BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

	)	
	)	
IN THE MATTER OF:	)	
	)	R2024-017
PROPOSED CLEAN CAR AND	)	
TRUCK STANDARDS	)	(Rulemaking – Air)

NOTICE OF FILING

TO:

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Please take notice that I have today filed with the Illinois Pollution Control Board the following documents: Answers to Pre-Filed Questions of Kathy Harris and Muhammed Patel; Answers to Pre-Filed Questions of Tom Cackette; Answers to Pre-Filed Questions of Dr. Peter Orris; Answers to Pre-Filed Questions of Dr. Daniel E. Horton; Answers to Pre-Filed Questions of Juliana Pino; Answers to Pre-Filed Questions of Brian Urbaszewski; Answers to Pre-Filed Questions of Myrna Salgado; Answers to Pre-Filed Questions of Justin Flores; Answers to Pre-Filed Questions Not Addressed to Specific Witnesses; and Certificate of Service, a copy of which is served upon you.

Date: November 18, 2024

Respectfully submitted,

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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R2024-017
PROPOSED CLEAN CAR AND TRUCK STANDARDS	)	(Rulemaking – Air)

RULE PROPONENTS' RESPONSES TO PRE-FILED QUESTIONS NOT ADDRESSED TO SPECIFIC WITNESSES

Pursuant to the August 13, 2024 Hearing Officer Order, Rule Proponents hereby provide Pre-Filed Answers responsive to all Pre-Filed Questions.

Where questions were not addressed to particular witnesses, but Proponents reasonably believed that those witnesses were properly suited to address those questions, those witnesses have provided answers to questions as indicated below. Those witnesses will affirm at the December 2 and 3, 2024 hearing that any answers below attributed to them are indeed their own answers and testimony. Answers are organized by the submitting party, as numbered by that party.

Submitted below are Pre-Filed Answers to questions not directed at any particular witness.

LIST OF ATTACHMENTS

Attachment 1	LANGUAGE OF PROPOSED RULE (35 Ill. Admin. Code § 102.202(a)), Clean Version
Attachment 2	LANGUAGE OF PROPOSED RULE (35 Ill. Admin. Code § 102.202(a)), Redlined Version

I. BOARD STAFF ("PCB") QUESTIONS ON PROPOSED PART 242

Section 242.101

1. Subsection (b) specifies that Part 242 is applicable to "new motor vehicle engines." Also, Section 242.102 defines a "heavy-duty engine". What are the other types of engines that are regulated under Part 242? Please comment on whether they should be defined in the proposed rules.

Also, subsection (b) refers to Section 242.101(e), but this proposed section does not include a subsection (e). Please comment on whether this should instead refer to the proposed exemption under Section 242.105(e) or any other proposed provision.

Also, where subsection (b) refers to simply to "engines," please comment on whether it should it refer to "heavy-duty engine" to match the proposed definition of that term, or whether there is another revision that may clarify that reference.

Pre-Filed Answer: Other types of engines regulated under Part 242 include light- and medium-duty vehicle engines. In other words, engines used in all vehicle types regulated under Part 242 are regulated under that Part, either through explicit language in the proposed rule text and the text of regulatory provisions that are incorporated by reference, or by virtue of the fact that the engines used in covered vehicle types have a significant impact on the emissions that those vehicles produce. For example, certain definitions in Section 242.102 of the proposed rules refer to "motor vehicle engines," and 13 CCR § 1956.8, which the proposed rules incorporate by reference, refers to "medium-duty engines." Rule Proponents do not believe it is necessary to define each of the types of engines regulated under Part 242. Rule Proponents are not aware of definitions for engine types other than "heavy-duty engines" and "motor-vehicle engines" that appear in the definition sections of the regulations that are incorporated by reference, despite the use of the term "engine" in various operative provisions of those regulations. Including definitions for these terms that do not appear in the regulations being incorporated by reference could have unintended consequences or apply meanings of those terms that were not intended. Terms used in regulations that are not defined in those regulations are generally understood to have their plain meaning, or their technical meaning in the case of technical terms, and context can help determine how a term is used in a particular instance. Rule Proponents note that although the rulemaking proposal includes a definition for "heavy-duty engine" that appears in 13 CCR § 1900(b)(5), that definition only specifies the use case that distinguishes heavy-duty engines (those that are "used to propel a heavy-duty vehicle") from other engines, and does not define the term "engine" as it is used in that definition.

The reference in subsection (b) to Section 242.101(e) should instead refer to Section 242.105. The proposed text has been amended accordingly in the attached updated proposed rule language.

The general reference to "engines" in subsection (b) is intended to capture the multiple ways in which motor vehicle engines are regulated under Part 242, as discussed above. Rule Proponents would not oppose revisions to clarify this reference as the Board deems necessary, but our current proposal is to keep this reference general, to reflect the multiple ways in which the term "engine" is used in the proposed regulations.

2. Please clarify whether subsection (d) applies only to the "motor vehicles of the United States and its agencies" that are registered in Illinois. If so, revise the proposed language to reflect the proposed intent.

Pre-Filed Answer: Yes, subsection (d) is intended to apply only to "motor vehicles of the United States and its agencies" that would be registered or required to be registered in Illinois. The proposed language has been revised to reflect this intent.

Section 242.102

3. The definition of "Financial assistance program" specifies that Qualifying programs in Illinois "will be" approved by the Agency and posted on the Agency's designated website. Please clarify whether the Agency's approval is based on any statutory regulatory requirements. If so, please provide citations to the applicable statutes. If not, explain the bases for the Agency's approval.

Pre-Filed Answer: The Agency's approval of qualifying financial assistance programs is based on the criteria set forth in Section 242.123(b)(2) (the operative provision of the proposed rules in which the term "financial assistance program" appears), 13 CCR 1962.4(e)(2)(B) (the CARB regulation referenced in Section 242.123(b)(2), which provides for the use of ZEVs and PHEVs in qualifying financial assistance programs to meet a portion of manufacturers' Annual ZEV Requirements), and in the definition of "financial assistance program" in Section 242.102.

Specifically, approved programs must be run by vehicle "dealerships [that] accept a point-of-sale incentive for used zero emission vehicles and plug-in hybrid electric vehicles for lower-income consumers," as provided in the definition in Section 242.102. Vehicles sold to dealerships that participate in approved financial assistance programs may be used to meet a portion of manufacturers' Annual ZEV Requirements as set forth in Section 242.123(b)(2), and as further specified in 13 CCR 1962.4(e)(2)(B). Accordingly, approved programs must involve ZEVs and PHEVs that meet the requirements of 13 CCR 1962.4(e)(2)(B), such as the maximum MSRP requirement for qualifying vehicles set forth in 13 CCR 1962.4(e)(2)(B)(2), and those programs may be required to meet the reporting and recordkeeping requirements set forth in 13 CCR 1962.4(j)(2)(c)(2).

Rule Proponents believe these provisions sufficiently specify the bases for the Agency's approval of financial assistance programs, but are open to any suggestions that participants in this proceeding may have to further clarify the bases for approval.

Section 242.104

4. This section specifies that the proposed prohibition is subject "to an applicable exemption". Please clarify whether the prohibition is subject to exemptions under Section 242.105. If so, revise the rule to reflect the intent. If not, please explain the proposed intent.

Pre-Filed Answer: Yes, Section 242.105 contains the exemptions to the prohibition set forth in Section 242.104. (Additionally, by incorporating the requirements set forth in certain enumerated California regulations, Section 242.104 also incorporates the exemptions to those requirements contained in the California regulations.) Rule Proponents believe that the phrase "applicable exemption" sufficiently qualifies the prohibition set forth in Section 242.104 while maintaining flexibility to add or move exemptions to different rule sections, and to account for existing statutory and regulatory provisions that may create exemptions not explicitly included in Section 242.105. This was the approach taken in Colorado, for example, which used the phrase "[s]ubject to an applicable exemption" in 5 Colo. Code Regs. 1001-24.E.III.A.[1] However, if the Board prefers to replace "Subject to an applicable exemption" with "Subject to the exemptions set forth in Section 242.105," Rule Proponents would not object to this change.

[1] Colorado Dep't of Pub. Health and Env't, Air Quality Control Comm'n, Reg. No. 20, Colorado Clean Cars and Trucks Regulation, 5 CCR 1001-24, (Dec. 15, 2023), https://drive.google.com/file/d/1KyOLttXj9-JTGzrFHf59_RZGWIuvvxJa/view.

5. Please clarify whether the various citations to the California Code in this section refers to the Sections of the Code incorporated by reference in Section 242.103 with a specific "Section Amended Date". If so, would it be acceptable if the phrase "incorporated by reference at Section 242.103" is added to the last sentence after Section 2065. If so, similar additions must be made throughout the proposed rules where California Code is cited to note that the rule is incorporated by reference.

Pre-Filed Answer: Yes, the various citations to the California Code in this section refer to the Sections of the Code incorporated by reference in Section 242.103 with a specific "Section Amended Date." Rule Proponents do not believe it is necessary to add the phrase "incorporated by reference at Section 242.103" to the last sentence after Section 2065, because Section 242.103 provides that "All references to the California Code of Regulations in this Part mean the versions specified in the table." However, if the Board prefers to add this phrase to Section 242.104 and other Sections that reference California Code provisions incorporated by reference, Rule Proponents would not object to these changes.

Section 242.111

6. Please clarify whether subsection (a) must include manufacturers of "medium duty vehicles".

Pre-Filed Answer: Yes, subsection (a) must include manufacturers of medium-duty vehicles. Medium-duty vehicles are subject to the requirements of 13 CCR 1961.3 and 13 CCR 1956.8(h)(6) (the requirements incorporated by reference in Section 242.111(a)), as set forth in those regulations. Section 242.111(a) applies these requirements to the same classes of vehicles produced and delivered for sale in Illinois that the California regulations apply to in California, consistent with the Clean Air Act's identicality requirement.

7. Should subsection (b) include manufacturers of "medium-duty passenger vehicles"?

Pre-Filed Answer: Yes, subsection (b) must include manufacturers of medium-duty passenger vehicles for the same reason that subsection (a) must include them. Medium-duty passenger vehicles are subject to the requirements of 13 CCR 1961.4 (the requirements incorporated by reference in Section 242.111(b)), as set forth in those regulations. Section 242.111(b) applies these requirements to the same classes of vehicles produced and delivered for sale in Illinois that the California regulations apply to in California, consistent with the Clean Air Act's identicality requirement.

Section 242.113

8. In subsection (a), please clarify whether determining compliance with "this regulation" means compliance with Part 242, Subpart B, or with Section 242.113 or subsection (a).

Pre-Filed Answer: Compliance with "this regulation" means compliance with Part 242, Subpart B. The proposed text has been amended accordingly in the attached updated proposed rule language.

Section 242.130

9. Subsection (a) specifies emission standards for "new heavy-duty diesel-cycle and Ottocycle engines used in heavy-duty vehicles." Please clarify if these engines fall under the definition of "Heavy-Duty Engine" under Section 242.102. If so, comment on whether that definition should be revised to include diesel and Otto-cycle engines.

Pre-Filed Answer: As stated in the response to Question 1 on Section 242.101 above, various engine types are referenced in various contexts in Part 242 and the regulations incorporated by reference. The definition of Heavy-Duty Engine under Section 242.102 includes any engine used to propel a heavy-duty vehicle, which is in turn defined as any motor vehicle having a manufacturer's gross vehicle weight rating greater than 8,500 pounds, except passenger cars. This definition would include "new heavy-duty diesel-cycle and otto-cycle engines used in heavy-duty vehicles with a gross vehicle weight rating (GVWR) over 14,000 pounds," as referenced in Section 242.130. However, Rule Proponents do not believe it is necessary or advisable to modify the definition of "heavy-duty engine" that appears in 13 CCR § 1900(b)(5) and is incorporated into Section 242.102, due to the risk of inadvertently altering the meaning of "heavy-duty engine" as it is used in other contexts in the proposed rules and the regulations incorporated by reference. The specific references to diesel-cycle and Otto-cycle engines used in vehicles with a GVWR over 14,000 pounds is based on the specific provisions that apply to these engine types in the regulations incorporated by reference in Section 242.130.

Section 242.131

10. In subsection (b), please clarify whether the phrase "requirements incorporated herein by reference" means the requirements incorporated by reference under Section 242.103. If so, please revise the language in subsection (b) to reflect the proposed intent.

Also, subsection (c) refers to "an order of enforcement action under Section 242.133(a)," but the proposed Part does not include a Section 242.133. Please comment whether this should refer to proposed Section 242.131(a) or with any other revision clarifying this cross-reference.

Pre-Filed Answer: Yes, the phrase "requirements incorporated herein by reference" means the requirements incorporated by reference under Section 242.103. The proposed text has been amended accordingly in the attached updated proposed rule language.

The reference in subsection (c) to "an order of enforcement action under Section 242.133(a)" should instead refer to Section 242.131(a). The proposed text has been amended accordingly in the attached updated proposed rule language.

Section 242.145

11. Under subsection (b), for purposes of the penalties provision of Section 42 of the Act, "the number of noncompliant, violating vehicles shall be equal to one half of the manufacturer's outstanding deficit." Please comment on the specific penalty provision of Section 42 under which this calculation would apply and on the basis for proposing the ration of one-half of the outstanding deficit.

Pre-Filed Answer: The language in the proposed rule mirrors the language that appears in 13 CCR 1963.5(a)(4). The one-half ratio is used to convert the number of deficits to the number of vehicles in violation of the standards for purposes of assessing penalties under Section 42. The ACT regulation determines compliance based on credits and deficits, not number of vehicles in violation, and the credits and deficits differ by the type and size of truck. Thus the deficit for a fleet of trucks that results in non-compliance must be converted to a vehicle basis to determine the maximum penalty (which is assessed per vehicle, not per credit). CARB's regulation provides for multiplying the fleet deficit by one-half to convert it to an average number of vehicles in non-compliance. This assures the penalty is consistent with the maximum per-vehicle penalty.

CARB's Final Statement of Reasons in support of the Advanced Clean Trucks rule provides additional explanation: 13 CCR 1963.5(a)(4) "specifies how to convert the size of a deficit into vehicle equivalents for the purpose of [California's statute setting maximum penalties for violations of vehicle emission standards]. Staff decided to divide the deficits in half for this conversion to ensure that the penalties are representative. For example, failing to produce a

zero-emission Class 8 non-tractor would generate two deficits. Under staff's current proposal, this would result in a penalty of [California's statutory maximum per-vehicle penalty] per Class 8 ZEV not sold. Without dividing the deficits by two, this penalty would be … double the statutory amount."[2] California statute establishes a maximum penalty of $37,500 per vehicle for failure to comply with a new vehicle emission standard. The exception is a maximum penalty of $20,000 for a light-duty ZEV. The one half-half factor puts the maximum penalty for a heavy-duty ZEV non-compliance similar to the light-duty maximum.

II. IEPA PRE-FILED GENERAL AND TECHNICAL QUESTIONS:

Environmental Benefit of Proposal Relative to Existing Requirements:

1. Please provide more specific information regarding how the Rule Proponents' proposed low emission vehicle ("LEV") regulation compares to the United States Environmental Protection Agency's ("USEPA") emissions standards for criteria pollutants and greenhouse gases for light-duty vehicles and Class 2b and 3 (''medium-duty'') vehicles for model years 2027 and later, 89 Fed. Reg. 27842 (April 18, 2024). Please discuss similarities and differences.

Pre-Filed Answer: The ACC II LEV IV regulation and the USEPA emission standards for criteria pollutants are structured differently. For NOx + NMOG, the USEPA standards provide a single fleet average standard to be met by all vehicles in the fleet, both ICE and ZEV. That standard declines over time, with the assumption that ICE emissions will remain constant but ZEVs will be added to the fleet to bring down the average to the required level.

The LEV IV rule sets a NOx + NMOG fleet average standard that applies only to the ICE portion of the fleet. That ICE-only standard remains constant over the life of the rule, based on the premise (similar to the federal rule) that the potential for additional reductions from ICEs is limited and manufacturer investment is best directed towards transitioning the fleet to ZEVs. The ZEV portion of ACC II then sets requirements for ZEV penetration. The level of ZEV penetration directly required under ACC II is greater than that assumed in the federal rule, which leads to additional emission reductions.

For particulate matter, both rules set largely similar vehicle-specific standards rather than a fleet average.

[2] CARB, Advanced Clean Trucks Regulation, Final Statement of Reasons, (Mar. 2021), https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2019/act2019/fsor.pdf, at 196.

For greenhouse gasses, the federal rules provide a declining fleet average standard that runs through MY 2032. California is in the process of considering updates to its LEV III GHG standards, which establish a declining fleet average through MY 2025.

2. What are the estimated emissions reductions by pollutant in the years 2028 to 2034 under the Advanced Clean Cars II ("ACC II") LEV standards under the proposed language?

Pre-Filed Answer: The table below shows ERM's projected emission reductions by pollutant for MY 2029 implementation (the revised start date for the rule) under the ACC II FULL + Clean Grid "clean grid" case. Additional results are reported in Exhibit 4. Reductions are shown through 2040 to provide a more complete picture of the impact of the rule, given that reductions increase rapidly as more ZEVs enter the fleet and a cleaner grid comes on line. Reductions are in metric tons for NOx and PM and in million metric tons for GHGs.

Annual Reductions			
	NOx	PM	GHG
2029	208	-17	-0.5
2030	66	-33	-1.0
2031	-106	-44	-1.5
2032	-250	-54	-1.9
2033	-443	-69	-2.5
2034	-674	-87	-3.2
2035	-932	-109	-4.1
2036	-1,344	-142	-5.1
2037	-1,761	-176	-6.1
2038	-2,178	-211	-7.0
2039	-2,596	-246	-8.0
2040	-3,011	-283	-8.9

3. Have the Rule Proponents estimated the cost of implementation per expected ton of annual controlled NOx emissions under the proposed Low NOx rule? If so, how does such cost compare to the cost per ton of each of the following:

a. Federal standards set to take effect in 2027,
b. Implementation of the zero-emission vehicle ("ZEV") sales requirement under the proposed Advanced Clean Truck ("ACT") standards,
c. Federal standards in combination with the proposed ACT ZEV sales requirements?

Pre-Filed Answer: As discussed at pages 60–62 of the Statement of Reasons, ERM's 2021 analysis estimated the annual and cumulative NOx emissions reductions and economic costs/benefits expected in a scenario that includes both the Low NOx rule and the ACT rule. The incremental emission reductions from the Low NOx rule can be estimated by comparing NOx emissions in this scenario to NOx emissions in a scenario that includes the ACT rule and the federal standards.[3] As noted in the Statement of Reasons, the new federal standards set to take effect in 2027 had not been enacted at the time of ERM's 2021 analysis.[4]

The incremental fleet costs of adding the Low NOx rule to the ACT rule, based on ERM's 2021 analysis, is $2,889 per metric ton of avoided NOx emissions in 2045 in 2020$ ($3,405 in 2024$). On the assumption that the Low NOX rule's cost per ton of avoided emissions is about the same compared to the earlier federal standards or the new federal standards (and that only the total amount of emission reductions achieved is lower relative to the new federal baseline), this would be the cost per ton of avoided emissions under the proposed Low NOx rule.

a. Federal standards set to take effect in 2027,

Pre-Filed Answer: The US EPA Regulatory Impact Analysis quantifies the NOx emissions and costs of implementing the regulation.[5] Based on Table 5-29 at page 273 of the RIA and Table 7-51 at page 370, the new federal standards will avoid 45,239 tons of NOx in 2045 (41,172 metric tons) and create $4.7 billion of technology and operating costs in 2017$. This yields an undiscounted cost of $11,430 per metric ton of avoided

[3] The emission reductions from adopting the Low NOx rule alone, without the ACT rule, would likely be greater than the reductions indicated by comparing an ACT scenario to an ACT + Low NOx scenario, because in the absence of the ACT rule a greater percentage of vehicles sold would likely be non-ZEV diesel trucks whose emissions are reduced by the Low NOx rule.
[4] Due to time and resource limitations and the potential for developments related to harmonization between the CARB and EPA standards, ERM's updated 2024 analysis focused on the ACT rule, and did not include a scenario comparing the Low NOx rule to the new EPA NOx standards. However, as described in the Statement of Reasons, the new federal standards achieve approximately 91.7% of the per-vehicle NOx reductions expected from the Low NOx rule. So the incremental emission reductions from the Low NOx rule, compared to the new federal standards, can be roughly estimated as 8.3% of the reductions projected in ERM's 2021 analysis. This yields an annual reduction of 1,285 metric tons of NOx in 2050, and a cumulative reduction of 27,133 metric tons by 2050. Statement of Reasons at 61.
[5] EPA, *Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards Regulatory Impact Analysis*, (Dec. 2022), https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1016A9N.pdf.

NOx emissions. This figure may be informative, but it cannot be directly compared to the dollar per ton based on ERM's findings, given the differences in methodologies used.

b. Implementation of the zero-emission vehicle ("ZEV") sales requirement under the proposed Advanced Clean Truck ("ACT") standards,

Pre-Filed Answer: ERM's 2021 analysis estimated that in 2045, the ACT rule would avoid 11,501 metric tons of NOx and *reduce* fleet costs by $917 million in 2017$. This would yield a negative cost per ton of avoided NOx emissions.

c. Federal standards in combination with the proposed ACT ZEV sales requirements?

Pre-Filed Answer: The cost per ton of emissions avoided under a scenario that combines the new federal standards with the ACT rule would likely fall between the cost per ton under the federal standards (*see* part (a) above) and the negative cost per ton under the ACT rule (*see* part (b) above). On the assumption that The incremental fleet costs of adding the Low NOx rule to the ACT rule, based on ERM's 2021 analysis, is $2,889 per metric ton of avoided NOx emissions in 2045 in 2020$ ($3,405 in 2024$).

Charging Infrastructure:

4. Based on current annual vehicle sales in Illinois and using Table 1 on page 34 and Table A1 on page 98 of the Rule Proponents' Initial Filing, how many ZEVs would need to be sold starting in 2028 to comply with the proposed rule's first annual ZEV sales requirements?

a) Please include responses for light duty vehicles (ACC II).

Pre-Filed Answer: According to the Illinois Auto Dealers, 408,436 new cars and light trucks were sold in Illinois in 2023.[6]

Given the updated proposal to reflect a model year 2029 implementation year, using those numbers provides a more accurate answer based on the current proposal. The model year 2029 ZEV sales requirement is 59% of total vehicle sales, however, manufacturers have extensive flexibilities when it comes to meeting the targets, especially through early sales. Just including early sales credits manufacturers would only need to reach an effective sales target of 50% to comply in MY 2029. As shown in the Vehicles page of Exhibit 4, ERM's 2024 analysis projects that 321,625 ZEVs will be added to the fleet in 2029 in the ACC II FULL scenario, and 256,902 ZEVs will be added in the ACC II FLEX scenario where manufacturers take advantage of the rule's compliance flexibilities.

b) Please include responses for medium- and heavy-duty vehicles (ACT).

[6] Illinois Automobile Dealers Association, *2023 Illinois Economic Impact Report*, https://illinoisdealers.com/wp-content/uploads/2024/05/IADA2023EconImpactfullreport8pg.pdf.

Pre-Filed Answer: In 2023, Illinois had 27,000 MHDV deployments.[7] The ACT rule's sales targets vary by vehicle class. In MY 2029, the sales percentage is 25% for Class 2b-3 and Class 7-8 tractors, and 40% for class 4-8 trucks. As shown in the Vehicles page of Exhibit 3, ERM's 2024 analysis projects that 2,080 class 2b truck ZEVs, 450 ZEV buses, 4,271 ZEV single unit trucks, and 1,378 ZEV combination trucks will be added to the fleet in 2029, for a total of 8,178 MHDV ZEVs.

5. Using the data provided in Table 4 on page 93 and Table 3 on page 122 of the Rule Proponents' Initial Filing, please provide an estimate of the number, location distribution, and capacity of charging stations needed throughout Illinois to reliably support the number of ZEVs noted in your responses to Question 4 above.

