percent of all port drivers. (5, 35, 68, and 87)

327. COMMENT: Information on brokerage and contract drivers should be collected in order to help ensure fair business practices and help to avoid the misclassification of workers as independent contractors. (35, 70, and 87)

328. COMMENT: The Department should make sure to cross-reference the reported information with information under the entity's Federal Motor Carrier Safety Administration broker registration, its U.S. Department of Transportation number, and other identification to ensure that all contracted trucks are being reported to Department. To assist in crossreferencing and ensure that no contracted trucks fall through the cracks, the Department should also ask reporting entities to report the vehicle identification numbers of all vehicles owned or brokered by the entity. (35 and 87)

329. COMMENT: The Department should require that all contracted trucking logistics fleets be subjected to the Fleet Reporting Requirements. (40)

330. COMMENT: The Fleet Reporting Requirements should include data on contract trucking operations, employee misclassification, and asset risk because the Department should be collecting information on small- and medium-sized fleets as well. (61 and 92) RESPONSE TO COMMENTS 325, 326, 327, 328, 329, AND 330: The adopted rules require brokers to provide additional information and details about contracted trucking practices, as well as keep and provide records about dispatched trucks on request. This will enable the Department to better assess how fleets that use contracted trucks operate, especially from the drayage and delivery sectors. The regulation balances the need to collect as much information

as possible with the burden on affected entities. The Department believes the required information is sufficient to broadly characterize industry sectors and to identify business models that may be able to electrify their fleets sooner. If the Department determines that there are gaps in the quality or quantity of information received, the Department may convene additional stakeholder meetings and/or information gathering to discuss future policy or rulemaking efforts. To the extent the comments are concerned with fair business practices or the costs of potential fleet purchase mandates, those issues are beyond the scope of this rulemaking.

331. COMMENT: The Fleet Reporting Requirements should not place all of the cost burden for electrification solely on individual drivers, who are often misclassified as independent contractors. (56)

RESPONSE: The Fleet Reporting Requirements are a one-time reporting requirement with minimal associated costs. If the commenter is referring to the costs associated with California's Advanced Clean Fleet rules, those rules have not been proposed by California or the Department and are beyond the scope of this rulemaking.

Limit Confidentiality

332. COMMENT: Fleet reporting should be made public insofar as is possible; limiting confidentiality will enable stakeholders and impacted communities to understand where and how fleets are operating. (70)

333. COMMENT: The Department should have public disclosure. (32)

334. COMMENT: The proposed rules should limit confidentiality to ensure that the public and the Department have the most up-to-date information. In this way the Department can

determine progress, gaps, and prioritize future policies, accountability, and funding in real time, where the need is greatest. (5)

335. COMMENT: The Department should ensure that any reporting entity's request to keep its information confidential is constructed narrowly to ensure as much public access to this information as possible. (35 and 87)

RESPONSE TO COMMENTS 332, 333, 334, AND 335: As stated in the notice of proposal, the information submitted in response to the Fleet Reporting Requirements would be treated confidentially, only if an entity or person submitting information makes a successful claim of confidentiality pursuant to the procedures set forth at existing N.J.A.C. 7:27-1.

Penalties Should be Revised

336. COMMENT: The Department should revise the penalty provisions at N.J.A.C. 7:27A for the proposed Fleet Reporting Requirements. Given the newness of this responsibility, the Department should anticipate inadvertent violations. Thus, the fee schedule should be revised to have the first offense penalty be an official warning and not \$500.00. The Department should work with leading trade associations and groups to help educate entities that are potentially under this new requirement. (47)

RESPONSE: In the notice of proposal Summary, 53 N.J.R. at 593, the Department explained that based on the criteria at N.J.S.A. 13:1D-129, it determined which of the proposed penalties at N.J.A.C. 7:27A-3.10(m) are minor and subject to a grace period, and which are non-minor and not subject to a grace period. Generally, violations that do not result in excess emissions and, therefore, pose minimal risk to the public health, safety, and the environment, and do not materially and substantially undermine or impair the goals of the regulatory program are

classified as "minor." 53 N.J.R. 593. N.J.A.C. 7:27-33.4(a) requires entities subject to the adopted rule to submit information specified at N.J.A.C. 7:27-33.6 and 33.7. The Fleet Reporting Requirements will help inform potential future strategies to accelerate the sale and use of zero-emission vehicles in the MDHD weight classes. See 53 N.J.R. 591. In response to the comment, the Department reviewed the classification of the violation at N.J.A.C. 7:27-33.4(a), in light of the criteria set forth at N.J.S.A. 13:1D-129 and determined that this violation should be designated minor and subject to a grace period. The Department is, therefore, modifying the penalty table at N.J.A.C. 7:27A-3.10(m)33 on adoption to classify the penalty for a violation of N.J.A.C. 7:27-33.4(a), Failure to submit, as minor.

Further, because this is a new rule, the Department will be implementing a robust outreach and education process prior to the first compliance deadline to ensure that regulated entities are aware of and understand the requirements. Increasing awareness should minimize the number of inadvertent violations.

LEGAL

Clean Air Act: SIP Requirement

337. COMMENT: Under the CAA, New Jersey has the authority to adopt California's ACT regulation because it has nonattainment and maintenance plan provisions approved by the EPA. Clean Air Act Part D, Section 177 specifies, "any State which has plan provisions approved under this part may adopt and enforce for any model year [California] standards relating to control of emissions from new motor vehicles or new motor vehicle engines." 42 U.S.C. § 7507 (emphasis added). The term "Plan provisions approved under this part" applies both to nonattainment plan provisions and maintenance plan provisions, as both such plan types are

approved by the EPA under Clean Air Act Part D. See 42 U.S.C. §§ 7502(c), 7505a (concerning nonattainment and maintenance plans, respectively, both under Part D); see also *Am. Auto. Mfrs. Ass'n v. Comm'r, Mass. Dep't of Env't Prot.*, 31 *F*.3d 18 (1st Cir. 1994) (observing that Section 177 means that "any State which has plan provisions [for the attainment and maintenance of the NAAQS] may adopt and enforce for any model year standards …"). Accordingly, since the EPA has approved multiple New Jersey nonattainment and maintenance plan provisions, New Jersey satisfies the Section 177 requirement to adopt California's ACT regulation. (25, 35, and 87)

338. COMMENT: Section 177 of the CAA authorizes a state to opt into California's standards only if the state has an EPA-approved State Implementation Plan (SIP) and the standards are necessary components of the state's NAAQS attainment demonstration. According to New Jersey's 2017 ozone SIP, the State has met its obligation for the 84 ppb and 75 ppb ozone NAAQS. Additionally, the State's monitors show the State is already close to attaining the 70 ppb ozone NAAQS and must demonstrate attainment several years before its proposed rule could take effect (that is, Model Year 2025). As such, the State is not authorized to opt in under Section 177 because the Department does not need, and cannot rely on, California's ACT regulation as a SIP provision to demonstrate attainment with the ozone NAAQS. (27) 339. COMMENT: If New Jersey is in attainment with the NAAQS, the Department has not demonstrated that the State must adopt California's rules to comply with the NAAQS, which is a predicate to opt-in under Section 177. With the implementation of existing EPA light- and heavy-duty emission standards, New Jersey is expected to attain all NAAQS within the CAA's required timeframes. (31)

RESPONSE TO COMMENTS 337, 338, AND 339: Section 177 of the CAA provides that "any State which has plan provisions approved under [Part D of Subchapter I of the Act] may adopt and enforce for any model year standards relating to the control of emissions from new motor vehicles ..." 42 U.S.C. § 7507. The threshold requirement of Section 177 is that a state "has plan provisions approved under this part [D]." Such approved plan provisions are not limited to states with nonattainment plans (Section 172) but include, for example, states that have achieved attainment, but have approved maintenance plans (Section 175A) or have other approved plan provisions related to their being within the Ozone Transport Region (Section 184), in addition to states with approved nonattainment plans. Once the threshold is met, the CAA plainly gives states the discretionary authority to determine what California "standards relating to the control of emissions from new motor vehicles" to adopt, subject only to the identicality and lead time requirements. This authority is granted directly, and exclusively, to states. There is no requirement at Section 177 for demonstrating need, let alone need into the future. New Jersey has nonattainment and maintenance plan provisions approved by the EPA. The Department is, therefore, authorized to adopt California's ACT regulation pursuant to Section 177.

Clean Air Act: Identicality Requirement

340. COMMENT: The Department should reject invitations to defer adopting California's ACT regulation until 2022 because such delay could hamper the Department's application of the standards to the 2025 model year. Section 177 requires New Jersey to "adopt [California] standards at least two years before commencement of [the vehicle] model year (as determined by regulations of the [EPA] Administrator)." 42 U.S.C. § 7507; see also 40 CFR 85.2302, 85.2303,

85.2304(a) (noting that "model year" can mean the "manufacturer's annual production period," which in turn can start as early as "January 2 of the calendar year preceding the year for which the model year is designated"). So delaying adoption of California's ACT regulation may delay the first model years that New Jersey could address. To ensure New Jersey can implement the ACT Rule beginning with model year 2025 trucks, the Department should adopt the rules before 2022. Likewise, there is no legal requirement for the Department to delay incorporation of the ACT regulation until all other California rules concerning MDHD vehicles have been finalized. While the CAA requires the Department to adopt rules that are "identical" to the ACT regulation, adopting the ACT regulation now and future California low-emission MHDV standards later would not contravene this "identicality" requirement because manufacturers would not need to create a "third vehicle" that does not already meet the California or Federal standards. See 42 U.S.C. § 7507; Engine Manufacturers Ass'n v. S. Coast Air Quality Mgmt. Dist., 158 F. Supp. 2d 1107, 1119 (C.D. Cal. 2001), aff'd 309 F.3d 550 (9th Cir. 2002), vacated on other grounds, 541 U.S. 246 (2004) ("Congress' purpose in enacting § 177 is to prevent states from adopting and enforcing standards in a manner that would create a 'third vehicle.'"). The Department can, and should, adopt each MDHD vehicle rule as soon as it can, and not wait until California finalizes all possible MDHV rules. (35 and 87)

RESPONSE: The Department acknowledges the concern about the model year that will be subject to the adopted rules. Accordingly, the Department has chosen model year 2025 to ensure that manufacturers will have the full two-year lead time pursuant to the CAA should their production period differ from the calendar year associated with a vehicle's model year.

341. COMMENT: The ACT Program as the Department would adopt and implement it in New Jersey would not be "identical" to the ACT Program that CARB is implementing in California. The ACT Rule, as adopted in California, requires the manufacturers of MDHD vehicles to sell an increasing percentage of ZEV trucks starting in 2024, with the mandated ZEV sales percentages varying for the different weight classes of MD and HD vehicles. The ACT regulation, as originally adopted in California, applies a percentage-based sales mandates to the total number of MDHD vehicles that a manufacturer sells in California to calculate the specific number and types of ZEV trucks, as sorted into the three weight-class groups, that a manufacturer needs to sell in a given year. The percentages are set forth at 13 CCR 1963.1, Table A-1 and the weight class modifiers are set forth at 13 CCR 1963.1, Table A-2. Basically, a manufacturer generates a "deficit" for each conventionally fueled vehicle it sells in any of the three listed weight-class groups of vehicles. The manufacturer then needs to generate a "credit" to offset that deficit by selling a ZEV truck of the same type, by selling a near-ZEV truck of the same type (which will earn partial credit), or by buying credits from another manufacturer. The credits that a manufacturer earns are weighted (using differing multipliers) based on the vehicle class of the ZEV truck that the manufacturer sells, with larger heavier trucks earning higher credit-multipliers than smaller lighter trucks. The ACT regulation's prescribed ZEV-sales percentages, in essence, are used to calculate the number of deficits that need to be retired each year through a manufacturer's sale of ZEV trucks and generation of corresponding credits. Those required ZEV-sales numbers are directly tied to the numbers and types of MDHD vehicles that a manufacturer sells into the California market each year.

Significantly, the Department is not proposing to utilize the California-sales-based calculations to determine the number of ZEV trucks that would need to be sold in New Jersey under the proposed opt-in to California's ACT regulation. Instead, the Department intends to apply the ZEV-percentage sales mandates and weighting factors (set forth at 13 CCR 1963.1, Tables A-1 and A-2) to the number and types of conventionally fueled MDHD vehicles that a manufacturer sells in New Jersey. To any manufacturer, the ZEV-truck production mandates under the ACT Program are not identical for California and New Jersey in practice because the manufacturing profile for its overall production of ZEV trucks for New Jersey and California will differ.

Significantly, the disparate and non-identical impacts on manufacturers from imposing the prescribed ZEV-sales mandates on differing mixes of truck sales in the two States will be exacerbated even more – multiplied, in fact – once the ACT program's various ZEV-credit multipliers (weighted differently for the three different weight-class groupings) are applied to manufacturers' differing mixes of trucks sold each year in the two states. That multiplying effect of the very real differences between the implementation of the ZEV mandates makes it even more apparent that the ACT Program would not apply identically to manufacturers selling trucks in New Jersey and California. The net result is that the Department is not authorized to adopt the ACT Program under CAA Section 177.

The ACT Program as the Department has proposed to adopt it is non-identical to California's in another important aspect as well. More specifically, under California's ACT Rule, MDHD manufacturers can generate and "bank" early credits by selling ZEV trucks starting this year, in 2021, which gives manufacturers a three-year window to generate ZEV credits before

they start to accrue deficits in 2024 for their sales of conventionally fueled vehicles in California. (27)

RESPONSE: The identicality requirement of Section 177 of the CAA is intended to prevent states that adopt a California vehicle emission standard from requiring or causing a manufacturer to create a motor vehicle or engine that is different than the motor vehicle or engine certified in California under the California standard. This prohibition is also sometimes referred to as a prohibition on the creation of a "third vehicle." 42 U.S.C. § 7507. The commenters' concern, as the Department interprets it, is that the use of New Jersey salesbased data when determining the prescribed ZEV-percentages to be applied to manufacturers will result in a different number and mix of MDHD vehicles sold in California than in New Jersey, which would violate the identicality requirement of Section 177 of the CAA.

The Department agrees that, factually, New Jersey vehicle sales numbers and fleet mixtures will not be identical to those in California. The adopted rules are designed as a credit/deficit program. A manufacturer's overall sales of MDHD vehicles (conventionally fueled and ZEV technology) will dictate the number of deficits it incurs and, therefore, the number of credits that must be used to offset those deficits. Below is an example of the rules' implementation if the Department were to apply the commenter's interpretation (that is, apply California's sales-based data when determining the prescribed ZEV-percentages to be applied to manufacturers in New Jersey):

Manufacturer A has 10,000 total sales of Class 2b/3 vehicles in California in MY 2025, but has 1,000 total sales of Class 2b/3 vehicles in New Jersey in MY 2025. Under the commenter's scenario and pursuant to Table A-1, New Jersey should calculate Manufacturer

A's deficits for Model Year 2025 in New Jersey based upon 7 percent of Manufacturer A's

10,000 sales in California. This would result in Manufacturer A incurring a total of 700 deficits in New Jersey that would need to be offset with 700 credits, which could only be earned through direct ZEV sales in New Jersey. Despite the fact that Manufacturer A's sales of all MDHD (conventionally fueled and ZEV technology) vehicles in New Jersey totaled only 1,000, Manufacturer A would need ZEV credits equaling 700 vehicle sales. Put another way, ZEV credits would have to account for 70 percent of their total sales in this weight class. Thus, the credits and deficits incurred by a manufacturer operating in the New Jersey market would have no relationship to that manufacturer's market share in this State.

The Department is confident that using New Jersey sales-based data will not result in the creation of a "third car" as prohibited by Section 177 of the CAA. All MDHD vehicles developed by a manufacturer to meet California's emission requirements can be used to fulfill any New Jersey requirement. No additional engine certifications or vehicle models will need to be created specific for New Jersey because the engine and vehicle standards, as well as the rules' percentages used to calculate the deficits incurred by a manufacturer will be identical to the standards and percentages used in California. For clarity, this scenario does not substantially differ from the manner in which New Jersey implements California's light-duty vehicle emission standards pursuant to N.J.A.C. 7:27-29. California and New Jersey do not have identical sales volume nor exact fleet mixes in the light-duty vehicle sector, yet pursuant to New Jersey's Low Emission Vehicle Program (LEV Program), the vehicle standards and sales percentage requirements in California and New Jersey rules are identical. And no manufacturer

has been required to develop a third vehicle to fulfill a requirement pursuant to the LEV program, which has been in operation since model year 2009.

With respect to the concern about early generation of credits, the Department does not agree that this creates an identicality issue. Again, this provision does not result in the creation of a third vehicle. Nonetheless, the Department has reconsidered its position on this issue and has determined it will modify N.J.A.C. 7:27-31.3 and 31.4(j) on adoption to allow New Jersey manufacturers to accrue credits beginning in MY 2022, rather than MY 2024 as proposed. This will provide the same three-year period of early credit banking that California has provided and will ensure that manufacturers selling in New Jersey are not at a disadvantage.

342. COMMENT: States must adopt regulations that are identical to California's rules in order to avoid Federal preemption. The Department concedes that it is not identical to California. For example, in the proposal, the Department admits that there are "key differences between the reporting requirements of California's ACT regulation and the Department's proposed rules." Further, the notice of proposal highlights the differences in the banking of early adoption credits. Though the Department calls its proposal "nearly identical" to California's regulations, that does not meet the statutory requirements to be "identical." (31)

RESPONSE: As explained in the notice of proposal Summary, the Department did not propose to incorporate by reference the provisions of California's ACT regulation that included a onetime fleet reporting requirement. As discussed in the Response to Comment 341, Section 177 of the CAA is intended to prevent states that adopt a California vehicle emission standard from requiring or causing a manufacturer to create a motor vehicle or engine that is different than the motor vehicle or engine certified in California under the California standard. The reporting

requirements are not emission standards within the meaning of Section 177 of the CAA as they have no relationship to any manufacturer's engine production. Thus, there is no identicality concern. To the extent the commenter is concerned about the banking of early credits, see the discussion in the Response to Comment 341.

Clean Air Act: Waiver Requirement

343. COMMENT: Section 177 of the CAA authorizes states to adopt and enforce California's emission standards if the EPA issued a preemption waiver to California and the standards are necessary for the State to come into compliance with the national ambient air quality standards (NAAQS). No waiver is in effect for California's ACT regulation. Therefore, the Department's proposed rules are in conflict with the Federal statute, even if the Department defers enforcement until a waiver is granted. Additionally, there is uncertainty for manufacturers because of the EPA's current revocation of California's waiver and what standards would apply to what model years if the waiver is reinstated. As a legal and policy matter, the Department should wait the outcome of the waiver proceeding. The Department has cited no authority for a "contingent" rulemaking, which raises fairness and due process concerns. (31)

RESPONSE: The Department is authorized to adopt California's standards before the EPA has granted a waiver, as long as the Department does not enforce the standards until the waiver is obtained. *Motor Vehicle Mrfs. Ass'n v. New York State Dep't of Envtl. Conservation*, 17 *F*.3d 521, 533-34 (2d Cir. 1994). Section 177 of the CAA requires the State to provide a two-year lead time, which provides manufacturers and interested parties sufficient time to prepare for the State's opt-in. The Department presumes that "waiver revocation" refers to the EPA's

action related to California's Advanced Clean Car program. See 78 FR 2112 (Jan. 9, 2013). The EPA recently published notice of its reconsideration of this action. 86 FR 22421.

Authority Under State Law: Advanced Clean Trucks Program

344. COMMENT: The Air Pollution Control Act does not provide the Department with the authority to incorporate by reference California's ACT regulation. When the Department adopted the California passenger vehicle and light duty truck program, it did so with the authorization of a statute passed by the Legislature. Nothing in the Global Warming Response Act gives the Department additional regulatory authority; it only directs the Department to use its existing authorities to achieve a certain policy outcome. Thus, the Department is without the authority to adopt the proposed rules absent specific legislative authorization. (12) 345. COMMENT: The Department has authority under New Jersey State law to adopt this rulemaking. The New Jersey Legislature has strongly communicated to the Department that the agency must act quickly to reduce pollutants. First and foremost, the Legislature has granted the Department-wide authority to protect air quality through the regulation of polluting sources. See N.J.S.A. 26:2C-8(a) ("The department shall have power to formulate and promulgate, amend and repeal codes and rules and regulations preventing, controlling and prohibiting air pollution throughout the State or in such territories of the State as shall be affected thereby"); see also American Petroleum Institute v. New Jersey Dept. of Environmental Protection, 230 N.J. Super 563, 565 (App. Div. 1989) (noting the "presumption of validity to which [the Department is] entitled" because of "conformance with the legislative goals of the enabling statute and their evident inclusion within the scope of the delegated administrative authority.") In re Adoption of Amendments and New Regulations at N.J.A.C. 7:27-27.1, 392 N.J.

Super 117, 118 (App. Div. 2007), certif. denied 192 N.J. 295 (upholding rules issued under "[the Department's] broad authority to issue health-based regulations under N.J.S.A. 26:2C-8.") Further, the New Jersey Legislature has, of course, not only directed the Department to reduce conventional pollutants, but also has specifically issued a directive to reduce greenhouse gas emissions. N.J.S.A 26:2C-40(a) ("No later than January 1, 2050, the greenhouse gas emissions in the State shall be stabilized at or below the 2050 limit and shall not exceed that level thereafter"); N.J.S.A 26:2C-39 (defining "2050 limit" as "the level of greenhouse gas emissions equal to 80 percent less than the 2006 level of Statewide greenhouse gas emissions"). (25) RESPONSE TO COMMENTS 344 AND 345: New Jersey's Air Pollution Control Act gives the Department broad authority to promulgate rules "preventing, controlling and prohibiting air pollution throughout the State," including air contaminants from motor vehicles. N.J.S.A. 26:2C-8 and 8.1. The statute defines "air pollution" to include "the presence in the outdoor atmosphere of one or more air contaminants in such quantities and duration as are, or tend to be, injurious to human health or welfare, animal or plant life ..." N.J.S.A. 26:2C-2. The GWRA finds and declares that greenhouse gases "increase temperatures in the atmosphere" and that "if steps are not taken to reverse these trends, the effects on human, animal and plant life on Earth may be catastrophic." N.J.S.A. 26:2C-38. The Legislature further declared that a comprehensive strategy to reduce greenhouse gas emissions 80 percent below the 2006 level by the year 2050 is in the public interest. N.J.S.A. 26:2C-38. Likewise, the GWRA declares that the State should implement cost-effective measures to reduce emissions of greenhouse gases. N.J.S.A. 26:2C-45. As noted in the notice of proposal, the purpose of the Department's adopted rules is to reduce emissions of air pollution that is injurious to human, animal, and plant life –

namely, NO_x and PM_{2.5}, and greenhouse gases. See 53 N.J.R. at 590. The reduction in CO₂ emissions expected as a result of the proposed rules will serve as an initial step in the State's comprehensive approach toward reducing emissions of greenhouse gases from the transportation sector. See 53 N.J.R. at 589. Thus, the Department has legislative authority under State law to incorporate by reference California's ACT regulation. For a discussion of New Jersey's authority under the CAA to adopt California's ACT regulation, see the Responses to Comments 337, 338, 339, 340, 341, 342, and 343.

Authority Under State Law: Fleet Reporting Requirements

346. COMMENT: The Department is without the legal authority to adopt the Fleet Reporting Requirements. Trucks are not currently regulated directly by the Department, nor are the businesses that own those trucks. It is possible that the majority of truck owners in this State have no regulatory connection to the Department. Yet, the Department believes it has the legal authority to require any business or truck owner in the State to submit documentation to it under penalty of law. (12)

RESPONSE: As noted in the Response to Comments 344 and 345, the Department has broad authority to promulgate rules addressing air pollution and air pollution sources pursuant to the APCA. See N.J.S.A. 26:2C-2. Moreover, the Department has the authority to require the filing of reports by persons engaged in operations that may result in pollution. See N.J.S.A. 13:1D-9 and 26:2C-9. The goal of the fleet reporting requirement rules is to gather information from the operators and owners of MDHD vehicles in New Jersey, to inform future actions to increase the use of ZEVs, which would reduce emissions of air pollution from the transportation sector. Accordingly, the Department has authority to require a one-time report by owners and

operators of MDHD vehicles that contribute to the overall emissions of the transportation sector.

Summary of Agency-Initiated Changes upon Adoption:

1. N.J.A.C. 7:27-31.4 identifies the specific provisions of the CCR that are incorporated by reference into new N.J.A.C. 7:27-31. N.J.A.C. 7:27-31.4(g) specifies that in all provisions of CCR Title 13 incorporated by reference, "California" is replaced with "New Jersey," except as specified. The Department is modifying N.J.A.C. 7:27-31.4(g) upon adoption to include 13 CCR 1963(e), which exempts manufacturers with fewer than 500 annual MDHD vehicles sales in California, in the list of excepted CCR provisions. Therefore, as adopted, "New Jersey" does not replace "California" at 13 CCR 1963(e), incorporated by reference, and manufacturers with fewer than 500 annual MDHD vehicle sales in California are exempt. The Department is making this change upon adoption to maintain consistency with California's program.

N.J.A.C. 7:27-33.3, 33.4, and 33.6, Reporting year and submission date for fleet reporting requirements

2. N.J.A.C. 7:27-33.5 outlines the general requirements for entities that are subject to the requirements at new Subchapter 33. The Department proposed to collect data from 2021, to be reported by April 1, 2022. 53 N.J.R. 592. The Department is modifying the rule upon adoption to change the date of the data to be collected from 2021 to 2022, given the continuing impact of the COVID-19 pandemic on the economy and to ensure that the information collected more accurately represents the operations of reporting entities, as the Department intended. *Ibid*. Accordingly, the Department is modifying N.J.A.C. 7:27-33.3(a)1 through 5, 33.4(g), and 33.6(a)11, 14, and 16 to replace 2021 with 2022. Because the

Department is modifying the year of data collected, the Department is also modifying N.J.A.C.

7:27-33.4(a) upon adoption to delay the date for submission from April 1, 2022, to April 1,

2023.

Federal Standards Statement

Executive Order (EO) 27 (1994) and N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c. 65), require State agencies that adopt, readopt, or amend State rules to which the EO and statute apply, to provide a Federal standards statement. If those rules exceed any Federal standards or requirements, the agency must also include in the rulemaking document a Federal standards analysis.

ACT Program

The Federal CAA (42 U.S.C. §§ 7401 et seq.) granted the State of California, which has some of the worst air pollution in the nation, the authority to enact stricter emission standards than the national standards set by the EPA. See 42 U.S.C. § 7543. The CAA also authorizes qualifying states to adopt and enforce emission standards for which California has received a waiver, if the states give two years' lead time. See 42 U.S.C. § 7507. Thus, once the EPA grants California's request for a waiver for the ACT regulation, pursuant to 42 U.S.C. § 7543, the Advanced Clean Trucks program that the Department proposes to incorporate by reference will be a Federally authorized standard. If, however, a waiver is not granted, the rules will not be applied or enforced pursuant to N.J.A.C. 7:27-31.3. Given the framework of the CAA, the ACT program rules would not exceed a Federal standard once a waiver is granted. Accordingly, no Federal standards analysis is required.

Fleet Reporting Requirements

The information gathered pursuant to the proposed fleet reporting requirements will assist the Department by informing future strategies that may be implemented to increase use of zero-emission vehicles over 8,500 pounds gross vehicle weight rating. Because there are no comparable rules or Federal standards, no Federal standards analysis is required for the fleet reporting requirements.

Full text of the adoption follows (additions to proposal indicated in boldface with asterisks

thus; deletions from proposal indicated in brackets with asterisks *[thus]*):

7:27-31.3 Applicability

(a) Upon publication, in the Federal Register, of the final notice of California's receipt of a waiver from the United States Environmental Protection Agency, pursuant to 42 U.S.C. § 7543, for the Advanced Clean Truck Regulation, set forth at 13 CCR §§ 1963 through 1963.5, this subchapter shall apply to:

1. (No change from proposal.)

2. Beginning with the model year *[2024]* ***2022***, any manufacturer that produces onroad vehicles over 8,500 pounds GVWR may generate, bank, and trade ZEV and NZEV credits pursuant to 13 CCR §§ 1963.2, as incorporated by reference herein.

7:27-31.4 Incorporation by reference

(a)-(d) (No change from proposal.)

(e) On or after (*[the operative date of this new subchapter]* ***December 31, 2021,*** or the operative date of California's regulations, whichever is later), new California rules,

amendments, supplements, and other changes, brought about through administrative or judicial action, automatically incorporated through the prospective incorporation by reference process, shall be effective upon publication in the California Regulatory Notice Register and operative on the operative date cited by California in the relevant California Regulatory Notice Register notice, unless the Department publishes a notice of proposal repealing the adoption in New Jersey of the California regulation in whole or in part, and/or proposing to otherwise amend the affected New Jersey rules.

(f) (No change from proposal.)

(g) In all provisions of CCR Title 13 incorporated by reference, replace "California" with "New Jersey," except at 13 CCR 1963(c)(11), (12), and (13) and ***13 CCR 1963(e) and***, wherein the terms "excluded bus," "executive officer," and "gross vehicle weight rating" or "GVWR" are defined.

(h)-(i) (No change from proposal.)

(j) In all provisions of CCR Title 13 incorporated by reference, replace the year "2021" with the year *["2024,"]* ***"2022,"*** except at 13 CCR § 1963.2(g).

7:27-33.3 Applicability

(a) The provisions of this subchapter apply to each of the following entities:

 Any entity with gross annual revenues greater than \$50 million in the United States for the *[2021]* *2022* tax year, including revenues from all subsidiaries, subdivisions, or branches, that operated a facility in New Jersey in *[2021]* *2022* and had one or more

vehicles over 8,500 pounds GVWR under common ownership or control that were operated in New Jersey in *[2021.]* ***2022;***

2. Any fleet owner that, in the *[2021]* ***2022*** calendar year, had 50 or more vehicles with a GVWR greater than 8,500 pounds under common ownership or control and operated a facility in New Jersey;

3. Any broker or other entity that, in the *[2021]* ***2022*** calendar year, dispatched 50 or more vehicles with a GVWR greater than 8,500 pounds into or throughout New Jersey and operated a facility in New Jersey;

 Any New Jersey government agency, including State and local government, that had one or more vehicles over 8,500 pounds GVWR that were operated in New Jersey in *[2021]*
2022; and

5. Any Federal government agency that had one or more vehicles over 8,500 pounds GVWR that were operated in New Jersey in *[2021]* ***2022***.

(b) (No change from proposal.)

7:27-33.4 General requirements

(a) An entity subject to this subchapter shall submit the information specified at N.J.A.C. 7:27-33.6 and 33.7 to the Department by April 1, *[2022]* *2023*, through the web portal to be established on the <u>www.stopthesoot.org</u> website.

(b) - (f) (No change from proposal.)

(g) Vehicle data must be reported as the fleet was comprised on a date of the fleet owner's

choosing, so long as that date falls between January 1, *[2021]* *2022*, and December 31,

[2021] ***2022***.

7:27-33.6 General entity information reporting

(a) An entity subject to this subchapter shall report the following general information, as

applicable:

1. – 10. (No change from proposal.)

For a non-governmental entity, the total annual revenue for the entity in the United
States for *[2021]* *2022*;

12. - 13. (No change from proposal.)

14. The number of entities with whom the reporting entity had a contract to deliver

items or to perform work in New Jersey using vehicles over 8,500 pounds GVWR in *[2021]*

2022;

15. (No change from proposal.)

16. The number of vehicles with a GVWR over 8,500 pounds the reporting entity owned and operated in New Jersey in *[2021]* ***2022*** that do not have a vehicle home base in New Jersey.

7:27A-3.10 Civil administrative penalties for violation of rules adopted pursuant to the Act

(a) - (l) (No change from proposal.)

(m) The violations of N.J.A.C. 7:27, whether the violation is minor or non-minor in accordance with (q), (r), (s), or (t) below, and the civil administrative penalty amounts for each violation are as set forth in the following Civil Administrative Penalty Schedule. The numbers of the following subsections correspond to the numbers of the corresponding subchapter at N.J.A.C. 7:27. The rule summaries for the requirements set forth in the Civil Administrative Penalty Schedule in this subsection are provided for informational purposes only and have no legal effect.

1–32. (No change from proposal.)

33. The violations of N.J.A.C. 7:27-33, Fleet Reporting Requirements, and the civil

administrative penalty amounts for each violation are as set forth in the following table:

						Fourth
						and Each
		Type of	First	Second	Third	Subseque
		Violatio	Offens	Offens	Offens	nt
Citation	Class	n	e	е	е	Offense
N.J.A.C. 7:27-33.4(a)	Failure to submit	*[NM]*	\$2 <i>,</i> 000	\$4,000	\$10,00	\$30,000
		M			0	
N.J.A.C. 7:27-33.4(a)	Omission of required	М	\$500	\$1,000	\$2 <i>,</i> 500	\$7,500
	Information specified in					
	N.J.A.C. 7:27-33.6 and					
	33.7					

						Fourth
						and Each
		Type of	First	Second	Third	Subseque
		Violatio	Offens	Offens	Offens	nt
Citation	Class	n	е	е	е	Offense
N.J.A.C. 7:27-33.4(b)	Failure to certify	М	\$2,000	\$4,000	\$10,00	\$30,000
					0	
N.J.A.C. 7:27-33.5(a)1	Failure to maintain	М	\$500	\$1,000	\$2 <i>,</i> 500	\$7,500
through 4	records					
N.J.A.C. 7:27-33.5(a)	Failure to make records	М	\$500	\$1,000	\$2,500	\$7,500
	readily available					
N.J.A.C. 7:27-33.5(b)	Failure to respond to an	М	\$500	\$1,000	\$2 <i>,</i> 500	\$7,500
	information request from					
	the Department in a					
	timely manner					

(n) – (u) (No change.)

ENVIRONMENTAL PROTECTION

AIR QUALITY, ENERGY, AND SUSTAINABILITY

DIVISION OF AIR QUALITY

Model Year 2027 or Later Heavy-Duty New Engine and Vehicle Standards and Requirements;

Diesel Vehicle Inspection Tests and Procedures

Proposed Amendments: N.J.A.C. 7:27-14.1, 14.5, 15.1, 15.3, and 15.7 and 7:27A-3.10

Proposed New Rules: N.J.A.C. 7:27-28A

Proposed Repeals: N.J.A.C. 7:27-14 Appendix and 7:27-28

Authorized By: Shawn M. LaTourette, Commissioner, Department of Environmental Protection.

Authority: N.J.S.A. 13:1B-3(e), 13:1D-9, 26:2C-1 et seq., particularly 26:2C-8.1, 26:2C-8.15 et

seq., and 39:8-2 and 61.

Calendar Reference: See Summary below for explanation of exception to calendar

requirement.

DEP Docket Number: 07-22-10.

Proposal Number: PRN 2022-150.

A **public hearing** concerning this notice of rule proposal and the proposed State Implementation Plan (SIP) revision will be held on Thursday, December 8, 2022, at 9:30 A.M. The hearing will be conducted virtually through the Department of Environmental Protection's (Department) video conferencing software, Microsoft Teams. A link to the virtual public

hearing and telephone call-in option will be provided on the Department's rules proposal

website at <u>https://www.nj.gov/dep/rules/notices.html</u>.

Submit comments by close of business on January 6, 2023, electronically at

www.nj.gov/dep/rules/comments. Each comment should be identified by the applicable

N.J.A.C. citation, with the commenter's name and affiliation following the comment.

The Department encourages electronic submittal of comments. In the alternative,

comments may be submitted on paper to:

Alice A. Previte, Esq.

Attention: DEP Docket No. 07-22-10

Office of Legal Affairs

New Jersey Department of Environmental Protection

401 East State Street, 7th Floor

Mail Code 401-04L

PO Box 402

Trenton, NJ 08625-0402

If you are interested in providing oral testimony or submitting written comments at the virtual public hearing, please email the Department at <u>monica.miranda@dep.nj.gov</u> no later than 5:00 P.M. on Tuesday, December 6, 2022, with your contact information (name, organization, telephone number, and email address). You must provide a valid email address so the Department can send you an email confirming receipt of your interest to testify orally at the hearing and provide you with a separate option for a telephone call-in line if you do not have access to a computer or mobile device that can connect to Microsoft Teams. Further, this
hearing will be recorded. It is requested (but not required) that anyone providing oral testimony at the public hearing provide a copy of any prepared remarks to the Department via email.

The proposed repeals, new rules, and amendments will become operative 60 days after they are adopted by the Commissioner of the Department (see N.J.S.A. 26:2C-8). This notice of proposal may be viewed or downloaded from the Department's website at

www.nj.gov/dep/rules.

The agency proposal follows:

Summary

As the Department has provided a 60-day comment period on this notice of proposal, this notice is excepted from the rulemaking calendar requirement, pursuant to N.J.A.C. 1:30-3.3(a)5.

On January 27, 2020, Governor Murphy issued Executive Order No. 100 (2020) (EO No. 100), which directs the Commissioner of the Department to, among other things, reform and modernize its air and land use regulations to mitigate the effects of climate change and to gather information to inform future climate-related rulemaking. In response to EO No. 100, Commissioner Catherine McCabe issued Administrative Order 2020-01 (AO No. 1), <u>https://www.nj.gov/dep/njpact/</u>, which directs the Department to propose rules that reduce emissions of carbon dioxide (CO₂) and short-lived climate pollutants, as well as identify the rules and programs that should be updated to better respond to the challenges presented by climate change. The Department held stakeholder meetings on February 25, 2020, as well as September 3, 10, and 16, 2020, to discuss multiple potential rulemakings that would be

responsive to EO No. 100 and AO No. 1. The public information meeting materials are available on the Department's website at <u>https://www.nj.gov/dep/njpact/</u>. Among the potential rulemakings discussed with stakeholders were California's Advanced Clean Trucks (ACT) regulation and complementary rules, known as the "Proposed Amendments to the Exhaust Emissions Standards and Test Procedures for 2024 and Subsequent Model Year Heavy-Duty Engines and Vehicles, Heavy-Duty On-Board Diagnostic System Requirements, Heavy-Duty In-Use Testing Program, Emissions Warranty Period and Useful Life Requirements, Emissions Warranty Information and Reporting Requirements, and Corrective Action Procedures, In-Use Emissions Data Reporting Requirements, and Phase 2 Heavy-Duty Greenhouse Gas Regulations, and Powertrain Test Procedures" (Low NO_x Omnibus rules), which California recently adopted in an effort to update the heavy-duty engine and vehicle emission standards to require more stringent and technically feasible emission control technology.

The Department separately proposed and adopted California's ACT regulation by incorporating those rules by reference (See 53 N.J.R. 588(a); 2148(a)), to reduce emissions of greenhouse gases and other criteria pollutants through the acceleration of sales of zero emission vehicle (ZEV) with a gross vehicle weight rating (GVWR) greater than 8,500 pounds, which is part of the State's overall strategy to electrify the transportation sector, consistent with the goals of EO No. 100 and AO No. 1. In conjunction with the transition of gasoline and diesel vehicles with a GVWR greater than 8,500 pounds to zero-emission vehicles, the Department proposes this rulemaking to: (1) incorporate by reference California's emission standards and supporting requirements for new model year (MY) 2027 and later gasoline and diesel engines and vehicles with a GVWR greater than 8,500 pounds; (2) repeal N.J.A.C. 7:27-28,

Heavy-Duty Diesel New Engine Standards and Requirements Program; (3) ensure that all heavyduty vehicles are subject to the same emission inspection procedures and standards; (4) amend the definition of "gross vehicle weight rating" or "GVWR" at N.J.A.C. 7:27-14, Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles, and 15, Control and Prohibition of Air Pollution from Gasoline-Powered Motor Vehicles, for consistency; (5) clarify that certain violations of N.J.A.C. 7:27-14 and 15 may be penalized pursuant to proposed new provisions at N.J.A.C. 7:27A-3; and (6) amend N.J.A.C. 7:27-15, so that the text more closely conforms to the text at N.J.A.C. 7:27-14. These proposed rules will ensure that any new gasoline- and diesel-powered vehicles rated in excess of 8,500 pounds GVWR sold in New Jersey will be subject to the most stringent emission standards that are technically feasible as the State steadily transitions to increased use of electric vehicles.