Pre-Filed Answer: The agency references data in Exhibits 1 and 2, however, Exhibits 3 and 4 provide updated analysis to the tables and figures referenced in Exhibits 1 and 2. The analyses in Exhibits 3 and 4 take into account more up to date market information as well as account for the new federal standards on both LDVs and MHDVs in the baseline scenarios.

The estimates on the number, capacity, and location distribution of charging stations to support the on-road vehicles resulting from the ACT and ACC II rules at each year of the program, can be found in the Statement of Reasons on pages 139 and 150, respectively. The results for MY 2029 are shown below.

Location / Capacity	LDV In-Use Ports (MY 2029)	MHDV In-Use Ports (MY 2029)
Home / L2	18,668	
Public / L2	106	
Depot		364
Public / DCFC (150 - 300 kW)	66	2
Public / DCFC (500 kW)		75

Charging stations can vary in the number of ports, usually as a result of site-specific decisions.

[7] Baha M. Al-Alawi and Jacob Richard, *Zeroing In On Zero-Emission Trucks: Market Update*, (May 2024), https://calstart.org/wp-content/uploads/2024/05/ZIO-ZET-May-2024-Market-Update_Final.pdf ("CalStart ZET Market Update").

Therefore, in-use ports are a better accounting of the number of chargers that will be needed to support electrification.

Location can be categorized by home charging, public charging (LDV), depot charging, and public charging (MHDV). The analysis in Exhibit 4 assumes that about 26 percent of LDVs would need to rely on a publicly accessible charging network. The analysis in Exhibit 3 assumes that most M/HD ZEVs in Illinois will use overnight charging at their place of business, though about 10 percent will need to rely on a publicly accessible network of higher-power chargers. The exception is combination trucks, 70 percent of which are assumed to require high-power public chargers since they are used primarily for long-haul freight operations.

Capacity of the charging ports is generally separated by Level 1, Level 2. Level 1 chargers can use a standard 120V outlet while Level 2 requires a dedicated 208-240V circuit. DCFC ports are able to provide 150 to 350 kW of energy for LDVs. Depot chargers will need to be 10–50 kW per port depending on vehicle type. Public DCFC for MHDVs will range from 150kW–500kW; the smaller 150 kW public chargers are needed primarily to support single-unit freight trucks, while the higher-capacity 500 kW public chargers are needed mostly for combination trucks.

6. The California requirements for ZEV sales began with more gradual increases in the years before MY 2028, i.e., a requirement of 35% for 2026, 43% for 2027, and 51% for 2028, giving the state time to develop the required charging infrastructure. Given that this rulemaking proposal, if adopted, would go into effect with MY 2029 vehicles and would begin at a 59% sales requirement for light duty ZEVs, did Rule Proponents take into account the shorter lead time in its feasibility analysis?

Pre-Filed Answer: Rule Proponents did take the charging infrastructure needs into account for a MY 2029 implementation date. It should be clarified that Illinois' lead time is the same as other states who adopted the rule earlier. The lead time is two-model years regardless of the year that a State chooses to adopt the regulation, and while the targets may increase relatively steadily year over year. In reality, the lead time is closer to 4 calendar years if Illinois adopts the rules in 2025.

As of November 2024, there were 1,410 publicly accessible charging stations in Illinois with a total of 2,656 public Level 2 ports and 1,219 DCFC ports (>50 kW).[8] There are at

[8] U.S. DOE, *Alternative Fueling Station Counts by State*, https://afdc.energy.gov/stations/states.

least 53 fast-charging Tesla supercharger stations that currently can be used only by Tesla owners.[9] However, 23 automakers will begin to manufacture vehicles that can use the Tesla chargers, some as soon as model year 2025.[10] According to the ERM analysis, by MY 2029, Illinois will need (in terms of public charging) 106 Level 2 ports and 67 DCFC ports to support ACC II. The major reason for the estimate on public charging is that it is anticipated that a significant number of ZEV drivers, especially in earlier years, will choose to charge at home.

Manufacturers have extensive sales flexibility when it comes to meeting the targets, especially through early sales compliance and other credits. Considering those flexibilities, Shulock Consulting estimates that manufacturers would only need to reach an actual sales target of 50% to comply in MY 2029. Thus, annual ZEV sales growth of about 10% is sufficient to reach compliance in MY 2029.

Economic Impact:

7. If the Board adopts the proposed rule, what is the anticipated effect on State revenues, specifically the motor fuel tax and sales tax on sales of motor fuel?

Pre-Filed Answer: It may be anticipated that motor fuel tax and sales tax on sales of motor fuel revenues will be reduced with more vehicles that don't need motor fuels. It should be noted that while the sale of new cars will increasingly be ZEVs, there will be a lag in vehicle turnover, and by 2037, about 50% fleet will still be non-ZEVs.[11] Moreover, the reduction in motor fuel tax revenue will be offset by an increase in the annual EV registration fee, which is currently $100/year for each EV.

Rule proponents did not specifically model impacts in motor fuel tax revenue, for multiple reasons. First, impacts on tax revenue are ancillary to the Board's authority to adopt emission standards. The analysis from the regulatory proposal and Statement of Reasons aimed to help the Board in considering whether to adopt "[s]tandards and

[9] Tesla, *Superchargers - United States*, (2024), https://www.tesla.com/findus/list/superchargers/United%20States.
[10] Eric Stafford, "Tesla Charging Network: All the Upcoming Compatible EVs," (Sept. 24, 2024), https://www.caranddriver.com/news/a44388939/tesla-nacs-charging-network-compatibility/. .
[11] Statement of Reasons at 144.

conditions regarding the sale, offer, or use of any fuel, vehicle, or other article determined by the Board to constitute an air-pollution hazard."[12] Rule proponents are not aware of the Board having specifically considered impacts on tax revenue when enacting other emission standards in the past. Determining the precise shortfall in revenues from the motor fuel tax, and the accompanying revenue sources to fill that shortfall, will fall under the authority of the General Assembly.

Second, EVs are already taxed an additional $100 fee every year in Illinois to specifically make up for the lack of money paid from those users in motor fuel taxes.

Third, any vehicle running on gasoline at *any point* pays the per gallon tax on fuel used, even though those vehicles vary widely in miles driven per gallon of fuel and fuel economy has improved dramatically over the years with more fuel-efficient cars and hybrids. While other states like Indiana have instituted a fee on hybrids to make up for the lower amount paid into the gas tax, Illinois has not attempted to levy a similar fee. For example, between 2011 and 2019, Illinois vehicle miles traveled increased by 4%, yet motor fuel tax revenue only increased by 3%, indicating the impact increased fuel efficiency played on revenue.[13]

8. If the Board adopts the proposed rule, what is the anticipated effect on local governments that receive funding from the State from the sales tax on sales of motor fuel?

Pre-Filed Answer: The Rule Proponents did not model the specific effects on local government funding from the state from the sales tax on sales of motor fuels. See note on the previous question regarding the phased fleet turnover resulting from the rules and the increase in EV annual registration revenue.

9. If the Board adopts the proposed rule, please identify any anticipated new revenue sources that may offset any loss in sales taxes and motor fuel taxes to ensure the State's capital improvements plan remains on target.

Pre-Filed Answer: As mentioned previously, EVs are already taxed an additional $100 fee every year in Illinois to specifically make up for the lack of gas tax on EVs. Rule Proponents are supportive of a variety of funding mechanisms to support funding for transportation capital improvements, and have never opposed the idea of EVs paying their fair share for usage of the road system.

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[12] 415 ILCS 5/10.

[13] Illinois Economic Policy Institute, *The Impact of Electric Vehicles and Increased Fuel Efficiency on Transportation Funding*, (Jan. 2023), https://illinoisupdate.com/wp-content/uploads/2023/01/evs-and-increased-fuel-efficiency-and-transpo-funding-final-1.10.23.pdf

Potential new revenue sources could include a vehicle miles traveled fee, a fee on hybrid vehicles, or weight based usage fees.

10. Have the Rule Proponents identified and considered the effect the rule proposal may have upon all potentially affected individuals, entities, and sources including:

a) Consumers?

b) Vehicle manufacturers?

c) Dealers?

d) Rental and leasing businesses?

e) Parts manufacturers, and other supporting services to parts and vehicle manufacturing?

f) Trucking and other transportation businesses?

If so, please describe the analysis that was undertaken and the results of the analysis, including the economic costs of the proposal for each of these groups. If not, please indicate whether Rule Proponents will be conducting such analysis.

Pre-Filed Answer: The evidence provided in our statement of reasons, prefiled testimony, and supporting exhibits evaluates a range economic costs and benefits that the rule proposal is expected to result in for many different stakeholders. These impacts include, first and foremost, health, air quality, and climate benefits for all Illinoisians.[14] We also evaluated multiple costs and benefits to consumers, including vehicle purchase costs, fuel and maintenance costs, cost of chargers and charger maintenance, and impacts on rates for all electric utility customers.[15] Because rental and leasing businesses and trucking and other transportation businesses purchase and operate vehicles, their costs and benefits of ZEV ownership are included among these consumer impacts.[16] These consumer impacts were combined with health and climate impacts, as well as infrastructure cost impacts, to estimate the rules' net social benefits, and is included in the net societal benefits that we cite (see Statement of Reasons, section IV.e and Exhibits 1-4, where 1 and 2 provide useful narrative, while 3 and 4 contain updated analyses on impacts of the rules).[17] ERM also performed IMPLAN modeling to assess the proposed rules' impacts on economic activity, GDP, and job growth/loss across multiple sectors, including vehicle manufacturing, engine manufacturing, and supporting services.[18]

[14] Statement of Reasons at 35–36, 50–52, 60–62; Prefiled Testimony of Kathy Harris and Muhammed Patel, Dr. Peter Orris, Dr. Daniel E. Horton, Juliana Pino, Brian Urbaszewski, Myrna Salgado-Romo, and Justin Flores.
[15] Statement of Reasons at 36–37, 40–41, 48–49, 52–53, 61–62; Exhibit 1 at 16–19 (Rulemaking Petition at 88-91); Exhibit 2 at 12–18 (Rulemaking Petition at 115–121).
[16] *Id.* at 55–57.
[17] *Id.* at 36–37, 52–53, 61–62; Exhibit 1 at 22–24 (Rulemaking Petition at 94–96); Exhibit 2 at 21–22 (Rulemaking Petition at 124–125).
[18] *Id.* at 46-48; Exhibit 1 at 19–21 (Rulemaking Petition at 91–93); Exhibit 2 at 20–21 (Rulemaking Petition at 123–124).

Finally, we considered opportunities to mitigate any adverse impacts from the rules on vehicle manufacturers (which produce downstream impacts) by taking advantage of the proposed rules' compliance flexibilities.[19]

These economic costs include financial impacts for businesses and individuals that own vehicles, including the costs of purchasing a ZEV vehicle, incremental vehicle maintenance, net fuel cost, cost of chargers, and charger maintenance. It considers the impact on utilities, and utility customers.

11. On March 20, 2024, USEPA finalized new pollution standards for passenger cars, light- duty trucks, and medium-duty vehicles. 89 Fed. Reg. 27842 (Mar. 20, 2024). USEPA's new pollution standards were hailed by environmental and public health organizations, as well as business and labor leaders. *See* https://www.epa.gov/newsreleases/what-they-are-saying-strongest-ever-pollution-standards-cars-will-reduce-pollution. In adopting the new pollution standards, USEPA rejected more stringent standards, stating:

> EPA has assessed the appropriateness and feasibility of [its final] standards taking into consideration the potential benefits to public health and welfare, existing market trends for PEV adoption, and constraints which could shape technology adoption in the future, including: cost to manufacturers and consumers; refresh and redesign cycles for manufacturers; availability of raw materials, batteries, and other necessary supply chain elements; adequate electricity supply and distribution; and barriers to consumer acceptance such as adequate charging infrastructure and a wide range of vehicle model choices that meet a diverse set of customer needs.

89 Fed. Reg. 28095. Do Rule Proponents agree that USEPA's final decision to adopt these vehicle pollution standards had a rational basis in the record before it? If not, why not?

Pre-Filed Answer: Yes, USEPA's final decision to adopt these vehicle pollution standards had a rational basis in the record. EPA must set nationwide standards that account for the varying stages of market development and policy support for ZEV adoption across the country, among other variations across regions. The record in this proceeding shows that market and policy conditions in Illinois support adoption of the proposed rules, that the proposed rules will help address Illinois' air quality issues (including nonattainment of federal air quality standards) and climate goals, and that the proposed rules will produce massive net benefits for Illinois.

12. Did Rule Proponents submit comments to USEPA in its rulemaking concerning the economic reasonableness and technical feasibility of vehicle pollution standards? If so, please provide those comments. If not, why not?

[19] Statement of Reasons at 34–35, 44, 49, 54; Pre-Filed Testimony of Tom Cackette.

Pre-Filed Answer: Yes. NRDC and Sierra Club comments for the USEPA rulemaking, supporting the economic reasonableness and technical feasibility of the vehicle pollution standards can be found under docket EPA-HQ-OAR-2022-0829-0759 at the link below.[20]

The introduction to our comments states "Zero-emission vehicles (ZEVs) are not only feasible and cost-reasonable—they are rapidly penetrating the fleet, with more than 250,000 fully battery electric vehicles sold in the first quarter of 2023 alone, a 44.9% increase over the same period last year. In addition, numerous emission control technologies for combustion vehicles are also feasible, cost-reasonable, and already extensively deployed on the fleet, yet still have potential for greater application within the fleet of new combustion vehicles that will continue to be produced."[21]

Miscellaneous:

13. Have the Rule Proponents reached out to the Midcontinent Independent System Operator ("MISO") and/or PJM Interconnection to obtain an assessment of any grid reliability impacts and concerns if the Board adopts the proposed rule? If so, can the Rule Proponents enter communications with MISO and/or PJM into the record for this rulemaking proceeding?

Pre-Filed Answer: Rule Proponents have not contacted MISO or PJM. There will be no grid reliability impacts resulting from the rules until they go into effect in MY2029, nearly four calendar years after adoption (if the Board adopts soon after January 2, 2025). This should give sufficient time for the Illinois Commerce Commission to factor in the growth of EVs into various transmission and distribution grid planning processes, and for various utilities around the state to begin making necessary grid investments. Luckily, Illinois is ranked #1 for power grid reliability in the country.[22]

14. The Statement of Reasons, at page 39, states, in part, that Illinois' overall 2023 electric vehicle market share was 7.8%. What is Illinois' market share of new registered

[20] Comments submitted on behalf of Center for Biological Diversity, Conservation Law Foundation, Environmental Law & Policy Center, Natural Resources Defense Council, Public Citizen, Sierra Club, and the Union of Concerned Scientists, and four exhibits, Doc. ID EPA-HQ-OAR-2022-0829-0759, Jul. 19, 2023), https://www.regulations.gov/comment/EPA-HQ-OAR-2022-0829-0759

[21] *Id.*

[22] U.S. News & World Report, "Best States Rankings: Power Grid Reliability," https://www.usnews.com/news/best-states/rankings/infrastructure/energy/power-grid-reliability

electric vehicles thus far for quarters 1 and 2 in 2024?

Pre-Filed Answer: According to the Get Connected Electric Vehicle Quarterly Report, published by the Alliance for Automotive Innovation, the Illinois market share of new registered light duty electric vehicles for quarters 1 and 2 in 2024 was 7.31% and 8.22% respectively.

QUESTIONS SPECIFIC TO THE PROPOSED RULE

PART 242
ILLINOIS CLEAN CAR AND TRUCK STANDARDS SUBPART A: GENERAL

Section 242.101 Purpose and Applicability

15. Rule Proponents indicate that the proposed clean vehicle standards "will apply . . . to *new* on-road vehicles delivered for sale in Illinois by manufacturers beginning with vehicle MY 2028." (Statement of Reasons at 63). In the discussion of "Purpose and Effect" of the proposal in the Statement of Reasons, the Rule Proponents discuss only the purpose and effect of the three California clean vehicle standards (Advanced Clean Cars II, Advanced Clean Trucks, and Heavy-Duty Low NOx Omnibus). (Statement of Reasons at p. 33). The rule proposal stresses that these clean vehicle standards apply to vehicle manufacturers, not consumers. (Statement of Reasons at 11; Joint Testimony of Kathy Harris and Muhammed Patel at 1). In the discussion of "Affected Sources and Facilities" in the Statement of Reasons, only vehicle manufacturers are identified. (Statement of Reasons at 63).

Based on the Agency's review of California's regulations, the three clean vehicle standards at issue apply to vehicle manufacturers only, with a few specific provisions applicable to vehicle dealerships. The Agency has not identified in the California regulations that Rule Proponents seek to be incorporated by reference any provisions that extend applicability to others.

The proposed Section 242.101, however, proposes applicability language that appears to extend beyond that of California's clean vehicle standards. Subsection (a) indicates that Part 242 establishes emission standards and requirements for "new motor vehicles and new motor vehicle engines." "New motor vehicle" is defined in terms of a vehicle's odometer reading and whether title has ever been transferred to the ultimate purchaser. Subsection (b) indicates that proposed Part 242 applies to specified vehicles "offered for sale or lease, or sold, or leased, for registration in Illinois." On its face, it is not restricted to vehicles produced and offered for sale or lease by manufacturers in Illinois, and in fact it does not reference manufacturers. On its face, the Part would apply to all vehicles offered for sale/lease, or sold/leased, for registration in Illinois, including by vehicle dealerships or even individuals. This Section also does not indicate that proposed Part 242 applies only to model year 2028 and later vehicles.

> **a.** Please identify the specific provision(s) in California's regulations that subsections (a) and (b) are based upon. If subsection (a) or (b) is not identical to California's regulations, please identify the origin of the provision and describe its purpose and effect.

Pre-Filed Answer: Subsections (a) and (b) are intended to concisely express the purpose and applicability of the proposed rules. These subsections are not identical to any specific provisions in California's regulations. They are based upon similar concise statements included in the regulatory enactments of other states that have adopted the ACC II, ACT, and Low NOx rules.

For example, 20.2.91.2 NMAC defines the scope of New Mexico's New Motor Vehicle Emission Standards program to include "All manufacturers, dealers, rental car agencies, the United States, state and local governments, or other persons who deliver for sale, offer for sale, sell, import, deliver, purchase, rent, lease, acquire, receive, or register model year 2027 and subsequent model year passenger cars, light-duty trucks, medium-duty passenger vehicles, medium-duty vehicles or motor vehicle engines, heavy-duty vehicles, heavy-duty engines or motor vehicle engines." This is similar to the reference in subsection (b) to vehicles, engines, and emissions control systems "offered for sale or lease, or sold, or leased, for registration in Illinois." Similarly, 5 Colo. Code Regs. 1001-24.A.II.S defines "New Motor Vehicle" as "a 2022 model year or later motor vehicle that has accumulated less than 7500 miles of use as of the date of sale or lease," and 5 Colo. Code Regs. 1001-24.B.I.C establishes a presumption that the equitable or legal title to a motor vehicle with an odometer reading of 7,500 miles or more has been transferred to an ultimate purchaser. This is similar to the definition of "new motor vehicle" included in Section 242.102 and applied in Section 242.101(b). That definition also specifies that a vehicle is not considered "new" if the equitable or legal title to the

vehicle has been transferred to the ultimate purchaser, which is in turn defined as "the first person who in good faith purchases a new motor vehicle for purposes other than resale and registers it with the Illinois Secretary of State." Thus, IEPA's statement that the proposed rules would apply to "even individuals" would not apply in the case of an individual who is an ultimate purchaser as defined in the proposed rules.

Subsections (a) and (b) are intended to concisely and inclusively describe the scope of the proposed Part 242. To the extent that particular operative provisions of the proposed rules specify a narrower scope for those provisions, the more specific operative provisions control, rather than the more general statement of Part 242's applicability. To the extent that the proposed rules include definitions and provisions that apply to activities like sales and registrations of new vehicles in Illinois, which may not be expressly covered by California regulations, these definitions and provisions are intended to ensure that the proposed rules apply to Illinois rather than California, and that they cannot be easily circumvented. As noted above, other states that have adopted the ACC II, ACT, and Low NOx rules have used similar definitions and statements of applicability to achieve these purposes.

If IEPA believes that a different general description of the rules' applicability in Section 242.101 would more accurately reflect the rules' operative provisions, Rule Proponents would not object in principle to a proposed amendment to this Section, although we reserve the right to review and respond to the specific language in any such proposal.

> **b.** Please identify the portions of the rule proposal, if any, that discuss the applicability language in this Section, including a description of the universe of persons and vehicles intended to be subject to Part 242 under this Section. If not in the rule proposal, please provide this information.

Pre-Filed Answer: The Statement of Reasons offered in support of the rulemaking proposal does not specifically discuss the language in Section 242.101, although it includes some general discussion of the proposed rules' purpose and applicability as noted above in IEPA's question. As noted in the response to part (a) above, Section 242.101 is intended to generally and inclusively describe the universe of persons and vehicles to which one or more provisions of the proposed rules may apply, with the caveat that many operative provisions in the proposed rules specify that those particular provisions apply to a narrower set of vehicles, persons, and actions.

> **c.** Is it the Rule Proponents' intent that the proposed Part 242 apply only to model year 2028 and later vehicles? If not, please identify the categories of vehicles intended to be subject to Part 242 under this Section.

Pre-Filed Answer: While many of the proposed rules' operative provisions apply specifically to model year 2029 and later vehicles,[23] some provisions such as the early credit generation provisions and certain reporting and recordkeeping requirements apply to earlier model years. Accordingly, Rule Proponents have not specified a particular model year in this concise statement of scope and applicability. As noted above, any operative provisions that apply specifically to certain model years control within their particular scope of application.

16. Section 242.101(b) references Section 242.101(e); however, there is no subsection (e). Is reference to another Section intended? If so, which one?

Pre-Filed Answer: The intended reference is to Section 242.105. The proposed text has been amended accordingly in the attached updated proposed rule language.

17. Subsection (d) indicates that proposed Part 242 applies to "motor vehicles of the United States and its agencies; and to motor vehicles of the State of Illinois and its agencies and political subdivisions."

> **a.** Please identify the specific provision(s) in California's regulations that subsection (d) is based upon. If subsection (d) is not identical to California's regulations, please identify the origin of this provision and describe its purpose and effect.

Pre-Filed Answer: Subsection (d) is based upon similar provisions included in the regulatory enactments of other states that have adopted the ACC II, ACT, and Low NOx rules. For example, 20.2.91.2 NMAC provides that New Mexico's adoption of ZEV standards applies to "the United States, state and local governments," among others. Likewise, 5 Colo. Code Regs. 1001-24.A.I.C provides that Colorado's adoption of vehicle emission standards applies to "motor vehicles sold or leased to the United States government or an agency thereof, or to the State of Colorado or any agency or political subdivision thereof that would be registered or required to be registered in the State."

> **b.** Given the broad applicability language in subsection (b) and the broad prohibition in Section 242.104, why is subsection (d) necessary? In other words,

[23] Many of these provisions have been updated in the attached proposed rule language to reflect a model year 2029 start date, rather than model year 2028 as originally proposed, in light of the schedule for this proceeding and the Clean Air Act's lead time requirement.

what is the anticipated impact of subsection (d) that is not effectuated by other provisions in the proposal?

Pre-Filed Answer: As noted in the response to part (a) above, subsection (d) is based upon similar provisions included in the regulatory enactments of other states that have adopted the ACC II, ACT, and Low NOx rules. The subsection clarifies that the proposed rules apply to motor vehicles of federal, state, and local governments, to help avoid confusion or questions about the rules' application to government entities that are sometimes subject to different regulatory requirements than non-governmental entities. Subsection (d) also provides context that helps clarify the exemption for military tactical vehicles included at Section 242.105(m).

Section 242.102 Definitions

18. The Agency cannot locate in California's regulations several of the definitions proposed in this Section and are unclear of those definitions' origins. To clarify for participants, please identify the specific provision(s) in California's regulations that each definition is based upon. If there are any terms or definitions that do not appear in California's regulations or that are not identical to California's regulations, please identify those terms/definitions and identify their origin, as well as their purpose and effect.