This Summary is organized by topic; consequently, some provisions of the new rules, such as the definitions, may be discussed in several places in the Summary.

Climate Change Strategies and Air Quality

In 2007, New Jersey's Legislature passed the Global Warming Response Act (GWRA), which recognized that climate change, primarily caused by emissions of heat-trapping greenhouse gases, poses a threat to the earth's ecosystems and environment. See N.J.S.A. 26:2C-38. Additionally, the Legislature acknowledged that reducing emissions of greenhouse gases was not only possible, but necessary to prevent further detrimental impacts on human, animal, and plant life. *Id*. The GWRA's two long-term goals are to reduce greenhouse gas emissions to the 1990 level of Statewide greenhouse gas emissions by 2020 (2020 goal), and to

reduce greenhouse gas emissions to 80 percent less than the 2006 level of Statewide greenhouse gas emissions by 2050 (the 80x50 goal).

Recognizing the need for a comprehensive strategy, Governor Murphy has directed multiple State agencies to develop or update reports and implement policies to mitigate climate change and strengthen resilience. Pursuant to Executive Order No. 28 (2019), the New Jersey Energy Master Plan was updated for 2019 and includes extensive modeling that resulted in the identification of seven overarching strategies the State should pursue in order to meet the 80x50 goal of the GWRA, as well as the goal of 100 percent clean energy by 2050 set forth in the 2019 EMP. See also 2019 Energy Master Plan: Pathway to 2050,

https://nj.gov/emp/docs/pdf/2020 NJBPU EMP.pdf (2019 EMP). In October 2020, the

Department released the 2050 Report, which builds on the 2019 EMP by analyzing New Jersey's emissions reductions to date, evaluating plans presently in place for further reducing emissions, and presenting a set of strategies across seven emission sectors for policymakers to consider in formulating legislation, regulations, policies, and programs to ensure that New Jersey achieves the 80x50 goal. New Jersey Department of Environmental Protection, New Jersey's Global Warming Response Act 80x50 Report, October 15, 2020, Executive Summary,

https://www.nj.gov/dep/climatechange/docs/nj-gwra-80x50-report-2020.pdf (2050 Report).

Both the 2019 EMP and the 2050 Report highlight the fact that reaching the 80x50 goal and the goal of achieving 100 percent clean energy by 2050 will require transformation in all economic sectors through the collaboration and planning of multiple State agencies, as well as the private sector, over the next three decades. See 2050 Report, Introduction, and Executive Summary; and 2019 EMP, Executive Summary and Conclusion, p. 231. For example, as New

Jersey moves toward the electrification of its transportation sector, multiple factors must be considered. These include, but are not limited to, the added demand for electric supply, the sources of electricity generated in New Jersey and for use in New Jersey through the regional transmission organization (known as PJM), emerging technologies, and the costs associated with technologies and infrastructure. New Jersey cannot immediately electrify all classes of vehicles within the transportation sector. Not only would electricity demand surpass the electric supply available from electric generating sources within the State, but also both development of the market for electric vehicles and the build-out of charging infrastructure requires more time.

Based upon these factors, electrification of the transportation sector must follow a deliberate, phased approach. To accelerate the sales of ZEVs rated in excess of 8,500 pounds GVWR, the Department has incorporated by reference the ACT regulation, as set forth in separate proposal and adoption documents (See 53 N.J.R. 588(a); 2148(a)). Assuming the EPA grants California's waiver request, beginning with model year 2025, New Jersey's Advanced Clean Truck (ACT) Program will require that certain manufacturers that sell vehicles in excess of 8,500 pounds GVWR in New Jersey generate enough credits to comply with the sales percentage requirement within the rule. A manufacturer may earn credits through direct sales of its own ZEVs in New Jersey. Alternatively, the manufacturer may purchase (or otherwise obtain) from another manufacturer enough ZEV credits to meet its percentage sales requirement. Pursuant to the ACT regulation, the sales percentage requirement will increase every year through 2035. Accordingly, the Department's implementation of California's ACT

regulation will serve as one of the initial steps New Jersey will take toward increased electrification of the transportation sector.

Though the Department's implementation of California's ACT regulation will be a significant positive step toward increasing electrification of the transportation sector, the ACT Program does not require total electrification of heavy-duty engines and vehicles and will not be fully implemented in New Jersey until 2035. Thus, during the transition to electrification of the transportation sector, the Department must continue to reduce pollutants from new gasoline- and diesel-powered vehicles in excess of 8,500 pounds GVWR that will continue to be placed in use throughout New Jersey.

As set forth in New Jersey's 2017 emission inventory, the on-road sources within the transportation sector are responsible for 44 percent of New Jersey's annual Statewide nitrogen oxide (NO_x) emissions, which are a precursor to ozone and secondary particulate matter (PM). Additionally, on-road sources are responsible for 10 percent of New Jersey's annual Statewide fine particulate matter (PM2.5) emissions. New Jersey is in non-attainment for the Federal ozone national ambient air quality standard (NAAQS) and must continue to reduce NO_x emissions Statewide to attain and maintain the ozone NAAQS. In 2006, New Jersey began to address these pollutants from on-road sources by adopting California's emission standards for MY 2009 or later light-duty and medium-duty passenger vehicles pursuant to N.J.A.C. 7:27-29, Low Emission Vehicle (LEV) Program. The Department proposes to mitigate the impact of these pollutants by incorporating by reference the California rules pertaining to emission standards and supporting requirements for gasoline- and diesel-fueled engines and vehicles with a GVWR greater than 8,500 pounds. California's emission standards were recently amended to include

more stringent NO_x and PM emission standards, which, if adopted in this State, will improve New Jersey's overall air quality and particularly benefit local communities that are disproportionately impacted by heavy truck traffic, including some overburdened communities (as defined at N.J.S.A. 13:1D-158).

The proposed incorporation by reference would establish a new regulatory program in New Jersey at proposed N.J.A.C. 7:27-28A, Model Year 2027 and Subsequent Model Year Heavy-Duty Engine and Vehicle Standards and Requirements (Heavy-Duty Emission Standards), that will be identical to California's emission standards for vehicles of the same model year and weight class beginning January 1, 2027. Specifically, the Department's proposed new rules will ensure that the gasoline- and diesel-powered vehicles rated in excess of 8,500 pounds GVWR that remain in operation during the transition to electrification of the transportation sector will be held to the most stringent NO_x and PM emission standards and that those vehicles will remain in compliance with the emission standards over a longer period of time. As a result of the proposed incorporation by reference at N.J.A.C. 7:27-28A, the Department proposes to repeal N.J.A.C. 7:27-28, which applies to only a subset of heavy-duty vehicles. The proposed rules, if adopted, would ensure that the emission standards at proposed N.J.A.C. 7:27-28A apply to all new motor vehicles and engines with a GVWR greater than 8,500 pounds (diesel and gasoline) beginning with MY 2027.

The Department's proposed amendments at N.J.A.C. 7:27-14, Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles, harmonize the inspection test procedures and standards for diesel vehicles with a GVWR greater than 8,500 and less than 18,000 pounds with the existing inspection test procedures and standards for diesel buses and those for diesel

trucks with a GVWR of 18,000 pounds or more. The proposed amendments include an onboard diagnostic (OBD) inspection or smoke opacity test, which will help to ensure that the benefits of the more stringent emission standards are fully realized by alerting owners and operators to the need for necessary emission system repairs. Further, requiring inspections to be completed by trained and licensed inspectors at licensed inspection facilities will help to deter and identify vehicle tampering. The Department's other proposed amendments at N.J.A.C. 7:27-14 and 15, and 7:27A-3, are for consistency among the air rules and clarification of the penalties for violations.

History of Emission Standards for Heavy-Duty On-Road Vehicles

General

The 1970 Federal Clean Air Act (CAA) established motor vehicle emission control standards to limit emissions of criteria pollutants, such as carbon monoxide (CO), volatile organic compounds (VOC), NO_x, and PM. Since the 1970s, the U.S. Environmental Protection Agency's (EPA) emission standards for these pollutants have been revised to be progressively more stringent. See <u>https://www.epa.gov/emission-standards-reference-guide/basic-information-about-emission-standards-reference-guide-road</u>. Additionally, pursuant to its authority pursuant to the CAA, the EPA began establishing emission standards to reduce greenhouse gases from MY 2012 and subsequent MY vehicles. See https://www.epa.gov/regulations-vehicles-and-engines/regulations-greenhouse-gas-ghg-emission; 75 FR 25324; 76 FR 57106.

Notably, the CAA granted the State of California, which has some of the worst air pollution in the nation and has been setting emission standards for new motor vehicles since 1959, the authority to enact stricter emission standards than the national standards set by the EPA. See 42 U.S.C. § 7543. In order to implement and enforce its own emission standards, California is required to request and obtain a waiver from the EPA. The CAA also authorizes qualifying states to adopt and enforce emission standards for which California has received a waiver, if the states give two years' lead time. See 42 U.S.C. § 7507. Thus, in the United States there are two Federally authorized motor vehicle emission control programs - the Federal program and the California program.

Emissions standards, whether imposed pursuant to the EPA's or California's rules, are generally implemented along two separate tracks: one set of standards and procedures for light-duty vehicles and another set of standards and procedures for heavy-duty vehicles. While the Department recognizes that the classification of vehicles for purposes of determining the appropriate engine standards pursuant to either the regulations of the EPA or California is complex and requires a careful reading of the relevant rules, for purposes of the Department's overview readers should understand the distinction. Generally speaking, in both the EPA and California regulations, the term "light-duty vehicle" refers to a passenger vehicle, the vast majority of which have a GVWR of 8,500 pounds or less. "Heavy-duty vehicle" refers to a vehicle that has a GVWR greater than 8,500 pounds. See https://www.epa.gov/emission-standards-reference-guide/basic-information-about-emission-standards-reference-guide-road. Examples of light-duty vehicles include minivans, passenger vans, pickup trucks, and sport-utility vehicles. Examples of heavy-duty vehicles include large pick-ups, delivery trucks,

recreational vehicles (RVs), buses, and semi trucks. See *id*. Both California and the EPA identify categories of heavy-duty vehicles by weight class. The three categories include light heavy-duty, medium heavy-duty, and heavy heavy-duty. See California Air Resources Board (CARB), Staff Report: Initial Statement of Reasons, June 23, 2020 (CARB Low NO_x Omnibus ISOR), p. I-46, Table I-9, <u>https://ww2.arb.ca.gov/rulemaking/2020/hdomnibuslownox</u>. California's classification scheme, however, is slightly more complicated than the EPA's classification scheme because California includes a subcategory of engines and vehicles, known as medium-duty engines and vehicles, within the light heavy-duty vehicle category. Medium-duty engines and vehicles are defined in California's certification test procedure regulations to include vehicles and engines with a GVWR greater than 8,500 and less than 14,001. See *id*.

Both California and the EPA also categorize heavy-duty vehicles based on their fuel usage as either diesel or Otto-cycle. The Department does not use or define "Otto-cycle engine" in any existing rules, but the CARB documents and California's rules, which the Department proposes to incorporate by reference, refer to heavy-duty engines as either "diesel" or "Otto-cycle." The term "Otto-cycle engine" is comparable to what the Department refers to in other rules as a "gasoline-fueled" engine. As defined at existing N.J.A.C. 7:27-15.1, "gasoline-fueled" means an engine that is "powered in whole or in part by a hydrocarbon fuel other than diesel fuel, including, but not limited to, gasoline, natural gas, liquefied petroleum gas or propane or powered by alcohol fuels, hydrocarbon-alcohol fuel blends or hydrogen."

Below the Department has reproduced a Table from CARB's Low NO_x Omnibus ISOR that depicts the California and Federal weight classifications for heavy-duty vehicles and engines by fuel type.

Weight Class (Ibs. GVWR)	CARB			U.\$	U.S. EPA/U.S. Department of Transportation (DOT)		
Diesel engines							
8,501-10,000	Heavy Duty	Medium- duty	Light heavy-	Heavy duty	Light heavy-	Class 2b	
10,001-14,000	Engine/ Vehicle	engine ^a / vehicle	duty engine	engine/ vehicle	duty engine	Class 3	
14,001-16,000]					Class 4	
16,001-19,500]					Class 5	
19,501-26,000			Medium heavy-		Medium heavy-	Class 6	
26,001-33,000			duty Engine		duty engine	Class 7	
>33,000	1		Heavy		Heavy	Class 8	
			heavy-		heavy-		
			duty		duty		
			Engine		engine		
Otto-Cycle Engines							
8,501-14,000	Heavy- duty engine/ vehicle	Medium- duty engineª/ vehicle		Heavy- duty engine/ vehicle		Classes 2b-3	
>14,000						Classes 4-8	
Reference	13 CCR 1900	13 CCR 1900; certificatio n test procedure s	13 CCR 1956.8; certificatio n test procedure s		40 CFR 86.085-2 (primary intended service class)	U.S. DOT 40 CFR 1037.801	

^a The term, medium-duty engine, is not defined in 13 CCR 1900 but is defined in the certification test procedures incorporated by reference in 13 CCR 1956.8.

CARB Low NO_x Omnibus ISOR, p. I-46, Table I-9.

Heavy-duty vehicles: Federal Program

The EPA set the first Federal emission standards for heavy-duty engines beginning in the

mid-1970s, and has subsequently revised those standards to be progressively more stringent.

See https://www.epa.gov/emission-standards-reference-guide/basic-information-about-

emission-standards-reference-guide-road. In early 2001, the EPA finalized a Heavy-Duty Engine and Vehicle rule, which applied to both diesel- and gasoline-fueled heavy-duty highway engines beginning with MY 2007. See <u>https://www.epa.gov/regulations-emissions-vehicles-and-</u> engines/regulations-smog-soot-and-other-air-pollution-commercial. This rule established a comprehensive national program (harmonizing standards with California) that regulated a heavy-duty engine and its fuel as a single system, with emission standards taking effect beginning with MY 2007 and fully phasing in by MY 2010. See *id*. In 2009, as advanced emissions control systems were being phased in to meet the 2007 standards, the EPA promulgated a final rule to require that these advanced emissions control systems be monitored for malfunctions through an onboard diagnostic (OBD) system. See *id*.

The EPA finalized Phase 1 of the Federal greenhouse gas emissions and fuel efficiency program for heavy-duty vehicles and engines in 2011. See <u>https://www.epa.gov/regulations-</u> emissions-vehicles-and-engines/regulations-greenhouse-gas-emissions-commercial-trucks; 76 FR 51706. The Federal Phase 1 program implementation spanned from MY 2014 to MY 2018. See *id*. In 2016, the EPA and the National Highway Traffic Safety Administration (NHTSA) finalized the heavy-duty Phase 2 greenhouse gas and fuel efficiency program (Phase 2). Phase 2 includes performance-based standards that will phase in over the long-term, with initial standards for most vehicles and engines commencing in MY 2021. See

https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-greenhouse-gasemissions-commercial-trucks; 81 FR 73478.

Heavy-duty vehicles: California Program

Like the EPA, California has been adopting emission standards for criteria pollutants from heavy-duty vehicles for model years dating back to the early 1970s. See 13 CCR §§ 1952 and 1957. Although the California and Federal emission standards have moved along similar tracks over the last five decades, California's rules have variations based on the state's air quality challenges. 13 CCR §§ 1950 et seq.;

https://ww2.arb.ca.gov/resources/documents/road-heavy-duty-current-standards-test-

procedures-and-regulatory-documents.

In 2013, California established emission standards for greenhouse gases from heavyduty trucks and engines, which were generally harmonized with the EPA's 2011 Phase 1 greenhouse gas rule for new trucks and engines. See <u>https://ww2.arb.ca.gov/our-</u> <u>work/programs/greenhouse-gas-standards-medium-and-heavy-duty-engines-and-</u> <u>vehicles/phase1</u>. Thereafter, CARB staff worked jointly with the EPA and NHTSA on Phase 2 of Federal greenhouse gas emission standards for medium- and heavy-duty engines and vehicles. See <u>https://ww2.arb.ca.gov/our-work/programs/greenhouse-gas-standards-medium-and-</u> <u>heavy-duty-engines-and-vehicles/phase2</u>. California's Phase 2 greenhouse gas standards, which were adopted in 2019, align with the EPA's Phase 2 greenhouse gas standards with minor variations. See *id*.

Thus, historically, the California and Federal criteria pollutant and greenhouse gas emission standards for heavy-duty engines have paralleled one another. The one notable exception is that California's emission standards implemented more stringent NO_x and PM standards in earlier model years than the Federal emission standards for heavy-duty engines.

In 2020 CARB adopted new emission standards and requirements for MY 2024 and subsequent MY heavy-duty gasoline and diesel engines and vehicles. See Heavy-Duty Engine and Vehicle Omnibus Regulation and Associated Amendments. Resolution 20-23. August 27. 2020; subsequently amended by Executive Order R-21-007, September 9, 2021. On March 28, 2022, the EPA published a proposed rule: Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standard. 87 FR 17414. The EPA's proposal would change the Federal heavy-duty emission control program, including, but not limited to, tightening the Federal emission standards. Ibid. Not only would the proposal, if adopted, reduce emissions of nitrogen oxides and other pollutants, it would also update the existing Heavy-Duty Greenhouse Gas Emissions Phase 2 program. *Ibid*. The EPA's rule proposal included "two regulatory options" (proposed Options 1 and 2) [which] would result in different numeric levels of the standards and lengths of useful life and warranty periods." 87 FR at 17417. As of the date of the submission of the Department's proposal to the Office of Administrative Law, the EPA has not published a final rule indicating which option, of the two proposed changes to the Heavy-Duty Engine and Vehicle Standard, the EPA will adopt. While the proposal indicated that the EPA intended the rules to be effective for MY 2027 vehicles, it is not clear whether a final rule will be adopted in time.

Heavy-duty vehicles: New Jersey

Existing N.J.A.C. 7:27-28, Heavy-Duty Diesel New Engine Standards and Requirements Program, incorporates California's vehicle and engine standards for new, MY 2005 or subsequent, heavy-duty diesel vehicles and engines. N.J.A.C. 7:27-28 defines a heavy-duty

diesel vehicle as a motor vehicle with a GVWR greater than 14,000 pounds that is equipped with a heavy-duty diesel engine. The Federal and California standards for heavy-duty diesel engines and vehicles were harmonized through MY 2023 subsequent to the Department's adoption of existing N.J.A.C. 7:27-28. Thus, prior to California's adoption of the Low NO_x Omnibus rules, a manufacturer of heavy-duty diesel engines and vehicles had to meet only one emissions standard to sell engines and vehicles in New Jersey, even though the engine or vehicle was required to receive a certification from both the EPA and CARB.

If the Department were to maintain N.J.A.C. 7:27-28, as originally adopted, heavy-duty diesel engines and vehicles with a GVWR greater than 14,000 pounds would be required to meet the revised emissions standards in California's Low NO_x Omnibus rules, beginning as early as MY 2024. Existing N.J.A.C. 7:27-28 incorporated California's engine standards, as amended and supplemented, for these diesel engines and vehicles, but the Low NO_x Omnibus rules revised engine standards are applicable to a number of vehicle and engine categories not covered at existing N.J.A.C. 7:27-28. Specifically, the rules proposed to be incorporated by reference apply to Otto-cycle engines and vehicles, and all heavy-duty engines and vehicles with a GVWR greater than 8,500 pounds. If N.J.A.C. 7:27-28 is not repealed, the emission standards of the Low NO_x Omnibus rules would apply to the category of heavy-duty diesel vehicles covered at N.J.A.C. 7:27-28 in an earlier MY than the other categories of heavy-duty vehicles covered by the Low NO_x Omnibus rules.

To avoid potential confusion among vehicle manufacturers and dealers in determining which engines and vehicles may be sold in New Jersey in a given MY, and for consistency in implementation and enforcement of the Low NO_x Omnibus rules, the Department proposes to

repeal existing N.J.A.C. 7:27-28 upon adoption. The repeal will result in the Low NO_x Omnibus standards becoming operative and enforceable for all vehicles beginning with the same MY.

Proposed Rules for Model Year 2027 or Later Heavy-Duty New Engine and Vehicle Standards and Requirements, N.J.A.C. 7:27-28A

General

Proposed N.J.A.C. 7:27-28A, Model Year 2027 or Later Heavy-Duty New Engine and Vehicle Standards and Requirements (Heavy-Duty Emission Standards), incorporates by reference the portions of the California Code of Regulations (CCR) listed at N.J.A.C. 7:27-28A.11 that make up all of California's heavy-duty engine and vehicle standards and requirements, including the greenhouse gas provisions and the more stringent NO_x and PM standards, which will be applicable to both gasoline and diesel heavy-duty engines and vehicles beginning with MY 2027. Generally speaking, California's regulations can be grouped into two categories: (1) the emission standards, which are frequently represented as a numerical limit on the amount of criteria pollutants and greenhouse gases that may be permissibly emitted from an engine or vehicle; and (2) the requirements that support the implementation of those emission standards. The second category ensures that manufacturers of the covered vehicles and engines are accountable for compliance with the more stringent emission standards over a longer period of time through administrative changes in the program, such as test procedures, recordkeeping, warranty periods, and in-use emission data reporting.

As CARB explained in its ISOR for the proposed amendments, the goal of the Low NO_x

Omnibus rules "is to achieve the maximum technologically feasible and cost-effective reductions in real-world NO_x emissions from heavy-duty engines and vehicles." CARB Low NO_x Omnibus ISOR at p. II-1. Like California, New Jersey needs to reduce Statewide emissions of NO_x to come into compliance with the NAAQS for ozone. As described in the Environmental, Social, and Economic Impact statements below, not only does NO_x negatively impact air quality as a direct air pollutant, but NO_x is a precursor in the atmospheric formation of ozone and secondary PM2.5. Multiple studies have shown that NO_x, ozone, and PM2.5 air pollution causes adverse environmental, social, economic, and health impacts. The Department's efforts to reduce NO_x emissions are particularly important given the warming climate, which is just one of the ongoing meteorological conditions that are conducive to the formation of ozone. Notably, approximately 75 percent of the annual NO_x air emissions in New Jersey (pollution emitted directly from pollution sources in New Jersey, as compared to ozone which is formed in the atmosphere and can also contain air pollution transported from other states) are from the mobile source sector, as estimated by the Department based on its 2017 air pollution emissions inventory. Thus, by reducing NO_x emissions, the State will experience related reductions in ozone and secondary PM2.5, which will generate corresponding health benefits. These health benefits will be especially important to local communities disproportionately impacted by heavy truck traffic that is the source of the NO_x emissions.

Purpose and Scope, Applicability, Requirements for Engine and Vehicle Transactions, and Exemptions, N.J.A.C. 7:27-28A.2, 28A.3, 28A.4, and 28A.5

Subject to the exemptions at N.J.A.C. 7:27-28A.5, Exemptions, proposed N.J.A.C. 7:27-28A.2, Purpose and scope, and 7:27-28A.3, Applicability, provide that the new subchapter is applicable to all MY 2027 or later, new motor vehicles rated in excess of 8,500 pounds GVWR and new motor vehicle engines intended for use in a motor vehicle rated in excess of 8,500 pounds GVWR (hereinafter referred to as "covered vehicles"). The proposed emission standards and requirements incorporate by reference the same emission standards and requirements in the provisions of the California Code of Regulations identified at proposed N.J.A.C. 7:27-28A.11. If, and when, California changes its rules, the Department's rules will also change, by virtue of the incorporation by reference.

Though California's recently revised rules identifying heavy-duty emission standards and requirements are applicable to MY 2024 vehicles and engines, the Department proposes a delayed MY applicability date to ensure compliance with the two-year lead time requirement in Section 177 of the Clean Air Act, 42 U.S.C. § 7505. In the event that the adoption of these rules is not finalized in order to be operative by January 1, 2027, the Department will modify the rules on adoption to commence with model year 2028. Proposed N.J.A.C. 7:27-28A.3 makes clear that the rules will not be enforceable in New Jersey unless or until such time as California receives a waiver from the United States Environmental Protection Agency, pursuant to 42 U.S.C. § 7543, as published in the Federal Register, for the applicable engine standard, vehicle standard, or other emission requirement.

Pursuant to proposed N.J.A.C. 7:27-28A.4, Requirements for engine and vehicle transactions, on or after January 1, 2027, the covered vehicles may not be sold, leased, rented, imported, delivered, purchased, acquired, registered, received, or otherwise transferred in this

State by any person who is a resident of New Jersey or who operates an established place of business within New Jersey, unless CARB has issued an executive order certifying the covered vehicle and the covered vehicle meets all of the applicable requirements of the California Code of Regulations identified at proposed N.J.A.C. 7:27-28A.11. A vehicle is "California-certified," and, therefore, eligible for sale, lease, purchase, registration, or transfer in New Jersey, if the manufacturer demonstrates that the vehicle complies with all applicable emission standards and requirements of Title 13 and 17 of the California Code of Regulations.

Generally speaking, California certification requires the vehicle's manufacturer to demonstrate that the vehicle's exhaust and (as applicable, depending on the specific vehicle category) evaporative emission control systems are durable and comply with the emission standards for the vehicle's useful life. This is done through durability and certification testing of a prototype vehicle. The manufacturer must also demonstrate compliance with the requirements for on-board diagnostics, and anti-tampering, as applicable, and must submit an application for certification to CARB. Production vehicles must be identical in all material aspects to the prototype vehicle for which the certification was granted. If the manufacturer makes emissions-related production running changes or field fixes, those must be CARBapproved. Production vehicles must be properly labeled, and their emission control systems warranted for the specified duration. New and customer-owned production vehicles are subject to compliance testing (by either the manufacturers or CARB) and warranty repairs reporting by the manufacturers, either of which can result in remedial actions. Certification is granted only to the vehicle manufacturer that controls the vehicle specifications, to ensure

compliance by all production vehicles. See the CARB On-Road New Vehicle and Engine Certification Program website, http://www.arb.ca.gov/msprog/onroad/cert/cert.php.

Proposed N.J.A.C. 7:27-28A.4, also sets forth a presumption that a vehicle with 7,500 miles or fewer is a "new" vehicle and is, therefore, subject to the requirements of the proposed subchapter. The presumption is necessary to prevent a New Jersey resident from arranging for a third party to purchase and register a non-complying vehicle in another state, so that the New Jersey resident could then re-register the vehicle in New Jersey as a used vehicle in order to avoid the more stringent emissions requirements.

Proposed N.J.A.C. 7:27-28A.5, Exemptions, lists several exceptions to the requirements at N.J.A.C. 7:27-28A.4, 28A.7, 28A.8, and 28A.11. To begin, medium-duty passenger vehicles are exempt from the requirements at proposed N.J.A.C. 7:27-28A, because those vehicles are covered at N.J.A.C. 7:27-29, Low Emission Vehicle Program. Zero-emission vehicles are also exempt from the proposed subchapter because they are not fueled by diesel or gasoline and, therefore, are not subject to the same emission standards.

The Department proposes a number of additional miscellaneous exemptions to the emission standards and requirements, which are modeled on exemptions in the LEV Program rules. For example, covered vehicles held for rental or daily lease to the general public, or that are being utilized for interstate commerce (such as interstate commercial delivery vehicles), that are registered and principally operated outside of New Jersey are exempt from the emission standards and requirements. This provision allows covered vehicles that are registered outside of New Jersey to continue to be rented in New Jersey, as long as the vehicles are principally operated outside of this State. An example of this would be moving vans that

are operated nationally. Likewise, covered vehicles sold or otherwise transferred directly from one dealer to another dealer would be exempt from the heavy-duty emission standards and requirements because the rules are not intended to restrict dealers from exchanging vehicles.

Covered vehicles that are transferred to a New Jersey resident through either inheritance or court decree are also exempt. In such cases, the resident has no discretion in acquiring a complying vehicle, making an exemption appropriate. Residents of other states establishing residence in New Jersey and wishing to transfer a non-complying vehicle that was certified to Federal emission standards and registered in the resident's former state may do so when establishing residence in New Jersey. Covered vehicles that are sold in order to be wrecked or dismantled, are exclusively for off-highway use, or that are sold for registration in another state are also exempt from the proposed heavy-duty emission standards and requirements.

Prohibition Against Stockpiling, N.J.A.C. 7:27-28A.6

There is a possibility that purchasers could attempt to circumvent the emission reduction requirements by stockpiling higher-emitting engines or vehicles before the proposed emission standards and requirements become applicable on January 1, 2027. Stockpiling would allow the purchaser to meet their projected need for such engines or vehicles early, and avoid having to buy the lower-emitting, cleaner engines and vehicles a year or so later. Accordingly, the Department is proposing a stockpiling prohibition at N.J.A.C. 7:27-28A.6 that makes it a violation to purchase covered vehicles in excess of normal business needs to evade the emission standards and requirements.

Manufacturer Compliance with California Warranty, N.J.A.C. 7:27-28A.7

The Department, at N.J.A.C. 7:27-28A.11, proposes to incorporate into its rules California's emissions warranty requirements for: (1) a MY 2027 or later, new motor vehicle rated in excess of 8,500 pounds GVWR; or (2) a MY 2027 or later, new motor vehicle engine intended for use in a motor vehicle rated in excess of 8,500 pounds GVWR. The warranty requirements will apply to all gasoline and diesel engines and vehicles delivered for sale in New Jersey on or after January 1, 2027.

As will be discussed in greater detail below, California's recent revisions to heavy-duty emission standards and requirements, extended warranty provisions for the emission control system for the covered vehicles beyond what is required under the existing Federal standards. Therefore, proposed N.J.A.C. 7:27-28A.7 provides that when a covered vehicle is sold to a purchaser in New Jersey, the manufacturer must comply with the extended coverage provisions under the California warranty requirements being incorporated by reference.

Manufacturer Compliance with California Orders and Voluntary Recalls, N.J.A.C. 7:27-28A.8

The Department, at N.J.A.C. 7:27-28A.11, proposes to incorporate into its rules California's requirements concerning compliance orders, enforcement actions, and recalls for a MY 2027 or later, new motor vehicle rated in excess of 8,500 pounds GVWR or a MY 2027 or later, new motor vehicle engine intended for use in a motor vehicle rated in excess of 8,500 pounds GVWR. These requirements will apply to all gasoline and diesel engines and vehicles delivered for sale in New Jersey on or after January 1, 2027.

California's recent revisions to its heavy-duty emission standards and requirements incorporate NO_x and PM emission standards that will be more stringent than the Federal standards, once implemented. If CARB issues an order, enforcement action, or there is a recall by CARB or a voluntary recall by the manufacturer as a result of a failure to meet the more stringent emission standards, proposed N.J.A.C. 7:27-28A.8 would require compliance for covered vehicles sold to a purchaser in New Jersey. The Department proposes an exception if, within 30 days of CARB's action, the manufacturer demonstrates to the Department's satisfaction, that the order, enforcement action, or recall is not applicable to the engines or vehicles in question.

Recordkeeping, N.J.A.C. 7:27-28A.9

The Department proposes new recordkeeping requirements that will serve as an enforcement and audit tool to ensure compliance with the Department's CARB certification requirements. Specifically, proposed N.J.A.C. 7:27-28A.9 requires any person operating a business in New Jersey that sells, leases, or rents the covered vehicles to maintain records of all sales, leases, rentals, imports, purchases, acquisitions, receipt of, or other transfers of MY 2027 or later MY vehicles for a period of at least five years after the date of the transaction. A person operating such a business must make those records available for inspection or provide copies to the Department upon request.

Right to Enter, N.J.A.C. 7:27-28A.10

Proposed N.J.A.C. 7:27-28A.10, Right to enter, is modeled on existing N.J.A.C. 7:27-1.31, Right to enter, and sets forth the scope of the Department's authority to enter and inspect. Proposed N.J.A.C. 7:27-28A.10 is slightly different from existing N.J.A.C. 7:27-1.31 in that it specifies the Department's right to enter, inspect, test, and sample vehicles. Failure to comply will subject the violator to an enforcement action.

Incorporation by Reference, and Definitions, N.J.A.C. 7:27-28A.11 and 28A.1

Proposed N.J.A.C. 7:27-28A.11, Incorporation by reference, identifies the specific provisions of the CCR that are to be incorporated by reference into this new subchapter, as well as the minor language changes necessary to effectively implement the program in New Jersey. To maintain consistency with the relevant provision of the CCR, proposed N.J.A.C. 7:27-28A.11 dictates prospective incorporation by reference of the California regulations. This means that upon the operative date of the Department's rules or the operative date of California's Low NO_x Omnibus rules, whichever is later, all amendments, supplements, repeals, or other changes California makes to the incorporated rule, shall also be effective in New Jersey on the effective date cited by California. Additionally, incorporation by reference of an applicable provision of the CCR includes all documents and notes associated with that provision, unless specifically excluded by the Department's rules. Equally important, proposed N.J.A.C. 7:27-28A.11 provides that if there is an inconsistency between the New Jersey rules in the subchapter and the California rules incorporated by reference, the California rules control. However, the incorporation by reference of the California regulation does not affect the Department's authority to enforce any other State requirements.

Proposed N.J.A.C. 7:27-28A.11 incorporates by reference 13 CCR 1900, 13 CCR 1956.8, 13 CCR 1961.2, 13 CCR 1965, 13 CCR 1968.2, 13 CCR 1971.1, 13 CCR 1971.5, 13 CCR 2035 through 2037, 13 CCR 2065, 13 CCR 2111 through 2119, 13 CCR 2121, 13 CCR 2125 through 2131, 13 CCR 2133, 13 CCR 2137, 13 CCR 2139, 13 CCR 2139.5, 13 CCR 2140 through 2149, 13 CCR 2166, 13 CCR 2166.1, 13 CCR 2167 through 2169, 13 CCR 2169.1 through 2169.8, 13 CCR 2170, 13 CCR 2423(n), 13 CCR 2485(c)(2) through (c)(3), 13 CCR 2485(h), and 17 CCR 95661 through 95663.

The California rule provisions identified at proposed N.J.A.C. 7:27-28A.11 include terms and definitions throughout, and those definitions are proposed to be incorporated by reference. Nonetheless, the Department proposes to define a number of terms at N.J.A.C. 7:27-28A.1, Definitions, for clarity. For instance, the Department proposes to define "California Air Resources Board" or "CARB," "CCR," and "Department," since those terms do not appear in the California regulation, but are necessary to harmonize the California and New Jersey provisions as part of the incorporation by reference. The proposed definition of "gross vehicle weight rating" and its acronym, "GVWR," at N.J.A.C. 7:27-28A.1 is consistent with CARB's definition.

To further clarify applicability, the Department proposes to define the terms "new motor vehicle" and "new motor vehicle engine" consistent with the definitions of those terms at 42 U.S.C. § 7550. The definitions of both of these terms include a reference to an "ultimate purchaser," which the Department proposes to define as the first person who, in good faith, purchases a new motor vehicle or new motor vehicle engine for purposes other than resale.

The Department uses the terms "sale," "sell," and "lease" at proposed N.J.A.C. 7:27-28A.4, Requirements for engine and vehicle transactions. The Department proposes definitions identical to the existing definitions of those terms at N.J.A.C. 7:27-28.1 (Heavy-Duty Diesel New Engine Standards and Requirements Program).

Though the Department proposes to incorporate by reference all of the CCR provisions identified at N.J.A.C. 7:27-28A.11, proposed N.J.A.C. 7:27-28A.11(g) through (I) identifies the CCR citations in which it is necessary to replace California-specific terms or provisions with New Jersey-specific language in order to integrate the California rules into the New Jersey regulatory program. For example, where the CCR indicates that a vehicle is "registered in California," the proposed rule replaces the provision with "registered in New Jersey." Additionally, there are a number of places where specific text in the CCR provisions incorporated by reference refers to California-specific activities and locations. Accordingly, "California statutorily authorized motor vehicle emissions inspection and maintenance program," "operate in California," "location in California," and "operation of the APS in California" are replaced with "New Jersey statutorily authorized motor vehicle emissions inspection and maintenance program," "operate in New Jersey," "location in New Jersey," and "operation of the APS in New Jersey," respectively (APS is an acronym for auxiliary power system).

In contrast to the simple replacement of terms the Department proposed at N.J.A.C. 7:27-28A.11(g) through (I), N.J.A.C. 7:27-28A.11(m) includes revisions to a specific provision of the CCR. These revisions were necessary as a result of the Notice of Public Availability of Modified Text and Availability of Additional Documents posted on May 5, 2021, in which CARB indicated that it intended to revise the originally proposed text of the Low NO_x Omnibus rule to

allow transit agencies to request an exemption to the emission standard applicable to dieselfueled urban buses at 13 CCR 1956.8. See CARB Low NO_x Omnibus Proposed Amendments to the Heavy-Duty Engine and Vehicle Omnibus Regulation and Associated Amendments, May 5, 2021 (5/5/21 Notice of Amendments), pp. 6-8;

https://ww3.arb.ca.gov/regact/2020/hdomnibuslownox/30daynotice.pdf. According to the

5/5/21 Notice of Amendments, the primary manufacturer of diesel-fueled urban bus engines indicated that it would not produce diesel-fueled urban bus engines compliant with Californiaspecific emission standards beginning in MY 2024. *Ibid*. CARB determined this decision by the manufacturer would create a compliance obstacle for transit agencies. *Ibid*. Hence, an exemption was added to the original Low NO_x Omnibus rule text for transit agencies. *Ibid*.

The language that was added pursuant to the 5/5/21 Notice of Amendments provides an exemption that will be conditioned upon a transit agency's demonstration that it meets certain other requirements pursuant to a separate California regulation, known as the Innovative Clean Transit (ICT) regulation. See *ibid*. The ICT regulation is focused on the transition of California's public transit agencies' bus fleets to 100 percent zero-emission by 2040. See <u>https://ww2.arb.ca.gov/resources/fact-sheets/innovative-clean-transit-ict-</u> <u>regulation-fact-sheet</u>. Pursuant to the ICT regulation, each California transit agency is required to submit a plan (to be approved by CARB) demonstrating how it will achieve zero-emission by 2040. *Ibid*.

The New Jersey Legislature has set goals for the use of plug-in electric vehicles. Specifically, "[b]y December 31, 2024, at least 10 percent of the new bus purchases made by the New Jersey Transit Corporation shall be zero emission buses, and (b) the percentage of zero

emission bus purchases shall increase to 50 percent by December 31, 2026, and 100 percent by December 31, 2032 and thereafter." N.J.S.A. 48:25-3.a(9)(a). However, this goal is not equivalent to the ICT program in California, which covers all transit agencies and sets reporting requirements. Accordingly, the Department proposes to keep the exemption for diesel-fueled urban buses but revise the conditions, so that they are New Jersey-specific.

The Department's revised language maintains the requirement for a transit agency to apply for the exemption before the purchase and mirrors the timing for application submittal. Exemptions in New Jersey will be conditioned upon the transit agency's demonstration that there are no diesel-fueled medium heavy-duty or heavy heavy-duty engines used in urban buses certified by California to meet the Exhaust Emission Standards for the model year in which the transit agency intends to make the purchase.

As noted above, the Federal and California criteria pollutant and greenhouse gas emission standards for new heavy-duty engines and vehicles have generally paralleled one another since the 1970s, with California's standards tending to introduce the more stringent standards a few model years earlier than the Federal rules. As the covered vehicles in New Jersey (and throughout the United States) are already required to meet the Federal certification requirements, the Department's description below of the California rules to be incorporated by reference is limited to a summary of the differences between the California and Federal standards. To the extent that California's standards are more stringent, it is generally a result of the recent revisions to California's emission standards, known as the Low NO_x Omnibus rules. The Department will not attempt to reproduce in this notice, a detailed a description of CARB's Low NO_x Omnibus rules, as was prepared by CARB staff in its ISOR and its subsequently

proposed amendments. See CARB Low NO_x Omnibus ISOR, June 23, 2020; 5/5/21 Notice of Amendments; CARB Low NO_x Omnibus Second Proposed Amendments to the Heavy-Duty Engine and Vehicle Omnibus Regulation and Associated Amendments, June 18, 2021 (6/18/21 Notice of Amendments). Those reports, which totaled more than 500 pages, combined, of both explanatory text and accompanying reference materials, are available online for review. See <u>https://ww2.arb.ca.gov/our-work/programs/heavy-duty-low-nox/heavy-duty-low-nox-updates</u>.

California Rule Provisions Identified at N.J.A.C. 7:27-28A.11, as Incorporated by Reference *General*

As discussed above, the EPA and California have set emission standards for new motor vehicles and engines since the 1970s. Regardless of whether an emission standard is imposed by the EPA's or California's regulations, an emission standard is not meant to be momentary; nor is an emission standard meant to apply under only one set of conditions. Rather, an emission standard is based on an engine's ability to maintain criteria pollutant and/or greenhouse gas emission levels at or below the standard over a specified period of time based upon a defined set of conditions. See <u>https://www.epa.gov/emission-standards-referenceguide/basic-information-about-emission-standards-reference-guide-road;</u> CARB Low NO_x Omnibus ISOR, p. ES-3. Pursuant to California's regulations, the specified period of time is frequently referred to as the engine's regulatory useful life, which often depends upon the class of the engine (that is, light-, medium-, or heavy-duty). See *id*. The conditions include variable operating situations, such as differing loads, speeds, and idling. As such, an emission standard is not a solitary number; an emission standard will vary based on factors, such as the class of

engine, the length of time determined to be the engine's regulatory useful life, and the operational conditions. See EPA Emission Standards Reference Guide,

https://www.epa.gov/emission-standards-reference-guide/basic-information-about-emissionstandards-reference-guide-road; CARB Low NO_x Omnibus ISOR, p. ES-3 to 4. In order to certify that an engine or a vehicle meets the applicable emission standard, CARB and the EPA have incorporated into their regulatory schemes testing provisions intended to assess the engine's ability to meet the emission standard under varying operational and mileage circumstances. Accordingly, the Department will group its discussion of the provisions of California's heavyduty emissions standards and requirements into three general categories: (1) emission standards; (2) requirements to support the implementation of those emission standards; and (3) miscellaneous provisions.

Part I: Emission Standards

Overview and Scope

Pursuant to the Low NO_x Omnibus rules, California revised its criteria pollutant emission standards at 13 CCR 1900, 1956.8, 1961.2, and 1965, beginning with MY 2024 heavy-duty diesel and heavy-duty Otto-cycle engines. The Department proposes to incorporate by reference these new, more stringent NO_x and PM emission standards, which will be applicable to heavyduty diesel and heavy-duty Otto-cycle engines sold, transferred, or leased in New Jersey beginning with MY 2027.

California's revised MY 2024 PM emission standard of 0.005 g/bhp-hr applies for the applicable, full useful life of an engine or vehicle. See CARB Low NO_x Omnibus ISOR, pp. ES-9

and III-8. The revised PM standard is more stringent than the 0.01 g/bhp-hr, which applies to prior model year engines and vehicles in California, as well as EPA-certified engines and vehicles. See *id*. at ES-3.

Unlike the PM standard, which has a single implementation date, California's new NO_x emission standards, which are described in greater detail below, occur in two steps. The first step is applicable to MYs 2024, 2025, and 2026, and the second step is applicable to MY 2027 and later MYs.

The new, more stringent emission NO_x and PM standards and requirements introduced in the Low NO_x Omnibus rules are applicable beginning with MY 2024 or MY 2027 engines and vehicles. As described above, however, the Department proposes to incorporate by reference California's emission standards beginning with MY 2027 new motor vehicles rated in excess of 8,500 pounds GVWR and new motor vehicle engines intended for use in a motor vehicle rated in excess of 8,500 pounds GVWR. Thus, California's two-tiered emission standards for NO_x, including those imposed by California prior to MY 2027, that go into effect in MY 2024 and end in MY 2026 will not be applicable in New Jersey. Only California standards that affect MY 2027 or later would be applicable in New Jersey.

Additionally, the Department notes that the revisions made to California's heavy-duty emissions standards and requirements pursuant to the Low NO_x Omnibus rules apply only to new motor vehicles rated in excess of 10,000 pounds GVWR and new motor vehicle engines intended for use in a motor vehicle rated in excess of 10,000 pounds GVWR. See CARB Low NO_x Omnibus ISOR, p. I-2. Thus, the Department highlights two aspects of this rulemaking. First, new motor vehicles rated in excess of 8,500, but less than 10,001 pounds GVWR and new

motor vehicle engines intended for use in a motor vehicle rated in excess of 8,500, but less than 10,001 pounds GVWR, are subject to the emission standards in California's LEV III rules, also proposed to be incorporated by reference. Second, only a portion of the engines and vehicles with a GVWR in excess of 10,000 pounds are subject to the more stringent criteria pollutant emission standards in the Low NO_x Omnibus rules. Specifically, "engines used in vehicles with GVWR greater than 14,000 pounds are *required* to certify to the [applicable] engine certification standards and test procedures specified in [13 CCR 1956.8; whereas,] vehicles from 8,501 to 14,000 pounds GVWR are subject to the Low Emission Vehicle III (LEV III) chassis certification emission standards found in 13 CCR 1961.2, *but manufacturers have the option to certify* a subset of engines used in incomplete Otto-cycle and incomplete and complete dieselcycle medium-duty vehicles, those from 10,001 to 14,000 pounds GVWR, to the engine dynamometer emission standards specified in 13 CCR 1956.8." CARB Low NO_x Omnibus ISOR, p. I-2 (emphasis added).

The Department also proposes to incorporate by reference the greenhouse gas emission standards, which are included in the California provisions identified at proposed N.J.A.C. 7:27-28A.11. But as discussed, the California greenhouse gas standards are harmonized with the existing Federal standards for greenhouse gas emissions and, as such, impose no more stringent emission standards or requirements than what is in effect in New Jersey at the time of this notice of proposal.

In short, all of the engines and vehicles subject to proposed N.J.A.C. 7:27-28A are required to meet California's emission standards and requirements. But only a portion of these

vehicles and engines are subject to the more stringent NO_x and PM standards and requirements

included in California's Low NO_x Omnibus rules.

The other vehicles will certify to the applicable chassis emission standards pursuant to

the LEV III rules that are already applicable in New Jersey. However, a manufacturer will now

need to supply a California certification for a covered vehicle sold in New Jersey.

Revisions to the NO_x Emission Standards: 13 CCR 1956.8, 1961.2, and 1965

For ease of reference, the Department is providing a short glossary of frequently used

terms and acronyms that are used in this section of the Summary. A more comprehensive list

of acronyms and abbreviations can be found in the Low NO_x Omnibus ISOR. See CARB Low NO_x

Omnibus ISOR, pp. xvii – xix; https://ww3.arb.ca.gov/regact/2020/hdomnibuslownox/isor.pdf.

Acronym/Abbreviation	Definition
FTP	Federal Test Procedure
g/bhp-hr	Grams per brake horsepower hour
g/hr	Grams per hour
HD	Heavy-Duty
HDO	Heavy-Duty Otto-Cycle
HHDD	Heavy Heavy-Duty Diesel
LHDD	Light Heavy-Duty Diesel
LLC	Low Load Cycle
MDDE	Medium-Duty Diesel Engine
MDOE	Medium-Duty Otto-Cycle Engine
OBD	On-Board Diagnostics
RMC-SET	Ramped Modal Cycle Supplemental Emissions Test

Step 1: More stringent NO_x emission standards for MY 2024, 2025, and 2026 Engines

Below is Table ES-1 from CARB's ISOR for the Low NO_x Omnibus rules, which shows

California's NO_x emission standards (referred to in the table as "current") prior to the adoption

of the Low NO_x Omnibus rules, and the revised, more stringent emission standards for MY 2024 to MY 2026 heavy-duty Otto-cycle and heavy-duty diesel engines intended for use in vehicle service classes with GVWR greater than 10,000 pounds. See CARB Low NO_x Omnibus ISOR, p. ES-8. The Department proposes to incorporate by reference California's revised, more stringent standards, which include the MY 2024 to MY 2026 emission standards. However, if adopted, the MY 2024 to MY 2026 standards would not be applicable to covered vehicles in New Jersey because the rules will not be effective until MY 2027. The Department notes that California's NO_x emission standard, prior to the adoption of the Low NO_x Omnibus rules, identified in the Table below as "current," generally corresponds with the EPA's NO_x emission standard, which is currently applicable in New Jersey. See *id*. at XI-1. Accordingly, the Table provides a useful way to compare and contrast the engine certification standards that vehicles sold in New Jersey must meet through MY 2026 (the existing national standard imposed by the EPA) and the engine certification standards that vehicles sold in California will be required to meet as of MY 2024 (the Step 1 Low NOx Omnibus rules standard).

	MDDE/LHDD	/MHDD/HHDD	MDOE/HDO [®]		
MY	FTP	RMC-SET	LLC	Idling	FTP
	(g/bhp-hr)	(g/bhp-hr)	(g/bhp-hr)	(g/hr)	(g/bhp-hr)
Current	0.20	0.20		30	0.20
2024-2026	0.050	0.050	0.200	10	0.050
	(0.10) ^b	(0.10) ^b	(0.30) ^b	(10) ^b	(0.10) ^b

Table ES-1. Proposed Heavy-Duty Diesel- and Otto-Cycle Engine NO $_{\!x}$ Standards (MY 2024 to 2026)

^aMDDE: Medium-duty diesel engines 10,001-14,000 lbs. GVWR, LHDD: Light heavy-duty diesel engines 14,001-19,500 lbs. GVWR, MHDD: Medium heavy-duty diesel engines 19,501-33,000 lbs. GVWR,

HHDD: Heavy heavy-duty diesel engines >33,000 lbs. GVWR, MDOE: Medium-duty Otto-cycle engines 10,001-14,000 lbs. GVWR, and HDO: Heavy-duty Otto-cycle engines >10,000 lbs. GVWR. ^b NO_x standards in parentheses are optional 50-state-directed engine standards. Manufacturers may meet these less stringent standards in California if they do so for all engine families they produce nationwide.

California's Low NO_x Omnibus rules, which the Department proposes to incorporate by reference, revise the emission standards based on the emission reductions achievable for the class of the engine (as defined by its GVWR) and under differing operational conditions (low load cycle or LLC versus idling). See CARB Low NO_x Omnibus ISOR, p. ES-11 to -12. As Table ES-1 shows, California's revisions include more stringent NO_x emission standards for MY 2024 through MY 2026 than the standards applicable to prior model years. For instance, beginning with MY 2024 in California (but MY 2027 in New Jersey), heavy heavy-duty diesel engines (engines with a GVWR greater than 33,000 pounds) must meet a 0.050 grams per brake horsepower hour (g/bhp-hr) in the ramped modal cycle supplemental emissions test (RMC-SET), which is more stringent than the 0.20 grams per brake horsepower hour standard listed as "current."

Step 2: More stringent NO_x emission standards for MY 2027 and Subsequent MY Engines

Below are Table ES-2 and a portion of Table III-3 from CARB's Low NO_x Omnibus ISOR, which show the revised NO_x emission standards for MY 2027 and later for diesel and Otto-cycle engines with a GVWR greater than 10,000 pounds. See CARB Low NO_x Omnibus ISOR, pp. ES-9 and III-8. "As shown in Table ES-2, [there are] tiered standards for [diesel engines with a GVWR

greater than 33,000 pounds] based on an intermediate useful life of 435,000 miles and full

useful life of 600,000 miles and 800,000 miles, for 2027 through 2030 and 2031 and subsequent

MYs, respectively." Id. at ES-8.

Table ES-2. Proposed Heavy-Duty Diesel- and Otto-Cycle Engine NO_x Standards (MY 2027 and Subsequent)

Test Procedure	MDDE/LHDD/M HDD	MDOE/HDO	HHDD	
	MYs 2027 and	d Subsequent	MY 2027 – 2030	MY 2031 and Subsequent
	(@Useful Life)	(@Useful Life)	(@435,000 miles) ^a	(@435,000 miles)ª
FTP cycle (g/bhp-hr)	0.020	0.020	0.020	0.020
RMC-SET cycle (g/bhp-hr)	0.020		0.020	0.020
Low-load cycle (g/bhp-hr)	0.050		0.050	0.050
Idling (g/hr)	5		5	5

^a For HHDD, the FTP, RMC-SET, and Low-load cycle standards at full useful life are higher to account for deterioration, as shown within the main document in Table III-3

Test Procedure	Heavy Heavy-Duty Diesel Engines						
	MYs 2027	- 2030	MYs 2031 and Subsequent				
	(@435,000 miles)	(@Useful Life)	(@435,000 miles)	(@Useful Life)			
FTP cycle (g/bhp-hr)	0.020	0.035	0.020	0.040			
RMC-SET cycle (g/bhp-hr)	0.020	0.035	0.020	0.040			
Low-load cycle (g/bhp-hr)	0.050	0.090	0.050	0.100			
Idling (g/hr)	5	5	5	5			

Table III-3. Proposed Heavy-Duty Diesel- and Otto-Cycle Engine NO_x Standards for 2027 and Subsequent
By comparing the table containing the MY 2024 to MY 2026 NO_x standards (Table ES-1) with the two tables showing the MY 2027 and later NO_x standards (Tables ES-2 and III-3), the CARB Low NO_x Omnibus ISOR demonstrates that the emission standards for the later model year engines are more stringent. For example, beginning with model year 2027, a medium-duty diesel engine, light heavy-duty diesel engine, medium heavy-duty diesel engine, medium-duty Otto-Cycle engine, and a heavy-duty Otto-Cycle engine (MDDE/LHDD/MHDD, MDOE/HDO) must meet the 0.020 g/bhp-hr emission standard in the FTP cycle, which is more stringent than the 0.050 g/bhp-hr emission standard that the same engines must meet in MYs 2024, 2025, and 2026 in California (Compare Tables ES-1 and ES-2). See CARB Low NO_x Omnibus ISOR at pp. ES-7 and ES-8.

The revised NO_x standard for a heavy heavy-duty diesel engine is a bit more complex because the stringency of the standard is tiered based upon other revisions found in California's Low NO_x Omnibus rules, which include an adjustment to the useful life of the vehicle. For example, a MY 2024 through MY 2026 heavy heavy-duty engine in the FTP cycle must meet a 0.050 g/bhp-hr emission standard. See Table ES-1. Beginning with MY 2027 and through MY 2030, a heavy heavy-duty engine in the FTP cycle must meet a two-tiered engine standard. For the first 435,000 miles (or first tier), the MY 2027 through MY 2030 heavy heavy-duty engine must meet a 0.020 g/bhp-hr emission standard, which is more stringent than the standard the same type of engine would have to meet in MY 2024 through MY 2026. Compare Tables ES-1 and III-3. However, after 435,000 miles and through its full useful life (or second tier), the MY 2027 through MY 2030 heavy heavy-duty engine must meet a 0.035 g/bhp-hr emission standard, which is less stringent than the emission standard imposed for the first 435,000 miles,

but still more stringent than the emission standard imposed on MY 2024 through MY 2026 heavy heavy-duty engines for the full useful life. Compare Tables ES-1 and III-3. A similar tiered approach, based on the increased useful life of the engine, is applied to MY 2031 and later heavy heavy-duty engines.

A key aspect of California's Low NO_x Omnibus regulation is its approach to useful life. It incorporates an increased useful life, which means that MY 2027 and later engines have to meet a more stringent NO_x emission standard for a longer period of time. See CARB Low NO_x Omnibus ISOR, p. III-4. And for heavy heavy-duty engines, the lengthier useful life period is tiered, such that the most stringent emission standard applies to the mileage accumulated earlier in the useful life of the engine.

Revisions to the Greenhouse Gas Emission Standards: 17 CCR 95661, 95662, and 95663

For the most part, the California greenhouse gas emissions standards at 17 CCR 95661, 95662, and 95663, which the Department proposes to incorporate by reference, harmonize with the Federal phase 2 greenhouse gas standards since 2018, which are currently applicable in New Jersey. See CARB Low NO_x Omnibus ISOR, p. I-44. As CARB describes in the Low NO_x Omnibus ISOR, some "differences were necessary to facilitate enforcement, align with existing California programs, and provide additional incentives for manufacturers to bring advanced technologies to market," but the timing and stringency of the standards are aligned. See *id*. The Low NO_x Omnibus rules include some administrative changes that CARB describes in the ISOR as necessary for clarification and correction of a few items. See *id*. at III-92 to III-94. The revisions concerning the greenhouse gas standards in California's Low NO_x Omnibus rules are

not substantive in nature. The emission standards of the California phase 2 greenhouse gas rules are generally aligned with the existing Federal phase 2 greenhouse gas standards. In other words, if California's phase 2 greenhouse gas rules are incorporated by reference, the only real change for manufacturers selling covered vehicles in New Jersey will be the requirement to certify the covered vehicles to California's standards, which may involve a discrete set of procedural requirements.

Part II: Requirements to Support the Implementation of the Heavy-Duty Emission Standards and Requirements

OBD Requirements: 13 CCR 1968.2, 1971.1, and 1971.5

"On-board diagnostic (OBD) systems are self-diagnostic systems incorporated into a vehicle's on-board computer. They are comprised mainly of software designed to detect emission-control system malfunctions as they occur. This is done by monitoring virtually every component and system that can cause increases in emissions, thus maintaining low emissions throughout the vehicle's life." CARB Low NO_x Omnibus ISOR, p. I-8. OBD systems can alert a vehicle owner to faulty components in the vehicle's emission system. See *id*. But "OBD systems also influence and interact with other CARB emission requirements. For example, the detection of faults during the emission warranty period provides a clear notification to the vehicle operator that a warranty repair is needed. In turn, this provides further motivation to engine manufacturers to design durable emission controls to minimize warranty costs and avoid perceptions by the vehicle operator of the need for frequent repairs. OBD systems have also become the basis for emission inspection programs in California and throughout the

nation." *Id*. Thus, an OBD system in a vehicle is an important element in the implementation and enforcement of any emission standard.

"The OBD system is required to monitor the components and indicate a fault code when emissions exceed the emission standards by a certain amount." CARB Low NO_x Omnibus ISOR p. I-9. Prior to the revisions made by the Low NO_x Omnibus rules, California's rules required that OBD systems set "[e]mission 'thresholds' for these faults [which] are typically either a multiple of the exhaust emission standard (e.g., 2.0 times the applicable standard, etc.), or an additive value above the standards (e.g., 0.2 g/bhp-hr above the applicable standards, etc.)." Id. But because engine manufacturers expressed concerns about the ability of their OBD systems to detect faults with certainty at the more stringent emission standard levels, California's Low NO_x Omnibus rules include revisions to the OBD requirements at 13 CCR 1968.2, 1971.1, and 1971.5, which the Department proposes to incorporate by reference. Beginning with MY 2024 in California (but in MY 2027 in New Jersey if the proposed rules are adopted), the OBD requirements maintain existing fault thresholds, rather than revising them to match the new, more stringent emission standards. *Id*. at II-10. This revision provides interim relief to manufacturers; however, CARB anticipates that the fault thresholds will be adjusted to account for the more stringent emission standards at a future date. See id.

Criteria Pollutant Emission Control System Useful Life and Warranty Period Requirements: 13 CCR 2035, 2036, 2037, and 2112

The Department proposes to incorporate by reference 13 CCR 2035, 2036, 2037, and 2112. These sections broadly cover criteria pollutant emission control system useful life and

warranty period requirements. "The regulatory useful life period is the period of time or engine operation during which manufacturers are liable for emissions compliance. Specifically, manufacturers must ensure that their engines meet emission standards not only at the time of certification ..., but also ... for their regulatory useful life." *Id.* at p. I-23. An "emissions warranty is used to cover any repairs needed to correct defects in materials or workmanship that would cause an engine or vehicle to not meet its applicable emission standards. From the vehicle owner's viewpoint, the inclusion of an emissions warranty provides a level of assurance that ... [i]f such defects do occur during the warranty period, the manufacturers are liable for fixing them." CARB Low NO_x Omnibus ISOR, p. I-14. California's Low NO_x Omnibus rules lengthen the warranty and useful life periods by phasing in the extensions of these periods over time.

Generally speaking, the useful life and warranty periods are closely linked to an emission standard because they set the period of time for which the engine must be able to attain an emissions standard. As discussed above, the regulatory useful life is the measure of an engine's ability to maintain emission levels at or below the emission standard set by the regulatory agency. And though the warranty period is usually not an exact match to the length of the useful life period, the warranty period is often correlated with the agency's determination of an appropriate useful life period because it is the time the manufacturer is responsible for ensuring the vehicle meets the required emission standard.

Both California and EPA measure useful life periods in "miles, years, and in some cases hours." CARB Low NO_x Omnibus ISOR, p. I-23. Prior to California's adoption of the Low NO_x Omnibus rules, CARB's and the EPA's regulations assigned the same useful life periods for

criteria pollutant emission standards for each class of heavy-duty vehicle. See CARB Low NO_x Omnibus ISOR, p. I-26. When California began the regulatory process to amend the emission standards applicable to heavy-duty vehicles, the analysis that eventually led to the adoption of the Low NO_x Omnibus rules, included consideration of changes to both the useful life and warranty periods. After considerable research, CARB determined that the useful life periods for criteria pollutant emission standards for heavy-duty vehicles should be updated based, in part, on the longer modern service lives of heavy-duty engines. See CARB Low NO_x Omnibus ISOR, p. II-17 to 18. Ultimately, "the useful life mileage periods were chosen to roughly correspond to the mileage when engines get either rebuilt or get replaced." Low NO_x Omnibus ISOR, p. III-57. Moreover, CARB determined that California's revised useful life periods were technically feasible based on a manufacturer's ability to "design parts and systems that are durable and function for the full useful life periods, or specify appropriate maintenance intervals such that owners inspect, repair and replace parts as needed." Low NO_x Omnibus ISOR, p. III-58.

Accordingly, California's low NO_x Omnibus rules increase the useful life periods for heavy-duty vehicles. Below is Table III-14 from CARB's Low NO_x Omnibus ISOR, which compares the revised useful life periods beginning in MY 2027 with the useful life periods applicable to prior model years (referred to in the Table as "current"). The Department proposes to incorporate by reference California's revised, longer useful life periods, which are identified as "proposed" in the Table. The useful life periods identified in the Table below as "current" generally correspond with the EPA's existing useful life periods as of the date of this notice of proposal, except that the EPA has a separate useful life category for complete heavy-duty gasoline vehicles. Accordingly, the Table provides a practical way to compare and contrast the

useful life periods that vehicles sold in New Jersey must meet through MY 2026 (the national

standard imposed by EPA) and the useful life periods that vehicles sold in New Jersey will be

required to meet as of MY 2027.

Engine / Vehicle Category (GVWR)	Current Useful Life Periods (Miles)	Proposed Phase-in for Useful Life Effective MY 2027 (Miles)	Proposed Phase-in for Useful Life Effective MY 2031 (Miles)
HHDD / Class 8	435,000	600,000	800,000
>33,000 lbs.	10 years	11 years	12 years
	22,000 hours	30,000 hours	40,000 hours
MHDD / Class 6-7	185,000	270,000	350,000
19,501 - 33,000 lbs.	10 years	11 years	12 years
LHDD / Class 4-5	110,000	190,000	270,000
14,001 - 19,500 lbs.	10 years	12 years	15 years
HDO >14,000 lbs.	110,000	155,000	200,000
	10 years	12 years	15 years

Table III-14. Current and Proposed Heavy-Duty Useful Life Periods

CARB Low NO_x Omnibus ISOR, p. III-57. As can be seen in Table III-14, the revised, longer useful life periods begin to phase in starting with MY 2027.

Along with the increased useful life periods, the Low NO_x Omnibus rules include an increased warranty period for criteria pollutant emission standards for heavy-duty vehicles. Increased warranty periods encourage the engine manufacturers to provide more durable emission controls to minimize warranty claims. Longer warranty periods also shift the costs of repairing emission control malfunctions from the vehicle owner to the manufacturer for a longer period. The end result of this should be reduced pollutants from the engine for a longer

time or more miles. According to the ISOR, CARB's research demonstrates that increased warranty periods are technically feasible, a finding that is based in part on the fact that manufacturers currently offer longer warranty periods for heavy-duty vehicles and engines. See CARB Low NO_x Omnibus ISOR, p. III-45 to 46.

Table III-10 below is from CARB's Low NO_x Omnibus ISOR, which compares the revised warranty periods beginning in MY 2022, MY 2027, and MY 2031 (pursuant to the Low NO_x Omnibus rules, which were adopted by CARB in August 2020 (and as amended in September 2021)) with California's heavy-duty vehicle warranty periods for model years earlier than MY 2022, which are identified in the Table as "current" (and which generally harmonize with the EPA's existing warranty periods). Accordingly, Table III-10 provides a practical way to compare and contrast the warranty periods that vehicles sold in New Jersey must meet through MY 2024 (pursuant to the national standard imposed by EPA) and the warranty periods that vehicles sold in New Jersey will be required to meet (pursuant to the Low NO_x Omnibus rules) as of MY 2027. Note that the third column in the Table indicates the warranty periods effective with MY 2022. As noted above, the Department incorporates the California rules by reference, but limits applicability to new MY 2027 and later vehicles and engines with a GVWR in excess of 8,500 pounds.

Table III-10. Current and	Current	June 2018	Proposed Phase-in	Proposed Phase-
Proposed Heavy-Duty	Warranty	Step 1 Warranty	for Step 2	in for Step 2
Diesel Warranty Periods	(Miles)	Amendments	Warranty	Warranty
Engine / Vehicle		Effective MY 2022	Effective MY 2027	Effective MY
Category		(Miles)	(Miles)	2031
(GVWR)				(Miles)
HHDD / Class 8	100,000	350,000	450,000	600,000
				_

Table III-10. Current and Proposed Heavy-Duty Diesel Warranty Periods

	3,000 hours		22,000 hours	30,000 hours
MHDD / Class 6-7	100,000	150,000	220,000	280,000
19,501 - 33,000 lbs.	5 years	5 years	7 years	10 years
	3,000 hours		11,000 hours	14,000 hours
LHDD / Class 4-5	100,000	110,000	150,000	210,000
14,001 - 19,500 lbs.	5 years	5 years	7 years	10 years
	3,000 hours		7,000 hours	10,000 hours
HDO >14,000 lbs.	50,000	50,000 ^a	110,000	160,000
	5 years	5 years	7 years	10 years
			6,000 hours	8,000 hours

^a Not included under Step 1 Warranty, but current periods shown here for completeness.

CARB Low NO_x Omnibus ISOR, p. III-44. As CARB explained in its ISOR, California set the "Step 1 warranty amendments ... to reflect approximately 80 percent of the current useful life of the vehicles. Following this approach, the Step 2 warranty mileage periods were also selected to represent approximately 75-80 percent of the corresponding useful life mileage period." CARB Low NO_x Omnibus ISOR, p. III-45.

Tables III-10 and III-14 serve as useful visual aids in explaining the principal differences between California's heavy-duty useful life and warranty periods prior to adoption of the Low NO_x Omnibus rules (which generally harmonized with the existing Federal standards applicable through MY 2024) and the useful life and warranty periods that will be applicable in New Jersey beginning with MY 2027 heavy-duty vehicles, once the California rules identified at N.J.A.C. 7:27-28A.11 are incorporated by reference.

In addition to the increase in the useful life and warranty periods, California's Low NO_x Omnibus rules include revisions that will result in additional variations from the existing Federal requirements, which are currently applicable in New Jersey. The Low NO_x Omnibus rules

increase the operational hours as part of the increased useful life period and re-introduce operational hours as part of the warranty period of a heavy heavy-duty (HHDD) engine. See CARB Low NO_x ISOR, pp. III-48 and 60. Since HHDD vehicles tend to idle for long periods of time, they often accumulate more hours of use at a disproportionately higher rate than miles of use. See *id*. Thus, CARB determined that lengthening the operational hours associated with the increased useful life period and including operational hours in the warranty period better reflects real-world usage of the trucks. See *id*.

The Low NO_x Omnibus rules, beginning with MY 2022 in California (but in MY 2027 in New Jersey if the proposed rules are adopted), expand the useful life and warranty period applicability to include heavy-duty hybrid vehicles that are equipped with California optionally certified heavy-duty hybrid powertrains. See CARB Low NO_x ISOR, pp. III-55 and 60. CARB determined that "it is feasible, if properly designed and integrated, for the durability of a downsized combustion engine in a hybrid powertrain to rival the expected durability of the larger engine that is used as the exclusive power source for similar vehicle applications." *Id.* at III-55. Thus, the useful life and warranty periods for optionally certified hybrid powertrains "will be the same as for a diesel engine that would typically be used in a comparable vehicle." *Id.* at III-60. Pursuant to the proposed rules, this expansion of the useful life and warranty periods applies in New Jersey beginning with MY 2027 for optionally certified hybrid powertrain engines.

The Low NO_x Omnibus rules, beginning with MY 2027, include an updated minimum maintenance interval schedule for heavy-duty Otto-cycle engines with a GVWR greater than 14,000 pounds. See CARB Low NO_x Omnibus ISOR, p. III.49. The updated schedule as applied to

each system component is located in Table III-12 in CARB's Low NO_x Omnibus ISOR, p. III-50, which includes a column that lists the minimum maintenance intervals required by the existing Federal rules, which are currently applicable in New Jersey, in order to compare and contrast the schedules. CARB based the updated schedule on its review of maintenance intervals set forth in the owner's manuals of the applicable-sized engines and vehicles. See *id*. at III-51.

The Low NO_x Omnibus rules maintain California's existing definition of "warranted parts" as applied to heavy-duty diesel engines and vehicles through MY 2026. See 13 CCR 2035. However, beginning with MY 2027, the definition of a warranted part is expanded to include heavy-duty engine or vehicle greater than 14,000 pounds GVWR of any fuel type. *Id*. The expansion of the definition ensures that all emission control system components are included in the definition of warranted parts for non-diesel heavy-duty vehicles. See CARB Low NO_x Omnibus ISOR, p. III-42. In addition, beginning with MY 2022 in California (but MY 2027 in New Jersey), the definition of a warranted part for heavy-duty hybrid vehicles greater than 14,000 pounds GVWR and California-certified hybrid powertrains, which are optionally certified, is expanded to include any part that affects regulated emission of criteria pollutants, including the electric motor, energy storage, and battery management systems. See *id*.

Finally, the Low NO_x Omnibus rules extend California's long-time designation of catalytic converter beds in diesel engines as non-replaceable parts to all heavy-duty Otto-cycle engines. *Id.*, p. III-52. The designation "means that manufacturers can only schedule repairs or replacements if they pay for them." *Id.* at III-51.

Emission Warranty Information and Reporting and Corrective Actions and Recalls: 13 CCR 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2121, 2123, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2133, 2137, 2139, 2139.5, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2166, 2166.1, 2167, 2168, 2169, 2169.1,2169.2, 2169.3, 2169.4, 2169.5, 2169.6, 2169.7, 2169.8, and 2170

The Department proposes to incorporate by reference 13 CCR 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2121, 2123, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2133, 2137, 2139, 2139.5, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2166, 2166.1, 2167, 2168, 2169, 2169.1, 2169.2, 2169.3, 2169.4, 2169.5, 2169.6, 2169.7, 2169.8, and 2170. Generally speaking, these sections cover the emission warranty information and reporting (EWIR) program and the corrective action procedures for California-certified engines and vehicles. Below is a short glossary of frequently used terms and acronyms that are used in this section of the Summary:

Acronym/Abbreviation	Definition
EIR	Emissions Information Report
EWIR	Emissions Warranty Information and Reporting
FIR	Field Information Report

Currently, the only certification required for the bulk of the heavy-duty vehicles and engines in New Jersey is the EPA certification, which means those vehicles are subject only to the EPA's warranty and recall requirements and procedures. Pursuant to the Low NO_x Omnibus rules, which the Department proposes to incorporate by reference, California's heavy-duty emission standards and procedures will include significantly different warranty coverage and

recall provisions than the EPA's rules currently do. That is primarily due to the inclusion of the new, more stringent emission standards and longer useful life and warranty periods. "The intent of the EWIR program and associated corrective action procedures is to ensure that defective emission control components are expeditiously identified and remedied through corrective action." CARB Low NO_x Omnibus ISOR, p. II-19.

Prior to the adoption of the Low NO_x Omnibus rules, the California rules required manufacturers to track the number of claims made during the warranty period for replacement/repair of components within the emission control system. See *Id.*, p. I-32. If the number of claims for a particular component reached certain graduated thresholds, the manufacturer was required to submit various reports to CARB. If the failure rate reached the highest of the graduated threshold levels, CARB could require, or the manufacturer could voluntarily take, corrective action. See *ibid*.

Over the years, CARB documented the many challenges of enforcing the warranty and corrective action requirements. The challenges included manufacturers' resistance to taking corrective actions, which resulted in delayed repairs. Such delays were compounded by the fact that defective emission control components do not necessarily impact the ability of the consumer to operate the vehicle. See CARB Low NO_x Omnibus ISOR, p. II-20. Thus, vehicles with defective emission control system components will continue to operate and emit in excess of the emission standards for long periods, unless the warranty and corrective action requirements are more consistently enforced to ensure repairs are made timely. See CARB Low NO_x Omnibus ISOR, p. II-19.

California has addressed these problems in its new Low NO_x Omnibus rules make several changes to the EWIR program and the corrective action procedures to address these concerns. Starting with MY 2024 in California (but in MY 2027 in New Jersey) each of the graduated thresholds for reporting will be lowered. See Low NO_x Omnibus ISOR, p. III-61. Reporting falls into two categories: (1) unscreened claims, which "refer[s] to the number of parts replaced during the warranty period for any reason, regardless of whether the replaced or repaired part actually experienced a failure"; and (2) actual failures. Ibid. A claim threshold is based on either the percentage of claims or the number of individual claims, whichever is greater. *Ibid*. By lowering the number of individual claims (not the percentage) that triggers the reporting threshold, the Low NO_x Omnibus rules "ensure that for engine families with a population of less than 2,500 engines, warranty claims are tracked and any issues are addressed guickly." *Ibid*. Below, is Table III-15 from CARB's Low NO_x Omnibus ISOR, which compares the revised reporting and corrective action thresholds beginning in MY 2024 (but will begin in MY 2027 in New Jersey), with those applicable to earlier model years, which are identified in the table as "current" (and which generally harmonize with the EPA's existing warranty periods).

	EWIR	FIR	EIR	Corrective Action
MYs	Threshold	Threshold	Threshold	Threshold
Current	1% or 25 Unscreened Claims	4% or 50 Unscreened Claims	4% or 50 Failures	4% or 50 Failures
2024-2026	1% or 12 Unscreened Claims	4% or 25 Unscreened Claims	4% or 25 Failures	4% or 25 Failures

Table III-15. Reporting and Corrective A	Action Thresholds
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	4.0/ 4.0		k	
2027-2030	1% or 12	Years 1-5	Years 1-5	Years 1-5
	Unscreened	4% or 25	4% or 25 Failures	4% or 25 Failures
	Claims	Unscreened Claims		
			Years 6-7	Years 6-7
		Years 6-7	5% or 35 Failures	5% or 35 Failures
		5% or 30		
		Unscreened Claims		
		Years 8-10		
		7% or 50		
		Unscreened Claims		
2031 and	1% or 12	Years 1-5	Years 1-5	Years 1-5
subsequent	Unscreened	4% or 25	4% or 25 Failures	4% or 25 Failures
	Claims	Unscreened Claims		
			Years 6-7	Years 6-7
		Years 6-7	5% or 35 Failures	5% or 35 Failures
		5% or 35		
		Unscreened Claims	<u>Years 8-10</u>	<u>Years 8-10</u>
			7% or 50 Failures	7% or 50 Failures
		<u>Years 8-10</u>		
		7% or 50		
		Unscreened Claims		

Note: The threshold is the greater of the percentage of the population for which there is a warranty claim or failure, or the number of warranty claims or failures specified for each threshold.

CARB Low NO_x Omnibus ISOR, p. III-64.

In addition to lowering the reporting thresholds as shown above, the Low NO_x Omnibus rules require manufacturers to submit reports to CARB throughout the useful life of the emission-related components rather than the shorter warranty period as required previously. See CARB Low NO_x Omnibus ISOR, p. III-61. The intent is to "allow CARB staff to determine whether replacement parts adequately address the in-use issues that caused the original versions of the parts to fail at unacceptably high rates or if additional corrective action is necessary." *Id.* at III-62. Beginning with MY 2024 in California (but with MY 2027 in New

Jersey), the Low NO_x Omnibus rules allow CARB to require corrective action when the failure rates meet or exceed the corrective action thresholds. *Id.* at III-65. This change is in contrast to CARB's rules pertaining to prior MYs that prevented CARB from exercising its recall powers unless it could show the reporting thresholds were met and "a substantial number of vehicles or engines contained a failure in an emission-related component that resulted in the failure of the vehicles or engines to meet applicable emission standards over their useful lives." *Id.* at III-66. Table III-16 below contrasts the requirements for MY 2024 and later engines and vehicles, which are identified as "proposed," with California's list of requirements applicable to prior model year engines and vehicles, which are identified in the table as "current" (and generally harmonize with the EPA's existing warranty periods, which are currently applicable in New Jersey). The revisions to the EWIR Program and corrective action and recall procedures are intended to facilitate expeditious identification and corrective action for defective emission control system components.

	Current Requirements	Proposed Requirements
6.2 Parts Storage	 No storage requirement. 	• Parts must be stored for 2 years.
6.3 Demonstration of Compliance with Emission Standards	• Manufacturers may demonstrate compliance with emission standards to overcome the presumption of noncompliance in order to avoid taking corrective action.	• No longer applicable. The need for corrective action will be based solely on failure rates.
6.4 Corrective Action Procedures	 Components are not identified for specific types of corrective action. 	 Certain components are identified as being subject to recall and extended warranties, while some are only subject to extended

Table III-16. Current and Proposed EWIR Requirements

	 Extended Warranty coverage is not required for replacement parts. Corrective action plans must be submitted within 45 days of being informed of a nonconformity. 	 warranties. (Any component is subject to recall if it reaches a 25% failure rate within 5 years.) Extended warranty coverage is required for replacement parts. Corrective Action Plans must be submitted within 90 days of exceeding the corrective action threshold.
6.5 Recall and Corrective Action Plan	• Manufacturers are required to submit corrective action plans for approval prior to implementation. The plans are reviewed to ensure that they will adequately address the problem that is occurring in the field.	• Manufacturers would be required to submit much of the same information, but include additional information so that CARB staff would be able to make more informed decisions when evaluating and approving recall and corrective action plans.
6.6 Approval and Implementation of Corrective Action Plan	• Manufacturers are required to implement corrective action plans within 45 days of receiving approval.	• Manufacturers would be required to implement the corrective action plan within 30 days of receiving approval, unless there is good cause to extend the deadline
6.7 Notification of Owners	• Manufacturers are required to notify vehicle and engine owners of corrective action.	• Manufacturers may have to take additional action to ensure that vehicle and engine owners are notified, such as using certified mail.
6.8 Owner Notification Letter	• Manufacturers must submit owner notification letters for approval as part of the corrective action plan.	• Manufacturers would follow the same approval process, but include additional information specified in Subsection 6.8.
6.9 Preliminary Tests	• Under an ordered recall, Executive Officer can request test data to demonstrate the	 No change to current requirements.

	effectiveness of corrective action repairs.	
6.10 Communication with Repair Personnel	• Manufacturers must submit repair instructions and technical service bulletins related to corrective action repairs as part of the corrective action plan.	• In addition to submitting repair instructions and technical service bulletins, manufacturers would also submit any updates to repair instructions or technical service bulletins.
6.11 Carryover and Carry Across Applications	• Though warranty and failure rate information may have been used when evaluating if it is appropriate to use carryover or carry across data, it was not explicitly stated how it would be used.	• Heavy-duty diesel and heavy-duty Otto-cycle test procedures would explicitly state that carryover or carry across data cannot be used if past MYs have exhibited that they are equipped with components that have failure rates greater than the corrective action thresholds and if an improved version of the component is not being used.