Pre-Filed Answer: The definitions in Section 242.102 are generally based upon similar provisions included in the regulatory enactments of other states that have adopted the ACC II, ACT, and Low NOx rules, as well as some definitions used in CARB regulations and some definitions in existing Illinois law. These definitions are intended to supplement the CARB regulations incorporated by reference, for example by defining key terms that appear in the text of the proposed rules or that are not otherwise defined in CARB's regulations, and by providing Illinois-specific definitions where appropriate. Below is a list of examples of other states' regulations that contain definitions similar to those found in Section 242.102.

Authorized Emergency Vehicle: 625 ILCS § 5/1-105

CARB: California Health and Safety Code, Division 26, Part 1, Chapter 1, Section 39003

Certification: 6 CRR-NY 218-1.2(h)

Community-Based Clean Mobility Program: 13 CCR 1962.4(*l*); 5 Colo. Code Regs. 1001-24.A.II.F

Emissions Control System: 5 Colo. Code Regs. 1001-24.A.II.F; 6 CRR-NY 218-1.2(c)

Financial Assistance Program: 13 CCR 1962.4(*l*); 5 Colo. Code Regs. 1001-24.A.II.J

Greenhouse Gas: 13 CCR 1961.3(f)(18); 5 Colo. Code Regs. 1001-24.A.II.K

GVWR: 13 CCR 1961.3(e)

Heavy-Duty Engine: 13 CCR 1900(b)(5)

Heavy-Duty Vehicle: 13 CCR 1900(b)(6)

Hydrogen fuel-cell electric vehicle: 13 CCR 2013(b), 2015(b)

Light-Duty Truck: 13 CCR 1900(b)(11); 5 Colo. Code Regs. 1001-24.A.II.N

Medium-Duty Passenger Vehicle: 13 CCR 1900(b)(12); 5 Colo. Code Regs. 1001-24.A.II.O

Medium-Duty Vehicle: 13 CCR 1900(b)(13); 5 Colo. Code Regs. 1001-24.A.II.P

Military Tactical Vehicles and Equipment: 5 Colo. Code Regs. 1001-24.A.II.Q

Model Year: 13 CCR 1963(c)(15); 6 CRR-NY 218-1.2(ae)

Neighborhood Electric Vehicle: California Vehicle Code Division 1 VEH Section 385.5; 49 CFR 571.500 (as it existed on July 1, 2000)

New Motor Vehicle: California Health and Safety Code § 39042 (incorporated by reference at 13 CCR 1900(a)); 5 Colo. Code Regs. 1001-24.A.II.S; 20.2.91.101.A NMAC; 6 CRR-NY 218-1.2(ah)

Near-zero-emission vehicle: 13 CCR 1963(c)

Passenger Car: 13 CCR 1900(b)(17)

Person: 5 Colo. Code Regs. 1001-24.A.II.V

Plug-In Hybrid Electric Vehicle: 13 CCR 1971.1(c)

Ultimate Purchaser: California Health and Safety Code § 39055.5 (incorporated by reference at 13 CCR 1900(a)); 5 Colo. Code Regs. 1001-24.A.II.Y; 6 CRR-NY 218-1.2(aw)

Used Motor Vehicle: 5 Colo. Code Regs. 1001-24.A.II.Z

Zero Emission Vehicle: 13 CCR 1962.4(b); 13 CCR 1963(b)(21); 5 Colo. Code Regs. 1001-24.A.II.AA

19. This Section does not indicate that the definitions in California's regulations apply to Part 242, even though California's 13 California Code of Regulations ("CCR") Sec. 1900, titled "Definitions," is incorporated by reference in proposed Section 242.103, and proposed Section 242.110 requires compliance with Sec. 1900 (among other provisions). Other provisions in California's regulations that are incorporated by reference also contain definitions. Please clarify whether the definitions in 13 CCR Sec. 1900 and other California regulations being incorporated by reference apply to Part 242. If they do, please clarify how the definitions set forth in proposed Section 242.102 should be reconciled with those in California's regulations, particularly any proposed definitions that differ from California's regulations.

Pre-Filed Answer: The definitions included in 13 CCR 1900 and in other CARB regulations incorporated by reference apply to Part 242. As noted in the response to question 18 above, the definitions in Section 242.102 are intended to supplement the CARB regulations incorporated by reference, for example by defining key terms that appear in the text of the proposed rules or that are not otherwise defined in CARB's regulations, and by providing Illinois-specific definitions where appropriate. In the small number of cases where the proposed definitions substantively differ from California's regulations, the differences generally relate to providing Illinois-specific definitions or applying existing definitions to Illinois contexts. Rule Proponents do not intend to include definitions in Section 242.102 that conflict with definitions incorporated by reference, so it is not necessary to reconcile the definitions.

Section 242.104 Prohibition

20. As noted in the Agency's questions regarding Section 242.101, the Agency cannot locate in the rule proposal discussion of the proposed provisions in this Section and in Subpart A in general. This Section purports to make it unlawful for "any person to sell or register, offer for sale or lease, deliver, import, purchase, or lease a new motor vehicle" unless the vehicle has been certified to California's emission standards and meets other applicable requirements. "Person" is defined as "any individual or entity."

On its face, this Section applies to any individual person or business entity who sells, purchases, leases, delivers, or registers with the Secretary of State a non-compliant vehicle (subject to applicable exemptions). This Section would arguably make it unlawful for individuals and entities to purchase or lease non-compliant vehicles both inside and outside of Illinois, even in other states where the sale/lease of such vehicles is lawful, and it would prohibit such individuals and entities from then registering the vehicles in Illinois. It also restricts vehicle dealerships, vehicle importers, and potentially others including entities that transport/deliver vehicles.

- **a.** Please identify the specific provision(s) in California's regulations that this Section is based upon, including the specific provision(s) in California's regulations that restrict individuals and entities other than vehicle manufacturers

from selling, purchasing, leasing, delivering, importing, or registering a non-compliant vehicle. Please clarify whether such regulations fall under a waiver that USEPA has issued to California or that is currently under consideration by USEPA. If any portion of this Section is not identical to California's regulations, please identify the language and its origin and describe its purpose and effect.

Pre-Filed Answer: As noted in the response to the Agency's questions regarding Section 242.101, the proposed rules include provisions that apply to activities like sales and registrations of new vehicles in Illinois, which may not be expressly covered by California regulations, in order to ensure that the proposed rules apply to Illinois rather than California, and that they cannot be easily circumvented. However, manufacturers remain the entities that have compliance obligations under the proposed rules. For example, Section 242.104 prevents vehicles that have not been certified to California emission standards from being registered in Illinois, but it does not place any compliance obligation for certifying vehicles to the California standards on persons other than vehicle manufacturers, who are subject to the credit retirement requirements in the incorporated California regulations. Other states that have adopted the ACC II, ACT, and Low NOx rules have included similar provisions to achieve these purposes. A separate USEPA waiver is not required to prohibit any person from selling, registering, offering for sale or lease, delivering, importing, purchasing, or leasing a new motor vehicle that is not certified to the California emission standards. The waiver requirement only applies to the emission standards themselves, and not the mechanisms by which those standards are enforced.

b. Please identify the portions of the rule proposal, if any, that discuss the provisions in this Section and that identify the categories of entities and individuals impacted. If the rule proposal does not contain it, please provide this information.

Pre-Filed Answer: The Statement of Reasons offered in support of the rulemaking proposal does not specifically discuss the language in Section 242.104, although it includes some general discussion of the categories of entities and individuals impacted, as noted above in IEPA question #15. The text of Section 242.104 describes the range of actions prohibited by that section. The categories of entities and individuals that are, in some sense, "impacted" by the prohibition include any entities and persons who might conduct these actions, such as auto dealers and persons registering new vehicles with the Secretary of State. However, as noted in the response to part (a) above, manufacturers remain the only entities with compliance obligations to certify vehicles to California standards under the proposed rules.

c. Has any outreach been conducted to individuals and entities that would be subject to this Section? If so, please describe the outreach and the information that was obtained.

Pre-Filed Answer: Rule Proponents have conducted outreach to electric vehicle manufacturers like Lion and Rivian to discuss the rulemaking at the Pollution Control

Board. Rule Proponents have conducted outreach to multiple trade associations and industry groups that represent certain manufacturers, charging infrastructure builders and operators, and logistics companies. This includes the Electrification Coalition, Advanced Energy United, CALSTART, Ceres, and Environmental Entrepreneurs (E2). Those individuals and entities were notified of the rulemaking and encouraged to provide public comment, but we cannot speak to the decisions of those entities or individuals to provide comment or testimony in this process. It should be noted that many of the groups listed above have previously expressed public support for Illinois (or other states broadly) adopting the Advanced Clean Trucks and Low NOx rules.[24]

Additionally, it should be noted that a subset of Rule Proponent groups (NRDC, RHA, LVEJO) met briefly in the spring of 2024 with the Illinois Trucking Association, ABATE of Illinois, the Illinois Farm Bureau, Chambers of Commerce, Illinois Manufacturers Association, Illinois Automobile Dealers, and others to discuss the standards.

Rule Proponents expect this rulemaking proceeding to offer a forum for interested stakeholders, including entities subject to this Section, to provide input on the proposed rules.

d. Similarly, has any analysis been undertaken of the impact that this provision could have on individuals and other entities? If so, please describe the analysis and the results.

Pre-Filed Answer: This provision helps operationalize the proposed rules by prohibiting actions that are inconsistent with the California emission standards. The Statement of Reasons thoroughly discusses the impact of operationalizing these standards on individuals and entities in Illinois, including expected impacts on air quality, health, climate, vehicle purchase prices, fuel and maintenance costs, ZEV availability, utility rates, and job growth. As for this provision's specific impacts on individuals and entities that are prohibited from taking certain actions, those impacts are expected to be minimal: manufacturers have compliance obligations to certify vehicles to California emission standards, and the vehicles that they make available for other individuals and entities to sell, register, etc. in Illinois are expected to meet those obligations.

e. Please comment on whether the Board may legally prohibit actions taken by Illinois citizens and entities in other states (such as purchasing a vehicle), particularly other states where such actions are lawful. Please explain the reasoning and identify any applicable legal authority.

[24] Letter to Gov. Pritzker Re: Support of ACT and HDO Rules, (Dec. 15, 2022), https://electrificationcoalition.org/wp-content/uploads/2022/12/IL-MHD-Action-Plan-Business-Letter-12-15-22-22.pdf; Advanced Energy United, *Illinois Clean Fleets*, https://advancedenergyunited.org/illinois-clean-fleets; Kabir Nadkarni, *Zero-Emission Trucks: A Major Opportunity in Equipment Financing*, (Sept. 2024), https://calstart.org/wp-content/uploads/2024/09/Zero-Emission-Trucks-A-Major-Opportunity-in-Equipment-Financing_Final.pdf; Ceres Post on X Re: Support of ACT Rule, (June 27, 2024), https://x.com/CeresNews/status/1806400393360117775.

Pre-Filed Answer: The Proposed Rules do not prohibit the purchase of a vehicle in another state. Rather they prohibit the delivery, importation, registration, etc. of a new vehicle in Illinois, regardless of where purchased, if that vehicle does not meet the ACC II regulations. *See*, for example, Section 241.101(c), which specifies that Part 242 applies throughout the State of Illinois.

f. Please also comment on whether the Board may legally prohibit Illinois citizens and entities from registering in Illinois certain vehicles, whether purchased inside or outside of Illinois. Please explain the reasoning and identify any applicable legal authority.

Pre-Filed Answer: The proposed rule simply adds one item to the set of items that must be supplied to the Secretary of State in order to register a vehicle. Registrants already must provide proof of identity, proof of residence, the vehicle title, proof of insurance, an odometer disclosure and a sales tax receipt if the vehicle was purchased out of state. Under the proposed rule they would also need to provide proof that the vehicle meets California regulations, which is supplied by the dealer who sold the vehicle. This process has been used for years without difficulty or legal challenge in California and in the other states that have adopted the California regulations.

g. The Agency cannot identify any provisions in the proposed rule that establish recordkeeping or reporting obligations for individuals and business entities purchasing or leasing vehicles and other entities such as vehicle dealerships, importers, and vehicle delivery services that would be subject to this Section. How do Rule Proponents anticipate that the Illinois EPA will learn that a transaction subject to this Section took place and then determine compliance, such that the Illinois EPA could practically enforce this Section against persons subject to it?

Pre-Filed Answer: As noted above, the regulated parties with primary compliance obligations are manufacturers, so IEPA will not necessarily need to focus on learning about particular transactions subject to this Section and determining compliance at the point of individual transactions. Instead, this provision is intended to help provide a mechanism for preventing registration of noncompliant vehicles in Illinois, should IEPA determine that, for example, a manufacturer is failing to meet its obligations to certify vehicles to the California emission standards. Nevertheless, various inspection, recordkeeping, and reporting requirements in the proposed rules and in regulations incorporated by reference can provide IEPA with insights into transactions subject to this Section. For example, for ACC II, the regulated parties are vehicle manufacturers. Manufacturers must provide information to the state upon request as specified in the Reporting Requirements sections of the proposed ACC II rule. That information will cover dealerships, importers, delivery services and other entities that obtain vehicles from the manufacturer. Individuals and business entities that register new vehicles in Illinois

must provide the Secretary of State with documentation that the vehicle meets California requirements, which is provided by the manufacturer via the selling dealer.

Section 242.105 Exemptions

21. The Agency cannot locate in California's regulations several of the exemptions proposed in this Section, and cannot locate any discussion of the exemptions in the rule proposal. Many appear unrelated to California's clean vehicle standards applicable to manufacturers who offer model year 2028 and later vehicles for sale or lease, set forth in the proposed rule in Subparts B, C, D, and E. In other words, they do not appear to create exemptions to California's regulations. They instead appear related to the provisions in Subpart A of the proposed rule applicable to individuals and others purchasing/leasing/selling/delivering/importing vehicles (see Sections 242.101 and 242.104).

a. Please identify the specific provision(s) in California's regulations that each exemption in this Section is based upon. Please also clarify whether such regulations fall under a waiver that USEPA has issued to California or that is currently under consideration by USEPA. If there are any exemptions that do not appear in California's regulations or that are not identical to California's regulations, please identify each such exemption, describe its origin, and explain the purpose and effect of the exemption.

Pre-Filed Answer: The exemptions in Section 242.105 are generally based upon similar provisions included in the regulatory enactments of other states that have adopted the ACC II, ACT, and Low NOx rules. These exemptions apply to the California emission standards incorporated by reference as well as the other provisions of Part 242, including Subpart A. The exemptions are either included in the California regulations or fall outside the scope of the Clean Air Act's waiver and identicality requirements and therefore do not require a waiver. Rule Proponents are not aware of any legal challenges to the exemptions that have been created by any state that has adopted California emission standards, related to waiver or identicality issues or otherwise. Below is a non-exhaustive list of examples of other states' regulations that contain exemptions similar to those found in each subsection of Section 242.105.

242.105(a): 13 CCR 1962.4(b); 13 CCR 1963(b), (c)(19); 20.2.91.103.C NMAC; 5 Colo. Code Regs. 1001-24.B.I.B.6; OAR 340-257-0060(3). (Note also that 42 USC §§ 7543 and 7507 apply specifically to new motor vehicles, so the waiver and identicality requirements do not apply to regulation of used vehicles.)

242.105(b): 20.2.91.103.L NMAC; 5 Colo. Code Regs. 1001-24.B.I.A.1.

242.105(c): 20.2.91.103.B NMAC; 5 Colo. Code Regs. 1001-24.B.I.A.1; OAR 340-257-0060(2).

242.105(d): 5 Colo. Code Regs. 1001-24.B.I.A.1.

242.105(e): 20.2.91.103.G NMAC; 5 Colo. Code Regs. 1001-24.B.I.B.1; OAR 340-257-0060(9).

242.105(f): 20.2.91.103.E NMAC; 5 Colo. Code Regs. 1001-24.B.I.B.2; OAR 340-257-0060(7).

242.105(g): 20.2.91.103.E NMAC; 5 Colo. Code Regs. 1001-24.B.I.B.3; OAR 340-257-0060(7).

242.105(h): 5 Colo. Code Regs. 1001-24.B.I.B.4.

242.105(i): 20.2.91.103.I NMAC; 5 Colo. Code Regs. 1001-24.B.I.B.4; OAR 340-257-0060(5).

242.105(j): 20.2.91.103.D NMAC; 5 Colo. Code Regs. 1001-24.B.I.A.1; OAR 340-257-0060(4).

242.105(k): 13 CCR 1963(c)(11); 20.2.91.103.N NMAC; 5 Colo. Code Regs. 1001-24.E.II.B.2.

242.105(*l*): 20.2.91.103.F NMAC; 5 Colo. Code Regs. 1001-24.B.I.B.7; OAR 340-257-0060(8).

242.105(m): 20.2.91.103.A NMAC; 5 Colo. Code Regs. 1001-24.B.I.B.8; OAR 340-257-0060(1).

b. Please identify the portions of the rule proposal, if any, that discuss the exemptions in this Section.

Pre-Filed Answer: The Statement of Reasons offered in support of the rulemaking proposal does not specifically discuss the exemptions in Section 242.105. See the response to part (a) above for a discussion of these exemptions and their origins.

c. Please clarify which exemptions, if any, regard the three California clean vehicle standards, addressed in Subparts B, C, D, and E of the proposed rule.

Pre-Filed Answer: All of the exemptions apply to Part 242, including Subparts B, C, D, and E. See the responses to part (a) and other IEPA questions above for a discussion of the relationship between Subpart A and the other Subparts of the proposed rules.

d. The Agency has not identified any provisions in the proposed rule that establish recordkeeping or reporting obligations for individuals and business entities purchasing or leasing vehicles and entities such as vehicle dealerships and importers who want to claim that a transaction falls under one of these exemptions. How do Rule Proponents anticipate that the Illinois EPA will ascertain that a transaction took place and assess whether it falls under one of these exemptions, such that the Illinois EPA could practically enforce these provisions?

Pre-Filed Answer: Please see the response to IEPA question #20(g) above. Additionally, individuals and entities subject to this Part may present evidence that a transaction falls under one of these exemptions to IEPA and other state agencies to demonstrate that the transaction is not subject to a requirement or prohibition of this Part. For example, an individual or entity seeking to register a vehicle that falls under one of these exemptions could present evidence that the exemption applies when submitting registration materials to the Secretary of State.

22. In subsection (d), what does "off-highway" mean?

Pre-Filed Answer: The term "off-highway" is not generally defined in California's emission standards or in the regulatory enactments of other states that have adopted the ACC II, ACT, and Low NOx rules, to Rule Proponents' knowledge. In the absence of an express regulatory definition, terms used in regulations are given their ordinary meanings or technical meanings as appropriate, and interpreted in the contexts in which they appear. In subsection (d), the term "off-highway" generally refers to use of a vehicle for applications other than use on the roads and highways of the State of Illinois, such as construction equipment, agricultural equipment, forklifts, etc.

23. In subsection (j), what does "rental agency" mean?

Pre-Filed Answer: The term "rental agency" is not generally defined in California's emission standards or in the regulatory enactments of other states that have adopted the ACC II, ACT, and Low NOx rules, to Rule Proponents' knowledge. In the absence of an express regulatory definition, terms used in regulations are given their ordinary meanings or technical meanings as appropriate, and interpreted in the contexts in which they appear. In subsection (j), the term "rental agency" generally refers to a business that rents motor vehicles to consumers in the State of Illinois.

24. Please identify the proposed rule provision(s) that, absent the exemption in subsection (j), would impact "rental agencies" in Illinois with regard to vehicle rental transactions.

Pre-Filed Answer: The proposed rule provisions that affect the types of vehicles that may be purchased and registered in Illinois, such as Section 242.104, will generally affect rental agencies when they purchase and register vehicles for use in their business, except where subsection (j) or another exemption applies. The proposed rules also include inspection and recordkeeping requirements that apply to rental agencies, including those found in Section 242.132.

Section 242.106 Enforcement

25. This Section is titled "Enforcement", however, in the Table of Contents it is titled "Civil Penalties". Which title is accurate?

Pre-Filed Answer: The proposed text has been amended in the attached updated proposed rule language to make the Table of Contents consistent with the title included in Section 242.106.

26. Subsection (a) provides as follows: "A person who violates any provision of this Part shall be subject to civil penalties in accordance with Section 42 of the Environmental Protection Act (415 ILCS 5/42)." However, the California regulations incorporated by reference include their own enforcement processes. For example, 13 CCR 1962.4(m) provides for an enforcement process involving an Executive Officer imposing civil penalties set by the California Health and Safety Code. How do the Rule Proponents intend for subsection (a) to be harmonized with conflicting enforcement provisions in California regulations incorporated by reference?

Pre-Filed Answer: The enforcement provisions in subsection (a), which subject any person who violates any provision of Part 242 to civil penalties in accordance with 415 ILCS 5/42, do not conflict with the enforcement provisions in California regulations incorporated by reference, which generally establish what constitutes a violation of the California emission standards. For example, 13 CCR 1962.4(m) establishes that actions such as submitting incorrect information or failing to make up a ZEV deficit constitute violations. Any person who commits violations as set forth in 13 CCR 1962.4(m) is subject to civil penalties pursuant to Section 242.106(a). These civil penalties for violations of the proposed Illinois regulations that occur in Illinois are separate from, and in addition to, any civil penalties issued pursuant to California law for violations of California regulations that occur in California. To the extent that California regulations incorporated by reference provide for California's issuance of civil penalties under the California Health and Safety Code, Illinois is not in a position to enforce those provisions, and will instead enforce the civil penalty provisions included in Section 242.106 in accordance with 415 ILCS 5/42. Other states that have adopted California

emission standards have included their own state-specific enforcement provisions, and these enforcement provisions have not created issues in those states to Rule Proponents' knowledge. *See*, for example, 5 Colo. Code Regs. 1001-24.D.VI.A, 1001-24.D.VI.B.3, 1001-24.F.VI.B, 1001-24.H (adopting 13 CCR 1962.4 by reference); 20.2.91.117 NMAC; OAR 340-257-0055; 6 NYCRR 218-3.3.

27. Subsection (c) provides as follows: "Each instance or day of violation of any provision of this Part shall be considered a separate violation." Please explain how this provision is consistent with Section 42(a) of the Act.

Pre-Filed Answer: The proposed text has been amended in the attached updated proposed rule language to clarify the application of 415 ILCS 5/42(a) to ongoing violations.

Section 242.108 Effective Date

28. This Section indicates, "this Part becomes effective when filed." Does "filed" mean when the adopted rule is filed with the Secretary of State?

Pre-Filed Answer: Yes; The Illinois Administrative Procedure Act requires that the "agency shall file in the office of the Secretary of State and in the agency"s principal office a certified copy of each rule and modification or repeal of any rule adopted by it." 5 ILCS 100/5-65(a). "Filed" means "filed with the Secretary of State pursuant to 5 ILCS 100/5-65(a)." Under the Illinois Administrative Procedure Act, rules adopted pursuant to an agency's general rulemaking authority become "effective upon filing unless a later effective date is required by statute or is specified in the rulemaking." 5 ILCS 100/5-40(d).

SUBPART B: LOW EMISSION VEHICLE REGULATION

Section 242.112 Certification Testing

29. Subsection (d) (which should be subsection (a)) requires that "[a]ssembly-line quality audit emission testing and reporting shall be performed" but does not elaborate regarding what such testing and reporting must entail. Also, the phrase "assembly-line quality audit emission testing" does not appear in California's regulations.

a. If this provision is intended to require compliance with California regulations that set forth assembly-line quality audit emission testing and reporting requirements, please identify those specific regulations.

Pre-Filed Answer: CARB's regulations provide for assembly-line testing and reporting. CARB performs this testing as part of its process for certifying vehicles to its emission standards. *See*, for example, 13 CCR 1961.4, 13 CCR 2062, and 13 CCR 2065 (incorporated by reference at Section 242.103). This subsection does not create any responsibility for Illinois agencies to perform additional assembly-line testing separate from the testing performed by CARB as part of its certification process. This section is based upon similar regulatory enactments by other states that have adopted California vehicle emission standards. *See*, for example, 5 Colo. Code Regs. 1001-24.B.II.A.; 6 NYCRR 218-5.1.

The subsection numbers throughout Section 242.112 have been corrected in the attached updated proposed rule language.

b. Otherwise, please clarify what such testing and reporting must entail.

Pre-Filed Answer: See response to part (a) above.

30. Subsection (e) (which should be subsection (b)) requires that manufacturers "comply with all applicable California Assembly Line and In-Use requirements." Please specify the California regulations that manufacturers must comply with under this subsection.

Pre-Filed Answer: See response to question 29(a) above.

31. Subsection (f) (which should be subsection (c)) requires that the Agency accept the results of "quality audit testing and inspection testing determinations and findings made by CARB to demonstrate compliance." The phrases "quality audit testing" and "inspection testing" do not appear in California's regulations. Please specify the California regulations that regard the determinations and findings being referenced in this subsection.

Pre-Filed Answer: *See* response to question 29(a) above. By accepting CARB's certification of vehicles to the applicable standards as provided, for example, in Sections 242.104, 242.110, 242.121, 242.130, and 242.140, the Agency will accept the results of CARB's testing determinations insofar as those determinations form part of CARB's certification process.

32. Subsection (g) (which should be subsection (d)) indicates that [r]emedial action plans . . . are required." The phrase "remedial action plan" does not appear in California's regulations. Please identify the California regulations governing remedial action plans as that phrase is used in this subsection.

Pre-Filed Answer: This subsection is based upon similar regulatory enactments of other states that have adopted California emission standards. *See*, for example, 5 Colo. Code Regs. 1001-24.B.II.B.; 6 NYCRR 218-5.2. California's provisions for remedial action plans are set forth in 13 CCR 2109, and applied to heavy-duty engines and vehicles in 13 CCR 2065. The phrase "remedial action plan" is a shorthand term for a manufacturer's plan to bring all vehicles into compliance as set forth in 13 CCR 2109. While this phrase does not appear in 13 CCR 2109, that term is used to describe the same type of plans in other California regulations, including 13 CCR 1968.5 and 13 CCR 1971.5, and it is generally understood to refer to the type of plan contemplated by 13 CCR 2109, as evidenced by the use of this phrase in the Colorado and New York provisions cited above. If IEPA proposes amendments that add a definition for "remedial action plan" or use a different term in Section 242.112, Rule Proponents would not object to this change.

33. If subsection (g) regards the plans addressed in Section 2109 of California's regulations, please explain what is meant by the statement, "Remedial action plans are required." Section 2109 regards plans to bring noncompliant vehicles into compliance, including vehicle recall provisions, but such plans do not appear to be required absent circumstances that indicate noncompliance.

Pre-Filed Answer: As noted in the response to question 32 above, the language of this subsection is based upon regulatory language used by other states, particularly 5 Colo. Code Regs. 1001-24.B.II.B. The intent is to apply the requirements governing remedial action plans set forth in 13 CCR 2109 to vehicles intended for sale in Illinois. If IEPA proposes amendments that clarify the circumstances in which a remedial action plan is required, consistent with 13 CCR 2109, Rule Proponents would not object to this change.

34. Subsection (g) provides, "If the State of California requires a remedial action plan based upon full calendar or partial calendar quarter testing pursuant to [Section 2109], such plan will apply to all vehicles . . . intended for sale in Illinois. Such plan will not apply to vehicles that have previously been sold to ultimate purchasers in Illinois."

a. Section 2109 does not discuss "full calendar or partial calendar quarter testing." Please identify the provision(s) in California's regulations that regard the testing referenced in this Section.

Pre-Filed Answer: As noted in the response to question 32 above, the language of this subsection is based upon regulatory language used by other states. The referenced language reflects the fact that CARB can conduct testing to determine compliance

quarterly or annually. The key element of this subsection is not the cadence of CARB testing, but whether California requires a remedial action plan pursuant to 13 CCR 2109. If IEPA proposes amendments to strike the reference to full calendar or partial calendar quarter testing, Rule Proponents would not object to this change.

b. Please identify the provision(s) in California regulations, if any, that indicate that remedial action plans do not apply to vehicles previously sold to ultimate purchasers. If not based on California's regulations, please explain the purpose and effect of this provision.

Pre-Filed Answer: As noted in the response to question 32 above, the language of this subsection is based upon regulatory language used by other states. The intent of this provision is to ensure that remedial action plans do not apply to vehicles that, on the effective date of the proposed rules, have already been sold to ultimate purchasers in Illinois. If IEPA proposes amendments to clarify or strike this language, Rule Proponents would not object to this change.

Section 242.113 Reporting Requirements

35. Subsection (c) requires manufacturers to submit, upon request by the Agency, "reports on all assembly-line emission testing and functional test results collected during compliance with this Subpart B and [13 CCR 2062]." California regulation Section 2062 does not reference reports or "functional tests." Please explain what the reports required by this Section must contain, and what is meant by "functional test."

Pre-Filed Answer: This subsection is based upon similar regulatory enactments of other states that have adopted California emission standards. *See*, for example, 5 Colo. Code Regs. 1001-24.B.IV.C.; 6 NYCRR 218-5.1. This subsection requires a manufacturer, upon request by the Agency, to provide reports on any assembly-line and functional emissions testing that are conducted in the course of determining compliance with Subpart B and 13 CCR 2062, regardless of whether those test results are required to be reported under other provisions. The subsection is intended to facilitate verification of a manufacturer's compliance by the Agency if such verification becomes appropriate and necessary.

Section 242.114 Inspection and Access to Records

36. Please specify the California regulations, if any, that the provisions in subsections (a) and (b) are based upon.

Pre-Filed Answer: These subsections are based upon similar regulatory enactments of other states that have adopted California emission standards. *See*, for example, 5 Colo.

Code Regs. 1001-24.B.IV.C, 1001-24.E.V.A; 20.2.91.115 NMAC; 6 NYCRR 218-5.3, 218-5.4; OAR 340-257-0150.

37. In subsection (a), both the Agency and the Illinois Secretary of State are authorized to "conduct inspections and surveillance of 2028 and subsequent model year motor vehicles for the purposes of determining compliance with and enforcing this Subpart B."

a. Please explain the basis for Rule Proponents' position that the Illinois Secretary of State is an appropriate entity to determine compliance with and enforce this regulation if adopted by the Board. Please include in the discussion any statutory authority the Illinois Secretary of State possesses to enforce Board regulations.

Pre-Filed Answer: As the official responsible for registration of motor vehicles in Illinois, the Secretary of State plays a role in ensuring that noncompliant vehicles are not registered in violation of Section 242.104. The Secretary of State is authorized to determine the genuineness, regularity, and legality of every application for registration of a vehicle and make investigation and verify the information submitted, pursuant to 625 ILCS 5/2-110. *See* also 625 ILCS 5/3-405(a)(4) (authorizing the Secretary of State to request in an application for registration of a motor vehicle such information "as may reasonably be required by the Secretary to enable him to determine whether the vehicle is lawfully entitled to registration and the owner entitled to a certificate of title"). The purpose of subsection (a) is to facilitate any necessary investigations by the Secretary of State to determine whether vehicles for which registration is sought comply with Subpart B.

b. The proposed rule does not require that any information be reported to the Illinois Secretary of State. How do Rule Proponents anticipate that the Illinois Secretary of State will have sufficient information to determine compliance with Subpart B?

Pre-Filed Answer: *See* response to part (a) above. As noted in the response to IEPA question #20 above, primary responsibility for complying with the proposed rules lies with vehicle manufacturers, and primary responsibility for determining and ensuring compliance lies with IEPA, relying in part on certification determinations made by CARB. The Secretary of State's role in ensuring compliance with Subpart B relates to the Secretary's responsibility for registration of motor vehicles in Illinois. The Secretary has various means of ensuring that vehicles registered in Illinois comply with Subpart B, including 625 ILCS 5/3-405(a)(4), which authorizes the Secretary of State to request in an application for registration of a motor vehicle such information "as may reasonably be required by the Secretary to enable him to determine whether the vehicle is lawfully entitled to registration and the owner entitled to a certificate of title").

38. Subsection (c) requires that "[a]ny person subject to this Subpart B must, upon oral or written request by [the Agency] furnish or permit access to all records relating to those

vehicles subject to regulation." Subsection (d) requires that "[a]ny person subject to this Subpart B" must retain records for a certain amount of time. It is unclear to the Agency who is considered a "person subject to this Subpart B," particularly as most of the provisions in Subpart B specifically reference only vehicle manufacturers, while Section 242.114(c) and (d) use the broader term "any person." This Section allows inspections to take place at car dealerships, but otherwise does not appear to place any affirmative requirements on dealerships or any other entity. Please clarify what categories of persons are intended to be "subject to this Subpart B."

Pre-Filed Answer: Persons subject to Subpart B primarily include vehicle manufacturers, and also include car dealers, which must allow inspections and vehicle testing as provided in subsection (b). This subsection is based upon similar regulatory enactments of other states that have adopted California emission standards. *See*, for example, 5 Colo. Code Regs. 1001-24.B.V.B.1; 6 NYCRR 218-2.3(b); 20.2.91.115.B NMAC.

39. In subsection (d), what is meant by "all relevant records"?

Pre-Filed Answer: Relevant records are any records that are relevant to determining compliance with Subpart B. This subsection is based upon similar regulatory enactments of other states that have adopted California emission standards. *See*, for example, 5 Colo. Code Regs. 1001-24.B.V.B.2.; 6 NYCRR 218-2.3(c); 20.2.91.116 NMAC.

SUBPART C: ZERO EMISSION VEHICLE REGULATION

Section 242.121 ZEV Standard

40. Reference is made to CCR, Title 13, Section 1692.6; should it be Section 1962.6?

Pre-Filed Answer: Yes. The proposed text has been amended accordingly in the attached updated proposed rule language.

Section 242.122 Annual ZEV Requirements

41. Some other states have adopted the California ZEV requirements through model year 2032. Are Rule Proponents amenable to such a modification to the proposed rule?

Pre-Filed Answer: No. The record in this rulemaking, including ERM's analysis of rule adoption scenarios, supports adoption of the ACC II rule for all model year 2029 and

subsequent vehicles. The record establishes that adoption of the full ACC II rule is aligned with Illinois' climate goals and EV adoption targets, provides the greatest air quality and economic benefits, and can be feasibly implemented. A partial ACC II rule would provide fewer benefits and less certainty for Illinois' ZEV market.

Section 242.123 ZEV Credit Generation

42. Some other states have provided for an initial or one-time credit allotment to manufacturer's accounts for the first model year in addition to the voluntary early action/early compliance credits. Did the Rule Proponents consider such an allotment for the proposed rule? If yes, why was it not included in the proposed rule? If not, why not?

Pre-Filed Answer: Rule Proponents are open to including a one-time credit allotment based on the one-time allotments that some other states have provided for. Rule Proponents have not included such an allotment in the rule proposal due to our focus on adopting the underlying California standards and the complexities of developing and incorporating a one-time credit allotment into the rule proposal.

However, if IEPA proposes amendments to incorporate a one-time credit allotment, Rule Proponents would support such an amendment. A provision for a one-time credit allotment could be based upon 20.2.91.109.C NMAC as it existed prior to December 19, 2023.[25] Rule Proponents note that one-time vehicle values (which are based on ACC I vehicle values) must be converted to "Converted ZEV Values" (which are equivalent to ACC II vehicle values) using the procedure set forth in 13 CCR 1962.4(g)(2). A provision for a one-time credit allotment could potentially be added to Section 242.123 as a new subsection (d).

Additionally, Rule Proponents have proposed minor changes to Section 242.124(d) to expand the range of model years for which manufacturers may transfer ZEV and PHEV values earned in Illinois, California or a Section 177 ZEV state to satisfy shortfalls or deficits in 20286 through 2030 model years earned in Illinois, California or a Section 177 ZEV state. The purpose of these changes is to facilitate smooth rule implementation by providing maximum flexibility, consistent with the underlying California regulations, with respect to the use of pooled ZEV and PHEV values between states.

[25] The text of this previous version of 20.2.91.109.C NMAC is available at https://www.srca.nm.gov/nmac/nmregister/xxxiii/20.2.91.html.

SUBPART D: HEAVY-DUTY LOW NOX REGULATION

Section 242.130 Requirement

43. Reference is made to CCR, Title 13, Section 2167.7; should this be Section 2169.7?

Pre-Filed Answer: Yes. The proposed text has been amended accordingly in the attached updated proposed rule language.

Section 242.131 Recalls

44. Section 242.131(c) references Section 242.133(a); however, there is no Section 242.133(a). Is reference to another Section intended? Also, please clarify what "order of enforcement action" means.

Pre-Filed Answer: The intended reference is to Section 242.131(a). The proposed text has been amended accordingly in the attached updated proposed rule language.

An order of enforcement action refers to an order issued to a manufacturer pursuant to 13 CCR 2109, 13 CCR 2123, or other order initiating a recall action pursuant to 13 CCR 2109 through 2135, as set forth in Section 242.131(a).

Section 242.132 Inspections and Information Requests

45. Please identify the California regulations, if any, that subsection (a) is based upon.

Pre-Filed Answer: Subsection (a) is based upon similar regulatory enactments of other states that have adopted California emission standards. See, for example, 5 Colo. Code Regs. 1001-24.E.V.A; OAR 340-257-0150.

SUBPART E: ADVANCED CLEAN TRUCKS REGULATION

Section 242.145 Enforcement

46. Rule Proponents indicate in their proposed rule under subsection (a) that any manufacturer that certifies certain on-road vehicles "for sale in Illinois is subject, by Illinois, to the enforcement provisions set forth in California Code of Regulations, Title 13, Section 1963.5."

a. Section 1963.5(a)(1) and (2) of California's regulations reference an "Executive Officer." What is the Illinois equivalent of an Executive Officer?

Pre-Filed Answer: The Air Resources Board has delegated many of the operational authorities to the Executive Officer, who directs the CARB. That includes enforcement, including recalls and penalties. Section 242.145 does not require an Illinois equivalent of CARB's Executive Officer to perform the functions identified in 13 CCR 1963.5(a)(1) and (2). Instead, Section 242.145 authorizes the Executive Officer to verify information reported to CARB, and to invalidate any ZEV or NZEV credits obtained based on false information. If any credits applied to Illinois vehicles are invalidated through this process, Section 242.145 provides for enforcement in Illinois of penalties for any resulting failure to meet credit and deficit requirements. If IEPA proposes an amendment that authorizes the Agency, in addition to CARB's Executive Officer, to audit records and invalidate credits based on false information as set forth in 13 CCR 1963.5(a)(1) and (2), Rule Proponents would not object to this change.

b. Section 1963.5(a)(4) regards civil penalties under California law for failure to retire an appropriate amount of ZEV or NZEV credits. Proposed Section 242.145(b), however, contains similar civil penalty language but governed by Illinois law. Please comment as to whether subsection (a) should be revised to clarify that the provisions of 13 CCR 1963.5(a)(4) are inapplicable, as civil penalties are governed by the Illinois Environmental Protection Act.

Pre-Filed Answer: *See* response to IEPA question #26 above. Rule Proponents do not believe any revision is necessary, because 13 CCR 1963.5(a)(4), by its terms, provides for the issuance of civil penalties in California, which Illinois is not in a position to enforce. The civil penalties for violations in Illinois, as set forth in Section 242.145(b), are separate from, and in addition to, any civil penalties issued pursuant to California law that are set forth in 13 CCR 1963.5(a)(4). Other states that have adopted California emission standards have included their own state-specific enforcement provisions, and these enforcement provisions have not created issues in those states to Rule Proponents' knowledge. *See*, for example, 5 Colo. Code Regs. 1001-24.F.VI. However, if IEPA proposes an amendment to clarify Illinois' and California's scope of authority to enforce violations in their respective states, Rule Proponents would not oppose this change.

47. Rule Proponents indicate in their rule proposal under subsection (b) that any manufacturer that fails to retire an appropriate amount of ZEV or NZEV credits as specified in Section 1963.3(c) and does not make up deficits within the specified time allowed by Section 1963.3(b) shall be subject to civil penalties contemplated by Illinois statutes and regulations applicable to a manufacturer who does not comply with emission standards or the test procedures adopted by the Board such as those in this Part 242. What is meant by civil penalties "contemplated" by Illinois statutes and regulations?

Pre-Filed Answer: Civil penalties "contemplated" by Illinois statutes and regulations are civil penalties under 415 ILCS § 5/42 for which "any person that violates any provision of…any regulation adopted by the Board" is liable.

48. Subsection (b) provides as follows: "For the purposes of 415 ILCS § 5/42, the number of noncompliant, violating vehicles shall be equal to one half of the manufacturer's outstanding deficit." Please explain how this provision is intended to be applied in the context of Section 42(a) of the Act.

Pre-Filed Answer: Section 42(a) of the Act provides for "a civil penalty of not to exceed $50,000 for the violation." Each "noncompliant, violating vehicle" would be considered a "violation" for purposes of Section 42(a). Therefore, the number of "violations" for purposes of applying Section 42(a) would be "equal to one half of the manufacturer's outstanding deficit." As discussed in the response to Pollution Control Board question #11 above, the ratio of one violation for every two credits of deficit is based on the number of deficits generated per vehicle under CARB's rules. For example, failing to produce a zero-emission Class 8 non-tractor would generate two deficits. Applying the ratio of one violation for every two deficits results in one violation per Class 8 ZEV not sold.

49. Section 42 of the Act provides that civil penalties should be set on a case-by-case basis, taking into account specified factors. *See* 415 ILCS 5/42(h). Do Rule Proponents intend that decision-makers should set civil penalties against manufacturers on a case-by-case basis? Is this approach consistent with California's program?

Pre-Filed Answer: Yes and yes. The Proposed Rules rely on and do not change the Act's preexisting civil penalty provisions, which impose a penalty maximum, in Section 42(a), and then considerations that might support setting final penalty amount beneath that ceiling on a case-by-case basis, in Section 42(h). This is similar to other states that have adopted California standards, such as Colorado, which has a statutory penalty scheme that also sets out a per-violation maximum penalty, followed by enumerated factors to determine the final civil penalty amount. *See* C.R.S. § 25-7-122(1) (per-violation maximum) & (2) (enumerated factors).

50. Why is an "Enforcement" provision included in Subpart E, but not in Subpart B, C, or D?

Pre-Filed Answer: This is a function of the differences between CARB's ACT rule, which includes a standalone enforcement section in 13 CCR 1963.5, and CARB's ACC II and Low NOx rules, which provide for enforcement by cross-reference to other provisions or in subsections of other sections, such as 13 CCR 1961.4(d)(1)(E)(1).

III. TRUCK AND ENGINE MANUFACTURERS ASSOCIATION ("TEMA") QUESTIONS

(Questions not specifically directed towards any expert):

1. Since CARB has committed under the Clean Trucks Partnership agreement to align its Omnibus low-NOx standards with EPA's low-NOx standards starting in the 2027 model year, what quantifiable incremental emissions and public health benefits will accrue in Illinois from implementing the identical Omnibus standards two years later in 2029?

Pre-Filed Answer: As stated at page 60 of Rule Proponents' Statement of Reasons, "As of the filing of this regulatory proposal, CARB has yet to take any action to align the Low NOx rule with EPA's Clean Truck program. If CARB does take action, Rule Proponents intend to update this proposal. If CARB does act to harmonize its standards with EPA's, adoption of the Low NOx rule would guard against federal backsliding and ensure Illinois can achieve necessary NOx emissions reductions."

As of the filing of these responses, CARB still has not issued a notice of any rulemaking to harmonize its standards with EPA's.[26] Accordingly, the estimates provided in the Statement of Reasons remain the best estimates of the incremental emissions and public health benefits expected from adopting the Low NOx rule in Illinois.[27] At this time, Rule Proponents cannot speculate about how a future rulemaking proposal from CARB would affect these estimated benefits.

2. Similar to Question #1, what is the quantifiable amount of marginal incremental emission reductions and health benefits that will accrue in Illinois if the ACT regulations are implemented in 2029, two years after the implementation of EPA's Phase 3 program in Illinois?

Pre-Filed Answer: As stated in the Joint Supplemental Testimony of Kathy Harris and Muhammed Patel, an Illinois ACT rule with a model year 2029 effective date would avoid up to 33 premature deaths, over 16,500 metric tons of NOx emissions, over 300 metric tons of $PM_{2.5}$, and 18 million metric tons of greenhouse gas emissions, yielding over $3.5 billion in cumulative net benefits by 2050.[28] These incremental benefits are measured relative to the federal standards finalized in April 2024, which include the Phase 3 heavy-duty GHG standards.[29]

[26] CARB, "Clean Truck Partnership Commitments – Status and Outcome," (last updated June 17, 2024), https://ww2.arb.ca.gov/clean-truck-partnership.
[27] Statement of Reasons at 60–61.
[28] Joint Supplemental Testimony of Kathy Harris and Muhammed Patel at 3–4. Due to a typographical error, this testimony stated that adopting the ACT rule starting in MY 2029 would avoid up to 35 premature deaths. The correct figure for a MY 2029 start date is 33 avoided premature deaths, as reflected in the spreadsheets reporting ERM's findings.
[29] Statement of Reasons at 12, n.16.

3. What will be the total costs in Illinois for the ZEV-truck recharging and hydrogen-refueling infrastructure required to implement the ACT regulations in Illinois? How do those total ZEV-truck infrastructure costs compare to the anticipated required infrastructure costs under EPA's Phase 3 regulations as implemented in Illinois?

Pre-Filed Answer: As shown in Exhibit 3 in the Statement of Reasons, beginning with MY 2029 adoption, cumulative investment need for public medium and heavy-duty vehicle charging will be $131 million by 2035. For depot charging, it is estimated at $92 million by 2035. It is important to note that these are cumulative investment numbers beginning in MY 2029 meaning that investment between now and 2029 will also work to contribute to the overall infrastructure needs.

Given that EPA's Phase 3 regulations do not contain state specific ZEV sales requirements, such as those in ACT, it is difficult to predict the specific infrastructure costs needed in Illinois. However, the baseline scenario for ERM's 2024 analysis includes the federal Phase 3 regulations, so the estimated number and cost of chargers in ERM's rule adoption scenarios represent the incremental charging need compared to the federal baseline. As part of Phase 3, EPA committed to working with US DOE and DOT to review charging needs as early as 2026.[30]

4. What is the timeline and pace of deployment for installing the ZEV-truck infrastructure in Illinois that would be required to implement the ACT regulations? How does that compare with the current pace of deployment of a MHD ZEV infrastructure in Illinois?

Pre-Filed Answer: The timeline and pace of deployment for installing infrastructure meant to support the implementation of the ACT rule differs depending on the makeup of depot or public charging. The cumulative expected charging ports needed for both depot and public charging based on the ERM report can be found in Exhibit 3 of the Statement of Reasons. For a MY 2029 adoption, ERM estimates that 77 public charging ports (75 500 kW ports and two 150 kW ports) will be needed in that MY to support implementation .

According to the Alternative Fuels Data Center, there are currently 39 public charging ports that support either medium or heavy-duty vehicles in Illinois.[31] That leaves 38 ports to be constructed before MY 2029, or approximately 10 ports a year.

[30] Yihao Xie, *U.S. EPA Phase 3 greenhouse gas emission standards for heavy-duty vehicles*, (Sept. 2024), https://theicct.org/wp-content/uploads/2024/09/ID-214-%E2%80%93-EPA-Phase-3-policy-update-letter-50097-v5.pdf.
[31] U.S. DOE, *Alternative Fueling Station Locator*, https://afdc.energy.gov/stations#/find/nearest.