CARB Low NO_x Omnibus ISOR, p. III-72.

In summary, the Low NO_x Omnibus rules significantly revise California's EWIR program and corrective action and recall procedures beginning with MY 2024 to ensure that defective emission control system components are identified quickly and that manufacturers take the necessary corrective actions. The Department notes however, that after Table III-16 (as replicated above) was published in CARB's Low NO_x Omnibus ISOR on June 23, 2020, CARB issued a Notice of Amendments on May 5, 2021, with a few revisions to the Low NO_x Omnibus rule requirements that are not reflected in the table. See 5/5/21 Notice of Amendments, pp. 12-13. Specifically, the requirement to store parts, which is noted in the first row of Table III-16, was eliminated. See *id.* at 28-29. This provision was originally included so that the parts

could be analyzed to determine the valid failure rate reported, but it was determined that this requirement would be too costly. *Ibid*. Additionally, the total ban on carryover or carry across data, which is noted in the last row of Table III-16, was modified. See *id*. at 50. Rather than imposing an outright ban, "[t]he proposed change would allow manufacturers to request a carryover or carry across application based on data from an engine family or test group that is equipped with such an emissions control component only if they extend the emissions warranty coverage for that component to the full useful life period of the engine or test group for which certification is sought." *Ibid*.

Engine Durability Demonstration Program, In-Use Emissions Data Reporting and Heavy-

Duty In-Use Testing Program: 13 CCR 1956.8, 2065, 2112, 2137, 2139, 2139.5, and 2140

The Department proposes to incorporate by reference 13 CCR 1956.8, 2065, 2112, 2137,

2139, 2139.5, and 2140. These sections broadly cover California's heavy-duty engine durability demonstration program, heavy-duty in-use emissions data reporting, and the heavy-duty in-use testing. Below is a short glossary of frequently used terms and acronyms that are used in this section of the Summary:

Acronym/Abbreviation	Definition
DDP	Durability demonstration program
FTP	Federal test procedure
HD	Heavy-duty
HDIUC	Heavy-duty in-use compliance
HDIUT	Heavy-duty in-use testing
HDTT	Heavy-duty transient test cycle
MAW	Moving average window
NTE	Not-to-Exceed
OBD	On-board diagnostics
PEMS	Portable emissions measurement system

RMC-SET	Ramped modal cycle version of the
	supplemental emissions test

As discussed in the purpose and scope section above, CARB issues an executive order when a manufacturer establishes that an engine meets the applicable certification requirements. Once the executive order is issued, a manufacturer is able to sell that engine in California. "The approval process to obtain an Executive Order includes many elements. The durability demonstration program (DDP) is one of the components of the on-road heavy-duty engine certification process." CARB Low NO_x Omnibus ISOR, p. I-37. The DDP requires the manufacturer to make two demonstrations. First, the manufacturer must show "that emissionrelated components are durable through the full useful life of the engine." *Id.* at I-38. Second, the manufacturer must show "that the deteriorated emissions test results at the end of the useful life periods do not exceed applicable emission standards." *Id.* at I-38. "To simulate heavy-duty engine and emission-related control component aging throughout the applicable useful life period, manufacturers operate engines over test cycles as specified in a durability demonstration program." *Id.* at ES-3-4.

After an engine is certified and receives an executive order by meeting the requirements of the DDP program under simulated use testing, California's rules require that manufacturers "test ... a fraction of their engine families, with the specific engine families specified by U.S. EPA and CARB" pursuant to the heavy-duty in-use testing (HDIUT) program while they are operated on the road under real world conditions using a portable emissions measurement system (PEMS). CARB Low NO_x Omnibus ISOR, p. ES-4. CARB evaluates the in-use test data, and may require independent testing under a companion program known as the heavy-duty in-use

compliance program (CARB's in-house testing) and may require a recall if either process discovers a component is defective. See ES-4 and I-12. Much like the DDP, the purpose of the heavy-duty in-use testing (HDIUT) program is "to ensure that emissions from diesel engines in vehicles greater than 8,500 pounds GVWR are controlled under real-world conditions, i.e., during normal vehicle operation in the field, throughout their useful life." *Id.* at III-31. But unlike the DDP, the HDIUT program's testing occurs after the certification process is complete and is far more limited in scope.

Based upon its research, which included reviews of engine compliance activities reports from EPA, CARB found that its DDP program was "not accurately simulating the factors contributing to engine and emission control deterioration." CARB Low NO_x Omnibus ISOR, p. II-21. As a result, CARB determined there was a disconnect between the operations of the emission control systems under real-world conditions and operations under the simulated, laboratory testing. *Id.* Similarly, CARB observed that the findings of its HDUIT program were not valid since the data on which they were based failed to capture a significant percentage of emissions during real-world operational conditions. *Id.* at II-11. Accordingly, when California revised its heavy-duty vehicle and emission standards through the Low NO_x Omnibus rules, it made several changes to the testing and data reporting requirements and procedures of CARB's DDP and HDUIT programs.

Beginning with MY 2027, CARB's Low NO_x Omnibus rules require manufacturers of heavy-duty Otto-cycle engines "to account for the lengthened useful life in the existing procedures for bench aging of [three-way catalysts] for the durability demonstration." See CARB Low NO_x Omnibus ISOR, p. III-78. *Id*. Additionally, heavy-duty Otto-cycle engines not

previously subject to testing pursuant to the HDIUT or HDIUC programs, will be subject to HDIUC testing starting with MY 2024 engines. CARB's Low NO_x Omnibus rules made no changes to the DDP data requirements for heavy-duty Otto-cycle engine, and it determined that unlike the heavy-duty diesel engines (discussed further below), heavy-duty Otto-cycle engines will be subject to CARB evaluation based on the FTP cycle standards alone. See *Id.* at III-33.

For heavy-duty diesel engines, the Low NO_x Omnibus rules include new testing and reporting standards that will assist CARB in its efforts to better predict the impact of real-world conditions on the emission control systems of engines. CARB staff determined that based on the current, predominant technology, testing under the DDP "requires a longer break-in period to ensure aftertreatment systems have stabilized in their ability to control exhaust emissions." *Id.* at III-79. A break-in period is a term used to describe the operating time it takes "to ensure that the emission levels [from an engine] have stabilized." Accordingly, beginning with MY 2024 engines, the break-in period for testing will be increased from 125 hours to 300 hours for the applicable certification test cycles. *Id*.

During DDP testing, manufacturers simulate the "aging cycle" to ensure that the emission control systems in an engine will be able to meet emission standards over long-term use (that is, during the useful life). CARB Low NO_x Omnibus ISOR, p. III-80. Beginning with MY 2024, the Low NO_x Omnibus rules will require manufacturers to choose between two standardized aging cycles for purposes of the DDP testing. Since manufacturers could propose and use a custom aging cycle for purposes of testing vehicles with earlier model years, this change standardizes testing among the manufacturers and better reflects real-world operations. See *ibid*. In addition to limiting DDP testing to two aging cycle options, beginning in

MY 2027, the Low NO_x Omnibus rules adjust the length of the aging cycles used in the DDP to account for the longer, full useful life period for the engine and the aftertreatment system. *Id.* at III-82 to 83. Likewise, the Low NO_x Omnibus rules adjust the DDP testing procedures to ensure that the impacts of different variables (that is, size, configuration) are factored in. See *id.* at 81. Specifically, manufacturers must "generate applicable engine dynamometer cycles for [Heavy- Duty Transient Test] HDTT, 55-cruise, and 65-cruise cycles and compare those cycles to the standard engine dynamometer certification cycles (FTP, RMC-SET). Manufacturers will be required to use the cycle with the highest load factor in the DDP." See *id.* at III-81.

Additional revisions to the DDP concern the Diesel Aftertreatment Accelerated Aging Cycle (DAAAC). See *id*. at III-83. California's Low NO_x Omnibus rules, beginning with MY 2024, allow manufactures to use the DAAAC protocol or propose other protocols to simulate aging of the aftertreatment system. See *id*. at III-83 to 84. However, a manufacturer that chooses the accelerated aftertreatment aging option, must store on the OBD system and periodically submit to CARB additional emissions data from in-use, on-road engines. See *id*. at III-84.

The Low NO_x Omnibus rules include revisions to test procedures and data collection for the HDIUT and HDIUC programs for heavy-duty diesel engines. The specific changes are:

The NTE-based test procedures will be replaced "with the MAW test procedures for the manufacturer-run HDIUT program and for CARB's HDIUC testing beginning with 2024 and subsequent MY engines, with some modifications between 2026 and 2027 and subsequent model year engines." See *Id.* at III-33. CARB staff determined that changes to the testing procedure were necessary because the NTE testing protocols used for prior model years "does not evaluate the vast majority of operating conditions." *Id.* at III-32.

- Beginning with the MY 2027 and later engines, a manufacturer's engine will have to demonstrate emissions control during cold start operation for testing. See CARB Low NO_x Omnibus ISOR, p. III-40. "A cold start exclusion for testing will be allowed for [model years 2024, 2025, and 2026] to give manufacturers more time to refine any needed hardware or calibration changes needed for the 2027 MY." *Id*.
- Beginning with MY 2024, there will be "an additional method to verify compliance with the idling emission standards," with the more stringent standards for criteria pollutants set by the rule. See CARB Low NO_x Omnibus ISOR p. III-40.
- Manufacturers will be required "to record and report two new types of OBD parameters from the engine control unit (ECU) during in-use testing. The first type includes data stream parameters, all service mode data, and tracked data." *Id.* at III-41. "The second type of data required is 1 Hz [Hertz] real-time data collected during the entire time of in-use testing." *Id.*

Part III: Miscellaneous Provisions

Tractor Auxiliary Power Units (APU) Certification: 13 CCR 2423(n), 2485(c)(2), 2485(c)(3), and 2485(h)

The Department is proposing to incorporate by reference 13 CCR 2423(n),

2485(c)(2), 2485(c)(3), and 2485(h). These paragraphs govern certifications required for auxiliary power units (APUs), which are also sometimes referred to as auxiliary power systems (APS). APUs are small engines sometimes used on heavier vehicles that need power for extended periods of time for cabin climate control and electricity, particularly for trucks

equipped with sleeper berths. See CARB Low NO_x Omnibus ISOR, p. I-43. The APU can be run while the primary vehicle engine is shut down, thus reducing emissions and saving on fuel. *Ibid*.

Although California's rules moved generally in tandem with the Federal phase 2 greenhouse gas standards, in 2018, California did not adopt a section of the Federal rules pertaining to an APU certification requirement. See CARB Low NO_x Omnibus ISOR, p. II-23. But California has incorporated the requirement into the Low NO_x Omnibus rules. See *id.* at III-91. As the Federal phase 2 greenhouse gas standards currently apply in New Jersey, this administrative change to the California rules will have no impact on vehicles sold in New Jersey if adopted.

Hybrid Powertrain Certification: 13 CCR 1956.8, 2035, 2036, and 2112

The Department's notice of proposal incorporates by reference 13 CCR 1956.8, 2035, 2036, and 2112. These sections primarily govern exhaust emission standards and emission control system warranty provisions. Pursuant to the Low NO_x Omnibus rules, beginning in MY 2024, manufacturers will have the option to certify "hybrid powertrains to criteria pollutant emission standards using powertrain testing procedures[, which] would allow heavy-duty hybrid vehicle manufacturers to seek voluntary powertrain-based (as opposed to engine-based, or chassis dynamometer-based) certification. The powertrain testing procedures would align with corresponding federal procedures for powertrain testing and would be based on the [EPA] Phase 2 [greenhouse gas] technical amendments for powertrain testing." See CARB Low NO_x Omnibus ISOR, p. III-90. Similar to the revision pertaining to the APU certification procedures discussed

above, this revision harmonizes California's powertrain testing procedures with the Federal procedures. See *id*.

Emissions Averaging, Banking, and Trading Program Amendments

As part of the Low NO_x Omnibus rules, California "established a separate California-only averaging, banking, and trading (CA-ABT) program starting with the 2022 MY engines." CARB Low NO_x Omnibus ISOR, p. ES-11. This California-only program allows manufacturers to voluntarily transfer a portion of the credits in their Federal averaging, banking, and trading (Federal ABT) accounts. See *id*. Though the California ABT program is included in the rules the Department proposes to incorporate by reference, credits in the CA-ABT program can be generated only through sales of vehicles in California. See *id*. III-73 to 74. Accordingly, manufacturers selling engines and vehicles in New Jersey will continue to bank credits through the Federal ABT program.

Repeal of N.J.A.C. 7:27-28

Proposed new N.J.A.C. 7:27-28A requires that new motor vehicles rated in excess of 8,500 pounds GVWR and new motor vehicle engines intended for use in a motor vehicle rated in excess of 8,500 pounds GVWR that are sold, leased, rented, imported, delivered, purchased, acquired, registered, received, or otherwise transferred in this State, or offered for sale, lease, or rental in New Jersey be certified by California as complying with its emission standards and testing requirements. Existing N.J.A.C. 7:27-28 has required since MY 2005 that new diesel motor vehicles rated in excess of 14,000 pounds GVWR and new diesel motor vehicle engines intended

for use in a motor vehicle rated in excess of 14,000 pounds GVWR that are sold for use in New Jersey must be certified by California as complying with its emission standards and testing requirements. As the vehicles covered at existing N.J.A.C 7:27-28 are a subset of the vehicles proposed to be covered pursuant to proposed new N.J.A.C. 7:27-28A beginning with MY 2027, the Department proposes to repeal N.J.A.C. 7:27-28, Heavy-Duty Diesel New Engine Standards and Requirements Program to avoid potential confusion among vehicle manufacturers and dealers in determining which engines and vehicles may be sold in New Jersey in a given MY. In other words, the repeal will prevent the new standards of the Low NO_x Omnibus rules from being applicable in New Jersey to some vehicles earlier than others. Pursuant to proposed N.J.A.C. 7:27-28A, all covered vehicles will be subject to the new standards beginning with MY 2027.

Diesel Vehicle Inspection Tests and Procedures

While the State moves toward increased electrification of the transportation sector, the Department must continue to reduce pollutants from fossil fuel powered heavy-duty diesel vehicles that will remain on the State's roads. To do so, not only are more stringent standards necessary, but to ensure compliance, appropriate emission tests, and procedures conducted by licensed, trained inspectors with requisite testing equipment are also required, particularly as emission control technology advances. Existing N.J.A.C. 7:27-14.5 does not require diesel vehicles with a GVWR of 8,501 to 17,999 pounds to undergo an OBD inspection or smoke opacity test at a licensed inspection facility, by a licensed inspector, which diesel vehicles with a GVWR 18,000 pounds or greater must undergo. The Department proposes to amend N.J.A.C.

7:27-14.5, Motor vehicle inspections, so that all heavy-duty diesel vehicles and diesel buses are subject to the same inspection procedures and tests.

Background

The Legislature delegated authority to both the Department and the New Jersey Motor Vehicle Commission (MVC) to regulate motor vehicle emissions. See N.J.S.A. 26:2C-8.1, 39:8-2, and 39:8-61. The Department is charged with adopting rules establishing emissions inspection procedures, exhaust emission standards, and test methods and standards for emission control apparatus and related items for diesel-powered motor vehicles, N.J.S.A. 26:2C-8.1 and 39:8-2 and 61. The MVC is directed to adopt rules "with respect to the type and character of the inspections to be made, the facility at which the vehicle shall be inspected, the frequency of inspections of motor vehicles and the approval or rejection of motor vehicles as a result of these inspections," N.J.S.A. 39:8-2.

The Department's Emission Standards, Tests, and Procedures for Diesel Vehicles, N.J.A.C. 7:27-

14

The existing emissions tests and procedures for the inspection of diesel vehicles covered at N.J.A.C. 7:27-14, Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles, are set forth at N.J.A.C. 7:27-14.5, Motor vehicle inspections, and 7:27B-4, Air test method 4: Testing procedures for diesel-powered motor vehicles. There are two categories of tests: visual tests that do not require instrumentation to conduct (a visible smoke test, an indicator light check, a visual fuel leak test, and an emission control apparatus examination) and instrumented tests (a smoke opacity test, or if equipped with On-Board Diagnostics (OBD), an OBD inspection). N.J.A.C. 7:27-14.5 sets forth which tests and procedures apply to each class of

diesel vehicle. The standards to determine if a vehicle passes inspection are established at

N.J.A.C. 7:27-14.6, Motor vehicle standards.

MVC's Self-Inspection Rules for Diesel Vehicles, N.J.A.C. 13:20-26

MVC's rules allow owners or lessees of diesel vehicles with GVWR 8,501 to 17,999 pounds to maintain and inspect their own vehicles. N.J.A.C. 13:20-43.2. These owners and lessees are required to certify, in writing, with their vehicle registration renewal, that the vehicle "'has been inspected and maintained in conformity with state self-inspection requirements.'" See 29 N.J.R. 1264(a). N.J.A.C. 13:20-26.17 states that a self-inspection certification is a representation that the vehicle complies with the Department's emission standards at N.J.A.C. 7:27-14 and applicable requirements regarding muffler and emission control apparatus. Additionally, the certification is a representation that "the diesel vehicle can successfully pass the test procedures set forth at N.J.A.C. 7:27B-4." N.J.A.C. 13:20-26.17(c).

Proposed Amendments, N.J.A.C. 7:27-14.5

Pursuant to existing N.J.A.C. 7:27-14.5(a)4 and (d), the emission tests and procedures for diesel vehicles subject to MVC's self-inspection program are limited to non-instrumented tests: a visible smoke test, an indicator light check, a visual fuel leak test, and an emission control apparatus examination. For vehicles with a GVWR equal to or greater than 18,000 pounds, the inspection tests and procedures include an instrumented test. N.J.A.C. 7:27-14.5(d). Specifically, these vehicles must undergo a smoke opacity test or, if equipped with On-Board Diagnostics (OBD), an OBD inspection. A smoke opacity test, which is used to determine compliance with opacity limits, measures the optical properties of diesel exhaust and provides an indirect way of measuring diesel particulate matter emissions. See

https://dieselnet.com/tech/measure_opacity.php. Vehicles equipped with OBD monitor the status of emission controls and engine performance, alerting the driver through a dashboard indicator if there is a malfunction. During an OBD inspection, a licensed inspector connects inspection equipment to the vehicle using a standardized connector and checks for malfunctions using the vehicle computer. The OBD inspection procedure is largely a process whereby the diesel emissions testing equipment and the motor vehicle's OBD system interface and exchange information. Pursuant to MVC rules, these tests must be performed on an annual basis at a licensed facility as part of MVC's periodic inspection program. N.J.A.C. 13:20-26.17.

The purpose of an emissions inspection is to ensure that a vehicle is in optimum operating condition and is not emitting excess air pollutants. The Legislature has recognized the public health risks posed by diesel exhaust emissions. See N.J.S.A. 39:8-59. The amendments at N.J.A.C. 7:27-14 are consistent with the legislative finding that diesel exhaust emissions "contribute significantly to air pollution problems within the State; that such emissions diminish the quality of life and health of our citizens; and that the technology and state of the art in determining and controlling the level of unacceptable exhaust emissions from ... diesel-powered motor vehicles are continually being advanced and that the procedures, test methods and standards for determination of such unacceptable levels must be reflective of those advances." *Id*.

Vehicle emission control technology has advanced to a level that requires equally advanced testing and inspection. These instrumented tests must be performed by a trained inspector using specialized equipment and software. Engine malfunctions or deteriorated

emission controls may not result in a change in engine performance noticeable to the driver. In both cases, electronic instrumentation is required to detect conditions resulting in excess emissions. Further, in instances of vehicles with tampered emission controls, an objective, trained inspector will find and report what the vehicle owner may not.

Inspection facilities licensed by the MVC are required to have emission testing equipment approved by the Department and employ licensed emissions inspectors. N.J.A.C. 13:20-44.9 and 44.18. The MVC's inspector licensing program, which requires an applicant to complete a training program and pass a written examination, and to complete periodic refresher trainings and testing once licensed, ensures that all licensed inspectors understand, for example, the technical details of emission test and OBD inspection procedures, equipment operation, calibration, maintenance, and regulations, as well as emission control device function, configuration, and inspection. N.J.A.C. 13:20-43.17. By contrast, vehicle owners who are currently allowed to perform self-inspections pursuant to MVC rules are not required to be licensed and, therefore, are generally neither properly trained nor equipped to comply with the proposed inspection standards and make determinations. Therefore, in order to effectuate the inspection testing and procedures that the Department is proposing to require that for diesel vehicles with GVWR of more than 8,500 and less than 18,000 pounds, the MVC will need to update its inspection requirements to include these vehicles in its periodic inspection program.

When MVC updates its rules to require these diesel vehicles to pass inspection at a licensed inspection facility, this will also ensure that any tampering is identified and remedied. Recent enforcement work by the EPA has shown prevalent tampering of diesel vehicles in this weight range, averaging around 15 percent of the national population of these vehicles. See

EPA Letter dated November 20, 2020 and Enclosure, Tampered Diesel Pickup Trucks: A Review of Aggregated Evidence from EPA Civil Enforcement Investigations,

https://int.nyt.com/data/documenttools/epa-on-tampered-diesel-pickups-11-

<u>20/6d70536b06182ad2/full.pdf</u>. The EPA estimates the rate of tampering to be 5.6 percent in New Jersey.

For all of these reasons, the Department is proposing to amend N.J.A.C. 7:27-14.5(a), so that all heavy-duty diesel vehicles, that is, all diesel-powered motor vehicles with a GVWR exceeding 8,500 pounds and diesel buses, will be subject to the same tests and procedures using testing equipment approved by the Department. To accomplish this, the Department proposes to delete subsection (a), which sets forth the categories of diesel vehicles to which the section is applicable. As amended, proposed N.J.A.C. 7:27-14.5 requires all testing to be done with equipment approved by the Department. The testing includes an OBD inspection or smoke opacity test.

Proposed recodified N.J.A.C. 7:27-14.5(c) requires a person testing a heavy-duty diesel vehicle or a diesel bus to perform all of the tests at (c)1 through 4. Therefore, the proposed rules will require diesel vehicles with a GVWR of 8,501 to 17,999 pounds to undergo an OBD inspection or smoke opacity test. As noted above, to effectuate this change, MVC will have to amend its corresponding rules to ensure that these vehicles are inspected by a licensed inspector at a licensed inspection facility, where these tests can be performed. All other heavy-duty diesel vehicles are already subject to an OBD or smoke opacity test at a licensed inspection facility, by a licensed inspector.

In addition to the proposed changes at N.J.A.C. 7:27-14.5, Motor vehicle inspections, the Department proposes to repeal N.J.A.C. 7:27-14 Appendix, Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles. The proposed amendments at N.J.A.C. 7:27-14.5 simplify the inspection requirements for diesel motor vehicles by eliminating distinctions between different weight classes and vehicle types (for example, trucks versus buses). As proposed, there would be one set of tests for light-duty diesel vehicles and one set of tests for all heavy-duty diesel vehicles. As such, the Department believes the appendix is no longer a useful addition to the rules.

The proposed amended rules refer to "light-duty diesel vehicle" and "heavy-duty diesel vehicle," rather than "light-duty diesel-powered motor vehicle" and "heavy-duty diesel-powered motor vehicle," consistent with the defined terms at existing N.J.A.C. 7:27-14.1.

Proposed amendment at N.J.A.C. 7:27-14.1 and 15.1

The Department proposes to amend the definition of "gross vehicle weight rating" or "GVWR" at N.J.A.C. 7:27-14.1 and 15.1 to mean "the value specified by the manufacturer as the maximum design loaded weight of a single vehicle." With this amendment, the definition will no longer refer to a combination vehicle and will expressly refer to the maximum "design" loaded weight, consistent with the definition of this term in the relevant California and the EPA rules.

Proposed amendments at N.J.A.C. 7:27-15

N.J.A.C. 7:27-14 governs the control and prohibition of emissions from diesel-powered motor vehicles, while N.J.A.C. 7:27-15 governs the control and prohibition of emissions from gasoline-fueled motor vehicles. Both subchapters generally prohibit activities that cause excess emissions. The Department proposes to amend N.J.A.C. 7:27-15.3 and 15.7 to conform these provisions to the comparable provisions at N.J.A.C. 7:27-14.3, General prohibitions, to ensure consistency across both programs.

Subchapter 14 generally prohibits any "person" from: idling a diesel vehicle; tampering with a diesel vehicle by, for example, disconnecting, detaching, deactivating, or altering the design or design element installed on the vehicle to control emissions; or selling, leasing, or offering to sell or lease any tampered vehicle. N.J.A.C. 7:27-14.3. Subchapter 15 contains similar provisions prohibiting the same activities. N.J.A.C. 7:27-15.3 prohibits the operation of a vehicle that: emits visible smoke in excess of three consecutive seconds; fails to meet the standards at N.J.A.C. 7:27-15.5 or 15.6; and/or is not certified by the EPA or California as meeting the emission standards applicable to the model year in which it was manufactured. N.J.A.C. 7:27-15.7 prohibits the tampering of a vehicle by disconnecting, detaching, deactivating, or otherwise altering an element of design originally installed on a motor vehicle, the operation of a tampered vehicle on the public roadways, and the offer for sale or lease of such a vehicle. The prohibitions at N.J.A.C. 7:27-15.3, General public highway standards, and 15.7, Prohibition of tampering with emission control apparatus, refer to an "owner or operator" of a gasoline-fueled motor vehicle. The Department proposes to amend N.J.A.C. 7:27-15.3 and 15.7 to replace "owner or operator" with "person," consistent with Subchapter 14.

Amendments at N.J.A.C. 7:27A-3.10(m)

At N.J.A.C. 7:27A-3.10(m), the Department proposes new civil administrative penalties for violations of existing N.J.A.C. 7:27-14.4(a)2 and 5, proposed N.J.A.C. 7:27-15.3(a), and proposed new N.J.A.C. 7:27-28A. The Department also proposes to correct an error related to a penalty for violations of N.J.A.C. 7:27-14.3(e)2. Existing N.J.A.C. 7:27A-3.5 authorizes the Department to impose a civil administrative penalty for a violation of any provision at N.J.A.C. 7:27, the Air Pollution Control Act (Act), or any rule promulgated, or administrative order, operating certificate, registration requirement, or permit issued pursuant to the Act, even if the violation is not otherwise included at N.J.A.C. 7:27A.

The Department proposes to add civil administrative penalties for violations of existing N.J.A.C. 7:27-14.4(a)2 and 5. N.J.A.C. 7:27-14.4(a)2 prohibits the operation on a public highway of a diesel vehicle with visible smoke for greater than three consecutive seconds. As visible smoke is an indication of excess emissions and poor vehicle maintenance, a penalty is appropriate to deter this conduct and mitigate emissions of PM2.5 and NO_x. The Department also proposes new penalties for violations at N.J.A.C. 7:27-14.4(a)5, which prohibits any person from operating a vehicle which has a tampered retrofit device or closed crankcase ventilation system installed pursuant to N.J.A.C. 7:27-32. The existing penalty schedule provides a penalty for the actual tampering, which is prohibited at N.J.A.C. 7:27-14.3(f), but does not provide a penalty for operating a tampered vehicle. A penalty is appropriate to provide an additional deterrent and prevent emissions in excess of the levels that N.J.A.C. 7:27-32 were meant to mitigate. The Department proposes civil administrative penalties for violations of proposed

amended N.J.A.C. 7:27-15.3(a), which pertains to gasoline vehicles, comparable to those proposed for existing N.J.A.C. 7:27-14.2(a)2, which pertains to diesel vehicles.

The proposed penalties at N.J.A.C. 7:27A-3.10(m)14 and 15 and at new N.J.A.C. 7:27A-3.10(m)28A are consistent with existing penalties for similar violations of other Department rules. For example, the Department determined that the failure to make records available pursuant to new N.J.A.C. 7:27-28A.9 is similar to the requirement to submit annual sales data at N.J.A.C. 7:27-29.11(a) and (b); therefore, the penalty provisions for violations of the requirements are consistent.

Under the Grace Period Law, N.J.S.A. 13:1D-125 to 133, a person responsible for a minor violation is afforded a period of time by the Department to correct the violation in order to avoid being subject to a penalty. Based upon the criteria set forth at N.J.S.A. 13:1D-129, the Department has determined which of the proposed penalties at N.J.A.C. 7:27A-3.10(m) are minor and, thus, subject to a grace period, and which are non-minor and, thus, not subject to a grace period. Generally, the Department has determined that violations that do not result in excess emissions (and, therefore, pose minimal risk to the public health, safety, and the environment) and do not materially and substantially undermine or impair the goals of the regulatory program are "minor." Pursuant to the existing rules, a minor violation can be ineligible for a grace period if the conditions at N.J.A.C. 7:27A-3.10(s) are not met.

Finally, the Department proposes to correct an error at N.J.A.C. 7:27A-3.10(m)14 for a violation of N.J.A.C. 7:27-14.3(e)2; specifically, the Department proposes to amend "five or fewer" to "five or more." The penalty in the preceding row at N.J.A.C. 7:27A-3.10(m)14 applies to four or fewer vehicles so this penalty should apply to five or more vehicles.
Social Impact

The Department anticipates that the proposed rules will have a positive social impact in New Jersey. As explained in the Environmental Impact, the Department expects the proposed rules will reduce emissions of PM2.5 and NO_x, a precursor of ozone and secondary PM2.5. All of these air pollutants cause adverse health impacts, as discussed below. Therefore, by reducing emissions of these harmful air pollutants, the Department expects corresponding health benefits, resulting in a positive social impact, particularly in local communities disproportionately impacted by heavy truck traffic.

Adverse Health Impacts of Ground-Level Ozone

Increased concentrations of ground level ozone have been linked to a number of adverse health impacts, including, but not limited to, eye irritation, aggravated asthma and other respiratory distress, and premature death. See 2020 Report on Climate Change at 63-64. Ozone exposure can cause irritation of the lungs, which can make the lungs more vulnerable to diseases, such as pneumonia and bronchitis, increase incidents of asthma and susceptibility to respiratory infections, reduce lung function, reduce an individual's ability to exercise, and aggravate chronic lung diseases. Increased ozone concentrations severely affect the quality of life for susceptible populations – small children, the elderly, and asthmatics – and present health risks for the public in general. Exposure to ozone for several hours at relatively low concentrations significantly reduces lung function and induces respiratory inflammation in normal, healthy people during exercise. This decrease in lung function is generally accompanied by symptoms, such as chest pain, coughing, sneezing, and pulmonary congestion. Research strongly suggests that, in addition to exacerbating existing asthma, ozone also causes asthma in

children. Long-term exposure may lead to scarring of lung tissue and lowered lung efficiency. Repeated exposure may cause permanent lung damage. When ozone reaches unhealthy levels, children, people who are active outdoors, and people with respiratory disease are most at risk. See USEPA 2016 RIA at 6-2 to 6-6.

Additionally, there is some evidence that the health impacts of increased ozone may be elevated when combined with other climate-related impacts, such as the higher temperatures that occur during heat waves. See 2020 Report on Climate Change at 66. This is particularly significant for New Jersey's urban areas where high temperatures are often accompanied by high levels of other local air pollutants. See *id*.

Adverse Health Impacts of NO_x and PM2.5

NO_x as an air pollutant adversely impacts public health and further, contributes to the formation of secondary PM2.5, which along with direct PM2.5, causes additional public health risks. The EPA has established a NAAQS for NO_x, as measured by nitrogen dioxide (NO₂). See 83 FR 17,226 (April 18, 2018). Long-term exposure to low concentrations of NO₂ causes adverse respiratory effects, including lung irritation and increased pulmonary inflammation in children with asthma. See USEPA 2016 RIA at 6-6 to 6-7. The Department measures NO₂ levels at 10 locations throughout the State: Bayonne, Camden Spruce Street, Chester, Columbia, Elizabeth Lab, Fort Lee Near Road, Jersey City, Millville, Newark Firehouse, and Rutgers University in New Brunswick. The design value for NO₂, which determines whether there is a violation of the NAAQS, is the three-year average of the 98th percentile of the one-hour daily maximum concentrations. Design values at the urban monitoring sites are consistently higher than the rural sites. The Department, therefore, expects that the proposed rules will particularly benefit

urban areas, while reducing NO_x emissions throughout the State. See 2018 NJ Air Quality Report, Executive Summary,

https://www.nj.gov/dep/airmon/pdf/2018%20NJ%20AQ%20Report-bookmarked.pdf#page=4.

PM2.5 has significant health impacts due to its ability to penetrate deeply into the lungs. See EPA, Health and Environmental Effects of Particulate Matter (PM),

https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm.

Exposure to PM2.5 has been linked to premature mortality, lung cancer, cardiovascular effects and disease, and nervous system effects. Exposure to PM2.5 has also been linked to respiratory effects including changes in lung function, decrements in lung function growth, increased respiratory symptoms, such as coughing, difficulty breathing, and irritation of the airways, respiratory infection, and aggravated asthma. See 85 FR 82,684, 82,695 through 82,703. Studies also indicate that "asthma, lung function decrement, respiratory symptoms, and other respiratory problems appear to occur more frequently in people living near busy roads." 69 FR 38,958, 38,966. One study "indicated that long-term residence near major roads, an index of exposure to primary mobile source emissions (including diesel exhaust), was significantly associated with increased cardiopulmonary mortality." Id. "Other studies have shown children living near roads with high truck traffic density have decreased lung function and greater prevalence of lower respiratory symptoms compared to children living on other roads." Id. Diesel PM emissions also contain "numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene" referred to as air toxics. See CARB, Overview: Diesel Exhaust & Health,

https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health. In summary, the

effects of NO_x and PM2.5 on public health have been widely and extensively studied by the EPA and others. The benefits of reducing these air pollutants include reduced incidence of premature mortality and morbidity from exposure to both PM2.5 and ozone. See EPA, Integrated Science Assessment for Oxides of Nitrogen – Health Criteria, United States Environmental Protection Agency, EPA/600/R-15/068, January 2016 (EPA ISA for Oxides of Nitrogen), http://ofmpub.epa.gov/eims/eimscomm.getfile?p download id=526855; and U.S. EPA, Integrated Science Assessment (ISA) for Particulate Matter, EPA/600/R-08/139F, December 2009, http://ofmpub.epa.gov/eims/eimscomm.getfile?p_download_id=494959. Other health impacts that have been recognized include reduced incidence of morbidity from exposure to NO_x. See National Research Council. 2002. Estimating the Public Health Benefits of Proposed Air Pollution Regulations. Washington, DC: The National Academies Press. https://doi.org/10.17226/10511; Driscoll, C.T, Buonocore, J., Reid, S., Fakhraei, H, and Lambert, K.F. 2014. Co-benefits of Carbon Standards Part 1: Air Pollution Changes under Different 111d Options for Existing Power Plants. Syracuse University, Syracuse, NY and Harvard University, Cambridge, MA. A report of the Science Policy Exchange. 34 pp.

Heavy-Duty Emission Standards

The Department expects a positive social benefit to result from the proposed Heavy-Duty Emission Standards, effective beginning Model Year 2027, which will complement the State's deliberate phased approach toward electrification of the transportation sector. Specifically, the more stringent NO_x emission standards, as well as other requirements including

strengthened in-use testing and enhanced warranty and useful life provisions, are anticipated to result in emission reductions, as discussed at greater length in the Environmental Impact.

The proposed rules require engine manufacturers to provide and guarantee more durable and longer-lasting emission controls. The proposed Heavy-Duty Emission Standards also include expanded emissions warranty reporting requirements for manufacturers, which will ensure more thorough collection of information when emission controls fail. Thus, the Department expects the proposed rules to benefit the buyers and owners of these vehicles, if repairs are necessary or manufacturer defects are detected during the longer warranty period. Moreover, the Department anticipates an overall social benefit from these requirements, which will collectively bolster the new emission standards by better ensuring that vehicles will remain in compliance with the emission standards over time. As heavy-duty engines tend to have long operating lifespans, the proposed rules will better protect New Jersey residents from excess exhaust emissions from these sources for as long as possible.

Diesel Vehicle Inspection Procedures and Standards

As discussed in the Environmental Impact, the Department expects the proposed inspection test procedures and standards for all diesel vehicles will reduce harmful NO_x emissions, which contribute to ozone and secondary PM2.5 formation, as well as direct PM2.5 emissions. These benefits would be realized when the MVC adopts rules requiring vehicles with a GVWR of greater than 8,500 and less than 18,000, which are currently excluded, to undergo periodic inspections. By requiring appropriate inspection procedures for all vehicles affected by the proposed Heavy-Duty Emission Standards, the amendments will ensure that the benefits of the Heavy-Duty Emission Standards are fully realized. As explained, the Department expects

urban areas, where high temperatures are often accompanied by high levels of local air

pollutants, will particularly benefit from the proposed rules and expected reductions.

Economic Impact

The Department expects the proposed rules will have a net positive economic impact. Although the proposed rules will result in increased compliance costs, the Department anticipates a net savings when avoided health costs are considered.

Heavy-Duty Emission Standards

The Department expects that the proposed Heavy-Duty Emission Standards will result in increased compliance costs for manufacturers and that these costs will likely be passed through to dealers and vehicle owners/lessees. However, the Department expects a net savings when avoided health and societal costs are considered.

Monetized Health Benefits

The proposed rules will incorporate California's rules pertaining to emission standards and supporting requirements for gasoline and diesel engines and vehicles with a GVWR greater than 8,500 pounds, which, pursuant to California's recently adopted Low NO_x Omnibus rules, will require manufacturers of heavy-duty vehicles to reduce NO_x emissions produced by these vehicles. The Department's estimated emissions reductions of NO_x, which will reduce ozone and secondary PM2.5, are described in detail in the Environmental Impact.

The Department relied on the CO-Benefits Risk Assessment Health Impact Screening and Mapping Tool (COBRA), which was developed by the EPA to estimate the health impacts of changes in air pollution emissions.

The Department expects the proposed Heavy-Duty Emission Standards will provide benefits in avoided health costs from reducing criteria air pollutants emitted by fossil fuel powered heavy-duty vehicles. Specifically, as explained in the Environmental Impact, the Department expects a reduction of NO_x emissions, which is linked with the following negative health outcomes in the COBRA tool: mortality, nonfatal heart attacks, hospital admissions for respiratory and cardiovascular conditions, acute bronchitis, upper and lower respiratory symptoms, emergency room visits for asthma, asthma exacerbation, restricted activity days for minors, and lost work days. Following the approach used by CARB, the Department chose to focus its analysis on the avoided health costs associated with mortality, hospitalization, and emergency room visits. The COBRA tool was used to estimate Statewide reductions in NO_x from the highway vehicles sector. Benefits were limited to New Jersey, although the Department notes that additional health benefits are expected in neighboring states as a result of these proposed rules.

The Department estimates that from 2027 through 2050, the NO_x reductions from the proposed rulemaking will result in between 37 and 84 avoided premature deaths, nine fewer hospitalizations from cardiovascular illness, eight avoided hospitalizations from respiratory illness, and 25 avoided emergency room visits. The Department estimates that implementation of the Heavy-Duty Emission Standards will result in monetized benefits from avoided premature deaths and avoided health incidents from 2027 through 2050 between approximately \$475 million and \$1.07 billion.

This amount is likely an underestimate of the avoided health costs from removing NO_X from the air, as there are additional health concerns linked to emissions that may not be

captured by the COBRA tool. For example, PM2.5, polycyclic aromatic hydrocarbons (PAHs), nitrogen dioxide, and black carbon have been associated with deficits in intelligence, memory, and behavior. PAHs, which are a component of black carbon and PM2.5, have been associated with developmental delay; reduced IQ; symptoms of anxiety; depression; and inattention; attention deficit hyperactivity disorder (ADHD); and reduced size of brain regions important for processing information and impulse control. See American Journal of Public Health, *Healthy Air, Healthy Brains: Advancing Air Pollution Policy to Protect Children's Health*, March 13, 2019, by D.C. Payne-Sturges et.al,

https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2018.304902. Black carbon and PM2.5 have also been associated with asthma exacerbation. See Science of the Total Environment, *Acute effects of black carbon and PM2.5 on children asthma admissions: a time-series study in a Chinese city*, by Hua, J., Yin, Y., Peng, L., Du, L., Geng, F., and Zhu, L. (2014), Vol. 481, pp. 433-38. It was estimated that nationwide in 2008, \$4 billion in direct medical costs and nearly \$5 billion in indirect costs, such as lost productivity resulting from parents' caring for sick children, could be attributed to asthma. Applying a range of attributable fractions (10 percent to 35 percent), the best estimate of nationwide childhood asthma costs in 2008 that could be associated with environmental factors was \$2.2 billion. Health Affairs, *Reducing the Staggering Costs of Environmental Disease in Children, Estimated at \$76.6 Billion in 2008*, 2011, by L. Trasande & Y. Liu in Health Affairs,

https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2010.1239.

Additional Benefits

The Department also expects potential additional Statewide monetary benefits in the form of savings to each vehicle owner, as a result of the longer warranties and other provisions of the Heavy-Duty Emission Standards that are anticipated to result in a longer useful life of a vehicle subject to the proposed rules. As discussed by CARB, two elements of the proposed rules are expected to provide cost-savings for vehicle purchasers: lengthened warranty and Emissions Warranty Information and Reporting (EWIR). CARB EA at 89-93. As CARB notes, although "the added costs associated with the longer warranty periods would ultimately be passed on to the consumers in the form of an increased purchase price for the trucks, some but not all, vehicle buyers would gradually recoup the initial increase in purchase price as they save money on repairs. For these vehicle buyers, the increased purchase price of the vehicle would be offset by savings benefits over time." CARB Low NO_x Omnibus ISOR, p. V-11. The proposed rulemaking also requires "manufacturers to more expeditiously repair or replace parts that are identified as having systemic issues as identified via the EWIR program" resulting in "cost savings for vehicle purchasers because components that they previously had to pay for out-ofpocket would now be repaired or replaced under an extended warranty or recall." *Id.* at V-14. The Department expects similar economic benefits in New Jersey.

Summary of Costs

The Department estimated the costs of implementing the proposed rulemaking by adjusting the cost estimates developed by CARB in its regulatory impact analysis. As CARB described, "The Proposed Amendments would require engine manufacturers to produce loweremitting heavy-duty combustion engines, which would increase upfront production and operational costs, compared to existing engines, and would result in direct and indirect

incremental costs. The direct and indirect incremental costs would likely be passed on to the engine/vehicle operators. Elements contributing to increased costs include establishing more stringent emission standards over existing regulatory cycles, amendments to in-use test procedures, modifications to the durability demonstration procedure for certification, lengthened warranty periods, lengthened useful life periods, amendments to EWIR reporting and corrective action procedures, and requiring NO_x data collection and reporting." CARB Low NO_x Omnibus ISOR at IX-46.

To estimate the costs, the Department scaled CARB's values to reflect vehicle miles traveled (VMT) in New Jersey. Though CARB's analysis assumed significant costs associated with the development of standards, certification of vehicles, and research and development of new technology, the Department assumed these costs would not apply to New Jersey's costs, as manufacturers will already be conducting these activities to meet California's requirements.

After carrying forward these assumptions, the Department estimates the total compliance costs for manufacturers of heavy-duty vehicles from 2022 through 2050 will be approximately \$250 million. The Department expects some or all of these costs will be passed through to dealers and vehicle owners in the form of higher vehicle prices. CARB estimated that the lifetime net impact per vehicle ranges from \$412.00 to \$8,841, depending on vehicle type and model year. See CARB Low NOx Omnibus ISOR at ES-14 through ES-16. As an example, CARB provided the following description of the price increase for a diesel vehicle 19,501 to 33,000 pounds GVWR: "CARB staff expects the initial vehicle purchase price to be about \$6,923 higher than it otherwise would be. A buyer of such a vehicle would receive savings of \$1,641 over the life of the vehicle, and would pay an additional \$532.00 for DEF [diesel exhaust fluid],

meaning that the net impact on the vehicle purchaser would be an increase of about \$5,814 over the life of the vehicle. Note that CARB's analysis was completed in 2020, so it is likely that inflation has increased the per-vehicle costs described above. While not insignificant, in this example these costs are relatively modest when compared to the total purchase price of MHDD [medium heavy-duty diesel cycle] vehicles with 2031 and subsequent MY engines, representing about 5.6 percent of baseline vehicle purchase price." *Id*. Note that the values provided by CARB include the costs of establishing new technology to meet California's standards. By adopting a similar standard, New Jersey will enable manufacturers to share costs across consumers in both states, lowering the per-vehicle lifetime net impact in both states.

Diesel Vehicle Inspection Procedures and Standards

The Department anticipates that the proposed diesel vehicle inspection procedures and standards will have a net positive economic impact. As set forth in the Environmental Impact, applying the vehicle test procedures and standards to all diesel vehicles is necessary to realize the full benefits of the Department's air quality programs. The Department also considered costs to current owners of diesel vehicles with a GVWR greater than 8,500 and less than 18,000 pounds, whose vehicles would be required to undergo inspection at a licensed inspection facility when the MVC updates its rules to require periodic inspections for this class of vehicles. In calculating costs, the Department considered a range of scenarios. The MVC may require all of these vehicles to be inspected at a private inspection facility (PIF), consistent with vehicles with a GVWR 18,000 pounds and above. Alternatively, the MVC may allow these vehicles to be inspected at either a PIF or a Centralized Inspection Facility (CIF), or the MVC may direct all of these vehicles to be inspected at a CIF.

Monetized Health Benefits

As set forth in the Environmental Impact, the Department estimates additional potential emission reductions to be 154 tons of NO_x per year and 25 tons of PM10 per year by applying the test standards and procedures to diesel vehicles with a GVWR greater than 8,500 and less than 18,000 pounds. To roughly estimate the avoided health costs associated with these reductions in NO_x and PM10, the Department relied on EPA's COBRA tool for estimating the health co-benefits of emissions reductions, finding avoided health costs between \$11 million and \$26 million per year.

In addition, when the MVC amends it periodic inspection requirements to include diesel vehicles with a GVWR greater than 8,500 and less than 18,000 pounds in accordance with the standards and procedures the Department is proposing, these regular inspections will ensure that tampered or modified emission controls in these vehicles are efficiently identified and corrected, generating further reductions in NOx and PM. Using the EPA's estimates, over the lifetime of all tampered vehicles, the Department anticipates NOx emissions will be reduced by approximately 5,800 tons, when compared to their tampered state. Similarly, the Department anticipates direct PM emissions will be reduced by approximately 51 tons for the lifetime of all tampered vehicles returned to original emissions system operation. Again, the Department used the EPA's COBRA tool. The estimated avoided health costs associated with these reductions is between \$82 million and \$187 million over the lifetime of all of these vehicles. *Summary of Costs*

The proposed inspection procedures and standards will impact owners of diesel vehicles greater than 8,500 and less than 18,000 pounds GVWR. Based upon 2022 data, there

Department estimates that there are approximately 100,000 of these vehicles registered in the State. The Department cannot ascertain the exact number of diesel vehicles greater than 8,500 and less than 18,000, because the data sets available sort vehicles up to 19,500 GVWR. Thus, the Department is using a conservative estimate of 100,000. More than 55 percent of the total number of vehicles registered in the State with a GVWR greater than 8,500 and less than 18,000 are commercially registered. The Department cannot accurately assess the costs for the additional inspections because the MVC will need to amend its rules, which will dictate the location of inspections. If the MVC were to require these vehicles to be inspected at a PIF, consistent with the requirements for vehicles 18,000 pounds and above, there would be no cost to the State. Vehicle owners, however, would bear the additional cost of an inspection through a private facility. Pursuant to the Department's proposed rules, the age and weight of the vehicle would determine the type of test that will be performed and, thus, the cost to the vehicle owner. Vehicles that are 8,501 to 14,000 pounds should receive an opacity test if MY 2007 and older and an OBD test if MY 2008 and newer and OBD eligible. The heavier vehicles covered by this rulemaking—14,001 through 17,999 pounds—should receive an opacity test if MY 2013 and older, and an OBD test if MY 2014 and newer and OBD eligible. This should result in approximately half of the vehicles affected by the proposed rules requiring an opacity test and the remainder requiring an OBD test. Inspection pricing is market driven and currently ranges from \$90.00 to \$150.00 for the annual opacity test. As OBD testing has not yet been implemented for vehicles other than light duty vehicles, the Department cannot estimate the market price for an OBD test.

If the MVC were to require these vehicles to be inspected at a CIF, there would be no cost to the vehicle owner. The State, however, would bear the added cost of additional inspections for approximately 100,000 vehicles. The MVC could decide to require inspections annually or on a different schedule (for example, every other year or every third year). The frequency of inspections would impact the costs to the State. Historically, inspections at CIFs cost approximately \$19.00 per vehicle. However, this number does not account for the possibility that the CIF may require extra staffing and/or additional equipment to accommodate the vehicles requiring an opacity test. The Department estimates that opacity testing equipment costs approximately \$6,500 per unit, and the MVC would have to decide how many CIFs would need to be equipped.

Based on internet surveys of annual repair and maintenance costs for many of the most prevalent vehicle models that will be affected by this proposed amendment, the Department estimates the cost of additional repairs required in order to maintain a vehicle in a condition able to pass inspection is between \$600.00 and \$1,000 per year. This range is roughly half of the range found for total maintenance costs and reflects the fact that emissions control equipment on modern diesel vehicles is quite complex and expensive to repair compared with other vehicle systems such as suspension or interior heating and cooling. Individual vehicle owner's experiences will likely vary widely as newer vehicles can be expected to require little to no maintenance and any actual repairs should be covered under warranty, whereas older vehicles may have extensive repair costs, at least to pass their first inspection pursuant to this rulemaking.

Repeal of N.J.A.C. 7:27-28

The Department's proposed repeal of existing N.J.A.C. 7:27-28 is not expected to have a substantial economic impact, because it will only delay the compliance date for a subset of the covered vehicles for a few model years.

Environmental Impact

The Department anticipates that the proposed rules addressing heavy-duty vehicles and engines will have a positive environmental impact due to the expected reductions of NO_x emissions, which contribute to the formation of ground-level ozone and secondary PM2.5, and direct PM2.5 (of which black carbon is a component).

Climate Change and Air Quality

The 2020 New Jersey Scientific Report on Climate Change is the Department's effort to compile scientific material in a comprehensive report detailing both the effects and the impacts of climate change. See New Jersey Department of Environmental Protection. 2020. New Jersey Scientific Report on Climate Change, Version 1.0 (Eds. R. Hill, M.M. Rutkowski, L.A. Lester, H. Genievich, N.A. Procopio) Trenton, NJ 184 pp. (2020 Report on Climate Change). While the report examines climate change at the global and regional level, its purpose is to explain the current and anticipated effects and impacts in New Jersey. See *id.* at 3. In fact, one of the report's findings is that New Jersey is uniquely vulnerable to climate change due to multiple factors, including its coastal location, population density, and geography. See *id.*, Executive Summary.

Climate scientists worldwide agree that the substantial increase in heat-trapping greenhouse gases in the earth's atmosphere from fossil fuel production and combustion, as well as land degradation are the principal causes of climate change. See *id.*, p. vi. As the 2020

Report on Climate Change explains the increasing CO₂ concentration was first observed over 60 years ago. *Id*. at 15. "Since then other human-sourced greenhouse gases have been recognized as contributing to climate change, such as methane (CH₄), nitrous oxide (N₂O), ozone (O₃), many halogenated gases (especially chlorofluorocarbons [CFC-11 and CFC-12]), among others." *Id*. at 16. Although CO₂ is the most abundant greenhouse gas, scientists have recently begun to study the role of other short-lived climate pollutants/forcers, such as hydrofluorocarbons, methane, and black carbon in climate change. See *id*. at 25-26. It is now understood within the scientific community that while these pollutants and forcers tend to have shorter atmospheric lives, they also have much higher warming potentials, making them significant contributors to climate change. See *id*.

Climate change affects temperature, precipitation, sea-level rise, and ocean acidification. See 2020 Report on Climate Change at 28. And "[a]s temperature, precipitation, sea-level rise, and ocean acidification increase, so will the impacts to New Jersey's air, water, habitats, and wildlife." *Ibid*. at vii. Climate induced increases in air pollution will also further degrade the environment, reducing visibility and damaging crops and forests. *Ibid*. Increased air pollution will lead to adverse health impacts, such as increased respiratory and cardiovascular health problems and more premature deaths. *Ibid*.

Of particular relevance is the interaction between climate change and air pollution, specifically, ground-level ozone. In the stratosphere, ozone provides protection from the sun's harmful ultraviolet rays. Ozone is harmful, however, when created in the Earth's lower atmosphere, or troposphere, by the interaction of "precursor" pollutant gases such as NO_x and volatile organic compounds (VOCs) with heat and sunlight.

Ground-level ozone

As discussed more fully in the Social Impact statement, ground-level ozone (also referred to herein as "ozone") harms our health. With respect to the physical environment, the damaging effects "of ozone can be observed across a variety of scales, i.e., subcellular, cellular, leaf, whole plant, population and ecosystem." See USEPA, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, Regulatory Impact Analysis, August 2016 (USEPA 2016 RIA), pp. 6-25,

https://nepis.epa.gov/Exe/ZyPDF.cgi/P100P7NS.PDF?Dockey=P100P7NS.PDF. Plant-level

effects, when widespread, can cause "broad changes in ecosystems, such as productivity, carbon storage, water cycling, nutrient cycling, and community composition." *Id.* Ozone damage to sensitive species includes visible injury to leaves and impaired photosynthesis, which is the process by which the plant makes carbohydrates, its source of energy and food. *Id.* By interfering with the ability of plants to produce and store food, ozone can lead to reduced crop and forest yields, including timber production, and can lessen overall plant productivity and growth. *Id.* Ground-level ozone makes plants more susceptible to harsh weather, disease, insects, and other pollutants. It also damages the foliage of trees and other plants, sometimes marring the landscape of cities, national parks and forests, and recreation areas. *Id.* at 6-25. *Ozone-climate penalty*

As the 2020 Report on Climate Change explains, "[t]he atmospheric conditions that generate high ozone levels are high temperatures, plenty of sunshine, and stagnant air masses, and often result in elevated levels of particulate matter and/or other colored gases that may appear visually as haze or smog...." *Id.* at 61. The many factors that contribute to ground-level

ozone concentrations at any given time and location can be separated into two general

categories. *Id.* at 62. The first category includes sources that emit ozone precursors, such as trucks that emit NO_x. Precursor emissions are expected to decline generally but remain high in dense urban areas. *Id.* at 62. The second category includes meteorological conditions that are conducive to the formation of ozone, such as a warming climate. *Id.* at 61-62. Meteorological changes are expected to cause the primary climate change impacts on ozone formation. *Id.* at 62. This phenomenon, which is frequently referred to as the "ozone-climate penalty," is explained as "the deterioration of air quality due to a warming climate, in the absence of anthropogenic (human-caused) polluting" activities. *Id.* Thus, "even as emissions are reduced, ozone formation may still increase due to the warmer climate," *id.*, making it more important to continue to reduce emissions of ozone precursors, even as it may become more difficult to reduce ozone pollution.

NO_x and PM

In addition to its role as an ozone precursor, NO_x can cause rainfall to become highly acidic, damaging leaves and plant structures during rain events. See NJDEP, Health and Environmental Effects of Ground-Level Ozone, <u>https://www.nj.gov/dep/cleanairnj/health.html</u>. NO_x also contributes to the formation of secondary PM2.5, either through condensation or complex reactions with other compounds in the atmosphere. PM2.5 includes all particulate matter having an aerodynamic diameter less than or equal to 2.5 microns, including condensable particulate matter. Particulate matter, also called particle pollution, is a term for a mixture of solid particles and liquid droplets in the air. See EPA Particulate Matter (PM) Basics, <u>https://www.epa.gov/pm-pollution/particulate-matter-pm-basics</u>. PM10 refers to inhalable

particulate matter with a diameter generally 10 microns or less. See CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10), <u>https://ww2.arb.ca.gov/resources/inhalable-particulate-</u> <u>matter-and-health</u>. Particulate matter includes larger particles known as PM10, such as dust, dirt, soot, smoke, as well as smaller particles, known as PM2.5. More than 90 percent of particulate matter in diesel exhaust is less than one micron in diameter and, therefore, is a subset of PM2.5.

Id.

As more fully discussed in the Social Impact statement, PM2.5 has been linked to public health risks. Particles generally also cause harm to the environment when they settle on ground or water. Particulate matter can acidify lakes and streams, change the nutrient balance in coastal waters and large river basins, deplete nutrients in soil, damage farm crops and sensitive forests, affect ecosystem diversity, and contribute to acid rain effects. *Id.* PM2.5 also is the main cause of reduced visibility, or haze.

When PM2.5 is discharged directly from combustion sources, such as diesel vehicles, it contains a component known as black carbon that is a climate forcer. Though black carbon is a short-lived climate pollutant, it has a high global warming potential.

Heavy-Duty Emission Standards

As explained in the Summary, the Department proposes new N.J.A.C. 7:27-28A to incorporate by reference California's rules pertaining to emission standards and supporting requirements for gasoline and diesel engines and vehicles with a GVWR greater than 8,500 pounds. New Jersey's proposed Heavy-Duty Emission Standards will require fossil fuel powered heavy-duty vehicles and engines sold in the State to meet more stringent NO_x emission standards. The proposed Heavy-Duty Emission Standards will also impose requirements, such as longer

warranty periods, to ensure that the vehicles remain in compliance with the standards through their useful lives.

The primary environmental benefit of the proposed Heavy-Duty Emission Standards is expected to be the reduction of NO_x emissions as a result of both the emission standards and the additional requirements to ensure that the vehicles' emission controls function as intended for an extended period of time. To estimate the projected NO_x emission reductions as a result of the proposed Heavy-Duty Emission Standards, the Department relied upon the methodology and assumptions described in the Final Report prepared for The International Council on Clean Transportation (ICCT) by Sonoma Technology. See Benefits of State-level Adoption of California Medium- and Heavy-Duty Vehicle Regulations, Sonoma Technology, Final Report, October 11, 2021, www.theicct.org (ICCT Report). The ICCT Report describes all of the data used and assumptions made for purposes of modeling the benefits of ACT, Low NO_x Omnibus rules and the Phase 2 GHG standards. Generally, the ICCT Report used EPA's MOtor Vehicle Emission Simulator (MOVES) emission modeling to develop a baseline for emission and vehicle activity for the years 2020 to 2050 in five-year increments. See ICCT Report, p. 3. It then developed adjustment factors to account for three California programs: Advanced Clean Trucks, Low NO_x Omnibus, and the Phase 2 GHG Standards. *Ibid*. Once the modeling was complete, the results were interpolated for each intermediate year and for various scenarios (that is, Business as Usual, adoption of ACT and Low NOx Omnibus rules, ACT adoption only, etc.). Ibid.

In September 2022, the ICCT adjusted the emission reduction benefits from the 2021 ICCT Report to account for a MY 2027 implementation date for the Low NO_x Omnibus rules in New Jersey. <u>https://theicct.org/benefits-ca-multi-state-reg-data/</u>. The Department is providing the

ICCT's emissions benefit estimates for each year starting with 2027 and ending with 2050 based upon the updated data for New Jersey. The estimated emission benefits are based on the assumption that the new standards will remain in place through 2050. Below is a table with the estimated emission reduction benefits for each year, as well as the estimated total (cumulative)

emission reductions:

Calendar	Omnibus Benefits
Year	NO _x Short Tons
2027	253
2028	378
2029	504
2030	630
2031	790
2032	950
2033	1,110
2034	1,270
2035	1,430
2036	1,590
2037	1,760
2038	1,910
2039	2,080
2040	2,240
2041	2,330
2042	2,440
2043	2,530
2044	2,640
2045	2,730
2046	2,800
2047	2,860
2048	2,920
2049	2,980
2050	3,050
Total	44,175

See *Ibid*. (Tank-to-Wheel NO_x Emissions by Scenario (short tons per year)), 2020-2050.

Repeal of N.J.A.C. 7:27-28

Existing N.J.A.C. 7:27-28, Heavy-Duty Diesel New Engine Standards and Requirements Program, requires that, beginning with MY 2005, new diesel-fueled motor vehicles rated in excess of 14,000 pounds GVWR and new, diesel-fueled motor vehicle engines, intended for use in a motor vehicle rated in excess of 14,000 pounds GVWR that are sold for use in New Jersey, must be certified by California as complying with its emission standards and testing requirements. As proposed new N.J.A.C. 7:27-28A requires certification by California for all engines and vehicles rated in excess of 8,500 GVWR, the applicability of these two subchapters would overlap, creating the potential for confusion among vehicle manufacturers and dealers about which engines and vehicles may be sold in New Jersey in a given MY. Accordingly, the Department proposes to repeal N.J.A.C. 7:27-28, so that it will be clear that the more stringent emission standards incorporated by reference at N.J.A.C. 7:27-28A, Heavy-Duty Emission Standards, will apply to all covered vehicles in the same MY, 2027. Though California's emission standards would have applied to new, diesel-fueled motor vehicles rated in excess of 14,000 pounds GVWR and new diesel-fueled motor vehicle engines intended for use in a motor vehicle rated in excess of 14,000 pounds beginning in MY 2024 if N.J.A.C. 7:27-28 was not repealed, the loss of a single MY of a smaller subset of engines is not expected to have a substantive environmental impact.

Vehicle Inspection Procedures and Standards

The Department also proposes amendments at N.J.A.C. 7:27-14, Control and Prohibition of Air Pollution from Diesel Powered Motor Vehicles, so that all heavy-duty diesel vehicles, that is, all diesel-powered motor vehicles with a GVWR exceeding 8,500 pounds, will be subject to the same tests and procedures, including the use of testing equipment approved by the Department. Regular OBD inspections may help to ensure that vehicle owners are made aware of faulty components in the vehicle's emission system during the warranty period.

Diesel vehicles with a GVWR from 8,501 to 17,999 pounds are the only category of diesel vehicles that are not required to pass a smoke opacity test or OBD test under the Department's existing rules, or to be inspected at an inspection facility by a licensed inspector pursuant to existing MVC rules. The Department's proposed amendments require instrumented tests that, as explained in the Summary above, must be performed at a licensed facility. Thus, when the Motor Vehicle Commission adopts rules to require this category of vehicles to be inspected at a licensed inspection facility, the rules together will extend the same inspection requirements to all diesel vehicles. By requiring all vehicles to pass an inspection performed by a properly trained and licensed inspector at a licensed facility with proper equipment to conduct the necessary tests, such as opacity and OBD, vehicles emitting excess pollutants will be identified and repaired. In addition, the Department expects that required regular inspections will dissuade vehicle owners from altering vehicle emission control systems. The Department, therefore, expects the inspection testing requirement amendments at N.J.A.C. 7:27-14 to have a positive environmental benefit when effectuated through complementary MVC inspection program amendments.

To estimate the emission reductions as a result of vehicle maintenance and repairs that will likely result from the inspection requirement, the Department calculated the estimated

emission reductions by using EPA's MOtor Vehicle Emission Simulator (MOVES). MOVES is an emission modeling system used by states to estimate emissions for mobile sources at the national, county, and project level for criteria air pollutants, greenhouse gases, and air toxics. The EPA's current MOVES model includes calculations reflecting the emission increases in both light-duty and heavy-duty vehicles that result from age, mileage, tampering, and poor maintenance. California has a similar model called EMission FACtor (EMFAC) that additionally includes repair effectiveness rates. The Department evaluated historic inspection failure rates, then applied MOVES' assumptions to estimate the total amount of excess emissions resulting from those failures. Based upon New Jersey's current inspection compliance rates and the repair effectiveness rates from California's EMFAC model, the Department estimated the percent of excess emissions that will be eliminated as a result of the MVC's proposed inspection requirement. To estimate the emission reductions that will be achieved once the approximately 100,000 registered 8,501 to 17,999 pound diesel vehicles in the State are inspected, the Department used both the percent of excess emissions resulting from inspection failures and the percent of excess emissions that will be eliminated as a result of the repairs triggered by inspection. The Department calculated the emission reductions to be approximately 154 tons of NO_x and 25 tons of PM10. As the majority of diesel exhaust is PM2.5 or smaller, the Department estimates that most if not all of this benefit is in the form of PM2.5. These emission reductions are equivalent to removing 90,000 cars from the roads. The Department expects these emission reductions to particularly benefit urban, environmentally overburdened communities, which experience heavy diesel truck traffic and are most impacted by direct diesel pollution.

The Department expects further benefit by mitigating excess emissions that result from the tampering with vehicle emission control systems. Recent enforcement work by the EPA has shown that tampering of medium-duty diesel vehicles is prevalent, averaging around 15 percent of the national population of these vehicles. As noted above, medium-duty vehicles with a GVWR greater than 8,500 and less than 14,001 pounds are a subset of heavy-duty vehicles. The EPA estimates that more than 550,000 vehicles have been functioning with tampered systems in the last decade, resulting in 570,000 tons of excess NO_x and 5,000 tons of excess PM emitted during their lifetime. See EPA Letter dated November 20, 2020 and Enclosure, Tampered Diesel Pickup Trucks: A Review of Aggregated Evidence from EPA Civil Enforcement Investigations, <u>https://int.nyt.com/data/documenttools/epa-on-tampered-diesel-pickups-11-20/6d70536b06182ad2/full.pdf</u> (11/20/20 EPA Letter). The added pollution is equivalent to adding more than nine million untampered medium-duty diesel vehicles to the nation's roadways.

The EPA estimates the rate of tampering to be 5.6 percent in New Jersey. See 11/20/20 EPA Letter. To calculate the potential emissions benefits to New Jersey if tampered vehicles are identified through proper inspection and required to be returned to their original emission system operation, the Department utilized the EPA's estimated 5.6 percent tampering rate and the EPA's estimated excess emissions due to tampering. The Department first divided the total (nationwide) excess emissions for NO_x (570,000) and for PM (5,000) by the total (nationwide) number of tampered vehicles (550,000) to calculate the excess, per vehicle NO_x emissions (1.036 tons) and PM emissions (0.0091 tons). The Department then took the estimated number of medium-duty diesel vehicles in the State (100,000 based on 2020 registration data)

and multiplied by the EPA's estimated 5.6 percent rate of tampering to determine the estimated total number of tampered vehicles in New Jersey (5,600 vehicles). The Department then multiplied the estimated total number of tampered medium-duty diesel vehicles in the State (5,600) by the estimated excess NO_x emissions per vehicle (1.036 tons) and excess PM emissions per vehicle (0.0091 tons) to calculate the estimated lifetime excess emissions for all vehicles in New Jersey. The Department estimated total excess emissions over the lifetime of these vehicles to be 5,802 tons of NO_x and 51 tons of PM. The excess emissions reflect the emissions benefit over the lifetime of all of these tampered vehicles if these vehicles are identified during regular inspection at an inspection facility and required to be repaired to pass inspection.

Federal Standards Statement

N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c. 65), requires State agencies that adopt, readopt, or amend State rules that exceed any Federal standards or requirements to include in the rulemaking document, a Federal standards analysis.

Heavy-Duty Emission Standards

The Federal Clean Air Act (CAA) (42 U.S.C. §§ 7401 et seq.) granted the State of California, which has some of the worst air pollution in the nation, the authority to enact stricter emission standards than the national standards set by the EPA. See 42 U.S.C. § 7543. The CAA also authorizes qualifying states to adopt and enforce emission standards for which California has received a waiver, if the state gives two years' lead time. See 42 U.S.C. § 7507.

Thus, once the EPA grants California's request for a waiver for the Low NO_x Omnibus rules, pursuant to 42 U.S.C. § 7543, the more stringent emission standards that the Department proposes to incorporate by reference will be a Federally authorized standard. If, however, a waiver is not granted, the rules will not be applied or enforced pursuant to N.J.A.C. 7:27-31.3. Given the framework of the CAA, the proposed rules would not exceed a Federal standard once a waiver is granted. Thus, no further analysis is necessary.

Diesel Vehicle Inspection Procedures and Standards

The proposed amendments at N.J.A.C. 7:27-14 apply the same test procedures and standards to all heavy-duty diesel vehicles. The Federal regulations that control establishment of enhanced inspection and maintenance programs are set forth generally at 40 CFR Parts 51 and 85. However, the Federal rules do not include test procedures and standards for diesel vehicles; therefore, the Department has determined that there are no comparable Federal standards. Accordingly, no Federal standards analysis is required.

Amendments at N.J.A.C. 7:27-15

The Department proposes amendments at N.J.A.C. 7:27-15 to conform the provisions with N.J.A.C. 7:27-14. The proposed amendments ensure consistency between the two programs; therefore, no Federal standards analysis is required.

Repeal of N.J.A.C. 7:27-28

The Department's proposed repeal of N.J.A.C. 7:27-28 would not exceed a Federal standard. Thus, no further analysis is necessary.

Jobs Impact

The Department anticipates that the proposed rules will have a small impact on job retention or creation in the State. As provided below, the Department anticipates that the proposed Heavy-Duty Emission Standards may result in the loss of 0.01 percent of New Jersey's baseline employment; whereas, the amended inspection requirements for diesel vehicles with a GVWR greater than 8,500 and less than 18,000 pounds may result in increased employment due to a need for additional licensed inspectors, if the PIFs and/or CIFs cannot absorb the additional vehicle inspection requirements with existing staffing. For these reasons, the Department is unable to estimate the net number of jobs that would be affected by the proposed rules.

Heavy-Duty Emission Standards

As part of its economic analysis, CARB estimated the impact of the Low NO_x Omnibus rules on the total employment in California in the following sectors: Government, Retail and Wholesale, Services, Construction, Transportation, Manufacturing, Financial Services, and Information Services. CARB estimated a slightly negative impact from 2022 to 2050. According to CARB, "as the requirements of the Proposed Amendments would go into effect, affected sectors would likely experience increases in production costs and hence slightly slower employment than they otherwise would experience." CARB, Further Detail on Costs and Economic Analysis, August 27, 2020, p.73,

<u>https://ww3.arb.ca.gov/regact/2020/hdomnibuslownox/appc3.pdf</u>. CARB also anticipated that "[t]he largest decrease in employment would manifest in the manufacturing, construction, transportation, and retail [and] wholesale trade sectors, which are estimated to realize an increase in production costs due to the increased heavy-duty truck prices driven by the

Proposed Amendments." *Id*. On net, CARB estimated a decrease of employment of roughly 2,000 jobs, less than 0.01 percent of baseline California employment. Adjusting for the size of New Jersey's employment as of October 2020, this would represent roughly 350 jobs in 2050.

Diesel Vehicle Inspection Procedures and Standards

The proposed changes to the required inspection tests and procedures for diesel vehicles with a GVWR of 8,501 through 17,999 pounds would mean that an estimated 100,000 vehicles would need to be inspected by trained inspectors at properly equipped facilities. The Department, therefore, anticipates that the proposed rules may result in additional jobs related to the inspection of these vehicles when the MVC updates its rules to require these vehicles to undergo periodic inspections. As of the date of this rulemaking, there are approximately 300 PIFS performing inspections on the roughly 125,000 heavy-duty diesel vehicles over 18,000 pounds that are registered in the State. As of the date of filing this notice of proposal with the Office of Administrative Law, there are approximately 25 CIFS performing inspections on the roughly 6.5 million light-duty and heavy-duty gasoline-powered vehicles and light-duty diesel-fueled vehicles that are registered in the State.

For the PIFs, this equates to 1.6 inspections per facility per business day. If the MVC imposes an annual (as opposed to biennial) inspection frequency for these diesel vehicles with a GVWR greater than 8,500 and less than 18,000 pounds, the Department estimates, based on the total number of additional vehicles to be inspected and the number of facilities, that inspections will increase the daily throughput to 2.53 inspections per facility per business day, or roughly one additional inspection per facility. The Department anticipates that this could necessitate the hiring of additional inspectors. However, the Department anticipates that these

facilities will be able to absorb the increased inspections from this additional category of vehicles and does not expect that the total number of licensed inspection facilities will need to increase to accommodate the additional inspections.

If the MVC imposes an annual (as opposed to biennial) inspection frequency for these diesel vehicles with a GVWR greater than 8,500 and less than 18,000 pounds, this could necessitate the hiring of additional inspectors at these facilities. The MVC could, however, structure their rules to require inspections less frequently than annually and/or allow certain vehicles to complete their inspections at CIFs while requiring others to go to the PIFs, or the MVC could structure its rules to require all inspections at CIFs. Thus, the impacts to employment will not be entirely clear until the MVC adopts new rules consistent with the proposed inspection procedures and standards.

Repeal of N.J.A.C. 7:27-28

The Department's proposed repeal at N.J.A.C. 7:27-28 is not expected to have an impact on job creation or retention in the State, because it will only delay the compliance date of the emission standards for a subset of the covered vehicles for a few model years.

Agricultural Industry Impact

The Department anticipates that the proposed rules will have a positive impact on the agricultural industry in New Jersey due to the expected reductions of NO_x and PM2.5 emissions. As discussed in the Environmental Impact, NO_x emissions contribute to the formation of ozone and secondary PM2.5; NO_x, ozone, and particle pollution all harm crops and vegetation. For this reason, the proposed rules, which as discussed in the Economic Impact will increase the

costs of on-road vehicles used in the agricultural industry, should still have a net positive impact on agriculture in the State by reducing emissions of pollutants that are harmful to crops and vegetation.

Regulatory Flexibility Analysis

As required by the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Department has evaluated the reporting, recordkeeping, and other compliance requirements that the proposed rules would impose upon small businesses. The Regulatory Flexibility Act defines the term "small business" as "any business which is a resident in this State, independently owned and operated and not dominant in its field, and which employs fewer than 100 full-time employees." Based upon this definition, the proposed Heavy-Duty Emission Standards and the revised diesel vehicle inspection tests and procedures may impose compliance, recordkeeping, and reporting requirements on small businesses, as discussed below. These requirements and their associated costs are discussed in the Summary and Economic Impact statements. In light of the impacts from emissions from diesel vehicles with a GVWR greater than 8,500 and less than 18,000 pounds that are not inspected and do not meet the more stringent NO_x emission standards, as discussed in the Social and Environmental Impact statements, the Department does not propose an exemption or accommodation for small businesses.

Heavy-Duty Emission Standards

The Department is not aware of any vehicle manufacturer that is resident in New Jersey that employs fewer than 100 full-time employees. However, small businesses involved in

selling heavy-duty vehicles could be affected by the rules if dealerships experience cost increases due to increased compliance costs to manufacturers. The Department does not anticipate any additional paperwork requirements for dealers associated with the proposed rules.

As small businesses often own heavy-duty vehicles that are used for business operations, the Department anticipates small businesses will be impacted given the likelihood that these costs will be passed on to dealers and consumers through higher vehicle prices.

Diesel Vehicle Inspection Procedures and Standards

The proposed changes to the inspection requirements for diesel vehicles with a GVWR of greater than 8,500 and less than 18,000 pounds would mean that these vehicles would need to be inspected by trained inspectors at properly equipped facilities, which would be effectuated through a change in the MVC's rules requiring these vehicles to participate in the MVC's periodic inspection program. Therefore, the Department anticipates that the number of annual inspections at licensed inspection facilities will increase as a result of the proposed rulemaking when the MVC updates its rules. The MVC may require inspections of these vehicles at the approximately 300 PIFs currently used to inspect vehicles with a GVWR greater than 18, 000. Nearly all of the PIFs, if not all, employ fewer than 100 people full-time and would, therefore, be categorized as small businesses. Thus, if the MVC updates its rules to require inspections at PIFs (rather than CIFs or some combination of the two), the Department anticipates that the number of inspections these small businesses would be performing would increase under the proposed rulemaking, and there would be a related increase in the amount of recordkeeping and reporting.

The Department also anticipates some impact on small businesses that own diesel vehicles with a GVWR greater than 8,500 and less than 18,000 pounds that will have to be inspected at a licensed facility. These small businesses would need to pay for the inspection and necessary repairs, the estimated costs of which are discussed in the Economic Impact.

Repeal of N.J.A.C. 7:27-28

The Department's proposed repeal at N.J.A.C. 7:27-28 is not expected to have an impact on small businesses because it simply delays the application and enforcement of California's emission standards for a small subset of the covered vehicles.

Housing Affordability Impact Analysis

In accordance with N.J.S.A. 52:14B-4, the Department has evaluated the proposed rules to determine their impact, if any, on the affordability of housing. Given that the proposed rules are only applicable to heavy-duty vehicles, as discussed in the Summary above, the Department has determined that the proposed rules are unlikely to impact housing affordability or the average costs of housing in the State.

Smart Growth Development Impact Analysis

In accordance with N.J.S.A. 52:14B-4, the Department has evaluated the proposed rules to determine their impact, if any, on housing production in Planning Areas 1 or 2, or within designated centers, under the State Development and Redevelopment Plan. Given that the proposed rules are only applicable to heavy-duty vehicles, as discussed in the Summary above,

the rules are unlikely to evoke a change in housing production in Planning Areas 1 or 2, or

within designated centers, under the State Development and Redevelopment Plan.

Racial and Ethnic Community Criminal Justice and Public Safety Impact

In accordance with N.J.S.A. 52:14B-4(a)(2) and 2C:48B-2, the Department has

evaluated this rulemaking and determined that it will not have an impact on pretrial detention,

sentencing, probation, or parole policies concerning adults and juveniles in the State.

Accordingly, no further analysis is required.

Full text of the rules proposed for repeal may be found in the New Jersey Administrative

Code at N.J.A.C. 7:27-14 Appendix and 7:27-28.

Full text of the proposed new rules and amendments follows (additions indicated in

boldface thus; deletions indicated in brackets [thus]):

CHAPTER 27

AIR POLLUTION CONTROL

SUBCHAPTER 14. CONTROL AND PROHIBITION OF AIR POLLUTION FROM DIESEL-POWERED MOTOR VEHICLES

7:27-14.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context [already] **clearly** indicates otherwise.

. . .

"Gross vehicle weight rating" or "GVWR" means the value specified by the [vehicle]

manufacturer as the maximum **design** loaded weight of a single [or combination] vehicle.

•••

7:27-14.5 Motor vehicle inspections

[(a) This section applies to the motor vehicle inspection of a diesel-powered motor vehicle, as follows:

1. The testing of a heavy-duty diesel vehicle, as designated by the Chief Administrator of the MVC, as part of the roadside enforcement program established pursuant to N.J.S.A. 39:8-64 and N.J.A.C. 13:20-46, Diesel Emission Inspection and Maintenance Program;

2. The testing of a heavy-duty diesel vehicle, as designated by the Chief Administrator of the MVC, as part of the periodic inspection program established pursuant to N.J.S.A. 39:8-64 and N.J.A.C. 13:20-26.17, Compliance with diesel emission standards, equipment requirements, and test procedures; inspection and verification of installation of best available retrofit technology devices; periodic inspection program for diesel emissions; self-inspection; exempt vehicles;

3. The testing of a diesel bus as part of the periodic inspection program pursuant to N.J.A.C. 13:20-30, Inspection of school buses, or N.J.S.A. 48:4-1 et seq., and N.J.A.C. 16:53, Autobuses;

4. The testing of a diesel-powered motor vehicle as part of the self-inspection programs pursuant to N.J.A.C. 13:20-26, Compliance with diesel emission standards and equipment, periodic inspection program for diesel emissions and self-inspection of certain classes of motor vehicles; and

5. The testing of a light-duty diesel vehicle subject to the enhanced inspection and

maintenance program pursuant to N.J.S.A. 39:8-1 et seq.]