5. What incentive funds are currently earmarked in Illinois for the purchase of MHD ZEV-trucks, and the development of the necessary ZEV-truck infrastructure, as would be necessitated under the ACT regulations? How does the total of the available incentive funding compare to the total anticipated costs of the ACT program?

Pre-Filed Answer: For a list and description of incentive funds that will support implementation of ACT, *see* the Statement of Reasons, section IV.b.iv.3. The incentives described will provide businesses and fleet owners with substantial support to comply with the measures in the ACT rule, but are not necessitated by the ACT rule itself. Businesses will be able to benefit from the cost savings associated with transitioning to ZEVs while using the incentives to reduce the up-front expenses of purchasing vehicles and chargers. Estimates on the total cost of charging infrastructure are a combination of public and private funding. Given the emphasis on depot charging for MHDVs, a significant portion of the investment needs will likely be covered by private entities. Therefore, comparing the total available incentives to the total anticipated charging costs of the ACT program is like comparing apples and oranges.

6. How do the purchase costs of MHD ZEV-trucks compare to the purchase costs of their conventionally-fueled counterparts, and how will those price differentials impact sales? What impacts will the FET have on the sales of higher-priced ZEV-truck products?

Pre-Filed Answer: Please see Tom Cackette's response to Alliance for Automotive Innovation prefiled questions #15a, 19, and 20, discussing current and projected MHD ZEV purchase prices. On average, the current purchase price of MHD ZEVs are larger than their diesel counterparts. However, ZEV purchase prices are projected to reach parity with combustion vehicles by 2030.

In terms of the impact of price differentials on sales, for certain vehicle classes, ZEVs already have a lower total cost of ownership. Total cost of ownership is a common evaluation tool businesses use to determine the value of purchasing a vehicle. For example, a light commercial truck bought today in Illinois and used for 15 years would save the owner approximately $39,000 in lifecycle vehicle costs when compared to a diesel vehicle.[32] Upfront purchase price differentials may impact a certain consumer's view, while other consumers may prefer using total cost of ownership as a deciding factor in purchasing.

The Federal Excise Tax, since it is based on total purchase price, will be higher for vehicles that cost more.

[32] Argonne National Laboratory, *AFLEET [Alternative Fuel Life-Cycle Environmental and Economic Transportation] Online*, https://afleet.es.anl.gov/afleet/.

7. How many MHD ZEV-trucks have been sold and registered in Illinois to date? How many MHD ZEV-truck recharging stations and ports are installed and operational in Illinois? How many ZEV-truck hydrogen-refueling stations are installed and operational in Illinois?

Pre-Filed Answer: According to CALSTART, as of May 2024, 1,363 MHD ZEVs have been deployed in Illinois.[33] According to the Alternative Fuels Data Center, there are currently 11 stations and 39 public charging ports that support either medium or heavy-duty vehicles in Illinois.[34] There are no hydrogen refueling ports for ZEVs according to the same source.

8. What impacts have the Omnibus and ACT regulations had on the MHD ZEV-truck markets, including with respect to the sales of new MHD ZEV-trucks, in California and the early opt-in states, which include Oregon and Massachusetts?

Pre-Filed Answer: In California, the ACT rule has led to a boost in the sale of new MHD ZEV-trucks, with manufacturer sales being 60% more than the MY 2024 requirements for the ACT rule.[35]

CARB noted in a recent memo that "product availability issues for the 2024 MY are not driven by the ACT regulation."[36] In the same memo, CARB noted shortages in California of Class 4-8 diesel heavy-duty vehicles, which were driven by a specific manufacturer that is dominant in the MHD sector. CARB concludes that "The sales projections used by some OEMs at the time of CTP (Clean Trucks Partnership) signing were inaccurate, underestimating the number of compliant engines they would sell. This has led to significantly fewer legacy engines being available." Rule Proponents believe that the delays in implementation for the states listed in this question are potentially due to misinformation and shifting of compliance burden from manufacturers.[37]

[33] Baha M. Al-Alawi and Jacob Richard, *Zeroing in on Zero-Emission Trucks: Market Update*, (May 2024), https://calstart.org/wp-content/uploads/2024/05/ZIO-ZET-May-2024-Market-Update_Final.pdf.
[34] U.S. DOE, *Alternative Fueling Station Locator*, https://afdc.energy.gov/stations#/find/nearest.
[35] CARB, *Advanced Clean Trucks Compliance and Incentives Update*, https://ww2.arb.ca.gov/resources/documents/advanced-clean-trucks-compliance-and-incentives-update.
[36] CARB, ACT Memo Re: California Truck Availability Analysis, (Sept. 25, 2024), https://ww2.arb.ca.gov/sites/default/files/2024-09/240925_actmemo_ADA.pdf
[37] Dave Cooke, "Trucking Industry Disinformation Will Cost Lives," (Oct. 30, 2024), https://blog.ucsusa.org/dave-cooke/trucking-industry-disinformation-will-cost-lives/.

9. What studies have been completed and published that detail how the implementation of the ACT regulations in Illinois – including the 100% ZEV-truck sales mandate as of 2036 – will work?

Pre-Filed Answer: Section IV.B of the Statement of Reasons discusses studies of ACT adoption in Illinois, including ERM analyses attached as Exhibit 1 and Exhibit 3, and analysis by the International Council on Clean Transportation attached as Exhibit 5. Atlas Public Policy also published a study in June 2024 that outlines the public charging infrastructure needs to support adoption of ACT in Illinois.[38] These studies do not address implementation of a 100% sales requirement starting in model year 2036, which was not part of the ACT rule when it was originally enacted.

Rule Proponents do not propose that Illinois adopt the 100% MHDV ZEV sales requirement for model years 2036 and later at this time. Rule Proponents have not analyzed the expected effects of adopting this requirement. The proposed text has been amended in the attached updated proposed rule language to clarify that Rule Proponents propose to adopt the ACT rule for model years 2029 through 2035. Under this proposal, Illinois would revert to federal MHDV emission standards after model year 2035. Because MHDV ZEV sales are unlikely to substantially decline after reaching the level of market penetration required by ACT in model year 2035, Rule Proponents' analysis projecting that ZEV sales percentages will remain constant after model year 2036 remains a reasonable expectation under a scenario where Illinois reverts to the federal standards. Adopting ACT through model year 2035 will give the Board, IEPA, and stakeholders several years to evaluate whether it is appropriate to propose and adopt amendments applying ACT to subsequent model years.

10. Is the adoption of California's ACT mandates for the increasing sales of ZEV trucks – mandates that will reach 100% by 2036 – the type of "major question" that should be specifically addressed by the Illinois Legislature as opposed to the IPCB in response to a petition for rulemaking?

Pre-Filed Answer: The Board has clear statutory authority to adopt the proposed rules, as stated in the Board's November 7, 2024 order denying the motions to dismiss the rulemaking petition. Moreover, as noted in the response to question #9 above, the proposed rules do not include the Advanced Clean Fleets rule's 100% sales requirement beginning in model year 2036.

[38] Lucy McKenzie and James Di Filippo, "Charging Infrastructure Needed to Support Advanced Clean Trucks in Illinois," (June 2024), https://library.edf.org/AssetLink/34rs2tc02xau5hnjcic3yg5j521v656u.pdf?_gl=1*sufv38*_gcl_au*MTUxMDc2NzI4MS4xNzMxNTQzNzcx*_ga*MTEzMzU5Nzk0MS4xNzMxNTQzNzcw*_ga_2B3856Y9QW*MTczMTU0Mzc3MC4xLjEuMTczMTU0Mzg0NC41Ny4wLjA.*_ga_Q5CTTQBJD8*MTczMTU0Mzc3MC4xLjEuMTczMTU0Mzg0NC41OC4wLjA.

IV. ILLINOIS AUTOMOBILE DEALERS ASSOCIATION ("IADA") QUESTIONS

(Questions not specifically directed towards any expert):

Impact on Energy Infrastructure and Grid Capacity:

1. What is the precise additional energy demand expected to be placed on Illinois' grid each year from when this Proposal would take effect through 2035 due to the ACC II rule, and how will this demand be met given Illinois' current energy infrastructure?

Pre-Filed Answer: Beginning with MY 2029 adoption, the ERM analysis in Exhibit 4 of the Statement of Reasons evaluates the MW incremental peak load from EV charging needed in 2030 and 2040. The analysis estimates 71 MW in 2030 and 1,345 MW in 2040 in the "ACC II FLEX" scenario, and 225 MW in 2030 and 1,466 MW in 2040 in the "ACC II FULL + Clean Grid" scenario.

There are a variety of ways this demand can be met with Illinois energy infrastructure. The grid is designed to have enough electricity to meet peak demand at any time, even if the peak demand occurs for only a few minutes a few times a year. If EV charging can be shifted to times and locations where capacity is available (i.e., off-peak times), it will minimize the amount of new electricity infrastructure that is needed, increase the utilization of assets that are already part of the system, and potentially result in lower electricity rates for all customers.[39]

2. What specific grid upgrades, including timelines and associated costs, are required to handle the massive increase of EVs mandated through the ACC II standards?

Pre-Filed Answer: The number of ZEVs on the road will gradually increase between now and 2050 due to the ACC II rule. In Exhibit 4, ERM estimates that only by 2037 will 50% of vehicles on the road be ZEVs, giving us a long timeline to begin upgrading the grid to meet the additional demand from ZEVs.

EVs pull their energy from the electricity grid, but the time of day that the charging occurs defines the cost and carbon content of its power and the impacts on the grid overall.[40] Over the last few years, Illinois utilities MidAmerican Energy Company and ComEd have introduced voluntary TOU rates for residential customers, and Ameren Illinois is now offering a residential credit program specifically for EVs that charge during off-peak periods. TOU rates, especially rates designed specifically for EVs, are beneficial for both utilities and customers. Since they can shift the majority of charging away from peak periods—and are highly successful at doing so— they can help reduce

[39] U.S. DOE Office of Electricity, *Planning Considerations for Electric Vehicles in Illinois*, (2022), https://www.transportationenergy.org/wp-content/uploads/2022/11/EV-DOE-Report_IL.pdf.
[40] Sarah Shenstone-Harris, et al., *Electric Vehicles Are Driving Rates Down for All Customers*, (Apr. 2024), https://www.synapse-energy.com/sites/default/files/Electric%20Vehicles%20Are%20Driving%20Rates%20Down%20for%20All%20Customer%20Illinois%20May%202024.pdf.

the costs of upgrading the grid while also increasing utility revenues, thereby helping to put downward pressure on rates for all. Please also refer to the Pre-Filed Answers of witness Urbaszewski on this point.

Predicting the specific grid upgrades, timelines, and associated costs required are therefore dependent on a variety of factors. We can assume transmission and generation costs, along with incremental capacity costs needed to support a certain number of EVs on the road in any given year, but those can vary based on the time of charging for the EVs on the road. ERM estimates these costs related to ACC II in Exhibit 4, please refer to page 148 in the Statement of Reasons.

It is important to note that for every year of the program, utility revenues outpace the costs, a historical trend that has been observed in Illinois and has resulted in putting downward pressure on electricity rates for all customers (see figure below from Synapse).

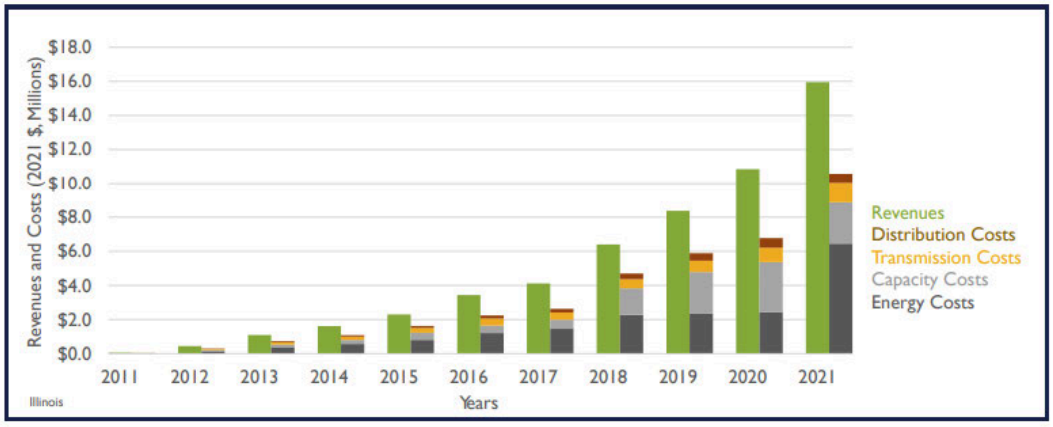


Figure 3. Total costs versus total revenues of EV charging in Illinois per year from 2011-2021.

3. What are the Proponent's estimated costs of upgrading and maintaining the grid to accommodate this additional load, and who will bear these costs (consumers, utility companies, or the government)?

Pre-Filed Answer: As shown in the UtilityImpacts page of Exhibit 4, ERM estimates that incremental generation, transmission, and grid capacity costs will total $107 million in 2030, $446 million in 2045, and $899 million in 2040 under the "ACC II FULL + Clean Grid" scenario, with somewhat lower costs under the "ACC II FLEX" scenario. In every year, these grid costs are outweighed by incremental utility revenue from increased utilization of the grid, which is expected to result in downward pressure on consumer rates. The Net Utility Revenue (Customer Savings) under this scenario is $27 million in 2030, $125 million in 2035, and $247 million in 2040. The estimated grid costs would be incurred by utility companies and recovered from the utility customers in the form of electricity rates, but because utility revenues from ZEVs will consistently exceed the costs of upgrading the grid, ZEVs will actually lead to net utility cost savings for consumers.

4. Can the Proponents provide an estimate of the increase in utility costs for consumers resulting from the higher demand on the electrical grid?

Pre-Filed Answer: There is no estimated increase in utility costs for consumers resulting in the higher demand for electricity from ZEVs. In fact, ERM estimates cost savings for both commercial and residential customers on their annual utility costs. The ACC II rule is projected to save the average Illinois household approximately $24 per year and the average commercial customer $202 per year by 2050. *See* page 49 of the Statement of Reasons, the UtilityImpacts page of Exhibit 4, and the response to question #3 above.

5. What specific strategies will be implemented to ensure grid resilience as Illinois transitions to 100% renewable energy under the Climate and Equitable Jobs Act (CEJA), especially during peak energy use times or adverse weather conditions, combined with the new demand with the massive influx of EVs mandated by the Proposal, potentially doubling or tripling electricity demand?

Pre-Filed Answer: Rule Proponents cannot speak to the specific grid strategies that *will* be implemented from the Proposal or CEJA, as the Proposed Rules have not yet been adopted and we are still in the early stages of CEJA implementation. The specific strategies currently being implemented to ensure grid resiliency long term are discussed in various Illinois Commerce Commission proceedings.

Please see the previous response in question 2 that discusses the importance of time of use rates to shift EV charging away from peak times to reduce peak demand. Or refer to a recent study that discusses various innovative strategies for managing additional EV load.[41]

6. Given that CEJA mandates a transition to 100% renewable energy by 2050, with significant milestones along the way, how will Illinois' energy grid handle the additional load from widespread electric vehicle adoption, particularly between 2030 and 2035?

Pre-Filed Answer: The Illinois Commerce Commission will evaluate forward looking demand needs for the 2030 to 2035 period, and the impact of certain regulations on grid needs, through the Multi Year Grid Planning process undertaken at the commission.[42] Specifically, the process directs "electric utilities serving more than 500,000 retail customers in the State to implement distribution system planning in order to accelerate progress on Illinois clean energy and environmental goals." Rule Proponents believe that

[41] Chengying Yang, et al., Innovative Strategies for Grid Resilience: Electric Vehicles, Load Response, and Renewable Energy Synergy in the Smart Grid Era, (Nov. 13, 2024), Renewable Energy 121890, https://www.sciencedirect.com/science/article/abs/pii/S096014812401958X.
[42] Illinois Commerce Commission, *Multi-Year Integrated Grid Plan Workshops*, https://www.icc.illinois.gov/informal-processes/multi-year-integrated-grid-plan-workshops.

the various forward looking grid planning processes at the ICC will serve to prepare the Illinois grid for the additional load resulting from widespread electrification.

Economic Costs to Consumers and Industry:

7. What is the estimated increase in new vehicle costs due to the ACC II mandates, particularly for consumers purchasing zero-emission vehicles (ZEVs) versus internal combustion engine vehicles?

Pre-Filed Answer: As discussed in detail in the proponent's rulemaking proposal, although ZEVs today have a somewhat higher upfront cost on average, they already have a lower lifetime total cost of ownership than internal combustion engine vehicles when lifetime fuel savings are taken into account.[43] By the time the rule takes effect in MY 2029 the upfront purchase price of ZEVs will be less than that of ICEs due to declining battery cost and economies of scale.[44] This will result in even greater lifetime savings.

8. Have the Proponents estimated how this proposal will impact the affordability of used vehicles in Illinois?

Pre-Filed Answer: Because ZEV new vehicle prices will be lower than ICE prices when the proposal takes effect, there is no reason to anticipate any impact on used vehicle prices. There also will be ample supplies of used ICEs for customers that prefer that technology.

9. How will the rule affect low-income communities in terms of vehicle affordability and access to electric vehicle charging infrastructure?

Pre-Filed Answer: Regarding affordability, the rule will not lead to any increase in new or used vehicle prices that would affect low-income communities. In addition, the proponent's submittal describes how the rule provides three separate incentives for manufacturers to make ZEVs even more affordable for low-income purchasers. Please refer to Kathy Harris and Muhammed Patel's response to the IIFC pre-filed questions 6–8.

[43] Atlas Public Policy, "Comparing the Total Cost of Ownership of the Most Popular Vehicles in the United States," (Mar. 2024), https://atlaspolicy.com/comparing-the-total-cost-of-ownership-of-the-most-popular-vehicles-in-the-united-states/.
[44] Suvrat Kothari, "Plummeting Battery Prices Will Make EV Costs Equal ICE Cars By 2029: Study," (Feb. 22, 2024), https://insideevs.com/news/709746/lower-battery-prices-to-make-ev-costs-equal-gas-cars/.

10. What programs or measures are in place or will need to be adopted to ensure that lower-income households are not disproportionately burdened or left out of the benefits of the transition to ZEVs? How are or will these programs be funded?

Pre-Filed Answer: There are already multiple programs in place to ensure that lower-income households have access to the benefits of the proposed rules. Please refer to Section IV.a.iv and Section IV.b.iv of the Statement of Reasons and Kathy Harris and Muhammed Patel's response to the IIFC pre-filed questions 6–8.

11. Do the Proponents have any models for how this Proposal might account for individuals who will choose to keep their older, less efficient ICE vehicles longer in the face of such mandates, and how do those older ICE vehicles affect GHG emissions?

Pre-Filed Answer: We do not have a model that projects which specific in-use vehicles will or will not be replaced by new ZEVs. However there is no reason to expect that owners of older, less efficient ICE vehicles would keep those vehicles longer if ACC II is adopted. If anything, such individuals should be more likely to replace their vehicle due to the increased opportunity for fuel savings and reduced maintenance costs.

12. What plans are in place to address possible non-compliance from automakers who cannot meet the ZEV quotas?

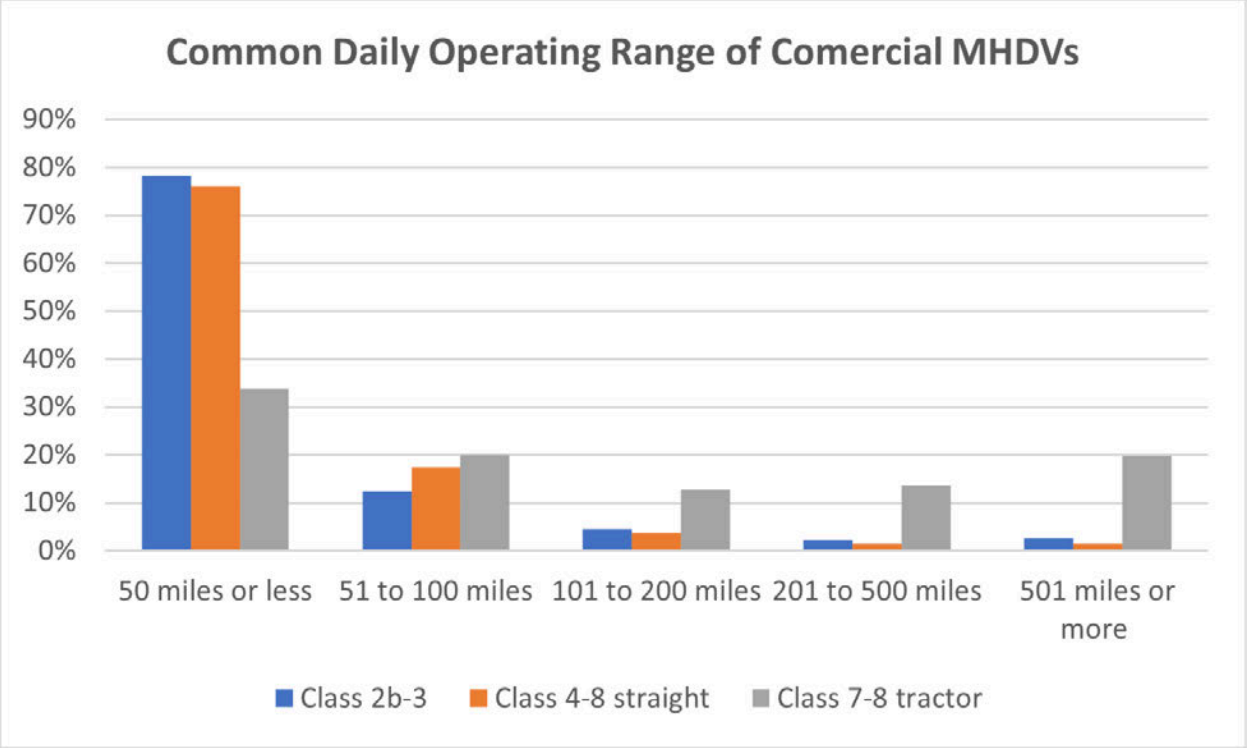
Pre-Filed Answer: The rule has its own enforcement provisions. Automakers are granted three years to recover a deficit in vehicle placements. If the deficit is not recovered by the fourth year, the automaker is subject to a penalty of up to $50,000 per vehicle pursuant to 415 ILCS § 5/42, as provided in Sections 242.106, 242.106, and 242.145 of the proposed rules.

13. Commercial fleet users operate their vehicles very differently from private individuals. Many commercial vehicles operate for many consecutive hours each day. A class 8 truck ICE vehicle has a range of 1,300 to 2,400 miles before it needs to refuel, compared to 150-340 miles for similar EV models, giving a diesel truck four to seven times the range of the comparable EV truck with the greatest range. Refueling time for an EV truck is hours compared to minutes for a diesel truck. How will the combination of significantly reduced range and increased refueling time add to the number of commercial vehicles needed to deliver the same amount of freight?

Pre-Filed Answer: There is a difference in operating profiles for large combination class 8 tractors and vocational vehicles that potentially do more local operations. CARB notes that "most trucks and vans operate less than 100 miles per day and several zero-emission configurations are available to serve that need."[45] An evaluation by the Union of

[45] CARB, *Advanced Clean Trucks Accelerating Zero-Emission Truck Markets*, (Aug. 20, 2021), https://ww2.arb.ca.gov/sites/default/files/2021-08/200625factsheet_ADA.pdf.

Concerned Scientists found that only a small percentage of total MHDVs traveled over 200 miles a day, making them perfect for ZEV range applications.[46]



Rule Proponents disagree with the range and refueling assumptions presented in the question. The Tesla Semi has a range of up to 500 miles, and can be recharged to 80% in 30 minutes at a mega charger. A real world freight demonstration found a Tesla semi could operate for 1,000 miles in one day.[47] When considering average[48] highway speeds (around 55 mph) and federal driver safety regulations[49] (~8 hours), the furthest distance a long-haul truck could travel before a mandatory 30-minute rest break is around 450 miles.