[(b)] (a) A person testing a diesel-powered motor vehicle[, as referenced at (a)1, 2, 3, and 5

above,] shall use diesel emissions testing equipment approved by the Department in

accordance with N.J.A.C. 7:27B-4.6.

[(c)] (b) A person testing a [diesel-powered motor] heavy-duty diesel vehicle or a diesel bus [in

accordance with (a)1, 2, and 3 above] shall perform one of the following:

1. – 2. (No change.)

[(d)] (c) A person testing a [diesel-powered motor] heavy-duty diesel vehicle or a diesel bus [in

accordance with (a)1 through 4 above] shall perform the following:

1. – 4. (No change.)

[(e)] (d) A person testing a light-duty [diesel-powered motor] diesel vehicle [in accordance with

(a)5 above] shall perform the following:

1. - 3. (No change.)

Recodify existing (f)-(i) as (e)-(h) (No change in text.)

APPENDIX

(RESERVED)

SUBCHAPTER 15. CONTROL AND PROHIBITION OF AIR POLLUTION FROM GASOLINE-FUELED MOTOR VEHICLES

7:27-15.1 Definitions
The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

•••

"Gross vehicle weight rating" or "GVWR" means the value specified by the manufacturer as the maximum **design** loaded weight of a single [or combination] vehicle.

•••

7:27-15.3 General public highway standards

(a) No [owner or operator of a gasoline-fueled motor vehicle] **person** shall cause, suffer, allow, or permit the operation of [the] **a** motor vehicle upon the public roads, streets, or highways of the State or any public or quasi-public property in the State, if the vehicle emits visible smoke in the exhaust emissions or in the crankcase emissions for a period in excess of three consecutive seconds.

(b) No [owner or operator of a gasoline-fueled motor vehicle] **person** shall cause, suffer, allow, or permit the operation of [the] **a** motor vehicle upon the public roads, streets, or highways of the State or any public or quasi-public property in the State, if the vehicle fails to meet any applicable standard at N.J.A.C. 7:27-15.6.

(c) No [owner or operator of a gasoline-fueled motor vehicle] **person** shall cause, suffer, allow, or permit the operation of [the] **a** motor vehicle upon the public roads, streets, or highways of the State or any public or quasi public property in the State, if the motor vehicle does not satisfy and pass all applicable motor vehicle inspection testing requirements at N.J.A.C. 7:27-15.5.

(d) No [owner or operator of a gasoline-fueled motor vehicle] **person** shall cause, suffer, allow, or permit the operation of [the] **a** motor vehicle upon the public roads, streets, or highways of the State or any public or quasi-public property in the State, if the motor vehicle is a 1968 or later model year vehicle (or, if the vehicle was originally sold in California, a 1966 or later model year vehicle), and the motor vehicle is not certified by either of the following agencies as meeting the applicable emission standards for motor vehicles manufactured in the model years listed below:

1. – 2. (No change.)

7:27-15.7 Prohibition of tampering with emission control apparatus

(a) No [owner or operator of a motor vehicle] **person** shall cause, suffer, allow, or permit any of the following, unless it is performed in accordance with EPA Memorandum 1A or it is exempt from prohibition by CARB Executive Order (information on devices or modifications approved by CARB Executive Order may be obtained from the California Air Resources Board, 1001 "I" Street, PO Box 2815, Sacramento, CA 95812 or at www.arb.ca.gov):

1. – 4. (No change.)

(b) (No change.)

SUBCHAPTER 28 (RESERVED)

SUBCHAPTER 28A. MODEL YEAR 2027 OR LATER HEAVY-DUTY NEW ENGINE AND VEHICLE STANDARDS AND REQUIREMENTS

7:27-28A.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

"California Air Resources Board" or "CARB" means the agency or its successor agency established and empowered to regulate sources of air pollution in the State of California, including motor vehicles, pursuant to Section 39003, California Health & Safety Code, 1999, incorporated herein by reference, as amended or supplemented.

"CCR" means the California Code of Regulations.

"Certification" or "certified" means a finding by CARB or the USEPA that a motor vehicle, motor vehicle engine, or air contaminant emission control system has satisfied the criteria for the control of specified air contaminants from motor vehicles, adopted by CARB or the USEPA, respectively, as set forth in their respective regulations.

"Department" means the New Jersey Department of Environmental Protection.

"Gross vehicle weight rating" or "GVWR" means the value specified by the manufacturer as the maximum design loaded weight of a single vehicle.

"Lease" means any commercial transaction recognized under the laws of this State as a means of creating a right to use a good and includes renting. It also includes offering to rent or lease.

"Medium-duty passenger vehicle" means medium-duty passenger vehicle as defined at 13 CCR 1900.

"Model year" or "MY" means model year as defined at 40 CFR 85.1502(a)(8).

"New motor vehicle" means a motor vehicle the equitable or legal title to which has never been transferred to an ultimate purchaser.

"New motor vehicle engine" means an engine in a new motor vehicle or a motor vehicle engine, the equitable or legal title to which has never been transferred to the ultimate purchaser.

"Person" means any individual or entity and shall include, without limitation, corporations, companies, associations, societies, firms, partnerships, and joint stock companies, and shall also include, without limitation, all political subdivisions of any states, and any agencies or instrumentalities thereof.

"Sale" or "sell" means the transfer of equitable or legal title to a motor vehicle or motor vehicle engine to the ultimate or subsequent purchaser.

"Ultimate purchaser" means, with respect to any new motor vehicle or new motor vehicle engine, the first person who in good faith purchases a new motor vehicle or new motor vehicle engine for purposes other than resale.

"Zero-emission vehicle" or "ZEV" shall have the same meaning as the term "zeroemission vehicle" as defined at 13 CCR § 1963(c).

7:27-28A.2 Purpose and scope

(a) This subchapter establishes emission standards in New Jersey that are the same as the California emission standards for vehicles and engines of the same model years and gross vehicle weight rating for:

1. All model year 2027 or later new motor vehicles rated in excess of 8,500 pounds GVWR; and

2. All model year 2027 or later new motor vehicle engines intended for use in motor

vehicles rated in excess of 8,500 pounds GVWR.

7:27-28A.3 Applicability

(a) Except as specifically provided herein, on or after January 1, 2027, this subchapter applies to:

1. All model year 2027 or later new motor vehicles rated in excess of 8,500 pounds

GVWR; and

2. All model year 2027 or later new motor vehicle engines intended for use in motor vehicles rated in excess of 8,500 pounds GVWR.

(b) The specified engine and vehicle standards and requirements set forth in the provisions of the California Code of Regulations, as identified at N.J.A.C. 7:27-28A.11 shall not be operative in New Jersey, unless or until such time as California receives a waiver from the United States Environmental Protection Agency pursuant to 42 U.S.C. § 7543, as published in the Federal Register, for the applicable engine standard, vehicle standard, or other emission requirement.

7:27-28A.4 Requirements for engine and vehicle transactions

(a) No person who is a resident of this State, or who operates an established place of business within this State, shall sell, lease, import, deliver, purchase, acquire, register, receive, or otherwise transfer in this State, or offer for sale, lease, or rental in this State a model year 2027 or later, new motor vehicle rated in excess of 8,500 pounds GVWR or a

model year 2027 or later, new motor vehicle engine intended for use in a motor vehicle rated in excess of 8,500 pounds GVWR, unless the California Air Resources Board has issued an executive order certifying the vehicle or engine and it meets all of the requirements of the California Code of Regulations identified at N.J.A.C. 7:27-28A.11 that apply to the model year and gross vehicle weight rating of the vehicle or engine in question.

(b) For the purposes of this subchapter, it is conclusively presumed that the equitable or legal title to any motor vehicle with an odometer reading of 7,500 miles or more has been transferred to an ultimate purchaser, and that the equitable or legal title to any motor vehicle with an odometer reading of less than 7,500 miles has not been transferred to an ultimate purchaser.

7:27-28A.5 Exemptions

(a) Notwithstanding the provisions at N.J.A.C. 7:27-28A.3, the requirements set forth at N.J.A.C. 7:27-28A.4, 28A.7, 28A.8, and 28A.11 do not apply to:

- 1. A medium-duty passenger vehicle;
- 2. A zero emission vehicle rated in excess of 8,500 pounds GVWR;

3. A vehicle held for daily lease or rental to the general public or engaged in interstate commerce, that is registered and principally operated outside of New Jersey;

4. A vehicle transferred by inheritance;

5. A vehicle transferred by court decree;

was originally registered in another state by a resident of that state, who subsequently establishes residence in this State;

6. A vehicle having a certificate of conformity issued pursuant to the Clean Air Act that

7. A vehicle sold or transferred directly from one dealer to another dealer;

- 8. A vehicle sold for the purpose of being wrecked or dismantled; or
- 9. A vehicle sold exclusively for off-highway use.

7:27-28A.6 Prohibition against stockpiling

No person shall purchase any new motor vehicle rated in excess of 8,500 pounds GVWR or any new motor vehicle engine intended for use in a motor vehicle rated in excess of 8,500 pounds GVWR, greater than normal business needs for the purpose of evading the requirements of this subchapter.

7:27-28A.7 Manufacturer compliance with California warranty

Each manufacturer of a vehicle subject to N.J.A.C. 7:27-28A.3 shall warrant to the ultimate purchaser and each subsequent purchaser that the vehicle will comply during its period of warranty coverage with all applicable requirements set forth in the sections of the California Code of Regulations, as identified at N.J.A.C. 7:27-28A.11.

7:27-28A.8 Manufacturer compliance with California orders and voluntary recalls

(a) Any order or enforcement action taken by the CARB to correct noncompliance with any section of Title 13 of the California Code of Regulations, which action results in the recall of any vehicle pursuant to any provision of the California Code of Regulations identified at N.J.A.C.

7:27-28A.11, shall be applicable in New Jersey, except where the manufacturer demonstrates to the Department's satisfaction within 30 days of issuance of the CARB action that the action is not applicable to vehicles subject to N.J.A.C. 7:27-28A.3.

(b) Any emission-related recall campaign, voluntary or otherwise, initiated by any manufacturer that results in the recall of any vehicle pursuant to any provision of the California Code of Regulations identified at N.J.A.C. 7:27-28A.11 shall be applicable in New Jersey, except where the manufacturer demonstrates to the Department's satisfaction within 30 days of the CARB approval of the campaign that the campaign is not applicable to vehicles subject to N.J.A.C. 7:27-28A.3.

7:27-28A.9 Recordkeeping

(a) Any person who operates a place of business that sells, leases, or rents new MY 2027 or later motor vehicles rated in excess of 8,500 pounds GVWR or new model year 2027 or later motor vehicle engines intended for use in motor vehicles rated in excess of 8,500 pounds GVWR in this State shall maintain records of all the business's sales, leases, rentals, imports, purchases, acquisitions, receipt of, or other transfers of new MY 2027 or later motor vehicle engines intended for use in excess of 8,500 pounds GVWR for a period of no less than five years after the date of the transaction.

(b) Upon the request of the Department, the owner or operator of the place of business shall make the records specified at (a) above available for inspection at the place of business by any representative of the Department during normal business hours.

(c) Upon receipt of a written request from the Department, the owner or operator of the place of business shall timely submit a copy of the records specified at (a) above to the Department by mail or by other means as agreed to by the Department.

7:27-28A.10 Right to enter

(a) The Department, or its representative, shall have the right to enter and inspect any site, building, equipment, or vehicle, or any portion thereof, at any time, in order to ascertain compliance or non-compliance with the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq., this subchapter, any exemption, or any order, consent order, agreement, or remedial action plan issued, approved, or entered into pursuant thereto. Such right shall include, but not be limited to, the right to test or sample any material, motor vehicle, or motor vehicle engine, or any emissions therefrom, at the facility; to sketch or photograph any portion of the site, building, vehicles, or motor vehicle engines; to copy or photograph any document or record necessary to determine such compliance or non-compliance; and to interview any employees or representatives of the owner, operator, or registrant. Such right shall be absolute and shall not be conditioned upon any action by the Department, except the presentation or appropriate credentials, as requested, and in compliance with appropriate standard safety procedures.

(b) Failure to comply with any of the obligations or requirements of this subchapter shall subject the violator to an enforcement action pursuant to the provisions at N.J.S.A. 26:2C-19 and N.J.A.C. 7:27A-3.

7:27-28A.11 Incorporation by reference

(a) Unless specifically excluded by this subchapter, when a provision of the CCR is

incorporated by reference, all notes, comments, appendices, diagrams, tables, forms, figures, publications, and cross-references are also incorporated by reference.

(b) Supplements, amendments, and any other changes including, without limitation, repeals or stays that affect the meaning or operational status of a California rule incorporated by reference, brought about by either judicial or administrative action and adopted or otherwise noticed by the State of California, shall be paralleled by a similar change to the New Jersey rule, so that the New Jersey rule will have the same meaning and status as its California counterpart. To satisfy the identicality requirement of the Clean Air Act, at 42 U.S.C. § 7507, all new California regulations related to certification of model year 2027 or later new motor vehicles rated in excess of 8,500 pounds GVWR and model year 2027 or later new motor vehicle engines intended for use in motor vehicles rated in excess of 8,500 pounds GVWR are also incorporated into this subchapter by this automatic process.

(c) In the event that there are inconsistencies or duplications in the requirements of the provisions incorporated by reference from the CCR and the rules set forth in this subchapter, the provisions incorporated by reference from the CCR shall prevail.

(d) Nothing in the provisions incorporated by reference from the CCR shall affect the Department's authority to enforce statutes, rules, permits, or orders administered or issued by the Commissioner.

(e) On or after (the operative date of this rulemaking or the operative date of California's regulations, whichever is later), any new California rules, amendments, supplements, and other changes that are brought about through administrative or judicial action and

automatically incorporated through the prospective incorporation by reference process shall

be effective upon publication in the California Regulatory Notice Register and operative on

the operative date cited by California in the relevant California Regulatory Notice Register

notice, unless the Department publishes a notice of proposal repealing the adoption in New

Jersey of the California regulation in whole or in part, and/or proposing to otherwise amend

the affected New Jersey rules.

(f) The following provisions of the CCR are incorporated by reference within this subchapter,

except as provided at (f)1 through 7 below:

	Table 1				
Provisions Incorporated by Reference					
	California Code of Regulations (CCR)				
	Title 13				
	Chapter 1				
	Motor Vehicle Pollution Control Devices				
	Article 1				
	General Provisions				
Section 1900	Definitions				
	Article 2				
Appro	oval of Motor Vehicle Pollution Control Devices (New Vehicles)				
Section 1956.8	Exhaust Emission Standards and Test Procedures - 1985 and Subsequent				
	Model Heavy-Duty Engines and Vehicles, 2021 and Subsequent Zero-				
Emission Powertrains, and 2022 and Subsequent Model Heavy-Duty					
Hybrid Powertrains					
Section 1961.2	Exhaust Emission Standards and Test Procedures - 2015 and Subsequent				
	Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles				
Section 1965 Emission Control and Smog Index Labels – 1979 and Subsequent					
	Year Vehicles				
Section 1968.2	Malfunction and Diagnostic System Requirements – 2004 and				
	Subsequent Model Year Passenger Cars, Light-Duty Trucks and Medium-				
	Duty Vehicles				
Section 1971.1	On-Board Diagnostic System Requirements2010 and Subsequent				
	Model-Year Heavy-Duty Engines				
	Article 6				

Emission Control System Warranty				
Section 2035	Purpose, Applicability and Definitions			
Section 2036	Defects Warranty Requirements for 1979 Through 1989 Model Passenger			
	Cars, Light-Duty Trucks, and Medium-Duty Vehicles; 1979 and			
	Subsequent Model Motorcycles and Heavy-Duty Vehicles; and Motor			
	Vehicle Engines Used in Such Vehicles; and 2020 and Subsequent Model			
	Year Trailers			
Section 2037	Defects Warranty Requirements for 1990 and Subsequent Model Year			
	Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles and Motor			
	Vehicle Engines Used in Such Vehicles			
	Chapter 2			
Enforc	ement of Vehicle Emission Standards and Enforcement Testing			
	Article 1.5			
Enforcement	t of Vehicle Emission Standards and Surveillance Testing for 2005 and			
9	Subsequent Model Year Heavy-Duty Engines and Vehicles			
Section 2065	Applicability of Chapter 2 to 2005 and Subsequent Model Year Heavy			
	Duty Engines and Vehicles.			
	Article 2.1			
Pro	cedures for In-Use Vehicle Voluntary and Influenced Recalls			
Section 2111	Applicability			
Section 2112	Definitions			
	Appendix A to Article 2.1			
Section 2113	Initiation and Approval of Voluntary and Influenced Recalls			
Section 2114	Voluntary and Influenced Recall Plans			
Section 2115	Eligibility for Repair			
Section 2116	Repair Label			
Section 2117	Proof of Correction Certificate			
Section 2118	Notification			
Section 2119	Record keeping and Reporting Requirements			
Section 2121	Penalties			
	Article 2.2			
Procedures for In-Use Vehicle Ordered Recalls				
Section 2123	Initiation and Notification of Ordered Emission-Related Recalls			
Section 2125	Ordered Recall Plan			
Section 2126	Approval and Implementation of Recall Plan			
Section 2127	Notification of Owners			
Section 2128	Repair Label			
Section 2129	Proof of Correction Certificate			
Section 2130	Capture Rates and Alternative Measures			
Section 2131	Preliminary Tests			
Section 2133	Record keeping and Reporting Requirements			
Article 2.3				

In-Use Vehicle Enforcement Test Procedures					
Section 2137	Vehicle Selection				
Section 2139	Testing				
Section 2139.5	CARB Authority to Test for Heavy-Duty In-Use Compliance				
Section 2140	Notification of In-Use Results				
	Article 2.4				
Proce	edures for Reporting Failure of Emission-Related Components				
Section 2141	General Provisions				
Section 2142	Alternative Procedures				
Section 2143	Failure Levels Triggering Recall				
Section 2144	Emission Warranty Information Report				
Section 2145	Field Information Report				
Section 2146	Emissions Information Report				
Section 2147	Demonstration of Compliance with Emission Standards				
Section 2148	Evaluation of Need for Recall				
Section 2149	Notification of Subsequent Action				
	Article 5				
Procedures for R	eporting Failures of Emission-Related Equipment and Required Corrective				
	Action				
Section 2166	General Provisions				
Section 2166.1	Definitions				
Section 2167	Required Recall and Corrective Action for Failures of Exhaust After-				
Treatment Devices, On-Board Computers or Systems, Urea Dosers,					
Hydrocarbon Injectors, Exhaust Gas Recirculation Valves, Exhaust Gas					
	Recirculation Coolers, Turbochargers, Fuel Injectors				
Section 2168	Required Corrective Action and Recall for Emission-Related Component				
	Failures				
Section 2169	Required Recall or Corrective Action Plan				
Section 2169.1	Approval and Implementation of Corrective Action Plan				
Section 2169.2	Notification of Owners				
Section 2169.3	Repair Label				
Section 2169.4	Proof of Correction Certificate				
Section 2169.5	Preliminary Tests				
Section 2169.6	Communication with Repair Personnel				
Section 2169.7	Recordkeeping and Reporting Requirements				
Section 2169.8	Extension of Time				
Section 2170	Penalties				
Chapter 9					
Article 4					
	Off-Road Compression-Ignition Engines and Equipment				

Section 2423(n)	Exhaust Emission Standards and Test Procedures - Off-Road				
	Compression-Ignition Engines				
	Chapter 10				
	Article 1				
	Commercial Motor Vehicle Idling				
Sections	Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial				
2485(c)(2),	Motor Vehicle Idling				
2485(c)(3), and					
2485(h)					
Title 17					
Division 3					
	Chapter 1				
	Subchapter 10				
	Article 4				
Subarticle 12					
Greenhouse Gas Emission Requirements for New 2014 and Subsequent Model Heavy-Duty					
Vehicles					
Section 95661	Applicability				
Section 95662	Definitions				
Section 95663	Greenhouse Gas Exhaust Emission Standards and Test Procedures for				
	New 2014 and Subsequent Model Heavy-Duty Vehicles				

1. At 13 CCR 1956.8(a)(2)(C)2b, replace "California" with "New Jersey";

2. At 13 CCR 2035, replace "registered in California" with "registered in New Jersey";

3. At 13 CCR 2036, replace "California statutorily authorized motor vehicle emissions

inspection and maintenance program" with "New Jersey statutorily authorized motor vehicle

emissions inspection and maintenance program";

4. At 13 CCR 2485(c)(3)(A), replace "operate in California" with "operate in New

Jersey";

5. At 13 CCR 2485(c)(2)(D)1 and 2485(c)(2)(D)2, replace "location in California" with

"location in New Jersey";

6. At 13 CCR 2485(c)(3)(D), replace "operation of the APS in California" with

"operation of the APS in New Jersey"; and

7. At 13 CCR 1956.8(a)(2)(F), replace the text to read as follows:

"(F) Transit Agency Diesel-Fueled Bus and Engine Exemption Request For 2027 and subsequent model diesel-fueled medium heavy-duty or heavy heavy-duty engines used in urban buses, the Department will approve a Transit Agency Diesel-Fueled Bus and Engine Exemption Request made by a transit agency that meets each of the conditions and requirements at subparagraphs 1 and 2 below. If granted, an exemption request will allow a transit agency to purchase, rent, or lease exempt buses, contract for service with bus service providers to operate exempt buses, or re-power buses with engines that are certified to both the federal emission standards for 2010 and later model year diesel-fueled medium heavy-duty or heavy heavy-duty engines and vehicles, as set forth at title 40, Code of Federal Regulations section 86.007-11, as last amended October 25, 2016, and the Greenhouse Gas Emissions and Fuel Economy Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2 requirements promulgated at 81 FR 73,478.

1. Conditions

If an exemption request is filed for the purpose of making a purchase of a MY 2027 or subsequent MY diesel-fueled medium heavy-duty or heavy heavy-duty engine to be used in an urban bus, the transit agency's

> exemption request shall demonstrate that there are no diesel-fueled medium heavy-duty or heavy heavy-duty engines used in urban buses certified to meet the Exhaust Emission Standards for 2027 and Subsequent Model Light Heavy-Duty Engines, and Medium Heavy-Duty Engines located at 13 CCR 1956.

2. Requirements and Procedures

a. The transit agency must submit its Transit Agency Diesel-Fueled Bus and Engine Exemption Request to the Department.

b. The Transit Agency Diesel-Fueled Bus and Engine Exemption Request must be submitted by May 1st of the first calendar year in which the exemption is requested.

c. The Transit Agency Diesel-Fueled Bus and Engine Exemption

Request must identify the number of exempt buses needed for each bus type.

d. If the transit agency requests to apply the exemption request to an existing contract, the Transit Agency Diesel-Fueled Bus and Engine Exemption Request must include a copy of the contract.

e. The Transit Agency Diesel-Fueled Bus and Engine Exemption Request must identify the number of exempt buses or re-powered buses that the transit agency requests for each calendar year within the triennial period of the Transit Agency Diesel-Fueled Bus and Engine Exemption Request, where the year the request is submitted is counted as the first calendar year.

3. The Department will issue an Executive Exemption Approval Letter if all foregoing conditions and requirements at subparagraphs 1 and 2 above are met. The Executive Exemption Approval Letter will allow a triennial quota for the purchase, rent, lease, contract for service, or re-power of exempt buses or engines. The triennial quota expires at the end of the third calendar year of the triennial period.

4. If the Transit Agency Diesel-Fueled Bus and Engine Exemption Request is approved by the Department, the transit agency may proceed with engine repower or exempt bus purchase, lease, rental, or contract for service. In the instance where new exempt engines and buses will be purchased or manufactured under the contract, the Executive Exemption Approval Letter will allow the bus and engine manufacturers to sell exempt engines to and manufacture exempt buses for the transit agency that has obtained the exemption. The transit agency must notify all parties involved of the approval and provide a copy of the issued Transit Agency Diesel-Fueled Bus and Engine Exemption Approval Letter to the engine and bus dealer(s), bus manufacturer(s), and engine manufacturer(s) involved with delivering the exempt buses or engines to the transit agency.

5. A transit agency may request a hearing to review the Department's denial of an Executive Exemption Approval Letter pursuant to the procedures set forth at N.J.A.C. 7:27-1.32."

CHAPTER 27A

AIR ADMINISTRATIVE PROCEDURES AND PENALTIES

SUBCHAPTER 3. CIVIL ADMINISTRATIVE PENALTIES AND REQUESTS FOR

ADJUDICATORY HEARINGS

7:27A-3.10 Civil administrative penalties for violation of rules adopted pursuant to the Act

(a) - (l) (No change.)

(m) The violations of N.J.A.C. 7:27, whether the violation is minor or non-minor in

accordance with (q) through (t) below, and the civil administrative penalty amounts for each

violation are as set forth at the following Civil Administrative Penalty Schedule. The numbers of

the following subsections correspond to the numbers of the corresponding subchapter in

N.J.A.C. 7:27. The rule summaries for the requirements set forth in the Civil Administrative

Penalty Schedule in this subsection are provided for informational purposes only and have no

legal effect.

1. –13. (No change.)

14. The violations of N.J.A.C. 7:27-14, Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles, and the civil administrative penalty amounts for each violation, per vehicle, are as set forth in the following table:

Citation	Class	Type of Violation	First Offense	Second Offense	Third Offense	Fourth and Each Subsequent Offense
 N.J.A.C. 7:27- 14.3(e)2	Sale/Offer for Sale; Lease/ Offer for	NM	\$1,000	\$2,000	\$5,000	\$15,000

	Lease by owner for four or fewer vehicles					
	Sale/Offer for Sale; Lease/ Offer for Lease by owner for five or [fewer] more vehicles	NM	\$2,000	\$4,000	\$10,000	\$30,000
N.J.A.C. 7:27- 14.4(a)2	Visible smoke	NM	\$250	\$500	\$1,000	\$2 <i>,</i> 500
N.J.A.C. 7:27- 14.4(a)5	Retrofit device or closed crankcase ventilation system tampering	NM	\$2,000	\$4,000	\$10,000	\$30,000

15. The violations of N.J.A.C. 7:27-15, Control and Prohibition of Air Pollution from Gasoline-fueled Motor Vehicles, and the civil administrative penalty amounts for each violation, per vehicle or, with respect to N.J.A.C. 7:27-15.7(a)4, per device/component, are as set forth in the following table:

Citation	Class	Type of Viola	ntion First Offense	Second Offense	Third Offense	Fourth and Each Subsequent Offense
N.J.A.C. 7:27-15.3(a)	Visible smoke	NM	\$250	\$500	\$1,000	\$2,500

16.-28. (No change.)

28A. The violations of N.J.A.C. 7:27-28A, Heavy-Duty 2027 or Later New Engine and

Vehicle Standards and New Requirements, and the civil administrative penalty

amounts for each violation, per vehicle, are as set forth in the following table:

Citation	Class	Type of Violation	First Offense	Second Offense	Third Offense	Fourth and Each Subsequent Offense
N.J.A.C. 7:27-28A.4	Deliver for sale, offer for sale, sell, import, deliver, purchase, rent, acquire, receive, or register a new motor vehicle or new motor vehicle engine not certified by CARB.	NM	\$2,500	\$5,000	\$12,500	\$30,000
N.J.A.C. 7:27-28A.6	Prohibition against stockpiling	NM	\$2,500	\$5,000	\$12,500	\$30,000
N.J.A.C. 7:27- 28A.8(a)	Recall due to an order or enforcement action taken by the CARB to correct noncompliance with any section of Title 13 of the California Code of Regulations	NM	\$2,000	\$4,000	\$10,000	\$30,000
N.J.A.C. 7:27- 28A.8(b)	Emission-related recall campaign, voluntary or otherwise, initiated by any manufacturer	NM	\$2,000	\$4,000	\$10,000	\$30,000
N.J.A.C. 7:27-28A.9	Recordkeeping	м	\$500	\$1,000	\$2,500	\$7,500

29.-33. (No change.) (n)-(v) (No change.)

ENVIRONMENTAL PROTECTION

AIR, ENERGY, AND MATERIALS SUSTAINABILITY

DIVISION OF AIR QUALITY

Model Year 2027 or Later Heavy-Duty New Engine and Vehicle Standards and

Requirements; Diesel Vehicle Inspection Tests and Procedures

Adopted Amendments: N.J.A.C. 7:27-14.1, 14.5, 15.1, 15.3, and 15.7; and 7:27A-3.10

Adopted New Rules: N.J.A.C. 7:27-28A

Adopted Repeals: N.J.A.C. 7:27-14 Appendix and 7:27-28

Proposed: November 7, 2022, at 54 N.J.R. 2007(a).

Adopted: April 21, 2023, by Shawn M. LaTourette, Commissioner, Department of

Environmental Protection.

Filed: April 21, 2023, as R.2023 d.066, with non-substantial changes not requiring additional

public notice and comment (see N.J.A.C. 1:30-6.3).

Authority: N.J.S.A. 13:1B-3(e), 13:1D-9, 26:2C-1 et seq., particularly 26:2C-8.1, 26:2C-8.15 et seq., and 39:8-2 and 61.

DEP Docket Number: 07-22-10.

Effective Date: May 15, 2023.

Operative Date: June 20, 2023, in accordance with N.J.S.A. 26:2C-8.a.

Expiration Dates: Exempt, N.J.A.C. 7:27-14.1, 14.5, 15.1, 15.3, 15.7, and 7:27-28A January 22, 2027, N.J.A.C. 7:27A.

This rulemaking will enable the State to reduce emissions, including oxides of nitrogen

(NO_x) and particulate matter (PM), from heavy-duty vehicles, by adopting California's emission

standards for these vehicles by incorporating by reference California's "Amendments to the Exhaust Emissions Standards and Test Procedures for 2024 and Subsequent Model Year Heavy-Duty Engines and Vehicles, Heavy-Duty On-Board Diagnostic System Requirements, Heavy-Duty In-Use Testing Program, Emissions Warranty Period and Useful Life Requirements, Emissions Warranty Information and Reporting Requirements, and Corrective Action Procedures, In-Use Emissions Data Reporting Requirements, and Phase 2 Heavy-Duty Greenhouse Gas Regulations, and Powertrain Test Procedures" (Low NOx Omnibus rules). In addition, this rulemaking will: (1) repeal N.J.A.C. 7:27-28, Heavy-Duty Diesel New Engine Standards and Requirements Program, to avoid any confusion about the applicable standards; (2) ensure that all heavy-duty vehicles are subject to the same emission inspection procedures and standards; (3) amend certain provisions at N.J.A.C. 7:27-14, Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles, and 15, Control and Prohibition of Air Pollution from Gasoline-Powered Motor Vehicles, for clarity and consistency; and (4) clarify that certain violations of N.J.A.C. 7:27-14 and 15 may be penalized pursuant to proposed new provisions at N.J.A.C. 7:27A-3. New Jersey is in nonattainment for the Federal ozone national ambient air quality standard (NAAOS) and must continue to reduce NO_x emissions Statewide to attain, and maintain, the ozone NAAOS. Moreover, the Department of Environmental Protection (Department) expects that the reduction in NO_x, PM, and other emissions that results from the adopted rules will improve New Jersey's overall air quality and particularly benefit local communities that are disproportionately impacted by heavy truck traffic, including some overburdened communities, as defined at N.J.S.A. 13:1D-158.

Summary of Hearing Officer's Recommendation and Agency's Response:

The Department held a virtual public hearing on this rulemaking on December 8, 2022, at 9:30 A.M., through the Department's video conferencing software, Microsoft Teams. Peg Hanna, Assistant Director for the Division of Air Quality, served as hearing officer. Eight people provided oral comments at the public hearing. After reviewing the written and oral comments received during the public comment period, the hearing officer recommended that the Department adopt the proposed rulemaking with the modifications described below in the responses to comments and in the Summary of Agency-Initiated Changes. The Department accepts the hearing officer's recommendations.

A record of the public hearing is available for inspection, in accordance with applicable law by contacting:

Department of Environmental Protection Office of Legal Affairs 401 East State Street, 7th Floor Mail Code 401-04L PO Box 402 Trenton, New Jersey 08625-0402

This notice of adoption document can also be viewed or downloaded from the Department's website at <u>http://www.nj.gov/dep/rules/adoptions.html</u>.

Summary of Public Comments and Agency Responses:

The Department accepted comments on the notice of proposal through January 6, 2023.

The following individuals provided timely written and/or oral comments:

- 1. Francine Allen
- 2. Wayne Augenstein
- 3. Mary Barber, Environmental Defense Fund
- 4. Jordan Brinn, Natural Resources Defense Council
- 5. Theodore Chase
- 6. Debra Coyle, New Jersey Work Environment Council
- 7. Marc Dragish
- 8. Timothy French, Truck & Engine Manufacturers Association
- 9. Kim Gaddy and Nicky Sheats, Coalition for Healthy Ports
- 10. Amy Goldsmith, Clean Water Action
- 11. Stanislav Jaracz, New Jersey Electric Vehicle Association
- 12. TD Kearns
- 13. Larissa Koehler, Environmental Defense Fund
- 14. James Lee
- 15. Ted Lee
- 16. Denise Lytle
- 17. Doug O'Malley, Environment New Jersey
- 18. Doug O'Malley, Jersey Renews
- 19. Marlene Oslick

20. David Pringle, Clean Water Action

21. Anjuli Ramos-Busot, Sierra Club, NJ Chapter

22. Dan Rodriguez, Bus Association of New Jersey

23. Nicky Sheats, Coalition for Healthy Ports NY/NJ, and signing on in agreement with the

comments: Eric Miller, Natural Resource Defense Council and Paulina Muratore, Union of

Concerned Scientists

24. Nicky Sheats, New Jersey Environmental Justice Alliance and Ironbound Community

Corporation, which also incorporates by reference the comments submitted by the Coalition for

Healthy Ports

25. Kevin Shen, Union of Concerned Scientists

26. Amanda Sherman, Department of Defense

27. Jackie Yeager, Cummins Inc.

The comments received and the Department's responses are summarized below. The number(s) in parentheses after each comment identify the respective commenter(s) listed above.

Request for Extension of Comment Period

1. COMMENT: Please extend the comment period, if possible. (9)

RESPONSE: The Department provided a 60-day public comment period as part of the notice of proposal, which began upon publication of the notice of proposal in the November 7, 2022, New Jersey Register. See 54 N.J.R. 2007(a). The 60-day comment period met the requirement of the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq. (APA). In addition to publication of the notice of proposal, the Department provided additional notice of the rulemaking on November 7,

2022, by posting on its website, to media outlets maintaining a press office to cover the State House Complex and other media outlets throughout the State, and by notice sent to the Department's rulemaking and permitting email lists. Prior to publication of the notice of proposal, the Department conducted stakeholder outreach meetings on September 10, 2020, and December 21, 2021. During these sessions, the Department notified stakeholders that it was considering a rule proposal to establish more stringent NOx emissions standards for new heavyduty engines and vehicles. On December 8, 2022, the Department held a public hearing at which approximately eight people testified. Upon the publication of the notice of proposal and the conclusion of the public hearing, more than 20 individuals and organizations submitted written and verbal comments, which are summarized and addressed in this notice of adoption. Given the volume of comments submitted in response to the notice of proposal within the 60-day comment period, the Department believes that there was ample opportunity to provide comments and discuss the rulemaking. Therefore, an additional period for public comment would be unlikely to result in the Department receiving comments relevant to the proposed rules that raise issues or provide new information, data, or findings that were not previously raised or provided during the development of the proposed rules or during the 60-day comment period.

General Support

2. COMMENT: The Model Year 2027 or Later Heavy-Duty New Engine and Vehicle Standards and Requirements, as well as the Diesel Vehicle Inspection Tests and Procedures rules (Heavy-Duty Vehicle rules), should be adopted because they will complement the work currently underway by the Advanced Clean Trucks (ACT) rules adopted in 2022, which accelerate the

sales of zero emission heavy-duty vehicles. The Heavy-Duty Vehicle rules are critical to reducing emissions in New Jersey's transportation sector. Medium- and heavy-duty trucks account for 24 percent of total U.S. transportation sector emissions. Air pollution levels are highest in areas adjacent to major roadways or facilities with significant vehicle volumes, like ports and rail yards and in environmental justice (EJ) areas. NOx emissions contribute to smog or ground-level ozone and secondary PM, which, along with primary PM emissions, are associated with increased risk of premature deaths, hospitalization, and emergency room visits. Cutting NO_x and PM emissions from trucking is vital for improving public health and meeting the Federal National Ambient Air Quality Standards. The Heavy-Duty Vehicle rules will target the emissions of those diesel and gasoline trucks that are still on the road and hold them to the most stringent standards while we transition to the electrification of our heavy-duty sector. While the ACT Rule works year-over-year to gradually increase the share of new zero-emissions truck sales, the Heavy-Duty Vehicle rules curtail toxic air pollution from new diesel vehicles that will continue to be sold in the interim. Together, these rules will reduce toxic air pollution that harm human health and disproportionately impact historically marginalized communities and these rules will meaningfully reduce damaging emissions in New Jersey. (21)

3. COMMENT: The Department should adopt the Heavy-Duty Vehicle rules. When combined with the ACT rules, the value of these rules is greater than the U.S. Environmental Protection Agency's (EPA's) rules. (20)

4. COMMENT: The Heavy-Duty Vehicle rules curtail toxic air pollution from new fossil fuel vehicles that will continue to make up the bulk of the vehicles sold as the ACT rules phase in electric heavy-duty vehicles. To provide fleets and drivers more durable vehicles and ensure

significant health and harm reduction in the most impacted communities, the Heavy-Duty Vehicle rules should be adopted as soon as possible. (4)

5. COMMENT: Air pollution has devastating impacts for the heart, lungs, and the rest of the human body. The Heavy-Duty Vehicle rules are designed to maximize the benefits of diesel truck emission technologies in tandem with the ACT rules. The Heavy-Duty Vehicle rules should be adopted because they will dramatically reduce emissions from the most polluting diesel engines in the State – a state that has the second highest health effects from dirty diesel in the country. (25)

6. COMMENT: The Heavy-Duty Vehicle rules should be adopted to reduce the amount of air pollution in New Jersey for our children and grandchildren. (15)

7. COMMENT: These Heavy-Duty Vehicle rules are needed to reduce air pollution from trucks. New Jersey must also make sure that inspections are removing trucks that do not meet emission standards from the State's roads. (14)

8. COMMENT: Heavy-duty trucks are significant contributors to New Jersey's air pollution. They produce substantial quantities of dangerous NO_x and diesel particulate emissions. Longer exposure to elevated concentrations of NO_x emissions may contribute to the development of asthma, and nitrous oxides react with other chemicals to form particulate matter and ozone. The Department should adopt the Heavy-Duty Vehicle rules to strengthen emissions standards for heavy-duty vehicles. (2, 7, 12, 16, and 19)

9. COMMENT: CARB's Low NO_x Omnibus rule should be adopted as quickly as possible in conjunction with complementary policies and strengthening of the proposed regulation. Specifically, the rules should be adopted within a framework of moving forward on the ACT

rules, as well as the proposed revised straw proposal from the Board of Public Utilities (BPU) on medium- and heavy-duty vehicle electrification charging infrastructure and its proposed investment in charging infrastructure in overburdened urban communities. New Jersey needs to electrify its truck fleet through the ACT rules, but during the transition to electrification, New Jersey needs to reduce toxic particulate matter pollution from new diesel vehicles as much as possible. The proposed rulemaking will reduce toxic air pollution to ensure that medium- and heavy-duty trucks will be subject to the most stringent emission standards that are technically feasible for NO_x and PM. The rulemaking will ensure that all heavy-duty vehicles are subject to the same emission inspection procedures and standards, amend the definition of gross vehicle weight rating, and constitute a revision to New Jersey's State Implementation Plan (SIP) for the attainment and maintenance of the National Ambient Air Quality Standards for ground level ozone. There is a clear public health benefit to cleaning up the truck pollution that harms the air quality of the State's urban neighborhoods. (18)

10. COMMENT: The Department should adopt the Heavy-Duty Vehicle rules that, in conjunction with the ACT rules, will significantly reduce emissions. This will lead to public health benefits, such as fewer premature deaths and asthma attacks. (17)

11. COMMENT: The Department should adopt the Heavy-Duty Vehicle rules because these rules will require truck emission levels for NO_x to be up to 90 percent lower than the current standards starting in 2027, prevent backsliding of particulate matter levels with the improvement of NO_x emissions; address emissions during use when emissions typically rise (that is, idling, low load use), and extend the emission control warranty, so that emission controls are required to be more effective over a longer period and emission standards hold up over time. These rules

have tremendous value in reducing diesel pollution in the future with already proven technologies. (10)

12. COMMENT: Tailpipe pollution from cars, trucks, and buses is a leading source of harmful air pollution in New Jersey. Each year, vehicles on New Jersey's roads release tons of smogforming pollutants and particulate matter, which have been linked to increased illness and death, primarily from heart and lung diseases. The Heavy-Duty Vehicle rules will reduce emissions from new fossil fuel medium- and heavy-duty vehicles that continue to be sold, requiring manufacturers of internal combustion engine trucks to reduce emissions of smog-forming pollutants by 90 percent, starting in model year 2027, and work in tandem with the ACT rules to send a clear market signal around which industry, government, and other stakeholders can plan and mobilize investments. The Heavy-Duty Vehicle rules make much-needed reforms, such as strengthening NO_x and PM emission standards for new fossil fuel trucks, introducing a new NO_x standard for a low-load certification cycle, extending manufacturer warranties, and improving inuse testing to better align with actual operations and global standards. The public health benefits from these emissions reductions are also substantial. Swiftly finalizing the Heavy-Duty Vehicle rules is an important step for New Jersey to address medium- and heavy-duty vehicle emissions and is a necessary complement to the State's ACT rules. (23)

13. COMMENT: New Jersey should adopt California's Low NO_x Omnibus rule because the air pollution emitted by heavy-duty vehicles is a significant public health hazard to New Jersey communities, including environmental justice communities. It appears that a fully adopted Low NO_x Omnibus rule would result in a general reduction in emissions from heavy-duty trucks and buses. (24)

14. COMMENT: Tailpipe emissions from medium- and heavy-duty vehicles are a public health menace that cause widespread harm in New Jersey. Medium- and heavy-duty vehicles are responsible for an outsized portion of harmful, localized pollution from the transportation sector. Allowing transportation and freight to continue with the status quo will have a detrimental and significant impact on health in communities, particularly those near highways and other major sources of transportation pollution. Conventionally powered vehicles will be on the roads for some years in the future; to protect public health in vulnerable communities, it will be imperative that the State address the tailpipe emissions from new fossil fuel heavy-duty trucks and buses. The Heavy-Duty Vehicle rules and the recently adopted ACT rules complement one another. Both regulations advance cleaner vehicle technology while addressing the pressing need for cleaner air in communities suffering from dangerous pollution levels. Adopting the Heavy-Duty Vehicle rules is a critical way to ensure that new fossil fuel-powered vehicles emit less harmful pollution as New Jersey adopts zero-emissions solutions. (3)

15. COMMENT: It is critically important for New Jersey to carve a pathway for a transition to zero-emission trucks and buses as it does with the ACT rules. However, there remains a need to clean up the new diesel vehicles that will be put in service in the intervening time. For New Jerseyans who live near highways, warehouses, and other high-truck traffic areas, reducing diesel truck exhausts can literally be a matter of life and death — a stark demonstration of the imperative nature of the Heavy-Duty Vehicle rules and other measures. (13) RESPONSE TO COMMENTS 2 THROUGH 15: The Department acknowledges the commenters' support for the adopted rules.

Requests for Clarification and Modification upon Adoption

Military and Emergency Vehicles

16. COMMENT: Pursuant to 42 U.S.C. § 7543 (Clean Air Act § 209), states that seek to adopt California's standards shall adopt the California standards in their entirety. Accordingly, all exemptions set forth in the California standards should be incorporated by reference in this rulemaking. At 13 CCR Section 1905, Exclusion and Exemption for Military Tactical Vehicles and Equipment, the California rules provide an exemption for military tactical vehicles. This particular exemption exempts military tactical vehicles and equipment from California motor vehicle emission control standards and requirements and goes beyond the exemption from idling prohibitions at 13 CCR Section 1956.8 at paragraph (a)(6)(B). The Department should modify Table 1 at Subchapter N.J.A.C. 7:27-28A.11 to include 13 CCR Section 1905 in the list of CCRs incorporated by reference. This would be consistent with California's rules governing emission control standards and requirements for heavy-duty vehicles as they pertain to military tactical vehicles and would make New Jersey's regulations consistent with Clean Air Act § 209. Also, for clarity, the Department should amend proposed N.J.A.C. 7:27-28A.5 to include an explicit exemption for military tactical vehicles to ensure consistency throughout the regulations and to prevent confusion as to the regulations' applicability to military tactical vehicles. (26) 17. COMMENT: Emergency vehicles in California are exempt from California motor vehicle pollution control requirements; for example, see California Vehicle Code 27156.2 and 27156.3. The Department should make a change upon adoption to include an exemption at N.J.A.C. 7:27-28A.5. This would also be consistent with the existing regulation at N.J.A.C. 7:27-28.4. (27)

RESPONSE TO COMMENTS 16 AND 17: The Department did not intentionally omit these provisions of the California Vehicle Code and California Code of Regulations from the proposed rulemaking. As the Department stated in the notice of proposal, 54 N.J.R. 2007(a), 2009, the Department's intention is to establish heavy-duty vehicle emission standards that are identical to California's for vehicles of the same model year and weight class. See also adopted N.J.A.C. 7:27-28A.11, which refers to the identicality requirements of the Clean Air Act, 42 U.S.C. § 7507. For purposes of identicality, therefore, the Department is modifying N.J.A.C. 7:27-28A.5, Exemptions, upon adoption to include specific prohibitions of both California's Code of Regulations and Vehicle Code, which specifically exempt emergency vehicles and military tactical vehicles, respectively. The Department is making corresponding changes upon adoption at N.J.A.C. 7:27-28A.11, Incorporation by reference, to include the California Vehicle Code and California Code of Regulation provisions that exempt both military tactical vehicles and emergency vehicles.

<u>Buses</u>

18. COMMENT: At N.J.A.C. 7:27-28A.11(f)7, the Department proposes to adopt CARB's exemption process for new diesel-fueled buses sold to transit agencies, with some New Jersey-specific revisions to remove conditions not applicable in New Jersey, such as compliance with CARB's Innovative Clean Transit requirements. While the New Jersey-specific revisions are helpful, the Department could further streamline the process by following the precedent set by Oregon by exempting engines in new diesel-fueled buses sold to a transit agency from meeting CARB requirements and allowing EPA-certified engines without a request and approval process

(see OAR 340-261-0060(2). This would also be consistent with the existing regulation at N.J.A.C. 7:27-28.4. (27)

19. COMMENT: While the Department's proposed rulemaking includes an exemption procedure for Model Year 2027 or later diesel-fueled urban bus engines if compliant engines or vehicles are unattainable, the exemption appears to be limited to "transit agencies." Thus, private providers of transportation could not apply. Moreover, the exemption process contemplated is administratively burdensome and is keyed to a timetable that might not match an individual bus company's purchasing schedule. The administrative research and paperwork requirements are particularly challenging to private carriers, who are without resources to research each manufacturer's compliance with emission standards. Therefore, the Department should modify the rules upon adoption to include an automatic exemption for private providers of public transportation when they are unable to acquire compliant vehicles. If necessary to ensure regulators that compliant vehicles are unavailable, that automatic exemption could be triggered when NJ Transit has received an exemption for the same circumstances. (22) 20. COMMENT: Unlike NJ Transit, private bus carriers, in general, receive no operating subsidies. Costs must come from the farebox. That means that private bus carriers who operate commuter bus lines at their own risk are able to sustain those routes only if the farebox revenues

exceed their costs. Depending on the costs involved, it is conceivable that these new regulations could make the difference between a carrier continuing to operate or suspending routes that cannot be operated profitably. For these reasons, the Heavy-Duty Vehicle rules should be modified upon adoption to afford a waiver to private bus companies that can demonstrate that purchasing and operating the vehicles in question is cost prohibitive. (22)

21. COMMENT: The Department should adopt California's Low NO_x Omnibus rule, but these standards and their associated exemptions must be tailored to New Jersey's unique policy environment. In the notice of proposal Summary, the Department proposed the exemptions outlined in California's Low NO_x Omnibus rule, which provided an exemption for new, dieselpowered transit buses sold to any public transit agencies, but with its own revised conditions. New Jersey law sets goals for transit bus electrification: 10 percent of new buses by 2025, 50 percent by 2027, and 100 percent by 2033. This is not equivalent to the Innovative Clean Transit (ICT) program, which applies to all transit agencies, sets reporting requirements, and has a later timeline for a complete electrification of transit fleets, rather than the New Jersey requirement, which only refers to sales. The revised conditions are adequate to address intermediate transit bus purchases, provided a fleet can demonstrate that the conditions under which it originally received an exemption continue to remain true, preferably through regular, public reporting. (3) RESPONSE TO COMMENTS 18, 19, 20, AND 21: As explained in the notice of proposal Summary, CARB included an exemption for diesel-fueled urban bus engines and vehicles sold to transit agencies. 54 N.J.R. at 2013. The exemption was based on a very specific circumstance: the primary manufacturer of diesel-fueled urban bus engines indicated that it would not produce diesel-fueled urban bus engines compliant with California-specific emission standards beginning in MY 2024. Ibid. As California and New Jersey have different legislative goals concerning the electrification of the bus fleets run by their respective transit agencies, the Department's intent was to tailor the California exemption to New Jersey-specific circumstances. 54 N.J.R. at 2014. Accordingly, the proposed rules included a requirement for a transit agency to apply for the exemption, which would be conditioned upon the transit agency's demonstration that there are

no diesel-fueled medium heavy-duty or heavy heavy-duty engines used in urban buses certified by California to meet the exhaust emission standards for the model year in which the transit agency intends to make the purchase. *Ibid*.

The Department concurs that because the exemption is based on unavailability, it would be appropriate to expand the exemption applicability to all operators of urban transit buses, whether public or private, since New Jersey Transit may contract with private bus companies to cover certain local routes. Upon adoption, the Department is modifying the rules to define the terms "bus company" and "transit agency" to distinguish between private entities operating buses and buses operated by a transit agency (public). Further, N.J.A.C. 7:27-28.11(f)7 is modified upon adoption to clarify that bus companies and transit agencies will be eligible to apply for the waiver when purchasing an urban bus. Finally, the Department is adding a definition of "urban bus" upon adoption to refer to the definition of "urban bus" in the California Code of Regulations to maintain consistency.

The Department does not agree that the exemption process is overly burdensome and should be streamlined. Urban buses, as defined in California's regulations, often operate in environmental justice communities, and it is important that the cleanest available engines be used in those applications. Thus, the administrative process for the exemption requires each urban bus fleet operator to continue to re-evaluate engine availability and its purchasing needs, and when necessary, demonstrate that the operator is buying the cleanest available engines.

Although the Department will not produce a public report detailing requests for an exemption, a request by a transit agency or private bus company for an exemption is public
information, unless an owner or operator makes a successful request for confidentiality pursuant to N.J.A.C. 7:27-1.

Averaging, Banking, and Trading

22. COMMENT: The Department should clarify, upon adoption, how a manufacturer would implement Federal Averaging, Banking, and Trading (ABT) for CARB-certified engines sold in New Jersey, since the EPA's regulations for ABT do not allow manufacturers to count engines certified to a state's emission standards that are different from the Federal standards. See 40 CFR 1036.801. (27)

23. COMMENT: As proposed, the rules would rely on the Federal crediting system program for accounting. This is a departure from what other Section 177 states have done. Upon adoption, the Department should clarify how the Federal program will be used, since there are different stringency levels that exist between the State and national standards. (4)

24. COMMENT: The Department proposes to use the Federal ABT system, which is inconsistent with other Section 177 states, such as Massachusetts. Using the Federal ABT system would hinder compliance and allow for an accumulation of surplus Federal credits that could reverse some of the benefits of the rules. This provision of the rules needs a second look. (25)
25. COMMENT: It is critical for the Department to reexamine the credit system to ensure that the State sees an absolute reduction in emissions. (17)

RESPONSE TO COMMENTS 22, 23, 24, AND 25: The notice of proposal indicated that manufacturers selling engines and vehicles in New Jersey should continue to bank credits through the Federal ABT program. See 54 N.J.R. at 2023. However, the Department

acknowledges that it will need to develop an independent, New Jersey-specific ABT program. Accordingly, the Department anticipates that it will establish a New Jersey-specific ABT program in a future rulemaking. This anticipated program will be based on the California ABT program, the provisions of which were included in the collection of California rule provisions the Department proposed to incorporate by reference. The Department's intent is to develop a State-specific ABT program that is consistent with, to the greatest extent possible, the reporting and additional administrative requirements of other states that have adopted CARB's Low NO_x Omnibus rule.

Adopt These Rules, but the Department Should Do More

Targeted Actions, Rules, and Policies

26. COMMENT: The Heavy-Duty Vehicle rules should be adopted, but, just as with the previously enacted ACT rules, the State should develop and adopt strategies, rules, and laws that will guarantee that air pollution emissions reductions from heavy-duty vehicles occur in New Jersey environmental justice (EJ) communities (that is, communities of color and communities with low-income). Numerous studies have found that communities of color and communities with low-income are disproportionately exposed to air pollution. The Department should develop a policy mechanism that ensures the reductions yielded in heavy-duty vehicle-related air pollution by the Heavy-Duty Vehicle rules occur in EJ communities that desperately need these reductions. Mechanisms should be included in all environmental policy that guarantee EJ communities, along with other communities, will realize the benefits produced by environmental policy. The Department could guarantee that the proposed rules produce emission reduction in

EJ communities using specific strategies. For example, trucking companies based in EJ communities, or whose fleet of trucks conduct a significant amount of business in EJ communities, should be required to use the portion of their fleet that is composed of zeroemission vehicles in those communities. Another example would be to allow only zero-emission heavy-duty vehicles in EJ communities or allow only heavy-duty vehicles that meet the emissions standards contained in the proposed rules to operate in EJ communities. In addition, the Department should develop an EJ community centered indirect source rule. As currently constructed, the proposed rules take no specific steps to ensure emissions reduction in EJ, urban, or overburdened communities. (24)

27. COMMENT: Cleaning up truck emissions is long overdue for the communities living adjacent to freeways, ports, and freight hubs that disproportionately suffer from harmful air pollution. Many of these communities, which are predominantly communities of color and low-income, see upwards of 1,000 diesel trucks passing through per hour. People who live, work, or go to school near such areas have an increased incidence and severity of health problems such as asthma, cardiovascular disease, childhood leukemia, and premature death.

We urge the Department to continue to prioritize communities overburdened with pollution and focus on the pollution reduction mechanisms that will get cleaner air for these communities as soon as possible. A logical step is to focus on the communities that are intertwined with industrial sectors in our State, like the ports. (21)

28. COMMENT: Adopting the Heavy-Duty Vehicle rules is critical, but alone the rules will not remove the oldest and dirtiest vehicles from the road nor prevent them from operating at the port, along logistics corridors, and in EJ communities. Residents living near the Port of New York and

New Jersey are exposed to levels of diesel air pollution that are 100 to 1,000 times the amount considered safe for humans. The Department must address the deadly pollution caused by the freight transportation system and commit to additional actions beyond the ACT and Heavy-Duty Vehicle rules. Actions to be taken by New Jersey and local governments include, but are not limited to, adopting fleet purchase requirements that ensure zero-emission vehicle deployments in EJ communities, creating local ordinances for low-/zero-emission zones in EJ communities, implementing an indirect source rule customized to EJ communities, scrapping and retrofitting existing diesel equipment in EJ communities, and mandating emission-reduction measures that target EJ communities, transportation corridors, and port regions. The need, benefits, and feasibility of the Heavy-Duty Vehicle rules are well understood; however, new vehicle emission standards alone do not guarantee emission reductions in EJ communities. Rather, additional State and local action must be taken. (23)

29. COMMENT: Communities located adjacent to ports and related goods-movement infrastructure (that is, warehouses, logistics centers, rail yards) experience higher levels of truck traffic, both from surrounding thruways and on local streets, which exacerbates health concerns. As these emissions are local in their effects, policies to reduce transportation emissions from medium- and heavy-duty vehicles can improve the health and well-being of communities in urban areas or around transportation corridors, which are often home to people of color, low-income residents, or those who are otherwise vulnerable or disadvantaged. To ensure reductions in those communities, program requirements on truck manufacturers, such as the ACT and CARB's Low NO_x Omnibus rule, will need to be accompanied by additional policies designed specifically with these communities in mind. The adoption of CARB's Low NO_x Omnibus rule

should be done in concert with regulatory protections to transition our medium- and heavy-duty vehicle sector to electrification. (18)

30. COMMENT: The ACT and Heavy-Duty Vehicle rules cannot be relied on alone to address New Jersey's deep environmental injustices. Additional actions that target emissions reductions in EJ communities must also be taken by the State and local governments. These actions could include: establishing fleet purchase requirements; local ordinances for lower zero-emission zones; a warehouse indirect source rule; replacing and retrofitting existing diesel equipment in EJ communities; or mandating guaranteed emissions reduction measures in targeted EJ communities, transportation corridors, and port regions. (25)

31. COMMENT: Tailpipe pollution causes tens of thousands of premature deaths nationwide each year, especially in communities of color. Trucks are on the roads for decades, which means the choices the State makes now will have an effect for years to come. The Department should ensure there are no diesel death zones. Low-income people should not be victims simply because they cannot afford to move. (1)

32. COMMENT: Localized heavy-duty vehicle pollution disproportionately impacts certain communities across the State – typically low- and moderate-income individuals and environmental justice communities – that are more likely to reside near freight corridors, ports, bus depots, and the Newark airport. Communities of color and low-income individuals are statistically much more likely to live near busy roads and have commensurately higher exposure to harmful transportation pollution. Relevant for New Jersey, a recent Union of Concerned Scientists study found that Asian American, Black, and Latino American residents in the Northeast and Mid-Atlantic region were exposed to 66 percent more air pollution from cars and

trucks than White residents. This is corroborated by research from the South Ward

Environmental Alliance, which points out that the South Ward of Newark "is the backyard of the third-largest port with 20,000 trucks trips per day and 4,500 of them stay on the local roads of the South Ward...[which] is an environmental health injustice" and is, thus, disproportionately suffering from health concerns with pollution from this and other sources. Also, this pollution contributes to heightened levels of respiratory and cardiovascular disease, comorbidities that may exacerbate the severity of COVID-19. As such, New Jersey must take action to start mitigating the impact of these vehicles and ensure that EJ communities are prioritized for infrastructure and vehicle deployment so that the near-term public health and community benefits can be maximized. (3)

33. COMMENT: Living, playing, working, and/or going to school on a truck corridor, near a port, or warehouse is a hazard to your health. According to the World Health Organization, diesel particulates are a known human carcinogen. Its corresponding smog-forming NO_x emissions are a very potent ground level pollutant and precursor to ozone. Together, they cause a number of acute and chronic public health harms including, but not limited to, respiratory disease, asthma, strokes, heart attacks, and premature death. In the Ironbound section of Newark, medium- and heavy-duty vehicles account for 24 percent of the NO_x, 14 percent of PM_{2.5}, and 19 percent of black carbon – more than all light duty vehicles combined. Non-road mobile sources (marine, cargo handling equipment, and rail) account for 77 percent of NO_x exposure and 85 percent of PM_{2.5} and black carbon. The region is currently in non-attainment for ozone of which NO_x is a precursor. Non-attainment for PM_{2.5} may also occur if the Federal standard is lowered as predicted. Given the acknowledged health and community impacts of diesel, New Jersey

needs to adopt as many regulatory tools, even going beyond the California rules where it can, in order to speed up the pace and/or mandate diesel emission reductions and simultaneous adoption, implementation, and funding of zero emission strategies (for example, electric vehicles) particularly in communities of Black, Indigenous, and People of Color (BIPOC communities) already overburdened by port operations and goods movement. (10)

34. COMMENT: According to the American Lung Association, New Jersey has eight counties that receive a D or an F grade for air quality. The Heavy-Duty Vehicle rules would go a long way in improving air quality in the most impacted and EJ communities. As truck traffic is expected to increase, the Department should adopt rules that go even further than these. (6) 35. COMMENT: The significant nationwide NO_x reductions from EPA's Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards for commercial vehicles and engines (the EPA's rule) will address any remaining nearer-term air quality issues in New Jersey. To the extent that there might be other local needs to reduce emissions from NO_x "hotspots" within the State, those local needs could be best addressed through more specific approaches, such as targeted accelerated fleet turnover programs, deployment of zero-emission vehicles (ZEV) and equipment at specific facilities, utilization of the State's purchasing and contracting power to acquire ZEV trucks, and other targeted incentive programs, rather than through the adverse Statewide economic and environmental impacts that would result from the implementation of CARB's infeasible and cost-prohibitive Low NO_x Omnibus program. Accordingly, New Jersey should align with the EPA's rule as the best option for achieving the State's air quality goals during the bridge years before significant ZEV-truck market penetration takes hold. (8)

RESPONSE TO COMMENTS 26 THROUGH 35: As stated in the notice of proposal, the Department expects that by reducing emissions of air pollutants from medium- and heavy-duty vehicles there will be corresponding health benefits, particularly in local communities disproportionately impacted by heavy truck traffic. See 54 N.J.R. at 2025. The Department is adopting CARB's more stringent emission standards, in part, because the communities most impacted by medium- and heavy-duty truck emissions should receive the greatest emission benefits possible. Nonetheless, the Department will continue to evaluate a variety of regulatory mandates, policies, and revenue sources to support incentive programs that can accelerate transportation electrification programs, reduce emissions, and directly address emission and equity issues in overburdened communities in a collaborative manner. The Department's continued efforts will include, but not be limited to, implementation and enforcement of the Environmental Justice Law, N.J.S.A. 13:1D-157 et seq., coordination with other State agencies and overburdened communities to ensure equity in vehicle and infrastructure incentive programs, including the use of Regional Greenhouse Gas Initiative funds, and monitoring the progress of California's rulemaking actions related to the transportation sector.

Environmental Justice and Electric Trucks

36. COMMENT: Residents of low-income residential areas are frequently exposed to air pollution from trucks. Residents of all ages, including unborn children, may be subjected to birth defects due to air pollution, as well as asthma, lung damage, and cancer. Diesel truck exhaust contains significant amounts of 2.5 micron particles and oxides of nitrogen, whose reaction with other pollutants and atmospheric oxygen produces still more dangerous compounds. To address

this pollution, the Department should adopt rules requiring an increasing percentage of electricity-powered trucks. Start with short-haul trucks and gradually, as charging stations for trucks become common, move on to long haul trucks. Zero-emission trucks will address air pollution and climate change. (5 and 11)

37. COMMENT: Dirty diesel in school buses, port drayage trucks, equipment, construction, municipal, and garbage truck fleets is a massive environmental justice issue, and the State should do much more, much faster. More recently, the proliferation of warehouse development in the State has become a growing concern about the traffic and harmful diesel emissions, whether it's in overburdened communities or rural beautiful farm fields. Living, playing, working, and going to school along truck corridors near a port, or near warehouses, is a hazard to health. However, these rules will not take any of the oldest and dirtiest diesel trucks off the roads for decades. The rules have no mechanism to prevent the dirtiest of diesel trucks from operating at the port and along logistics corridors as the port continues to grow. If California's Advanced Clean Fleets (ACF) rule progresses as expected, it would allow only zero-emission/electric trucks to enter California's ports beginning in 2024. The Department must be bold and take steps like mandating the reduction of diesel emissions, especially in BIPOC, low-income, and language-isolated communities. (20)

38. COMMENT: The adoption of the strong and effective Heavy-Duty Vehicle rules is key, but not the only actions this Administration can take to move farther and faster towards zero emissions in transportation and goods movement. The Department is responsible for protecting and serving the public, health of people and the environment, mitigate against climate and make us more resilient to our climate future. California is developing an ACF rule that includes

provisions concerning port drayage trucks. If California's rule proposal progresses as expected, it would only allow zero emission/electric trucks to enter California ports beginning in 2024. New Jersey should follow suit. (10)

39. COMMENT: The Department should move forward with the Heavy-Duty Vehicle rules and work to adopt by reference California's Advanced Clean Cars II rule, which will accelerate the transition to light-duty electric vehicles. In the medium- and heavy-duty vehicle sector, there is a similar transition both with the wide-spread adoption of the ACT rules, but also the coming adoption of California's ACF rule, with its focus on port drayage trucks. The requirement of electric trucks for California's ports is ultimately where New Jersey policy needs to lead. Diesel combustion from the medium- and heavy-duty fleet no longer needs to be a permanent curse for this vehicle fleet. The proposed rule should be adopted as part of the broader transition by New Jersey regulators to move forward for an electric truck future within these next two decades.

(18)

40. COMMENT: The Department must continue to prioritize communities overburdened with pollution and focus on the pollution reduction mechanisms that will get cleaner air for these communities as soon as possible. A strong transition of heavy-duty vehicles from diesel to electric will go a long way in helping many communities affected by the in-and-out traffic of these deadly polluting vehicles at ports. Additionally, the Department should incorporate by reference California's Advance Clean Cars II, which is the next logical step in tackling the biggest source of greenhouse gas and air pollution in New Jersey. (21)

41. COMMENT: The Department must enact zero emissions rules around ports and other diesel death zones that are a growing and accelerating problem for our already overburdened communities. (14)

42. COMMENT: Scientists have labeled areas with heavy traffic "diesel death zones," and have linked exposure to diesel exhaust to more than four dozen toxic air pollutants that cause birth defects, lung damage, and cancer. Zero-emission trucks will help address local air pollution problems and meet climate goals. There are electric refuse trucks, electric school and transit buses and shuttle buses, electric terminal trucks for distribution centers, electric postal trucks, and so many more. (2, 7, 12, 16, and 19)

RESPONSE TO COMMENTS 36 THROUGH 42: As explained in the Response to Comments 26 through 35, the Department will continue to evaluate a variety of regulatory mandates, policies, and funding sources to support incentive programs that can accelerate transportation electrification programs, reduce emissions, and directly address emission and equity issues in overburdened communities in a collaborative manner. In 2021, the Department adopted the ACT rules, which require manufacturers of vehicles over 8,500 pounds gross vehicle weight rating (GVWR) to participate in a credit/deficit program intended to increase the percentage of zero-emission vehicles sold in New Jersey. In addition, the rulemaking requires a one-time reporting that will enable the Department to obtain information on fleets of medium- and heavy-duty vehicles in the State. The Department adopted the reporting provisions because New Jersey is closely monitoring California's transportation rulemaking initiatives, including the ACF rule, as part of the State's broader network of policies and rules that will advance electrification. Further,

the Department began holding stakeholder meetings this year to consider California's Advanced Clean Cars II rule, which has electrification requirements for light-duty vehicles.

<u>Scrappage</u>

43. COMMENT: While the ACT rules, and now the Heavy-Duty Vehicle rules have value and are stronger than the EPA rules and should be adopted, they are fundamentally not the answer to the environmental injustices that occur each and every day in port adjacent neighborhoods. These rules will not take any of the oldest and dirtiest diesel trucks off the road for decades. There is no scrapping requirement of the diesel engine even when/if replaced by electric powered trucks. There is also no mechanism to prevent the dirtiest of the diesel trucks from operating at the port

and along logistics corridors as the port continues to grow. (10)

44. COMMENT: Clean diesel engines remain a misnomer and new vehicles that hit the road will be polluting for decades. There is no mechanism to remove the oldest and dirtiest diesel trucks from the roads or scrapping requirement for the oldest diesel trucks. There are no restrictions on the oldest and dirtiest diesel trucks from operating at the Port of Newark and Port of Elizabeth, in addition to the South Jersey Port, or on their primary logistics corridors, which directly contrasts with California's port truck policies. (18)

RESPONSE TO COMMENTS 43 AND 44: The Department's primary goal in proposing these rules was to continue to reduce pollutants from new gasoline- and diesel-powered vehicles in excess of 8,500 pounds GVWR that will continue to be placed in use throughout New Jersey as the State transitions to electrification of the transportation sector. 54 N.J.R. at 2009. The Department recognizes that these rules do not require old vehicles to be removed from service. However, as noted in the Response to Comments 36 through 42, the Department is closely

monitoring California's transportation rulemaking initiatives, including the ACF rule. Though the ACF rule is only at the proposal stage, one component of the proposed ACF rule is the acceleration of fleet turnover at places such as ports and warehouses. If adopted, the Department will evaluate whether the ACF rule should be part of the broader suite of strategies pursued in New Jersey.

Engine Family or Engine Class Credit Systems

45. COMMENT: Policies that allow emission averages or credits within a family or class of trucks (that is, offsetting dirtier engine model trucks with cleaner diesel or EV trucks) fail to adequately address environmental justice. A true environmental justice policy would have no trading or credits. There would be an absolute mandatory reduction in emissions, particularly in already overburdened communities, either by mandating only the cleanest of diesel truck fleets or zero-emission only truck corridors. The proposed rules allow pollution shifting within a family of trucks and between manufacturers. This should not be allowed as older trucks often end up at the ports concentrating diesel emissions, health, traffic, and other impacts even further. (10)

46. COMMENT: The Heavy-Duty Vehicle and ACT rules rely on credit trading systems for accounting and compliance. If New Jersey wants to adopt California's emission standards, the rules must be identical. However, trading systems do not guarantee emission reductions in EJ communities. Though the rules should be adopted, the emission credit trading system included in the rules are opposed by the EJ community. Freight-adjacent communities, like the people who live and work around the Port Newark-Elizabeth Marine Terminal, have disproportionately borne

the burdens of New Jersey's goods-movement industry for far too long, and the Department must ensure that its mobile source programs target emission reductions first and to the largest extent in these overburdened communities. (23)

47. COMMENT: The EJ advocacy community has generally opposed emissions trading. Primarily, EJ advocates oppose emissions trading because it does not guarantee emissions reductions at any one location and, therefore, does not ensure reductions will occur in EJ communities. The Heavy-Duty Vehicle rules include a credit trading system, and it is not clear what impact this system will have on emissions reductions in EJ communities. The credit trading system could conceivably play a role in allowing reductions to continue to occur in EJ communities, or at the very least play a role in not maximizing possible reductions in these communities. Support for the Heavy-Duty Vehicle rules should not be construed as support for the credit trading system included in the rules. (24)

48. COMMENT: Though California's Low NO_x Omnibus rule should be adopted in New Jersey, broader electrification efforts of the medium- and heavy-duty vehicle sector must be pursued over the next two decades. Policies that allow emissions averages/credits within truck classes do not ensure that the dirtiest diesel vehicles are removed from the roads. This is an especially damaging component of the proposed rules because the dirtiest diesel vehicles end up being port drayage trucks which stay within close proximity of the ports and its surrounding neighborhoods, exacerbating the diesel death zones that impact Newark's Ironbound community. (18)

49. COMMENT: It is critical to reexamine the credit system in the rules to ensure that the State sees an absolute reduction in emissions and to ensure that its most vulnerable communities are seeing the most benefit from the rules. (17)

50. COMMENT: Policies that allow credits and trading between engine families to allow for manufacturer flexibility must be implemented alongside mandatory emissions reductions that prevent disproportionate burdens of trading policies on EJ communities. (25)

RESPONSE TO COMMENTS 45 THROUGH 50: The Department acknowledges the input and concerns raised about the credit trading/family emission limits built into CARB's Low NO_x Omnibus rule. However, the Department is constrained by the identicality requirements of the Clean Air Act. As noted in the Response to Comments 26 through 35 and 36 through 42, the Department understands that more needs to be done to target emission reductions in communities that are disproportionately impacted by medium- and heavy-duty vehicle pollution. Accordingly, the Department will continue to evaluate a variety of regulatory mandates, policies, and funding sources to support incentive programs that can accelerate transportation electrification programs, reduce emissions, and directly address emission and equity issues in overburdened communities in a collaborative manner. To date, the State has awarded nearly \$240 million to electrify vehicles operating in and around overburdened communities and will continue to target available funding to such efforts.

Eliminate Idling of Trucks

51. COMMENT: Though these rules are needed, they do not go far enough. Idling trucks, including trucks idling overnight, are a growing problem in New Jersey. The Department should

eliminate loopholes that allow for continued idling, which is a major source of PM_{2.5} pollution. (14)

52. COMMENT: There are more and more trucks in New Jersey. In addition to adopting these rules, the Department should end truck idling. (15)

RESPONSE TO COMMENTS 51 AND 52: The Department's rules limit engine idling for both diesel and gasoline vehicles to three minutes with limited exceptions. See N.J.A.C. 7:27-14.3 and 15.8. To the extent members of the public have concerns about potential violations of the idling rules, those concerns may be reported through the Department's hotline for investigation: 877-WARN-DEP or through the WARN DEP app.

The Federal Standards Versus the California Standards

Defer

53. COMMENT: The Department should defer adoption of the Heavy-Duty Vehicle rules until such time as the Department can thoroughly evaluate the nationwide heavy-duty low NO_x regulations that the EPA will be finalizing before the end of 2022. Those Federal regulations will comprehensively address the Department's concerns regarding diesel truck emissions by reducing those emissions to near zero levels and will do so in a far more feasible and cost-effective manner than California's regulations. (8)

54. COMMENT: The Department should withdraw the proposed opt-in to California's Low NO_x Omnibus rule in light of the fact that on December 20, 2022, the EPA finalized more effective low-NO_x regulations that are much better suited to address New Jersey's air quality priorities. (8)

55. COMMENT: The Department should delay the adoption of the proposed rules in favor of a national standard that the EPA is expected to implement. A single national standard will likely create the necessary demand for low emission buses which will, in turn, incentivize manufacturers to build them. This should reduce concerns about availability and may have a positive impact on purchase price as well. (22)

56. COMMENT: California's Low NO_x Omnibus rule raises many concerns in California that apply similarly for New Jersey. The Department's adoption of the California rule raises additional concerns related to manufacturers and customers managing unique products for different states. Accordingly, New Jersey and other states should remain aligned with the EPA's heavy-duty engine standards. (27)

57. COMMENT: Companies are investing billions of dollars to develop heavy-duty on-highway zero-emission vehicles (ZEVs), and fully support expanding the heavy-duty ZEV market in New Jersey. ZEVs are and need to be the future of the commercial trucking industry. However, the Department's proposal to adopt CARB's Low NO_x Omnibus rule will not foster or accelerate the transition to ZEV trucks in New Jersey. Rather, the proposed opt-in is far more likely to upend the heavy-duty on-highway market in New Jersey and will undermine the implementation of the ACT regulations that the Department adopted at the end of 2021, which will similarly disrupt and undermine the deployment of ZEV trucks in the State. (8)

58. COMMENT: The EPA's rules will take effect starting with the 2027 model year, the same year that the Department's proposal to incorporate by reference CARB's Low NO_x Omnibus rule would take effect. By law, the EPA's final, very-stringent rules will achieve the greatest feasible reductions in heavy-duty on-highway engine and vehicle emissions, taking costs and other

important considerations into account. It is well-established that national standards are far more effective than state-specific requirements for regulating heavy-duty on-highway vehicle and engine emissions, since those sources are inherently designed for and utilized in interstate commerce. Further, nationwide standards mitigate the potential pre-buy/no-buy impacts, and are far more cost-effective, since the attendant regulatory costs can be allocated across national sales volumes, as opposed to much lower state-specific sales. Due to the stringency, and timing of California's Low NO_x Omnibus rule requirements, there is a strong likelihood that commercial vehicle and engine manufacturers will be so overwhelmed that the major manufacturers will exit the California market. Significantly, no manufacturer has confirmed more recently that California-compliant products will be available. Similarly, no commitments have been made by any original engine manufacturer (OEM) regarding the availability of California-compliant products for the 2027 model year and beyond. Accordingly, it is reasonable to anticipate that no OEM will manufacture California-compliant heavy-duty on-highway products from and after the 2027 model year. States outside of California should work to avoid that type of adverse market outcome. Otherwise, the consequences could be severe – both environmentally and economically. (8)

59. COMMENT: In late December, the EPA issued new standards that would curb dangerous tailpipe pollution from trucks in the coming years, the first time it has updated these standards in more than two decades. However, these standards fall short, and the agency missed a critical opportunity to slash soot and smog and accelerate the shift to the cleanest vehicles. This decision means that states like New Jersey must act ahead of the Federal government, adopting regulations like California's Low NO_x Omnibus rules in order to secure the public health of State

residents. In August 2022, the Port Authority of New York and New Jersey (PANYNJ) surpassed the Ports of Long Beach and Los Angeles to become the busiest port in the nation. This is not an aberration, but a trend, with more than seven million units of cargo passing through the PANYNJ in 2019 and expected to more than double by 2050. Importantly, 80 percent of all cargo capacity from the PANYNJ is situated in New Jersey's Port Newark-Elizabeth Marine Terminal complex. Diesel drayage trucks transport 85 percent of the goods from the port to warehouses, assembly facilities, and retailers in the immediate region. On average, more than 9,000 truck drivers make 14,000 trips each day along local roads and major highways, passing schools, playgrounds, offices, and homes. Twenty percent of these truck trips to the port start in Newark, and 23 percent of trips from the port end in Newark. Given the magnitude of the problem, New Jersey must take the strongest possible action to eliminate transportation emissions.

In the case of the ACT and Low NO_x Omnibus rules, nine additional states including Oregon, Washington, Massachusetts, New York, New Jersey, Colorado, Vermont, Maine, and Connecticut have either adopted one or both of these rules or have publicly stated intentions to do so. Given the sheer size of the truck market these states encompass, manufacturers are making the necessary investments to adjust production lines to deliver vehicles that comply with the ACT and California's Low NO_x Omnibus rules—but these vehicles and their significant benefits will go first to the states that have opted into the standards. (23)

RESPONSE TO COMMENTS 53 THROUGH 59: The Department recognizes the potential benefits of a national program and supports the Federal government's efforts to reduce pollutants from medium- and heavy-duty vehicles and engines. However, the Federal Clean Air Act

(CAA) (42 U.S.C. §§ 7401 et seq.) recognizes that a national standard will not be appropriate for every state. Under the CAA, the State of California, may enact stricter emission standards than the national standards set by the EPA, so long as California receives a waiver. See 42 U.S.C. § 7543. The CAA also authorizes qualifying states to adopt and enforce emission standards for which California has received a waiver. See 42 U.S.C. § 7507. The Department analyzed the implications of New Jersey's incorporation by reference of California's Low NOx Omnibus rule and determined that the more stringent California standard is a necessary component of a comprehensive approach to reduce emissions from the transportation sector in New Jersey. Like California, New Jersey needs to reduce Statewide emissions of NOx to attain the NAAQS for ozone. See 54 N.J.R. at 2011. Not only does NO_x negatively impact air quality as a direct air pollutant, but NO_x is a precursor in the atmospheric formation of ozone and secondary PM_{2.5}. *Ibid.* Multiple studies have shown that NO_x, ozone, and PM_{2.5} air pollution cause adverse environmental, social, economic, and health impacts. Ibid. The Department's efforts to reduce NO_x emissions are particularly important given the warming climate, which is just one of the ongoing meteorological conditions that are conducive to the formation of ozone. *Ibid.* Notably, approximately 75 percent of the annual NO_x air emissions in New Jersey (pollution emitted directly from pollution sources in New Jersey, as compared to ozone that is formed in the atmosphere and can also contain air pollution transported from other states) are from the mobile source sector, as the Department estimated based on its 2017 air pollution emissions inventory. *Ibid.* Given the State's non-attainment with the ozone NAAOS, the dense population, the large number of freight/transportation corridors, and the contribution of these vehicles to in-State emissions, the Department has determined, as discussed more thoroughly in the Response to

Comment 70, that the more stringent NO_x fleet certification standards set forth in CARB's Low NO_x Omnibus rule will address New Jersey's air quality issues more effectively than the national standard because they will yield greater NO_x emission reductions. Moreover, as discussed in the Response to Comments 60 through 65, the Department is satisfied that it is feasible for manufacturers to meet the more stringent engine standards by model year 2027.