[46] Sam Wilson, "Delivery Vans Are Going Electric: Where and Why," (Sept. 17, 2024), https://blog.ucsusa.org/sam-wilson/delivery-vans-are-going-electric-where-and-why/.
[47] Moe Khatib, "Tesla Semi's 1,000 Mile Day: Recapping Run on Less Electric, (Oct. 10, 2023), https://www.atlasevhub.com/weekly-digest/over-600000-miles-driven-during-run-on-less-electric-2023/.
[48] U.S. DOT Federal Highway Administration, *Freight Facts and Figures 2010*, https://ops.fhwa.dot.gov/freight/freight_analysis/nat_freight_stats/docs/10factsfigures/table3_8.htm .
[49] Federal Motor Carrier Safety Administration, *30-Minute Driving Break*, https://www.fmcsa.dot.gov/regulations/hours-service/summary-hours-service-regulations#:~:text=Drivers%20must%20take%20a%2030,combination%20of%20these%20taken%20consecutively).

14. Heavy-duty EV trucks currently cost significantly more than their diesel counterparts. How will the increased vehicle costs and the reduced range increase affect the price of transporting goods?

Pre-Filed Answer: Many EV trucks cost more today, but by 2029, most trucks are expected to have reached purchase cost parity with diesels, and the total cost of ownership will be lower than diesels due to the lower cost of electricity compared to diesel fuel. Current trucks meet most urban and regional truck operational needs today, and battery advancements and lower battery cost will allow longer ranges where needed.

Technical Feasibility and EV Market Readiness:

15. How many EVs were sold in Illinois in 2023 and 2024? How many EVs must be sold for Illinois to meet the obligations of the ACC II rule? If those EV sales targets cannot be met, how much will the sale of ICE vehicles need to be reduced to meet the obligations in the ACC II rule? Can you provide a clear breakdown of vehicle sales targets through 2035?

Pre-Filed Answer: The most recent Alliance for Automotive Innovation *Get Connected Electric Vehicle Quarterly Report* states that BEV plus PHEV sales in Illinois in the second quarter of 2024 were 8.2%. In Q2 2023, that sales percentage was approximately 7.3%.

The regulatory requirement is 59% new ZEV sales in Model Year 2029. However, there are flexibilities within the regulation to help lower this requirement. Taking these flexibilities into account, the de facto requirement for MY 2029 will be around 50% rather than the nominal 59%. There are four model years (not three) available to move from 8.2% in MY 2024 to 50% (not 59%) in MY 2029. Thus annual ZEV sales growth of about 10% will be sufficient to reach compliance in MY 2029.

ICE sales being reduced to comply with sales targets is reliant on too many variable factors such as usable compliance flexibilities and credits available, and therefore cannot be estimated.

A clear breakdown of the sales percentage requirements for ACC II can be found in the Statement of Reasons on page 34, and ERM's expected percentages and vehicle counts for ZEVs under rule adoption scenarios are included in the Vehicles page of Exhibit 4. For further information, *see* Rule Proponents responses to question #4 from the IEPA.

16. Given the nature of the Proposal and its mandate for increasing ZEV obligations and the widespread consumer concern over vehicle charging, what is the average length of time an EV driver can expect for a paid fast charging session, from a low remaining range to 80%? What is the average time for similar free, fast-charging sessions?

Pre-Filed Answer: Rule Proponents dispute the characterization that there is "widespread consumer concern over vehicle charging," which is not based on any record evidence. Charging speed varies from vehicle to vehicle, has increased with each new

generation of ZEVs, and will further improve between now and the MY 2029 implementation of the rule. Using 5% to 80% charge as the metric, for the fastest charging versions of today's vehicles charging times are around 20 minutes. Because that metric does not account for the size of the battery pack, it also is useful to consider how many miles of range are added per minute of charging. On that dimension, modern vehicles typically add about 5 miles per minute. There is no consistent distinction between free and paid fast charging; rather the speed is dependent on the technology deployed at the charger and on the vehicle.

17. Given the potential supply chain and production constraints, how will Illinois guarantee that enough EVs will be available for purchase? What specific agreements with manufacturers will ensure that Illinois will meet its sales mandates?

Pre-Filed Answer: The compliance obligation under ACC II is imposed on the manufacturer, not the state. Illinois does not need to guarantee that enough EVs will be available, nor does it need specific agreements with manufacturers. Any supply chain or production constraints would be global in nature, and manufacturers would need to decide how to allocate the available vehicles. To date manufacturers have reliably allocated ZEVs to states that have adopted the Advanced Clean Cars regulation.

18. What contingency plans or partnerships are in place to ensure a stable supply of critical minerals (such as lithium and cobalt) necessary for EV battery production, especially given the global competition for these resources?

Pre-Filed Answer: To maintain their competitive position in the global marketplace, manufacturers are investing heavily in all aspects of the supply chain for battery production. The International Energy Agency recently found that "high levels of investment in mining and refining in the past 5 years have ensured that global supply can comfortably meet demand today, not only for EVs but also in historical markets including portable electronics, ceramics, metals and alloys."[50]

19. What data or models support the assumption that the State's infrastructure, both in terms of charging stations and service networks, will be sufficiently developed by 2035 to meet the needs of widespread EV adoption?

Pre-Filed Answer: The ERM analysis in Exhibits 3 and 4 support the assumption that Illinois will be able to meet the targets set in the standards by 2035. *See also* Atlas Public Policy, *Charging Infrastructure Needed to Support Advanced Clean Trucks in Illinois*.[51]

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[50] IEA, *Trends in electric vehicle batteries*, https://www.iea.org/reports/global-ev-outlook-2024/trends-in-electric-vehicle-batterie

[51] Lucy McKenzie and James Di Filippo, "Charging Infrastructure Needed to Support Advanced Clean Trucks in Illinois," (June 2024), https://library.edf.org/AssetLink/34rs2tc02xau5hnjcic3yg5j521v656u.pdf?_gl=1*sufv38*_gcl_au*MTUxMDc2NzI4MS4xNzMxNTQzNzcx*_ga*MTEzMzU5Nzk0MS4xNzMxNTQzNzcw*_ga_2B385

20. What are the backup plans in case of energy supply issues, such as grid failures or shortages in energy production, given the current energy transition directed under CEJA combined with the mandated increase in EVs in this Proposal, especially as it applies to first responders?

Pre-Filed Answer: Please refer to the Rule Proponents responses to pre-filed questions 2 and 3 from the Illinois Automobile Dealers and the response to pre-filed question 13 from the Illinois EPA.

21. How does ACC II account for consumer preference for hybrid vehicles or other lower-emission options, such as plug-in hybrids, that are not fully electric? Will the rule limit consumer choice in a way that could hinder overall emissions reductions?

Pre-Filed Answer: Plug-in hybrid vehicles that meet specified range requirements are treated as ZEVs under ACC II, and can account for 20 percent of the required ZEV sales in any year. Other hybrids (that do not plug in) are treated as ICEs but are incentivized via the GHG tailpipe standards. There is no scenario under which ACC II would hinder overall emission reductions.

22. What are the exact number of public and private level 1, level 2, and DC fast chargers currently operating in Illinois? What specific targets have been, or will be, set for additional chargers by 2027, 2030, and 2035 to meet the ZEV obligations in the Proposal?

Pre-Filed Answer: Please refer to answers given to pre-filed question 5 and 6 from the IEPA. Please refer to Exhibits 3 and 4 of the Statement of Reasons which both contain the specific estimated chargers needed to support adoption in 2030 and 2035. It should be noted that since 2027 is not a year that is subject to the proposed rules, it is not included in the analysis.

23. How many states have adopted California's ACC II standards? How many states have adopted these standards through Rules like are being proposed here, to adopt these standards?

Pre-Filed Answer: To date 12 states and the District of Columbia have adopted California's ACC II standards.[52] In all cases the regulations were adopted via a rulemaking similar to that being undertaken in Illinois.

6Y9QW*MTczMTU0Mzc3MC4xLjEuMTczMTU0Mzg0NC41Ny4wLjA.*_ga_Q5CTTQBJD8*MTczMTU0Mzc3MC4xLjEuMTczMTU0Mzg0NC41OC4wLjA.

[52] Sierra Club, *Clean Vehicle Programs: State Tracker*, https://www.sierraclub.org/transportation/clean-vehicle-programs-state-tracker.

24. Of the other states that have adopted California's ACC II regulations, how many are on track to meet their obligations in 2027, 2030, 2033, and 2035?

Pre-Filed Answer: All states that have adopted ACC II made a determination that the regulation was feasible, and fully expect that compliance will be achieved. ACC II is not yet in force, but in those states that adopted the predecessor ACC I regulation there has never been an instance where manufacturers failed to comply.

25. California has had several years to develop electricity generation and EV Charging infrastructure. Adopting ACC II would require Illinois to meet current California standards without providing time to develop adequate infrastructure. How will that impact Illinois' ability to meet the ACC II obligations?

Pre-Filed Answer: Rule Proponents dispute the characterization that "Adopting ACC II would require Illinois to meet current California standards without providing time to develop adequate infrastructure," which is not based on any record evidence. Please refer to the response to pre-filed question 6 from the IEPA. Illinois has just as much time as any other state adopting the standards to develop adequate infrastructure, given the uniform lead time granted between adoption and implementation. Illinois actually has more chargers per EV than California does (*see* response to question #26). Additionally, please refer to the Pre-Filed Testimony and Pre-Filed Answers of witness Urbaszewski for more information on federal, state, and utility incentives for charging infrastructure in Illinois as well as the "Beneficial Electrification Plan" regulatory structure requiring regulated utilities to address EV charging infrastructure planning and needs.

26. Given that Illinois would be adopting a California vehicle emission standard if this Proposal were to take effect, how many public chargers are currently operating in California, and how does that compare to Illinois?

Pre-Filed Answer: The state of California may have the greatest number of public charging ports by quantity, but is low on the list of chargers per capita by state. Rural states like Wyoming and North Dakota have the most public chargers per EV, and because of federal investments, are the fastest growing areas.[53] As of September, 2024, Illinois has 28 registered EVs per public charge port. California has 29 registered EVs per public charge port. It appears that Illinois has been increasing charge ports to meet the needs of the growing number of EVs, similar to California.[54] In addition, it is important to compare California fleet size to Illinois. As of 2023, there were 6.8 million passenger

[53] Samuel Bestvater and Sono Shah, "Electric Vehicle Charging Infrastructure in the U.S.," (May 23, 2024), https://www.pewresearch.org/data-labs/2024/05/23/electric-vehicle-charging-infrastructure-in-the-u-s/ ("Pew Research Article").
[54] U.S. DOE, *Alternative Fueling Station Counts by State*, https://afdc.energy.gov/stations/states?count=public&include_temporarily_unavailable=false&date=2024-01-02.

vehicles in Illinois.[55] In California, there were 27.8 million light duty vehicles at the end of 2023.[56]

27. How many of Chicago's 77 community areas in Chicago have publicly accessible EV chargers? What percentage of Chicagoans currently have access to a charger at their place of residence?

Pre-Filed Answer: A 2020 analysis of public charging infrastructure in Chicago neighborhoods showed that half of the 77 community areas lacked public charging access. An updated analysis of these areas reveals that 22 of those areas now have public charging, and an additional 10 areas have public charging in an immediately neighboring area or suburb.[57] This is further supported by research showing nationally 86% of urban residents live within 2 miles of a public charger.[58] It is difficult to assess the percentage of Chicagoans with access to home charging. One-quarter of residences in Chicago are single-family homes.[59] In multi-family residences, developers are generally required to build one parking space per residential unit, where EV owners may install necessary infrastructure. Additionally, please refer to the Pre-Filed Testimony and Pre-Filed Answers of witness Urbaszewski for more information on recent statutes passed by the General Assembly that ensures renters have the right to charge their EVs where they live.

28. How many public chargers are available in Chicago? What is the ownership percentage of those public chargers?

Pre-Filed Answer: It's not understood what "ownership percentage" means. However, the Alternative Fuels Data Center has a useful tool that allows users to find the stations and filter who owns the charging station.[60] Using a 15 mile radius from City Hall shows there are 164 public charging ports for passenger vehicles in that range. Almost 90% of those publicly available charging ports are owned by private entities.

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[55] State of Illinois, 2023 Vehicle Registration Counts by County, (Jan. 1, 2024), https://www.ilsos.gov/departments/vehicles/statistics/lpcountycounts/2023countycounts.pdf.
[56] California Energy Comm'n, Light-Duty Vehicle Population in California, https://www.energy.ca.gov./data-reports/energy-almanac/zero-emission-vehicle-and-infrastructure-statistics-collection/light.
[57] Audrey Henderson, "In Chicago, 'charging deserts' part of racial divide on electric vehicles," (Dec. 4, 2020), https://energynews.us/2020/12/14/in-chicago-another-roadblock-for-would-be-ev-drivers-charging-deserts/.
[58] Pew Research Article, *supra* note 55.
[59] Institute for Housing Studies, *Housing Market Indicators Data Portal*, https://www.housingstudies.org/data-portal/browse/.
[60] U.S. DOE, *Alternative Fueling Station Locator*, https://afdc.energy.gov/stations#/analyze?region=US-IL&tab=station&maximum_vehicle_class=LD.

29. Are the Proponents aware of any States that have adopted ACC II regulations but are now attempting to delay the ZEV sales requirements or slow down the enforcement of the ACC II regulations?

Pre-Filed Answer: The Commonwealth of Virginia adopted ACC II in February 2024, but in June 2024 Governor Youngkin announced that Virginia would withdraw from the Advanced Clean Cars program when ACC I ended. We are not aware of other similar state actions.

30. Have the proponents modeled any scenarios for how revenue in the Illinois Road Fund would be affected by the increase of EVs in Illinois and the decrease in ICE vehicles? What effect would less funding through the gasoline tax have on Illinois' Road Fund, which is used to maintain Illinois' roads and highways?

Pre-Filed Answer: Please reference the responses to pre-filed questions #7, #8, and #9 from the IEPA.

Environmental and Emissions Concerns

31. How much of a reduction in greenhouse gas (GHG) emissions is expected if Illinois adopts the ACC II Proposal, and over what timeframe would these benefits be realized?

Pre-Filed Answer: By 2050, cumulative GHG emissions reductions from ACC II are estimated to be 143 million metric tons of CO2e.[61] However, emissions benefits from ACC II implemented in MY 2029 when compared with existing federal standards would begin as early as 2031.

32. How does the lifecycle environmental impact of producing EVs (e.g., mining for lithium, rare earth elements, battery disposal) compare to traditional internal combustion vehicles?

Pre-Filed Answer: There have been multiple comparisons of the life cycle environmental impact of EVs vs. ICEs. One authoritative example is a 2022 study by Ricardo for the Fuels Institute, which looked at all aspects of vehicle life from production through use and disposal.[62] That study concluded that while EVs have somewhat higher production impacts, the "break even" point with ICEs is 19,000 miles of operation. Over the lifetime use of the vehicle, EVs have a substantial advantage.

[61] Statement of Reasons, Exhibit 4.
[62] Fuels Institute, *Life Cycle Analysis Comparison*, (Jan. 2022), https://www.transportationenergy.org/wp-content/uploads/2022/10/FI_Report_Lifecycle_FINAL.pdf.

33. What lifecycle analysis has been done on EV batteries, including the extraction of raw materials for batteries, vehicle production, usage, and battery disposal, and how does this impact Illinois' environmental goals?

Pre-Filed Answer: See response 32 above.

34. Has a full lifecycle environmental impact comparison between EVs and ICE vehicles been conducted, accounting for factors like production emissions, energy consumption, and end-of-life disposal?

Pre-Filed Answer: See response 32 above.

35. How do the Proponents believe the State should prepare to handle the environmental impacts related to EV battery disposal and recycling?

Pre-Filed Answer: Electric vehicle battery disposal and recycling is a national issue that is being addressed in a comprehensive fashion and will not require any specific action by Illinois. In 2022 the International Council on Clean Transportation conducted an in-depth review of the issue and concluded that "the 2023 operational recycling capacity should be sufficient to process end-of-life batteries from BEVs (battery electric vehicles) and PHEVs (plug-in hybrid electric vehicles) up to the year 2036. When recycling plants announced as of September 2023 are included, sufficient capacity is available to recycle end-of-life batteries until 2044."[63]

36. Why does the Clean Car II rule focus exclusively on electric vehicles rather than including other emerging clean technologies, such as hydrogen fuel cell vehicles or advanced hybrid systems?

Pre-Filed Answer: We assume that by "electric vehicles" the questioner is referring to battery electric vehicles. If that is the case, it is incorrect to state that ACC II focuses exclusively on [battery] electric vehicles. Hydrogen fuel cell vehicles qualify as ZEVs and can be used to achieve compliance, and the regulation further incentivizes hydrogen fuel cell sales by allowing manufacturers that place fuel cell vehicles in one state to earn vehicle values that can be used towards compliance in other states. Moreover, advanced hybrid systems such as plug-in electric hybrid vehicles also count toward compliance, and can be used to meet up to 20% of the obligation in any year.

[63] Alexander Tankou and Dale Hall, "Will the U.S. EV Battery Recycling Industry Be Ready for Millions of End-of-Life Batteries?" (Sept. 29, 2023), https://theicct.org/us-ev-battery-recycling-end-of-life-batteries-sept23/.

37. How does cold weather affect electric vehicle range?

Pre-Filed Answer: Cold weather has two impacts on electric vehicle range. Batteries operate somewhat less efficiently in cold weather, but more importantly the battery capacity needed to heat the cabin can no longer be used to move the vehicle. In ICEs the gasoline engine produces a substantial amount of waste heat, which is used to heat the cabin. Electric vehicles do not waste energy in the same fashion, which is part of why they have much lower GHG emissions per mile. The impact of cold weather on range varies from vehicle to vehicle, but studies put the loss in the range of 25 to 30 percent.[64] Drivers can take steps to mitigate this loss, such as pre-heating the vehicle while it is plugged in and using heated seats. Meanwhile, the latest generation of EVs use heat pumps rather than resistance heating to heat the cabin, which greatly reduces the loss of range.

38. How does cold weather affect charging times at charging stations?

Pre-Filed Answer: The interaction of cold weather and charging times is complex. Batteries charge most rapidly when they are at their specified operating temperature. If the battery is cold, then some time must be taken to bring it to operating temperature before the ideal charging rate is achieved. However not all charging sessions in cold weather start with a cold battery. If the vehicle has been "pre-conditioned" (a setting on many EVs that brings the battery to optimum temperature while the vehicle is being driven) then the impact is minimal. On the other hand if the vehicle has been sitting outside overnight in freezing weather and then immediately begins to charge, a fast charge could take an additional 20 to 30 minutes.[65]

39. Should the Pollution Control Board consider the climate of Illinois and its susceptibility to severe winter storms and compare it to California's milder climate?

Pre-Filed Answer: Climatic conditions are a factor to consider, but as shown in the responses to questions 37 and 38 above, they do not diminish the feasibility of adopting the proposed rules in Illinois. *See also* Tom Cackette's response to IIIFFC question #2. Electric vehicles today generally have ranges in excess of 300 miles, so any range degradation due to cold weather will have no impact on the vast majority of driving. Drivers typically do not set out on long trips during severe winter storms.

[64] Jeff S. Bartlett and Devin Pratt, "How Much Do Cold Temperatures Affect an Electric Vehicle's Driving Range," (Jan. 17, 2024), https://www.consumerreports.org/cars/hybrids-evs/how-much-do-cold-temperatures-affect-an-evs-driving-range-a5751769461/.

[65] Chantel Wakefield, "Electric Car Charging: Things To Know for Winter," (Jan. 20, 2023), https://www.kbb.com/car-advice/ev-charging-winter/#times.

Equity and Fairness:

40. What concrete steps will Illinois take to ensure that EV charging infrastructure is equitably distributed, particularly in rural and low-income areas?

Pre-Filed Answer: Rule Proponents refer the questioner to the beneficial electrification section of the Climate and Equitable Jobs Act, which notes that states, "Widespread adoption of electric vehicles requires increasing public access to charging equipment throughout Illinois, especially in low-income and environmental justice communities, where levels of air pollution burden tend to be higher."[66] It further references rural buildout within the same section. Considering the current implementation of the Beneficial Electrification Plans, there are specific rebates available for charging infrastructure for the communities mentioned in the question, supporting equitable access to charging.[67] Additionally, please refer to the Pre-Filed Testimony and Pre-Filed Answers of witness Urbaszewski for more information on federal, state, and utility incentives for charging infrastructure in Illinois as well as the "Beneficial Electrification Plan" regulatory structure requiring regulated utilities to address EV charging infrastructure planning and needs.

However, steps that Illinois *will* take to ensure charging infrastructure is equitably distributed is probably better answered by the State of Illinois or its representative agencies.

41. What measures will be in place to ensure that those who cannot afford to purchase a new EV by 2035, especially those who rely on a motor vehicle to commute to work, are not disproportionately disadvantaged during the transition?

Pre-Filed Answer: Before 2035, the purchase price of a new BEV will be at or below parity with gasoline cars and light trucks, in fact, it could be as early as 2029.[68] If the person cannot afford a new vehicle, there will be used BEVs as well as many used gasoline vehicles available for purchase. In 2035 more than half of the vehicles on the road will still be ICEs.

42. What specific measures are in place to address the unique challenges faced by individuals who live in multi-family homes or apartments, especially those who rely on street parking and those without access to home charging?

Pre-Filed Answer: Illinois law requires all new residences to be built with the electrical infrastructure necessary to support future charging, including apartments. Those in existing homes have a "right to charge" in a parking space they own or rent where they

[66] Illinois P.A. 102-0662, https://epa.illinois.gov/content/dam/soi/en/web/epa/topics/ceja/documents/102-0662.pdf.
[67] Ameren, *Beneficial Electrification Plan 2*, (July 1, 2024), https://www.icc.illinois.gov/docket/P2024-0494/documents/352385/files/616708.pdf.
[68] Suvrat Kothari, "Plummeting Battery Prices Will Make EV Costs Equal ICE Cars By 2029: Study," (Feb. 22, 2024), https://insideevs.com/news/709746/lower-battery-prices-to-make-ev-costs-equal-gas-cars/.

pay for installation costs, electricity usage, and follow other common sense guidelines.[69] To expand access to charging for those without off-street parking, the federal government, state of Illinois, cities like Chicago and other "EV Ready" municipalities are investing in urban charging infrastructure, including curbside charging, reducing barriers to access, streamlined permitting and zoning, and targeted buildout in underserved areas.[70]

43. How many Illinoisians currently live at a residence capable of providing a Level 2 charger? Does the Proposal address the concern that many Illinoisians currently do not or would not have direct access to such chargers and would rely on more expensive public charging?

Pre-Filed Answer: As mentioned, two-thirds of Illinoisans live in single family homes with a statewide median age of 58 years.[71] 100-ampere service in homes has been standard since the mid-1960s, sufficient for Level 2 home charging, and 200-ampere service is standard on new homes today. Access to home charging is not within the scope of the Proposed Rule's requirements upon manufacturers.

44. What enforcement mechanisms are contained in the Proposal prohibiting Illinoisians from circumventing ACC II by purchasing ICE vehicles out-of-state and bringing them back to register in Illinois? How will sales lost to other states impact employment and tax revenue?

Pre-Filed Answer: Section 242.104 of the Proposed Rule makes it "unlawful for any person to sell or register … a new motor vehicle unless that new motor vehicle has been certified to California emission standards and meets all other applicable requirements of California Code of Regulations." Therefore there will be no lost sales and no impact on employment or tax revenue.

Other:

45. What projections exist for long-term changes in vehicle ownership patterns (e.g., car-sharing, ride-hailing) as EV technology becomes more widespread, and how will this impact the overall energy and transportation infrastructure?