Feasibility

60. COMMENT: The EPA has recently finalized a comprehensive and stringent suite of nationwide low-NO_x regulations for new heavy-duty on-highway engines and vehicles. Importantly, the EPA regulation mirrors California's Low NO_x Omnibus rule in all key aspects – new dramatically lower NO_x and PM standards; new low-load NO_x standards; new "binned" moving-average window (MAW)-based in-use standards; enhanced on-board diagnostic (OBD) standards; and significantly extended useful life and emissions warranty requirements – but does so in a more feasible and far more cost-effective manner.

California's Low NO_x Omnibus rule, however, is infeasible and cost-prohibitive. Two years have passed since CARB first proposed the Low NO_x Omnibus requirements. During that time, Southwest Research Institute (SwRI), the expert emissions-research laboratory engaged by both CARB and the EPA, has conducted additional emissions testing of the prototype low NO_x engines and aftertreatment systems. The low-NO_x "Stage 3" prototype engines and aftertreatment systems are the technical bases for the California and EPA regulations. Those additional tests have shown, among other things, that: (i) CARB's proposed in-use "Bin 3" emission standard is infeasible under various test cycles, as well as at the proposed extended useful life and emissions warranty mileages; (ii) CARB's standards provide no variability allowance or compliance

margin to account for engine/aftertreatment component and manufacturing variances, or to reflect the impacts of in-use ambient operating conditions, including ambient temperatures, extreme duty cycles, and in-use fuel-quality issues; (iii) certain of CARB's standards would compel additional measures to ensure higher exhaust temperatures under low loads, which will increase CO₂ emissions, and (iv) under cold ambient temperatures, the NO_x emissions from the "Stage 3" prototype increase by 0.04 g/bhp-hr (or more), which is two times more than CARB's proposed primary certification NO_x standard (0.02 g/bhp-hr). As the EPA's regulations will reflect the emissions test data and results that have been developed over the two years since CARB first proposed the Low NO_x Omnibus rule, the EPA's regulations are more feasible and cost-effective than CARB's rule.

In light of these more recent technical developments and findings, the EPA has rightly concluded that a full nationwide implementation of CARB's Low NO_x Omnibus rule is not feasible. Perhaps even more significant, it appears that the Department has not conducted any due diligence of its own regarding these important intervening technical developments, but instead appears to be relying solely on CARB's out-of-date and incomplete analysis from more than two years ago. That approach is insufficient to support New Jersey's contemplated adoption of the Low NO_x Omnibus rule, especially since the Department has not conducted any assessment whatsoever of the relative efficacy of the EPA's recently finalized regulations. (8) 61. COMMENT: The NO_x standard for model year 2027 and subsequent years set forth in CARB's Low NO_x Omnibus regulation, can be achieved by adding cylinder deactivation – a technology widely used in passenger vehicles. In addition to being feasible, California regulators determined that the standards provide net societal benefits. According to CARB staff's thorough

assessment, in California, the monetized health benefits of the NO_x emissions reductions are eight times greater than the costs of compliance, primarily as a result of the significant prevention of nearly 3,900 premature deaths. As well, though the lifecycle cost increase of buying a new, cleaner diesel truck meeting the 0.02 g/bhp-hr proposed standard ranges from about five to nine percent, depending on the truck size and model year, this is unlikely to be a barrier to many businesses purchasing new trucks, particularly if financial incentives are designed to address the upfront cost in the early years of deployment.

CARB staff has demonstrated the technical feasibility of both the 2024 and 2027 proposed NO_x standards through several years of extensive development and testing in partnership with the SwRI. While testing has seen NO_x emissions deteriorate slightly above the proposed 2027 standard as the test engine is approaching the end of its useful life, SwRI has identified additional approaches that engine manufacturers can pursue to prevent a decrease in the effectiveness of these vehicles in achieving the needed emission reductions. SwRI evaluated several engine modifications that could prevent an increase in fuel consumption while simultaneously reducing NO_x. SwRI down-selected cylinder deactivation is the most practical technology that helps improve engine efficiency and reduces CO₂. Cylinder deactivation also increases exhaust temperature, which reduces CO₂ by improving NO_x catalyst efficiency, especially at low speed and low load conditions where current after-treatment systems have been less effective due to low exhaust temperature. Thus, cylinder deactivation helps achieve a 90 percent reduction in NO_x emissions under most driving conditions with no increase in CO_2 emissions or fuel consumption. These approaches increase the efficiency of the NO_x aftertreatment devices to reduce NO_x emissions below the proposed standard, allowing for future

deterioration. Moreover, engine manufacturers still have six years to improve the NO_x control system before compliance in 2027, ample time to address emission deterioration. (3) 62. COMMENT: The timeline of CARB's Low NO_x Omnibus rule does not present undue constraints. The low NO_x standards that immediately preceded CARB's recent Low NO_x Omnibus rule, which largely mirrored the EPA standards, were some of the most technologyforcing emissions standards ever adopted - requiring the development of a completely new catalyst, new particulate filters, and a system that had to track the amount of NO_x in the tailpipe, an amount that varies greatly under different driving conditions and integration of an advanced and complex engine exhaust gas recirculation system. Further, those new technological elements all had to work in concert without significantly impacting fuel consumption. Despite these challenges, manufacturers were readily able to meet these standards in a timely manner and maintained the minimal impact of fuel consumption required. In contrast, "meeting the envisioned CARB 2024 targets would require very modest increases in technical complexity and costs." Thus, compliance can reasonably be achieved on the timeline set forth by CARB and there is no reason to expect that industry cannot rise to the occasion. (3)

63. COMMENT: Opponents of the rules claim that cutting the NO_x emission limit for new fossil fueled heavy-duty vehicles by 90 percent by 2027 to 0.020 g/bhp-hr is infeasible. This effort to dissuade states from adopting the rule ignores nearly a decade of rigorous research, testing, and demonstrations that convincingly show a 0.020 g/bhp-hr standard for model year 2027 can be met. Over eight years ago, the SwRI began working with local, state, and Federal regulators and industry to determine what, if any, technologies could meet a 0.020 g/bhp-hr NO_x requirement. The most recent results from this multi-million-dollar demonstration project are conclusive: the

HDO rule's 2027 requirements can be met with plenty of margin for a variety of real-world truck routes. While the SwRI demonstration project is proving what's possible, the companies building emission control systems are delivering solutions. According to the Manufacturers of Emission Controls Association (MECA), their members are developing numerous engines and aftertreatment technologies "to simultaneously meet future NO_x and GHG emission standards" which "include electrification, advanced turbochargers, EGR systems, cylinder deactivation, advanced catalysts and substrates, novel aftertreatment architectures, and dual urea dosing with optional heating."

Innovation is driving cost-effective solutions. In fact, the technologies to meet CARB's Low NO_x Omnibus rule's first stage that runs through 2026 are already commercially available at minimal cost and truck manufacturers have more than enough lead time to explore and commercialize existing demonstration projects to meet the second stage beginning in 2027. The Low NO_x Omnibus rule's purpose is to push innovation further and faster to accomplish the maximum pollution reduction possible in a realistic timeframe. Demonstration projects are proving a suite of options are available to meet even the most stringent pollution requirements while potentially cutting costs for fleets and manufacturers. (23)

64. COMMENT: CARB's Low NO_x Omnibus rule was informed by years of extensive feedback and analysis, proving with overwhelming evidence its feasibility. More than eight years ago the Southwest Research Institute began working with local, state, and Federal regulators in industry to determine what technologies could meet the Low NO_x Omnibus rules' strongest requirement of .02 grams of NO_x per brake horsepower-hour. The most recent results from this multimillion-dollar demonstration project are conclusive. The 2027 requirement of CARB's Low NO_x

Omnibus rules can be met with plenty of margin for a variety of real-world truck routes, and several manufacturers are already making plans to develop engines to meet these 2027 requirements. (4)

65. COMMENT: CARB has shown that these standards are technically feasible for manufacturers across the country through multiple technological pathways and that manufacturers can meet during the lead time to 2027, whether it be through technologies like improved thermal management of excess temperatures, improved selective catalytic reduction (SCR) conversion efficiency at low-engine loads, improved engine calibration or hardware changes, or advanced aftertreatment systems. Also, the improved warranty and useful life requirements ensure that these emission controls benefit communities lasting for longer periods of time. (25)

RESPONSE TO COMMENTS 60 THROUGH 65: The Department acknowledges that the emissions standards in CARB's Low NO_x Omnibus rule are technology-forcing. However, as some commenters have noted, studies from the SwRI and statements from MECA have indicated that it is feasible to meet CARB's engine standards by model year 2027 even though it will require further innovation. The Department will continue to monitor the progress of innovation, but believes, based upon the information currently available, that it is feasible for manufacturers to meet the more stringent engine standards by model year 2027.

Availability, Pre-Buy, Impact on ACT

66. COMMENT: If the Department proceeds to implement California's Low NO_x Omnibus standards, it is highly likely that manufacturers will not produce CARB-compliant heavy-duty on

highway trucks for sale in New Jersey as of the 2027 model year. Consequently, it is highly likely that if the Department adopts the Low NO_x Omnibus rules, there will be significant shortages (or "product blackouts") of new trucks available for sale in New Jersey to truck dealers and truck operators as of 2027. As a result, the market for new truck sales in the New Jersey heavy-duty on highway truck market will largely shut down. Truck operators may buy their new (and used) trucks outside of New Jersey or simply hold on to their current trucks longer. If new truck sales in New Jersey are precluded, and truck operators extend the life of their existing vehicles, emissions in New Jersey will increase. A 20-year-old truck emits 10 times more pollutants than a truck with current emissions control technology. Without new trucks entering the New Jersey market, those old trucks will stay on the road longer. The net result will be diminished returns in terms of emission reductions.

Additionally, a product blackout could have serious ramifications, including with respect to New Jersey's ACT rules since the percentage mandates under ACT to sell zero-emission trucks is derived from how many conventionally fueled trucks are sold. If no CARB-compliant products are available because manufacturers cannot feasibly make them, there will be no mandate in effect for zero-emission trucks either. So, New Jersey's adoption of the Low NO_x Omnibus rules could undermine the ACT rules. (8)

67. COMMENT: The Department's opt-in proposal also fails to account for the likely result that manufacturers will simply choose to exit the New Jersey market for new medium- and heavyduty vehicle sales rather than trying to comply with CARB's infeasible and cost-prohibitive Low NO_x Omnibus standards. Similarly, the Department's "benefits" assumptions overlook the fact that truck purchasers in New Jersey likely would buy any needed new heavy-duty vehicles in

advance of the implementation of CARB's standards (a "pre-buy"), which would be followed by a long deferral of any new truck purchases after the California standards take effect in New Jersey (the ensuing "no-buy"). Alternatively, truck owners may simply retain their older vehicles for as long as possible, or will make any new truck purchases out-of-State. Again, the net result is that the emissions reductions that the Department is assuming (based solely on CARB's analysis) will not actually occur given the anticipated response of the medium- and heavy-duty vehicle market to the adoption of CARB's standards in New Jersey.

There are multiple other reasons why the Department's cost-benefit assumptions are insufficient. By way of example, the Department has not provided any independent estimate of how many new, conventionally fueled trucks supposedly would be sold and registered in New Jersey on an annual basis from and after the 2027 model year, also factoring any expected prebuy/no-buy market behavior, if the Department proceeds to implement California's infeasible Low NO_x Omnibus program. Without any attempted accurate estimate of those supposed in-State new truck sales, the potential emissions benefits in New Jersey from opting-in to CARB's Low NO_x Omnibus rule cannot be assessed in any reasonable manner. The fact that the Department has not yet assessed that most basic information (or any other actual New Jerseyspecific cost-benefit information) in this rulemaking process demonstrates that the regulatory impact analysis at issue is fundamentally inadequate. (8)

68. COMMENT: Forecasts of pre-buying in response to earlier generations of emissions standards did not materialize. In reality, "the pre-buy in response to 2007 criteria pollutant standards [was found] to be approximately symmetric, short-lived, and small in volume relative to previous estimates" – indicating that fears of mass purchase of more polluting vehicles before

implementation of a standard are unlikely to come to fruition. Katherine Rittenhouse and Matthew Zaragoza-Watkins, *Strategic Response to Environmental Regulation: Evidence from U.S. Heavy-Duty Vehicle Air Pollution Regulations* at 33, MIT CEEPR Working Paper (2016). The bottom line is that, rather than seeing fleets buy dirtier, ostensibly cheaper vehicles in a panic, there is clear evidence that there is no meaningful adjustment in market purchasing as a result of these standards – fleets recognize the cost savings over time of cleaner vehicles and do not seem inclined to ignore those benefits to reap the marginally lower purchase price of more polluting vehicles while they still can. (3)

69. COMMENT: It is important to note that industry arguments citing concerns about prebuying in response to regulations have not been borne out by past experience. (13)

RESPONSE TO COMMENTS 66, 67, 68, AND 69: The Department acknowledges that with any change in emission standards, there is the potential for the phenomenon known as pre-buy. Moreover, some consumers may decide to purchase used, rather than new vehicles, or delay the purchase of new vehicles. Generally speaking, the pre-buy phenomenon occurs in the early years of the implementation of the new standards and does not continue over a prolonged period. Historically, this pre-buy phenomenon has occurred not only when CARB has adopted more stringent standards, but also when the EPA has adopted a more stringent national standard. As one commenter noted, the EPA's new Federal standards will begin in the same model year that New Jersey intends to implement the CARB standards. Thus, the pre-buy phenomena may occur in New Jersey whether the Department adopts CARB's Low NO_x Omnibus rules or defers to the national standard. In either case, the emission standards will become more stringent, and consumers may engage in aberrant behaviors as a result (excessive pre-buys, holding onto

vehicles longer, or purchasing used vehicles). To mitigate this risk, the Department has included a prohibition against stockpiling at N.J.A.C. 7:27-28A.6, which prohibits the purchase of new vehicles greater than normal business needs for the purpose of evading the requirements of the rules.

With regard to the impact on ZEV sales pursuant to the ACT rules, the Department notes that ACT will be implemented in model year 2025. Pursuant to the ACT rules, the deficits attributable to a manufacturer are based on the total number of its sales of medium- and heavy-duty vehicles in New Jersey. The deficits incurred each year must be offset by credits (sales of zero-emission vehicles) annually, beginning with model year 2025, and increase every year through 2035, thereby increasing the total number of ZEV sales in the State. If the adoption of CARB's Low NO_x Omnibus rule results in the pre-buy phenomenon, the Department would expect to see a larger than usual number of internal combustion engine vehicles sold in model years 2024, 2025, and 2026. This would only increase the number of ZEV sales that will be required of manufacturers in the early years of implementation of the Low NO_x Omnibus rules, potentially making up for any decrease in sales in subsequent years. Thus, it is not clear that implementing the Low NO_x Omnibus rules will lessen the impacts of the ACT rules.

The Department is not aware of prior "product blackouts" as a result of new emission standards. As the commenters have provided no examples or evidence of this phenomenon, and the Department received no comments from individual manufacturers specifying the products that they will not produce for New Jersey, the Department does not agree that this prediction is a highly likely outcome.

Emission Benefit Analysis

70. COMMENT: The Department has not conducted any independent analysis of whether the proposed opt-in will actually result in any net emissions benefits in New Jersey. Instead, the Department has relied almost exclusively on out-of-date California-focused analyses that CARB conducted nearly three years ago. In that regard, the Department has failed to quantify how the amount of emission reductions under the EPA's finalized regulations compare against the potential reductions under a California Low NO_x Omnibus opt-in.

If new truck sales in New Jersey are precluded, and truck operators extend the life of their existing vehicles, emissions in New Jersey will increase. In that regard, a 20-year-old truck emits 10 times more pollutants than trucks with current emissions control technology, and without new trucks entering the New Jersey market, those old trucks will stay on the road longer. The net result will be diminished returns in terms of emission reductions, and a wholesale undermining of the Department's prior opt-in to CARB's ACT program, since the mandated number of ZEV-truck sales under the ACT regulation is dependent on and derived from the number of sales of conventionally fueled new trucks in New Jersey. If that number drops to zero or near-zero in New Jersey in 2027, so too will the mandated number of ZEV-truck sales. All of that runs directly counter to the State's goal of accelerating the transition to ZEV trucks.

In summary, the EPA's single-step nationwide low-NO_x standards will yield greater overall emission benefits in New Jersey than CARB's infeasible multi-step phased-in program because: the EPA's standards are implementable and more effective; new low-NO_x trucks will continue to be available for sale in New Jersey; the ACT program will continue to be implemented; the anticipated pre-buy/no-buy impacts and market disruptions will be avoided;

and the HDOH vehicle fleet will continue to turn over in a cost-effective manner toward a ZEVtruck future.

The Department should not proceed with the proposed rulemaking until that quantitative comparative analysis is completed and vetted. Until the results from that most basic analysis are known, the Department will not be able to establish that its proposed opt-in will yield any actual net benefits for New Jersey. (8)

RESPONSE: Since the Department's notice of proposal published in November 2022, the EPA finalized its new national emission standards for medium- and heavy-duty vehicles. A comparison of the emission benefits provided by the Department's adopted rules (CARB's Low NO_x Omnibus rule) versus the EPA rule is very complicated because the two rules establish slightly different standards for numerous parameters for each vehicle category, such as fleet certification standards for various test procedures, useful life levels for emission controls, and warranty periods. It would be difficult to accurately quantify the exact difference in overall emission impacts between the two rules because each rule has standards specific to a particular vehicle class or useful life period that may be considered more stringent than the other rule's standard for that class or period. Secondary effects, such as potential responses to truck sales resulting from the two rules are typically not considered as part of the Department's emission benefit analysis. However, if they were, then, as discussed in the Response to Comments 66, 67, 68 and 69, the EPA's new Federal standards will begin in the same model year that New Jersey intends to implement the CARB standards; thus, the pre-buy phenomenon may occur in New Jersey whether the Department adopts CARB's Low NO_x Omnibus rules or defers to the national standard.

Despite the complexity of a comparative analysis of the emission benefits from the implementation of CARB's Low NO_x Omnibus rules versus the EPA's new rules, the Department has estimated a baseline for the NO_x emission benefits that would accrue pursuant to CARB's Low NO_x Omnibus rule versus the EPA's rule. A simplified approach to a comparison of the two rules is to contrast the difference between the NO_x fleet certification standards of the two rules. The EPA's rule lowers the NO_x fleet certification standard from its current level of 200 mg/HP-hr to 35 mg/HP-hr (82.5 percent reduction), while CARB's Low NO_x Omnibus rule lowers the standard to 20 mg/HP-hr (90.0 percent reduction). Based on this parameter only, CARB's Low NO_x Omnibus rule will yield approximately 8.3 percent greater reductions than the EPA's rule.

The Department has determined that the greater reductions achieved through implementing CARB's Low NO_x Omnibus rule will ensure that communities in New Jersey, especially those near high truck traffic corridors, benefit from the greatest NO_x emission reductions feasible.

Economic Analysis

71. COMMENT: If, as predicted, CARB-compliant products are not available in New Jersey from, and after, model year 2027, fleet operators will accelerate their purchase of new Federally certified vehicles in New Jersey, or acquire new trucks in adjacent non-opt-in states, rely more on the used truck market, or simply retain their existing fleet vehicles longer. To the extent that fleet operators are compelled to acquire new vehicles out-of-State, that would result in a cascading series of negative economic impacts. In particular, truck dealerships in New Jersey will face significant adverse consequences. Also, if New Jersey-based fleet operators were to

choose to relocate out-of-State, significant in-State job losses would result across the wideranging trucking sector, including within the goods-movement, warehousing, and truck-servicing and repair sectors. A far more effective bridge to the widespread sale and deployment of new advanced heavy-duty on highway vehicles is through the more cost-effective EPA rules that were recently finalized. Future Federally certified lower-NO_x heavy-duty on highway engines and vehicles will ensure that businesses and municipalities in every state, including New Jersey, have access to the full range of powertrain and vehicle solutions they are accustomed to purchasing today. They will not be forced to pay premium prices for new products, to purchase outside their brand preference, or to seek purchase opportunities in neighboring states. They can maintain profitability without resorting to purchasing used, higher-emitting vehicles, or maintaining their existing fleet longer without the environmental benefits gained from new vehicle purchases. (8)

RESPONSE: The Department's previous introduction of a CARB emission standard did not cause a cascade of negative economic impacts that resulted in widespread job loss in the State. Accordingly, the Department does not anticipate a cascade of negative impacts as a result of the adopted rules. With regard to the concern about fleets purchasing trucks out-of-State, the State has a mechanism to limit such transactions. In the case of new vehicles, CARB certification is verified at the time of initial registration and titling in New Jersey. Thus, the New Jersey Motor Vehicle Commission would reject any new vehicles that fail to meet certification requirements. Further, as noted in the Response to Comments 66, 67, 68, and 69, the EPA's new Federal engine standards will begin in the same model year that New Jersey intends to implement the CARB standards. Thus, the pre-buy phenomenon is just as likely to happen if the Department

were to defer to the national standard. It is also unlikely that the cost of a new vehicle, alone, would compel New Jersey-based fleet operators to relocate to another state. Business decisions of that magnitude would not be made on a single factor. Also, because the EPA has proposed new standards, the cost of medium- and heavy-duty vehicles will increase in every state, not just the states that adopt the CARB engine standards.

72. COMMENT: California's Low NO_x Omnibus rule will help drivers and fleets save on maintenance by increasing fossil fuel vehicles' manufacturer warranty and useful life requirement. Trucks will stay cleaner for longer, and it will also shift maintenance costs from fleets to manufacturers and create a powerful incentive for these manufacturers to produce tougher products that break less. The result is lower costs for fleets and drivers and the costs of fewer maintenance problems. Further, some of the engine control technologies such as opposing piston engines can meet the model year 2027 requirements while also saving fleets 11 percent on costs. (4)

73. COMMENT: Despite arguments to the contrary, the targets of California's Low NO_x Omnibus rule are feasible from a technological standpoint on the timeline set forth in the rule, and the benefits are significant. As the Department has recognized, California's Low NO_x Omnibus rule will result in reduced incidents of premature mortality and morbidity from exposure to both PM_{2.5} and ozone in the State, which means that New Jersey will see significant societal benefits from its passage of this regulation. (13)

74. COMMENT: As part of a broader suite of policies, New Jersey's adoption of California's Low NO_x Omnibus rule would result in significant health benefits – contrary to the intimation

that these positive impacts do not outweigh costs. The emissions from medium- and heavy-duty vehicles are significant and can result in severe health impacts, missed workdays, and hospital visits. The significance of such health benefits should not be given short shrift in the context of analogous New Jersey rules. (3)

75. COMMENT: The Department's reliance on CARB's three-year-old analysis cannot justify the proposed rulemaking. More specifically, the Department is simply scaling based on vehicle miles traveled (VMT) to the understated cost estimate that CARB generated back in 2019 and 2020. Using that approach, the Department claims that the costs to heavy-duty on-highway vehicle purchasers in New Jersey from the proposed opt-in will be approximately \$5,800 per truck over the life of the vehicle. That cost estimate is unreasonably low. More recent analyses by ACT Research and Ricardo confirm that the per-truck cost impacts of California's Low NO_x Omnibus regulation would be approximately \$35,000 for heavy heavy-duty (HHD) trucks, not including the extra operating costs associated with increased diesel emission fluid (DEF) usage.

The Department, like CARB, also claims that some of the expected per-truck cost increases will be offset by the "savings to each vehicle owner, as a result of the longer warranties of the [Omnibus] standards." That is a flawed assumption, since it presumes that original engine manufacturers (OEMs) will not be able to accurately assess and pass on to customers the actual costs associated with lengthened emission warranties. The history of pricing in the heavy-duty on-highway engine and vehicle market conclusively refutes that assumption.

The Department also asserts that none of the costs associated with the research and development efforts associated with the design and manufacture of heavy-duty on-highway engine and aftertreatment technologies to meet California's Low NO_x Omnibus standards in
2027 will need to be taken into account in New Jersey because "manufacturers will already be conducting those [R&D] activities to meet California's requirements." That is a spurious argument. 2027 will be the first year of the second and most stringent phase of the Omnibus standards, such that OEMs would need to incur new and very significant R&D costs to try to comply with those standards for the first time - - in both California and New Jersey. Thus, New Jersey truck purchasers would not be exempt from those significant cost impacts.

In summary, the Department's reliance on CARB's cost-benefit analysis is inadequate and out of date. It cannot and does not support the proposed rulemaking, especially when there is a more cost-effective alternative in the form of the EPA's regulations (8)

RESPONSE TO COMMENTS 72, 73, 74, AND 75: The Department conducted an economic analysis that "describes the expected costs, revenues, and other economic impact upon governmental bodies of the State, and particularly any segments of the public proposed to be regulated." N.J.A.C. 1:30-5.1. The Department acknowledges that the Economic Impact analysis in the notice of proposal relied, in large part, on California's regulatory impact analysis, which included a number of assumptions. However, the Department determined that the bulk of CARB's assumptions were appropriate for New Jersey's analysis, and the Department made adjustments to those variables that it expected would have a significant bearing on the impact of the adopted rules' implementation in New Jersey.

As noted in the proposal Summary, the per-truck (HDD) net impact was estimated at \$5,800 over the life of the vehicle based on assumptions about costs and savings that were described in the proposal. See 54 N.J.R. at 2027. One commenter took issue with the assumptions made by the CARB and the Department. A separate analysis cited by the

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commenter yielded a per-truck (HDD) net impact estimate of \$35,000. Although the analysis relied upon was not submitted as part of the comment, the Department deduced that it was based on a different set of assumptions, including the degree to which manufacturers would pass on the added costs to consumers. Any prediction of future conditions will be imprecise to some degree, because it is based on assumptions that may or may not prove accurate. In this case, the Department believes, based on the best available evidence, that the assumptions it relied on were reasonable and resulted in reasonable projections about the impacts of the adopted rules. Also, as other commenters note, the costs to vehicle manufacturers, purchasers, and operators are not the only consideration in an economic analysis. The Department must take a balanced approach to rulemaking that also considers health and environmental impacts and their corresponding costs and benefits.

Waiver

76. COMMENT: The Department should not adopt California's Low NO_x Omnibus regulation because those regulations likely are ineligible to receive a preemption waiver from the EPA. California adopted the Low NO_x Omnibus regulation on September 9, 2021. Those regulations take effect starting in model year 2024. Thus, CARB has only provided two model years of lead time (MYs 2022 and 2023) for the Low NO_x Omnibus regulations. That is inconsistent with the applicable provisions of the Clean Air Act (CAA), which mandate four years of lead time for heavy-duty on highway emission-control regulations. Accordingly, it is anticipated that the EPA could deny some or all aspects of CARB's waiver request. CARB's pending waiver request relates to heavy-duty on highway regulations that fail to provide the mandated four full model years of lead time. Based on the unambiguous terms of the CAA and the applicable controlling precedent,

the EPA cannot and should not grant those waiver requests. The net result is that the Department also cannot, and so should not, take steps to implement CARB regulations that are likely ineligible to receive the requisite preemption waiver. It also has become clear that the EPA's recently finalized emission standards are more stringent than CARB's Low NO_x Omnibus regulations in several material respects, including with regard to carbon monoxide and hydrocarbon emissions, and with respect to in-use NO_x emissions from medium/high-load engine operations. As a result, California's Low NO_x Omnibus regulations may be ineligible to receive a preemption waiver on the additional grounds that they are not "as protective of public health and welfare as applicable Federal standards." See 42 U.S.C. § 7543(b)(1)(A). (8)

RESPONSE: The Department is authorized to adopt California's standards before the EPA has granted a waiver, as long as the Department does not enforce the standards until the waiver is obtained. *Motor Vehicle Mrfs. Ass'n v. New York State Dep't of Envtl. Conservation*, 17 *F*.3d 521, 533-34 (2d Cir. 1994). Should the EPA determine that it will not grant California a waiver for some or all of the Low NO_x Omnibus rule, the Department will not enforce the rule (or any specific provisions that are not granted a waiver). In the absence of a definitive finding by the EPA on the request for a waiver, the Department has determined that CARB's Low NO_x Omnibus rule is a necessary component of a comprehensive approach to reduce emissions from the transportation sector in New Jersey.

Summary of Agency-Initiated Changes upon Adoption:

The Department is modifying N.J.A.C. 7:27-28A.11, Incorporation by reference, to reflect the most recent effective date of a Federal rule that was amended between the

Department's notice of proposal and notice of adoption of this rulemaking. The Department also notes a formatting error in the notice of proposal at N.J.A.C. 7:27-28A.11(f)7. The Department intended the phrase "(F) Transit Agency Diesel-Fueled Bus and Engine Exemption Request" to be a heading for the paragraph. The way it was printed, however, the header was combined with the paragraph text. The Department is correcting the formatting on adoption.

Federal Standards Statement

Executive Order (EO) 27 (1994) and N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c. 65), require State agencies that adopt, readopt, or amend State rules to which the EO and statute apply, to provide a Federal standards statement. If those rules exceed any Federal standards or requirements, the agency must also include in the rulemaking document a Federal standards analysis.

Heavy-Duty Emission Standards

The Federal Clean Air Act (CAA) (42 U.S.C. §§ 7401 et seq.) granted the State of California, the authority to enact stricter emission standards than the national standards set by the EPA. See 42 U.S.C. § 7543. The CAA also authorizes qualifying states to adopt and enforce emission standards for which California has received a waiver, if the state gives two years' lead time. See 42 U.S.C. § 7507. Thus, once the EPA grants California's request for a waiver for the Low NO_x Omnibus rules, pursuant to 42 U.S.C. § 7543, the more stringent emission standards incorporated by reference will be a Federally authorized standard. If, however, a waiver is not granted, the rules will not be applied or enforced pursuant to N.J.A.C. 7:27-31.3. Given the

framework of the CAA, the adopted rules would not exceed a Federal standard once a waiver is granted. Thus, no further analysis is necessary.

Diesel Vehicle Inspection Procedures and Standards

The amendments at N.J.A.C. 7:27-14 apply the same test procedures and standards to all heavy-duty diesel vehicles. The Federal regulations that control establishment of enhanced inspection and maintenance programs are set forth generally at 40 CFR Parts 51 and 85. However, the Federal rules do not include test procedures and standards for diesel vehicles; therefore, the Department has determined that there are no comparable Federal standards. Accordingly, no Federal standards analysis is required.

Amendments at N.J.A.C. 7:27-15

The Department's amendments at N.J.A.C. 7:27-15 conform the provisions with N.J.A.C. 7:27-14. The amendments ensure consistency between the two programs; therefore, no Federal standards analysis is required.

Repeal of N.J.A.C. 7:27-28

The Department's repeal of N.J.A.C. 7:27-28 would not exceed a Federal standard. Thus, no further analysis is necessary.

Full text of the adopted new rules and amendments follows (additions to proposal indicated in boldface with asterisks ***thus***; deletions from proposal indicated in brackets with asterisks *****[thus]*):

CHAPTER 27

AIR POLLUTION CONTROL

SUBCHAPTER 28A. MODEL YEAR 2027 OR LATER HEAVY-DUTY NEW ENGINE AND VEHICLE STANDARDS AND REQUIREMENTS

7:27-28A.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

"Bus company" means a private entity employing one or more buses for the transportation of passengers for hire.

•••

"Transit agency" shall have the same meaning as the term "transit agency" as defined at 13 CCR 2020(b), as incorporated by reference at N.J.A.C. 7:27-28A.11.

•••

"Urban bus" shall have the same meaning as the term "urban bus" as defined at 13 CCR 1956.8, as incorporated by reference at N.J.A.C. 7:27-28A.11.

7:27-28A.5 Exemptions

(a) Notwithstanding the provisions at N.J.A.C. 7:27-28A.3, the requirements set forth at N.J.A.C.

7:27-28A.4, 28A.7, 28A.8, and 28A.11 do not apply to:

- 1. -7. (No change from proposal)
- 8. A vehicle sold for the purpose of being wrecked or dismantled; *[or]*
- 9. A vehicle sold exclusively for off-highway use*[.]**;*

*10. An emergency vehicle, pursuant to California's Vehicle Code Sec. 27156.2 and 27156.3, as incorporated by reference at N.J.A.C. 7:27-28A.11; and

11. A military tactical vehicle, pursuant to 13 CCR 1905, as incorporated by reference at N.J.A.C. 7:27-28A.11.*

7:27-28A.11 Incorporation by reference

(a) Unless specifically excluded by this subchapter, when a provision of the CCR ***or the California Vehicle Code*** is incorporated by reference, all notes, comments, appendices, diagrams, tables, forms, figures, publications, and cross-references are also incorporated by reference.

(b) Supplements, amendments, and any other changes including, without limitation, repeals or stays that affect the meaning or operational status of a California rule ***or Code*** incorporated by reference, brought about by either judicial*****, **legislative**,***** or administrative action and adopted or otherwise noticed by the State of California, shall be paralleled by a similar change to the New Jersey rule, so that the New Jersey rule will have the same meaning and status as its California counterpart. To satisfy the identicality requirement of the Clean Air Act, at 42 U.S.C. § 7507, all

new California regulations ***or Codes*** related to certification of model year 2027 or later new motor vehicles rated in excess of 8,500 pounds GVWR and model year 2027 or later new motor vehicle engines intended for use in motor vehicles rated in excess of 8,500 pounds GVWR are also incorporated into this subchapter by this automatic process.

(c) In the event that there are inconsistencies or duplications in the requirements of the provisions incorporated by reference from the CCR ***or the California Vehicle Code*** and the rules set forth in this subchapter, the provisions incorporated by reference from the CCR ***or the**

California Vehicle Code* shall prevail.

(d) Nothing in the provisions incorporated by reference from the CCR *or the California

Vehicle Code* shall affect the Department's authority to enforce statutes, rules, permits, or orders administered or issued by the Commissioner.

(e) On or after (*[the operative date of this rulemaking]* *June 20, 2023* or the operative date of California's regulations *or Code*, whichever is later), any new California rules, *Codes,* amendments, supplements, and other changes that are brought about through administrative or judicial action and automatically incorporated through the prospective incorporation by reference process shall be effective upon publication in the California Regulatory Notice Register and operative on the operative date cited by California in the relevant California Regulatory Notice Register notice, unless the Department publishes a notice of proposal repealing the adoption in New Jersey of the California regulation in whole or in part, and/or proposing to otherwise amend the affected New Jersey rules.

(f) The following provisions of the CCR ***and the California Vehicle Code*** are incorporated by reference within this subchapter, except as provided at (f)1 through 7 below:

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Table 1	
Provisions Incorporated by Reference	
California Code of Regulations (CCR)	
Title 13	
	Chapter 1
	Motor Vehicle Pollution Control Devices
	Article 1
	General Provisions
Section 1900	Definitions
Section 1905	Exclusion and Exemption for Military Tactical Vehicles and Equipment
Article 2	
((No change from proposal.)	
Article 6	
(No change from proposal.)	
Chapter 2	
(No change from proposal.)	
Chapter 9	
(No change from proposal.)	
Chapter 10	
(No change from proposal.)	
Title 17	
Division 3	
Chapter 1	
Subchapter 10	
Article 4	
Subarticle 12	
(No change from proposal.)	
*Provisions Incorporated by Reference	
California Vehicle Code	
Division 12. Equipment Of Vehicles	
Chapter 5. Other Equipment	
Article 2. Exhaust Systems	
Section 27156.2	
Section 27156.3*	

1.-6. (No change from proposal)

7. At 13 CCR 1956.8(a)(2)(F), replace the text to read as follows:

"(F) Transit Agency Diesel-Fueled Bus and Engine Exemption

[Request For] ***Request**

For* 2027 and subsequent model diesel-fueled medium heavyduty or heavy heavy-duty engines used in urban buses, the Department will approve a Transit Agency Diesel-Fueled Bus and Engine Exemption Request made by a transit agency ***or bus** company* that meets each of the conditions and requirements at subparagraphs 1 and 2 below. If granted, an exemption request will allow a transit agency ***or bus company*** to purchase, rent, or lease exempt buses, contract for service with bus service providers to operate exempt buses, or re-power buses with engines that are certified to both the federal emission standards for 2010 and later model year diesel-fueled medium heavy-duty or heavy heavy-duty engines and vehicles, as set forth at title 40, Code of Federal Regulations section 86.007-11, *[as last amended October 25, 2016,]* *effective March 27, 2023,* and the Greenhouse Gas Emissions and Fuel Economy Standards for Medium- and Heavy-Duty Engines and Vehicles — Phase 2 requirements promulgated at 81 FR 73,478.

1. Conditions

If an exemption request is filed for the purpose of making a purchase of a MY 2027 or subsequent MY diesel-fueled medium heavy-duty or heavy heavy-duty engine to be used in an urban bus, the transit agency's ***or bus company's*** exemption request shall demonstrate that there are no diesel-fueled medium

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heavy-duty or heavy heavy-duty engines used in urban buses certified to meet the Exhaust Emission Standards for 2027 and Subsequent Model Light Heavy-Duty Engines, and Medium Heavy-Duty Engines located at 13 CCR 1956.

2. Requirements and Procedures

a. The transit agency ***or bus company*** must submit its Transit Agency Diesel-Fueled Bus and Engine Exemption Request to the Department.

b. The Transit Agency Diesel-Fueled Bus and Engine Exemption Request must be submitted by May 1st of the first calendar year in which the exemption is requested.

c. The Transit Agency Diesel-Fueled Bus and Engine Exemption Request must identify the number of exempt buses needed for each bus type.

d. If the transit agency ***or bus company*** requests to apply the exemption
request to an existing contract, the Transit Agency Diesel-Fueled Bus and Engine
Exemption Request must include a copy of the contract.

e. The Transit Agency Diesel-Fueled Bus and Engine Exemption Request must identify the number of exempt buses or re-powered buses that the transit agency ***or bus company*** requests for each calendar year within the triennial period of the Transit Agency Diesel-Fueled Bus and Engine Exemption Request, where the year the request is submitted is counted as the first calendar year.

3. The Department will issue an Executive Exemption Approval Letter if all foregoing conditions and requirements at subparagraphs 1 and 2 above are met. The Executive Exemption Approval Letter will allow a triennial quota for the purchase, rent, lease,

contract for service, or re-power of exempt buses or engines. The triennial quota expires at the end of the third calendar year of the triennial period.

4. If the Transit Agency Diesel-Fueled Bus and Engine Exemption Request is approved by the Department, the transit agency ***or bus company*** may proceed with engine repower or exempt bus purchase, lease, rental, or contract for service. In the instance where new exempt engines and buses will be purchased or manufactured under the contract, the Executive Exemption Approval Letter will allow the bus and engine manufacturers to sell exempt engines to and manufacture exempt buses for the transit agency ***or bus company*** that has obtained the exemption. The transit agency ***or bus company*** must notify all parties involved of the approval and provide a copy of the issued Transit Agency Diesel-Fueled Bus and Engine Exemption Approval Letter to the engine and bus dealer(s), bus manufacturer(s), and engine manufacturer(s) involved with delivering the exempt buses or engines to the transit agency ***or bus company***.
5. A transit agency ***or bus company*** may request a hearing to review the Department's

denial of an Executive Exemption Approval Letter pursuant to the procedures set forth at N.J.A.C. 7:27-1.32."