Pre-Filed Answer: The analysis in Exhibit 4 of the Statement of Reasons does display vehicle turnover rates that includes its own modeling of vehicle ownership patterns. In a 2023 report (Exhibit 2), they assume vehicle ownership will grow long term. The

[69] EDF, *Illinois Renters & Condo Owners Have a Right to Charge*, https://www.edf.org/sites/default/files/documents/SB40%20Fact%20sheet%20final.pdf.
[70] Metropolitan Mayors Caucus, *EV Readiness Program*, https://mayorscaucus.org/initiatives/environment/becoming-ev-ready/.
[71] ATTOM Data, *Illinois Real Estate & Property Data*, (Nov. 11, 2024), https://www.attomdata.com/data/us-real-estate/il/.

estimates on vehicle turnover and fleet composition directly inform the overall estimations on incremental peak energy load and charging infrastructure needs long-term.

46. What measures will be in place to monitor and adjust the ACC II implementation over time to account for changing market forces, technological developments, and consumer behavior?

Pre-Filed Answer: The California Air Resources Board continually monitors the development of the electric vehicle market, and in the past has modified the ZEV regulation to take changes into account. It will continue to do so going forward and if adjustments are needed they will be adopted, and partner states such as Illinois can make corresponding updates.

47. What strategies will be employed to educate the public about the benefits and requirements of the ACC II rule?

Pre-Filed Answer: It is not clear what strategies will be employed in the future as the rules haven't been adopted. However, the PCB has notified several newspapers around the state of the ongoing rulemaking, where the public is able to participate and view documents like this response and others that describe the benefits and requirements of the ACC II. Multiple organizations have published public blogs and press releases that educate publicly on the ACC II rule benefits.[72] Many other states that have adopted the rule post FAQs and other informational materials on state websites.[73]

48. How do the Proponents plan to engage with stakeholders such as consumers, automakers, and vehicle dealers to ensure widespread acceptance and understanding of the rule?

Pre-Filed Answer: Rule Proponents are making efforts to respond directly to pre-filed questions from automakers, dealers, and others as part of this public process in front of the Pollution Control Board. Rule Proponent witnesses will answer questions from interested stakeholders directly during the scheduled hearings. This process of direct engagement allows all participants the opportunity to express acceptance and understanding of the proposed rules.

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[72] Muhammed Patel, "Clean Cars Yield $178 Billion in Benefits for Illinois," (Oct. 16, 2023), https://www.nrdc.org/bio/muhammed-patel/clean-cars-yield-178-billion-benefits-illinois; Miguel Moravec and Jake Glassman, "Analysis: Illinois is leaving money on the table until it embraces clean transportation," (Apr. 19, 2024), https://rmi.org/analysis-illinois-is-leaving-money-on-the-table-until-it-embraces-clean-transportation/; Green Latinos, *Fact Sheet: Urging Federal & State Clean Cars Policy*, https://www.greenlatinos.org/wp-content/uploads/2024/02/Illinois-clean-car-policy.pdf.

[73] Maryland Dep't of the Env't, *Maryland Clean Cars Program*, https://mde.maryland.gov/programs/air/mobilesources/pages/cleancars.aspx; State of Oregon Dep't of Env'tl Quality, *Advanced Clean Cars II – Frequently Asked Questions*, https://www.oregon.gov/deq/aq/Documents/ACCII-FAQ.pdf; New Jersey Dep't of Env'tl Protection, *Advanced Clean Cars II Frequently Asked Questions*, https://dep.nj.gov/wp-content/uploads/njpact/faqs.pdf.

49. What are the penalties for automakers who fail to meet ZEV quotas under ACC II, and who will enforce these penalties – the Illinois Pollution Control Board (PCB) or California authorities?

Pre-Filed Answer: Please reference the responses to pre-filed questions 25–27 from the IEPA.

50. Under the Proposal, how much flexibility would the PCB have to amend it to meet Illinois's unique needs? Would the PCB or Illinois Environmental Protection Agency be allowed to postpone targets if it is demonstrated that the market would not support them?

Pre-Filed Answer: The PCB does not have the ability to amend ACC II to postpone its targets. Under federal law Illinois must follow either the California or federal regulations, and cannot enact its own unique requirements. However the PCB or the Illinois Environmental Protection Agency could withdraw from the California regulation at any time it sees fit, and automakers would then be subject to the federal rules in place for the applicable model years.

V. ALLIANCE FOR AUTOMOTIVE INNOVATION ("AFAI") QUESTIONS

Questions for All Witnesses:

25. Are you aware that in March 2024, the U.S. Environmental Protection Agency ("EPA") finalized its multi-pollutant rule that will reduce criteria pollutants by 50% over the lifetime of the program?

Pre-Filed Answer: Yes.

a. Is it correct that the EPA regulations will be in place for the U.S. as a whole and provide criteria emission benefits nearly identical to those promulgated under California's ACC II Low Emissions Vehicle IV program?

Pre-Filed Answer: It is correct that USEPA light duty vehicle criteria pollutant tailpipe regulations will be in place for the U.S. as a whole. However our analysis concludes that although the regulations are similar there will still be criteria pollutant decreases with the adoption of the ACC II LEV IV program. This is due to the fact that under ACC II the tailpipe reductions for ICEs will be similar to the federal rule, but there will be more ZEVs in the fleet than would be the case under the federal standards. For example with MY 2029 implementation ERM projects cumulative NOx reductions of about 38,000 to 48,000 metric tons through 2050, relative to a baseline scenario that includes the new federal standards. Similarly, ERM projects particulate matter (PM) reductions of about 3,800 to 4,600 metric tons through 2050. *See* Exhibit 4, Emissions page.

b. Can you please explain how adoption of California's Advanced Clean Cars II program will improve the air quality in Illinois if manufacturers must already meet the federal regulations?

Pre-Filed Answer: As noted above the Illinois light duty vehicle fleet will have more ZEVs under ACC II which will lead to emission reductions and improved air quality.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R2024-017
PROPOSED CLEAN CAR AND TRUCK STANDARDS	)	(Rulemaking – Air)

RULE PROPONENTS' ANSWERS TO PRE-FILED JOINT TESTIMONY OF KATHY HARRIS AND MUHAMMED PATEL

I. BOARD STAFF ("PCB") QUESTIONS

PCB-1: On page 3 of your joint testimony, you state that even if the proposed rules are implemented in Model Year (MY) 2029, i.e., the rules are adopted after January 2, 2025, they will still be feasible.

PCB-1a: Please comment on the whether the adoption of the proposed rules after January 2, 2025 (effective for MY 2029) would be consistent with the requirements of the CARB regulations incorporated by reference under Section 242.103.

Pre-Filed Answer: The adoption of the proposed rules after January 2, 2025 would be consistent with the requirements of the CARB regulations incorporated by reference under this section. The CARB regulations are crafted such that different adoption dates in Section 177 states can be accommodated without modification.

PCB-1b: If not, would the proposed rules need to be revised to accommodate the change in the model year from MY 2028 to MY 2029? Please propose any necessary revisions to allow for effective date of the later model year.

Pre-Filed Answer: The proposed rule needs to be modified to reflect the Model Year 2029 implementation date. Additional revisions include incorporating amendments recently adopted by CARB for ACT (see response to question 8 below). These are reflected in the updated rule proposal document.

PCB-1c: Page 17 of the Statement of Reasons reports that USEPA granted California a waiver for ACT on April 6, 2023. SR at 17, n.33, citing 88 Fed. Reg. 20688 (Apr. 6, 2023). Proponents report that USEPA "has not yet issued waivers for the ACC II and Low NOx rules." Proponents add that USEPA issued "[a]n initial notice of a proposed waiver for ACC II" on December 16, 2023, and "an initial notice of a proposed waiver for the Low NOx. rule" on June 13, 2022, SR at 17, n.33, citing 88 Fed. Reg. 88908 (Dec. 26, 2023); 87 Fed. Reg. 35765 (June 13, 2022). Since the proponents filed their proposal, has USEPA granted a waiver or taken any other action on these initial notices? If so, please provide a citation to such action.

Pre-Filed Answer: As of November 18, 2024, the USEPA has not granted a waiver or taken any other action on these initial notices since the proposal was filed. However, it should be noted that the lack of a waiver does not preclude a state from adopting regulations—states are just unable to enforce the regulations until a waiver is granted.

PCB-1d: Would Section 177(1) of the Clean Air Act prohibit states from modifying the Clean Car and Truck Standards prior to adoption?

Pre-Filed Answer: Yes, this clause notes the identicality requirements of adopting motor vehicle emission standards. That means that Illinois cannot modify the provisions of the Clean Car and Truck Standards that constitute parts of the California emission standards within the meaning of Section 177's identicality requirement, unless those changes have already been adopted in California. As noted at pages 20–21 of Rule Proponents' Response in Opposition to Motions to Dismiss, Illinois can modify or augment aspects of the rules that are not part of the emission standards, such as enforcement provisions, inspection and recordkeeping requirements, and effective dates (provided the effective dates comply with the Clean Air Act's two-year lead time requirement).

PCB-2: On page 4 of your joint testimony, you note that "higher sales percentages" for ZEVs will be required if the implementation date is moved to MY 2029.

PCB-2a: What are the higher sales percentage values that would be required for MY 2029?

Pre-Filed Answer: Both the Advanced Clean Trucks and Advanced Clean Cars II rules use gradually increasing sales percentages of ZEVs by model year to help achieve emissions reductions in a planned, phased manner. That means that every model year, manufacturers must gradually increase their ZEV sales as a percentage of total new vehicle sales. Naturally, as part of the program structure, the sales percentages will increase year over year, leading to a higher sales percentage in MY 2029 than in MY 2028. These are broken down in the table below. Note that for ACT, the sales percentage differs based on vehicle class whereas for ACC II it is one percentage applied to all light-duty vehicles regulated as part of the program.

It is critical to note, however, that there are robust flexibilities in the regulations that lower the "real world" ZEV requirements. For example, with MY 2029 implementation of ACCII, manufacturers will earn ZEV "vehicle values" (the currency used to track compliance) for ZEVs sold in Illinois in the 2027 and 2028 model years. Those values can then be applied towards compliance in model years 2029 through 2031. Taking such flexibilities into account, Shulock Consulting projects that the actual sales level needed in MY 2029 will be about 50% rather than the nominal 59% shown below.

Model Year	ACC II	ACT		
		Class 2b-3	Class 4-8	Class 7-8
2028	51%	20%	30%	20%
2029	59%	25%	40%	25%

PCB-2b: Would the higher sales percentages be codified in the rules? If so, please propose appropriate revisions to the rule proposal.

Pre-Filed Answer: The higher sales percentages are already codified in the rules as part of the increasing sales percentages in the final regulation orders of both the ACT[1] and ACC II[2] from CARB, which are incorporated by reference in the proposed rule language from the proponents.

PCB-3: On page 4, Footnote No. 3 of your testimony, you note, "to ensure that emissions are reduced as intended, these provisions are limited to no more than 15% of a manufacturer's obligation in MY 2028 and phase out completely after MY 2030." Please comment on whether the 15% limit and the three-year phase out period would still apply if the rules are adopted after January 2, 2025.

Pre-Filed Answer: As noted above, given MY 2029 implementation the early compliance flexibility can be used through MY 2031. There are also "environmental justice vehicle values" that if earned can be applied through MY 2031. All other flexibilities expire after MY 2030.

PCB-4: On page 5 of your testimony you note, "to ensure ZEV tractors, which includes class 7 and 8 vehicles that typically haul freight on highways, will be available to reduce emissions at ports and other areas with high tractor concentrations, only Class 7 and 8 tractor credits may be used to satisfy Class 7 and 8 tractor deficits." Please comment on whether there are concerns about availability of ZEV tractors in ports and areas with high tractor concentrations to meet the proposed targets.

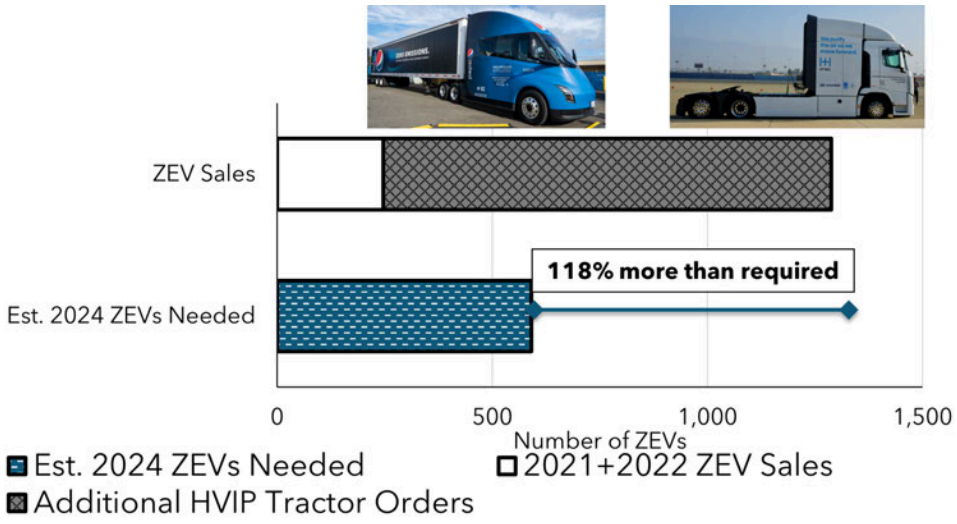
Pre-Filed Answer: There are not concerns about availability of ZEV tractors to meet the proposed targets. The quote from the testimony was intended to explain why Class 7 and 8 tractor credits generated in the program are only available to be used for Class 7 and 8 tractor deficits.

The primary reason for why there is this Class 7 and 8 tractor credit qualifier when compared to the other classes is to encourage electrification in Class 7 and 8, where diesel vehicles in these classes are often higher polluting vehicles that operate in high concentrations in or near environmental justice communities. For example, if manufacturers were able to transfer Class 4 credits to comply with tractor credits, then it could

[1] State of California, Final Regulation Order: Advanced Clean Trucks Regulation, https://ww2.arb.ca.gov/sites/default/files/2023-06/ACT-1963.pdf.
[2] State of California, Final Regulation Order: Section 1962.4, Title 13, California Code of Regulations, Zero-Emission Vehicle Requirements for 2026 and Subsequent Model Year Passenger Cars and Light-Duty Trucks, https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/accii/2acciifro1962.4.pdf ("Section 1962.4, Title 13").

potentially encourage more Class 4 sales to comply with the tractor deficits. By requiring tractor deficits to be satisfied by tractor credits, the rule encourages manufacturers to sell more Class 7 and 8 tractors, leading to emissions reductions where these vehicles are often used; in high traffic areas near highways and ports.

In terms of overall availability of these vehicles to meet the proposed targets, lessons learned from California provide useful data.[3] For Class 7-8 tractors, 290 zero-emission tractors have been delivered for sale in 2021 and 2022, and over 1,000 zero-emission tractors were expected to be delivered in 2023 and 2024. With those combined sales, there is expected to be more than double the number of ZEV tractors sold than is needed to comply with the ACT regulation in 2024 (see Figure below).



PCB-5: On page 6 of your testimony, you set forth the ZEV sales percentage requirements and the weight class modifiers in two tables. Please comment on whether these requirements and modifiers are affected if the rules are adopted after January 2, 2025. If so, please submit revised requirements to reflect a later adoption date.

Pre-Filed Answer: These requirements and modifiers will not be affected if the rules are adopted after January 2, 2025. As mentioned previously, the later adoption date would only shift the first model year of sales percentage compliance from MY 2028 to MY 2029, not the requirement itself.

[3] CARB, *Advanced Clean Trucks Compliance and Incentives Update*, https://ww2.arb.ca.gov/resources/documents/advanced-clean-trucks-compliance-and-incentives-update.

PCB-6: Pages 34-35 of the Statement of Reasons, state that plug in hybrid electric vehicles (PHEVs), which meet specific requirements, may be "used to meet up to 20% of a manufacturer's annual zero-emission vehicle (ZEV) requirements."

PCB-6a: Will this percentage be applied consistently through 2035 or will this mechanism be phased out by the time manufacturer sales are 100% ZEVs?

Pre-Filed Answer: This percentage will be applied consistently through 2035 and will be maintained in subsequent model years.

PCB-6b: What are the specific requirements for a PHEV to be used towards a manufacturer's annual ZEV requirement?

Pre-Filed Answer: *See* Section 1962.4 e(1)[4] which states:

"PHEV Flexibility. Manufacturers may fulfill a portion of their total Annual ZEV Requirement with PHEVs produced and delivered for sale in California as follows: (A) For each 2026 model year and subsequent PHEV that meets all the following criteria, manufacturers may count such vehicles at a value of one towards the Annual ZEV Requirement: 1. SULEV30 Standards. Certified to full useful life SULEV30 or lower exhaust emission standards for passenger cars and light-duty trucks in CCR, title 13, section 1961.4. 2. Extended Defects and Performance Warranty. Extend the performance and defects warranty period set forth in CCR, title 13, sections 2037(b)(2) and 2038(b)(2) to 15 years or 150,000 miles, whichever occurs first. 3. Battery Labeling Requirements. Meet requirements set forth in CCR, title 13, section 1962.6. 4. Data Standardization. Meet applicable requirements set forth in CCR, title 13, section 1962.5 5. Service Information Requirements. Meet requirements set forth in CCR, title 13, section 1969. 6. Battery Warranty. Meet applicable battery warranty requirements set forth in CCR, title 13, section 1962.8. 7. Charging Requirements. Meet requirements set forth in CCR, title 13, section 1962.3. 8. Minimum Certification Range Value. Minimum certification range value of greater than or equal to 70 miles, per the 2026 ZEV and PHEV Test Procedures. 9. Minimum US06 All-Electric Range Value. Minimum US06 all electric range value greater than or equal to 40 miles, per the 2026 ZEV and PHEV Test Procedures. (B) For each 2026 through 2028 model year PHEV that meets the criteria identified in section (e)(1)(A)1. through (e)(1)(A)6., with a minimum certification

[4] Section 1962.4, Title 13, *supra* note 2, https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/accii/2acciifro1962.4.pdf.

range value of less than 70 miles and greater than or equal to 43 miles, per the 2026 ZEV and PHEV Test Procedures, manufacturers may count such vehicles at a partial vehicle value comprised of the sum of the Partial Vehicle Value equation plus additional credit for US06 all-electric range, calculated as follows: 1. Partial Vehicle Value Equation:

$$Partial\ Vehicle\ Value = \frac{Certification\ Range\ Value}{100} + 0.20$$

Where: Partial Vehicle Value = vehicle value per qualifying PHEV in units of vehicles, rounded to two significant digits and capped at a maximum of 0.85 Certification Range Value = As defined in subsection (l), in units of miles, rounded to the whole mile. 2. Additional credit for US06 all-electric range. An additional 0.15 partial vehicle value, if the PHEV has a US06 all-electric range of at least 10 miles determined in accordance with the 2026 ZEV and PHEV Test Procedures. 3. The maximum total partial vehicle value earned by a PHEV under the Partial Vehicle Value Equation plus additional credit, per subsection (e)(1)(B)2., may not exceed 1.00."

PCB-7: The Board is aware of three current pending appeals of various portions of the California Clean Car and Truck Standards: (1) *The Two Hundred for Homeownership, et. al. v. Steven S. Cliff*, (United States District Court, Eastern District of California, Fresno Division, Case No. 1:22-at-904, (2) *Western States Petroleum Association v. California Air Resources Board, et al.*, (Fresno County Superior Court, Case No. 22CECG03603 and (3) *Diamond Alternate Energy, LLC, et. al., v. EPA, et. al.*, Nos. 24-7, 24-13. Are you aware of any other pending appeals of the California rules at issue in this rulemaking?

Pre-Filed Answer: There is an additional case, *Ohio vs. EPA,* that was appealed in the D.C. District Court of Appeals. The court found "that the Fuel [Industry] Petitioners lack[ed] standing to raise their statutory claim, and that [the] State Petitioners lack[ed] standing to raise their preemption claim, because neither group ha[d] demonstrated that their claimed injuries would be redressed by a favorable decision by th[e] Court." The court also rejected the state petitioners' constitutional claim "on the merits," holding that the EPA's decision did not violate the constitutional requirement of equal sovereignty among the states.[5]

[5] *Ohio v. EPA*, 98 F.4th 288, 294 (D.C. Cir. 2024), https://law.justia.com/cases/federal/appellate-courts/cadc/22-1081/22-1081-2024-04-09.html.

The petitioners then filed a *petition for certiorari* at the Supreme Court of the United States. As of November 18, 2024, there has not yet been a determination as to whether the Court will hear this case.

PCB-8: Is the California Air Resources Board in the process of revising the Clean Car and Truck Standards in any way? If the California Air Resources Board is revising the standards, how would such revisions affect other States undertaking a rulemaking to adopt those Standards?

Pre-Filed Answer: The California Air Resources Board has recently adopted amendments to the ACT rule that grant additional flexibilities to manufacturers.[6] This includes, but is not limited to, tripling of the period for deficit makeup. These amendments do not significantly affect the rule's overall structure, stringency, or expected outcomes of adopting the rule, but instead are designed to facilitate smooth implementation of the rule, especially in the near term. These amendments have been incorporated into the attached updated proposed rule language by updating the "Section Amended Date" in Section 242.103 to reflect the latest amendments to affected sections.

While CARB has not yet proposed changes to the Low NOx standard, per the Clean Trucks Partnership Agreement signed by CARB and several manufacturers, CARB agreed to amend the Low NOx standards in 2027 and later model year requirements to align with the United States Environmental Protection Agency's (U.S. EPA) Clean Trucks Plan (CTP) Oxides of Nitrogen (NOx) Final Rule, with certain exceptions.[7] This is the same agreement noted in the comments from the Truck and Engine Manufacturers Association (EMA), where EMA agreed to remain neutral in states considering adoption of the standards.

CARB has also announced an intent to revise the light duty tailpipe GHG standards and other minor aspects of ACC II but has not yet commenced the rulemaking process.[8] In all cases, states will need to adopt amendments made in California to the extent that those amendments alter California's vehicle emission standards within the meaning of the identicality requirement in Clean Air Act Section 177, and any rule changes affecting future model years must be adopted by Illinois. As stated in Mr. Cackette's response to PCB Question 15, CARB has historically adopted

[6] CARB, Public Hearing to Consider Proposed Amendments to the Advanced Clean Trucks Regulation and the Zero-Emission Powertrain Certification Test Procedure, Staff Report: Initial Statement of Reasons, (Mar. 26, 2024), https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/actzepcert/isor.pdf.
[7] CARB, Final Clean Truck Partnership Agreement, (July 5, 2023), https://ww2.arb.ca.gov/sites/default/files/2024-10/Final%20Clean%20Truck%20Partnership%20Agreement_CARB%2C%20EMA%2C%20and%20Ford%202023_07_05.pdf.
[8] CARB and California EPA, "August 25, 2022, Board Meeting Agenda," (Aug. 25, 2022), https://ww2.arb.ca.gov/ma082522.

amendments to its vehicle emission standards with ample lead time, allowing 177 states to adopt those amendments at least two model years before they go into effect and providing manufacturers with sufficient time to ensure successful compliance.

II. ALLIANCE FOR AUTOMOTIVE INNOVATION ("AFAI") QUESTIONS

AFAI-1: If the Board adopts the proposed amendments based on Advanced Clean Cars II ("ACC II") in 2025, the zero-emission vehicle ("ZEV") mandate will begin for model year ("MY") 2029 vehicles at a 59% ZEV sales requirement, correct?

Pre-Filed Answer: The regulatory requirement is 59% new ZEV sales in Model Year 2029. However, there are flexibilities within the regulation to help lower this requirement. Shulock Consulting has projected that taking these flexibilities into account, the de facto requirement for MY 2029 will be around 50% rather than the nominal 59%.

AFAI-1a: Using current data for ZEV sales in Illinois as a baseline, how much will automakers collectively need to increase their market share of ZEVs each year for the next three years to meet the 59% requirement?

Pre-Filed Answer: The most recent Alliance for Automotive Innovation *Get Connected Electric Vehicle Quarterly Report* states that BEV plus PHEV sales in Illinois in the second quarter of 2024 were 8.2%. There are four model years (not three) available to move from 8.2% in MY 2024 to 50% (not 59%) in MY 2029. Thus annual ZEV sales growth of about 10% will be sufficient to reach compliance in MY 2029.

AFAI-1b: The ACC II "flexibilities" referred to in NRDC's testimony are allowed two years prior to the first year of ACC II and are capped at 15% and expire in MY2030, correct? Additionally, is it correct that there is a cap of 20% plug-in hybrid vehicles ("PHEVs")?

Pre-Filed Answer: With MY 2029 implementation the "early compliance" flexibility (under which vehicle values are earned for ZEV sales in the 2027 and 2028 model years) can be used for the first three model years of compliance, or through MY 2031. There are also "environmental justice vehicle values" that if earned can be applied through MY 2031. All other flexibilities expire after MY 2030. The cap on vehicle values earned for PHEV sales is 20% in all model years.

AFAI-1c: Can NRDC explain how this 2-year lead time to go from 7.3% ZEV to 59% ZEV is attainable, knowing that these "flexibilities" are capped and expire in MY2030?

Pre-Filed Answer: As noted above, the lead time is essentially 4 years (not 2), current Illinois sales are 8.2% (not 7.3%) and the effective target is 50% (not 59%). In addition, in the event of a shortfall manufacturers are able to purchase vehicle values from manufacturers that have a surplus. "ZEV-only" manufacturers such as Tesla, Rivian, and Lucid, which automatically generate substantial surpluses, will have excess vehicle values available. To date no manufacturer has failed to comply with the ZEV regulation in any state.

AFAI-2: Are you aware that California has spent over $10 Billion in public charging infrastructure to reach their current 26% ZEV market share to date?

Pre-Filed Answer: We are unable to find documentation that supports the statement that California has spent $10 billion in public charging infrastructure to date. The questioner may be referring to a recent commitment to spend $10 billion over several years on a variety of ZEV measures, a portion of which is devoted to infrastructure. In addition, it is important to compare California fleet size to Illinois. As of 2023, there were 6.8 million passenger vehicles in Illinois.[9] In California, there were 27.8 million light-duty vehicles at the end of 2023.[10]

AFAI-3: What is your best estimate concerning the amount of money the state of Illinois will need to invest over the next ten years in order to develop the public charging infrastructure necessary to support the level of electric vehicles required under the regulations?

Pre-Filed Answer: According to the ERM analysis, $238 million in public, private, and utility investment will be needed to achieve the public charging demand by 2034 for light-duty vehicles. It should be noted that this investment is a mix of public, utility, and private investment, not just money from the State of Illinois.

[9] State of Illinois, *2023 Vehicle Registration Counts by County*, (Jan. 1, 2024), https://www.ilsos.gov/departments/vehicles/statistics/lpcountycounts/2023countycounts.pdf.
[10] California Energy Comm'n, *Light-Duty Vehicle Population in California*, https://www.energy.ca.gov./data-reports/energy-almanac/zero-emission-vehicle-and-infrastructure-statistics-collection/light.

AFAI-3a: Are you aware that it has been estimated that Illinois will need to spend over $676 million on publicly accessible EV charging stations to support 1 million electric vehicles by 2030? If so, do you agree with that assessment? If you do not agree with that assessment, why not and what would be a more reasonable estimate for the costs associated with the number of chargers needed to support 1 million electric vehicles?

Pre-Filed Answer: We are aware of this estimate, however, it is from over two years ago and much of the market has changed. So we do not agree with that assessment and would regard it as outdated. According to a more recent estimate from ERM, approximately $238 million in public charging investments will need to be made by 2030 to support approximately 1.2 million vehicles on the road. This estimate is based on more recent market conditions, factoring in the millions in private and public investment that has occurred in Illinois since 2022, when the number you reference was modeled.

AFAI-3b: What is your best estimate for the number of publicly available chargers that would be necessary to support the number of electric vehicles required under the proposed ACC II program, if adopted, in 2030? In 2032? And in 2035?

Pre-Filed Answer: The number of publicly available chargers that will be needed to support the estimated number of zero-emission vehicles on the road in the years noted will differ based on first model year of compliance and the type of public charger (Level 2 or DC Fast Charger). For the purposes of this question, I will assume MY 2029 as the first year of compliance. The below table provides estimates of the number of in-use charge ports, not stations, for public DCFC and Level 2 that will be needed.[11]

In Use Charge Port Type	**2030**	**2032**	**2035**
Level 2	309	1,146	3,320
DC Fast Charger	195	722	2,094

[11] Values are from Statement of Reasons, Ex. 4: ERM, *Analysis Update: Illinois Advanced Clean Cars II Program* at Chargers page. These values are from the "ACC II FLEX" scenario. Values for ERM's "ACC II FULL + Clean Grid" scenario are somewhat higher, and are available in the same spreadsheet.

AFAI-3c: What is your best estimate for the total cost of building out the number of publicly available chargers set forth above in each year? What is your position concerning who should bear those costs?

Pre-Filed Answer: Based on the same ERM analysis noted in the previous question, the cumulative investment needed for the number of publicly available chargers, both Level 2 and DCFC, is set forth in each year are detailed in the table below.[12]

	2030	**2032**	**2035**
Cumulative Investment ($millions)	$29	$107	$313

As of November 2024, there were 1,410 publicly accessible charging stations in Illinois with a total of 2,656 public Level 2 ports and 1,219 DCFC ports (>50 kW).[13] There are at least 53 fast-charging Tesla supercharger stations that currently can be used only by Tesla owners.[14] However, 23 automakers will begin to manufacture vehicles that can use the Tesla chargers, some as soon as model year 2025.[15]

It is our position that investments in a public charging network and associated grid infrastructure will be undertaken by private developers, utilities such as Ameren and Commonwealth Edison, as well as government entities, as has been occurring in Illinois and across the country.

[12] *Id.*
[13] U.S. DOE, *Alternative Fueling Station Counts by State*, https://afdc.energy.gov/stations/states.
[14] Tesla, *Superchargers - United States*, (2024), https://www.tesla.com/findus/list/superchargers/United%20States.
[15] Eric Stafford, "Tesla Charging Network: All the Upcoming Compatible EVs," (Sept. 24, 2024), https://www.caranddriver.com/news/a44388939/tesla-nacs-charging-network-compatibility/.

AFAI-3d: If the Board were to adopt the proposed amendments based on ACC II, but the actual development of the necessary charging infrastructure identified above falls well short of those targets, would you agree that the state would need to reconsider the adoption of ACC II? If not, why not?

Pre-Filed Answer: No, I would not agree. While we can estimate what charging infrastructure needs may be, an exact number of charging stations can not logically be an indicator that a program will succeed or fail. This is in part because EV technology (and ranges of vehicles) continue to improve with each model year, helping to alleviate fears of range anxiety for drivers. Further, as drivers continue to transition from a "gasoline station" mindset of refueling towards a model of refueling that takes advantage, the majority of the time, of the "down" time of the vehicle while it is parked, the number of public chargers needed may significantly decrease from initial projections.

It is also important to note that under ACC II, all ZEVs are required to have Level 2 charging cords included with each vehicle.

AFAI-3e: Will the same light-duty infrastructure be usable by medium-duty EVs that are required to electrify under the proposed amendments based on the Advanced Clean Trucks ("ACT") program? How much infrastructure investment, in addition to that already set forth in response to this question, will be required for the proposed ACT program?

Pre-Filed Answer: Many class 2b-3 vehicles are able to use the same light-duty infrastructure that will be needed to support light-duty vehicle electrification. Given the sale flexibilities in the Advanced Clean Trucks Program, it is difficult to predict the number of in-use charging ports that will be needed *in addition* to those needed under ACCII.

For a scenario where the ACT rule is adopted but not the ACC II rule, ERM estimated that by MY 2035, approximately $154 million in public and private investment in publicly accessible charging will be needed to meet the demand from on-road medium- and heavy-duty vehicles, given a MY 2028 implementation year of ACT. With a MY 2029 implementation year, that total is reduced to $131 million. If both ACT and ACC II are adopted, some charging infrastructure will likely serve both light- and medium-duty vehicles as noted above, which would reduce the cost of charging infrastructure attributable solely to the ACT rule below the amounts estimated by ERM.

AFAI-4: Are you aware of how much California has spent on consumer incentives via the Clean Vehicle Rebate Program over the life of the program? If so, what is the amount?

Pre-Filed Answer: The California Clean Vehicle Rebate Program distributed approximately $1.5 billion dollars of rebates over the thirteen years of the program. These rebates were for plug-in hybrid vehicles, battery electric vehicles, fuel-cell electric vehicles, as well as "other" vehicles, such as non-highway BEVs, zero-emission motorcycles, and commercial ZEVs.[16]

AFAI-4a: In your opinion, what level of consumer rebates would be necessary to support the level of electric vehicle sales required under the proposed ACC II provisions, if any? Should it be in proportion to the amount California has spent when normalized to account for the relative size of the vehicle market in each state?

Pre-Filed Answer: Illinois already has an authorized EV rebate program, which provides $4,000 rebates to purchase new or used EVs. The Illinois General assembly has appropriated $14 million for rebates from January 21, 2025 April 30, 2025, with low-income applications being given priority for rebates. This program has been so successful, that the state has had to limit applications to certain months, and has been frequently oversubscribed.[17]

Optimally, the auto industry will continue to move towards reducing the upfront cost of EVs, making rebates unnecessary. California's rebate program was created during the extremely nascent market for EVs, and ultimately, California realized the market in the state was in a place where rebates were no longer needed. This type of evaluation and adjustments are needed as the market in Illinois continues to accelerate.

Since the market is now 13 years further along than when California began its customer rebate program, it is likely that Illinois will need fewer rebate funds to support this transition.

AFAI-4b: What is your proposal for funding the consumer rebates discussed above?

Pre-Filed Answer: Illinois already has a consumer rebate program that is funded through appropriations from the General Assembly.

[16] California Clean Vehicle Rebate Project, *Rebate Statistics*, (2024), https://cleanvehiclerebate.org/en/rebate-statistics.
[17] IEPA, *Electric Vehicle Rebate Program*, https://epa.illinois.gov/topics/ceja/electric-vehicle-rebates.html.

AFAI-4c: Will the addition of an Illinois rebate, in addition to current federal incentives, be capable of ensuring EV sales grow from 7.3% in Illinois to 59% by MY 2029? What is the basis for your response to this question?

Pre-Filed Answer: Yes. First of all, Illinois does not need to have 59% EV sales by 2029—effectively, the state will likely only need around 50% sales of ZEVs to achieve compliance. More importantly, as discussed in detail in Section IV.a.iv.5 of the Statement of Reasons, there are numerous trends that indicate that the ACCII requirements are feasible.

AFAI-5: Are you aware of the amount of money California has allocated through its Clean Truck & Bus Vouchers (HVIP) program to support the Advanced Clean Truck rule? If so, what is the amount?

Pre-Filed Answer: The HVIP program was created in 2009, independently of the ACT rule which was adopted in 2021. Assuming that zero-emission vehicles supported by the HVIP program from 2021-2024 were relevant to ACT, then approximately $287 million of funding was provided.

AFAI-5a: In your opinion, what amount of financial incentives over the next ten years would be necessary to support the level of electric heavy duty vehicle sales required under the proposed ACT provisions?

Pre-Filed Answer: As discussed in Section IV.b.iv.3, there are substantial federal, state, and utility incentives already available in Illinois that we believe are sufficient to support the adoption of the ACT rule.

While financial incentives may be helpful in reducing the upfront price difference between a ZEV and its diesel counterpart, for certain vehicle classes, ZEVs already have a lower total cost of ownership. For example, a light commercial truck bought today in Illinois and used for 15 years would save the owner approximately $39,000 in lifecycle vehicle costs when compared to a diesel vehicle.[18]

With or without additional financial incentives, the current market projects that by 2035, zero-emission vehicle total cost of ownership for all market segments will be the same or better than diesel counterparts.[19] Without further financial incentives than currently available, ERM estimates that the average MHD ZEV owner in 2035 will save over $65,000 in net operating costs, and over $33,000 in net lifecycle costs when compared to

[18] Argonne National Laboratory, *AFLEET [Alternative Fuel Life-Cycle Environmental and Economic Transportation] Online*, https://afleet.es.anl.gov/afleet/.
[19] Julia Thomas, "Study Examines Cost Competitiveness of Zero-Emission Trucks," (Apr. 3, 2024), https://www.nrel.gov/news/program/2024/study-examines-cost-competitiveness-of-zero-emission-trucks.html.

diesel counterparts. Therefore, I do not believe that a certain level of financial incentives are "necessary" to support the level of ZEVs under ACT—rather, the current market forces, continued reduction in vehicle costs, and lifetime vehicle savings will contribute to the achievability with ACT, with support from existing incentives.

AFAI-5b: How would you recommend that Illinois ensure adequate complementary policies such as a robust incentive program with appropriate funding pools to support MDV ZEV mandates found in the proposed ACT provisions?

Pre-Filed Answer: Illinois already has access to several incentive programs to support the level of ZEV deployment expected from adoption of the ACT program. The substantial federal, state, and utility incentives that are available to support implementation of ACT are outlined in the Statement of Reasons, section IV.b.iv.3. I would recommend that Illinois continues to support those incentives.

AFAI-6: In the last two sessions in Illinois, is it true that the Senate and House bills introducing the adoption of ACC II failed, including the most recent SB2839 and HB1634? Additionally, is it true that Governor Pritzker publicly opposed these bills?

Pre-Filed Answer: I would not agree with either of those statements. Neither bills were ever called for a vote in committee, so it is unclear what the intention was of both the House and Senate. Many bills that are introduced in the Illinois General Assembly are not called for a vote in committee. It is not true that Governor Pritzker opposed adoption of the rules in total, but rather expressed that the timing of adopting the rules was not suited at the time he made his remarks.

AFAI-6a: If the Illinois House, Senate and Governor have decided not to adopt ACC II in Illinois, why should the Illinois Pollution Control Board circumvent these Decisions?

Pre-Filed Answer: Per the previous response, I do not agree that the House, Senate, and Governor have decided not to adopt the regulation. Therefore, there is no decision that the Pollution Control Board would be circumventing. Additionally, the Pollution Control Board has the authority, given to them by the General Assembly, to adopt the three standards proposed. The Board confirmed that it has this authority, and that this authority is not affected by referenced bills, in its order denying the motions to dismiss the rulemaking petition.

AFAI-6b: Do you agree that the ACC II regulations include a complete ban on the sale of any new vehicle that does not qualify as a "zero emission vehicle" starting in model year 2035? If so, shouldn't such a significant policy question be designated to the elected representatives of the people of Illinois?

Pre-Filed Answer: The Advanced Clean Cars II regulations allow for a planned, phased approach towards the transition to zero-emission vehicles. The regulations require an increasing number of new zero-emission vehicles to be sold annually—including battery electric vehicles, plug-in hybrids, and fuel-cell electric vehicles—before culminating in 100% new zero-emission vehicle sales in 2035.

With regard to elected representatives, Illinois elected representatives have previously granted to the Pollution Control Board the authority to make such decisions, which signals their intent to leave such matters in the hands of administrative experts. Additionally, if the proposed rules are adopted by the Pollution Control Board, it must be approved by the Joint Committee on Administrative Rules, part of the General Assembly and composed of elected representatives of the people of Illinois.

AFAI-7: In the Statement of Reasons supporting the proposed rulemaking, it is conceded that the recently adopted federal standards for light duty vehicles "will increase the share of new light-duty ZEV sales in Illinois to 66% by 2032 and maintain that sales percentage through 2050." Adoption of the proposed ACC II provisions would increase that sales percentage to 82% in 2032 and 100% in 2035, correct?

Pre-Filed Answer: According to analysis by ERM, it is anticipated that the federal standards will increase the sale of EVs in Illinois. ACC II would require 82% of new vehicle purchases to be zero-emission in 2032 and 100% in 2035.

AFAI-7a: Please explain how this increase in ZEV sales percentage between the federal standards and ACC II would impact the availability of electric vehicles for consumers in Illinois, if at all.

Pre-Filed Answer: To date, manufacturers have allocated ZEVs to states that have adopted the California standards before other states, as the federal standards do not require zero-emission vehicles. Therefore, in order to increase customer choice, adoption of ACC II is the only way to ensure automakers send clean, zero-emission vehicles to Illinois. This is because while the federal standards are a fleetwide average nationally (and not a ZEV requirement). There is no reason to expect a shortfall of ZEVs in Illinois—rather ACC II ensures that more ZEVs are available for purchase in the state.

AFAI-7b: Please explain how the ZEV sales percentage requirements meet customers' needs and preserve customer choice.

Pre-Filed Answer: Customers want vehicles that can meet all of their usage requirements and have the attributes that they value (size, brand, type, level of luxury, cost, etc.). Today's ZEVs already can handle the majority of use cases, and MY 2029 ZEVs will be even more capable. As noted in our Statement of Reasons, the number and types of ZEV models continues to increase. For any use cases that might present difficulties for pure EVs (e.g. towing) the rule allows up to 20% of sales to be PHEVs, and fuel-cell electric vehicles are also compliant within the regulations.

AFAI-8: The Statement of Reasons supporting the proposed rulemaking states that there were more than 110 EV models available for sale in all segments in 2023, and that 197 ZEV models are projected to be available by the end of 2025. At the same time, the Statement of Reasons argues that "a business as usual approach without implementation of the proposed rules will continue to see ZEV adoption and transportation sector GHG emission reductions lag far behind statewide goals."

AFAI-8a: Given the wide availability of ZEV models available to consumers, why do Proponents conclude that adoption of ACC II is necessary to meet the state's climate goals?

Pre-Filed Answer: The availability of ZEV models speaks to existing market trends and the feasibility of manufacturers complying with ACC II. But the number of ZEV models available nationwide, as a stand-alone factor, does not address Illinois' climate goals. Illinois has committed to the Paris Climate

Agreement, established in Executive Order 2019-06.[20] Practically speaking, this means adhering to the United States' emissions target under the agreement: reducing greenhouse gas emissions 50-52% below 2005 levels by 2030, and to net zero no later than 2050.

In Illinois, that means reducing annual emissions between 136.1 and 141.8 $MMTCO_2e$ per year by 2030.[21] As of 2022, Illinois yearly CO_2 emissions 183.7 $MMTCO_2e$, an increase from 183.4 (2021).[22]

ACC II allows for a planned, phased approach to reducing our transportation sector emissions, and sends a signal to the market that Illinois is ready for the transition. It allows investors and state agencies to have a better understanding of when vehicles can be expected to come online, potentially increasing investments in infrastructure. Given that transportation is the largest source of emissions by sector in the state, adoption of ACC II is necessary to meet the state's climate goals.

AFAI-8b: In your opinion, is there a market failure preventing the widespread adoption of electric vehicles? If so, what is that market failure and how should it be addressed?

Pre-Filed Answer: Motor vehicle emission standards in general are premised on the market failure that the public health, climate and environmental impacts of vehicle emissions are not captured in the price of the vehicle or the fuel. Motor vehicle standards such as ACC II are one vital component of a multi-pronged societal effort to mitigate those impacts. Meanwhile, most customers are unfamiliar with ZEV technology so we also need more education, with support from automakers and dealerships.

AFAI-8c: What metric has been used to define "lag far behind"?

Pre-Filed Answer: Total current CO_2e emissions in the state and the targets established in the Paris Climate Agreement.

[20] State of Illinois, Exec. Order 2019-06, (Jan. 23, 2019), https://www.illinois.gov/government/executive-orders/executive-order.executive-order-number-6.2019.html.
[21] IEPA, *Priority Climate Action Plan*, (Mar. 1, 2024), https://epa.illinois.gov/content/dam/soi/en/web/epa/topics/climate/documents/Illinois%20Priority%20Climate%20Action%20Plan.pdf.
[22] EIA, *Illinois State Energy Profile*, (Sept. 19, 2024), https://www.eia.gov/state/print.php?sid=IL.

AFAI-8d: To what extent would Illinois "lag behind" its statewide goals under the recently adopted federal standards for light-duty vehicles?

Pre-Filed Answer: Transportation sector CO_2 emissions must be reduced by 50–52% in 2030 compared to 2005 levels to meet statewide goals. For light duty vehicles to meet their share of the total sector emission reductions, annual emissions from light-duty vehicles will need to be approximately 24.2 MMT CO_2e.[23] In the baseline estimate from ERM, which factors in federal standards, annual emissions in 2030 from LDVs would be 34.1 $MMTCO_2e$.

AFAI-9: The Statement of Reasons states that the ACC II rule "imposes obligations on vehicle manufacturers—not consumers" while "culminat[ing] in a 100% new ZEV sales requirement beginning in MY 2035." Would you agree that an obligation on automakers to sell only ZEVs is the same thing as an obligation on consumers to purchase only ZEVs? If not, why not?

Pre-Filed Answer: No, we do not agree. These are statewide sales targets, giving automakers flexibility to send vehicles to dealerships that are most likely to sell EVs. Also, automakers can choose to purchase credits from other automakers. Consumers can still buy new gasoline vehicles before 2035 and used gasoline vehicles after 2035.

AFAI-10: The Statement of Reasons states that under the Inflation Reduction Act, consumers purchasing EVs are eligible for a tax credit of up to $7,500.

AFAI-10a: How many of the electric vehicles available for sale today qualify for the full $7,500 consumer purchase tax credit?

Pre-Filed Answer: As of November 13, 2024, 28 models (27 battery electric and 1 plug-in hybrid) are eligible for the full tax credit.[24] This number is expected to increase as automakers shift more of their battery and manufacturing supply chains to the United States—a requirement for the tax credits.

[23] Assuming 67% of transportation GHG emissions are from LDVs means 2005 LDV GHG emissions are ~48.6 $MMTCO_2e$. 50% of that is 24.2 MMT CO_2e.
[24] U.S. DOE Fuel Economy, *Federal Tax Credits for Plug-in Electric and Fuel Cell Electric Vehicles Purchased in 2023 or After*, https://fueleconomy.gov/feg/tax2023.shtml.

AFAI-10b: How many of the electric vehicles available for sale today qualify for a partial $3,750 consumer purchase tax credit?

Pre-Filed Answer: 20 models are currently eligible for the partial tax credit (6 plug-in hybrid and 14 battery electric vehicles).

AFAI-10c: How many of the electric vehicles available for sale today do not qualify for any consumer purchase tax credit?

Pre-Filed Answer: All new or used all-electric vehicles are eligible for the Illinois state EV rebate. The most recent data from Q2 of 2024 from the Alliance for Automotive Innovation suggests there are 117 models available in the U.S.[25] We can assume that approximately 69 models are not eligible for the IRA tax credit, but all are eligible for the Illinois rebate.

AFAI-10d: Do you agree that the consumer tax credits in the Inflation Reduction Act Are important for spurring consumer demand for electric vehicles?

Pre-Filed Answer: They are an important factor supporting a rapidly growing EV market.

AFAI-10e: In your opinion, with the availability of the Inflation Reduction Act, why have sales of electric vehicles in Illinois not increased exponentially?

Pre-Filed Answer: The point of sale rebates under the Inflation Reduction Act only began in 2024. The point of sale portion of the incentives is a key component, as it allows drivers to receive the incentives upfront. Sales need to increase by about 10 percent per year between 2025 and 2029 in order to reach compliance in MY 2029 for ACC II. Meanwhile there was a 51% increase in EV registrations from Feb. 2023 to Feb. 2024 according to the Illinois Secretary of State, which was the first year that IRA credits (without the point of sale) were available.

[25] Alliance for Automotive Innovation, *Get Connected: Electric Vehicle Quarterly Report 2024 (Q2)*, (Oct. 2, 2024), https://www.autosinnovate.org/posts/papers-reports/get-connected-q2-2024.

AFAI-10f: What action (if any) should Illinois take with respect to promulgation and implementation of ACC II if the consumer tax credits in the Inflation Reduction Act were to be repealed?

Pre-Filed Answer: Illinois should continue to support the existing programs at the state level regardless of the current or future status of the Inflation Reduction Act.

AFAI-10f(i): Should Illinois reconsider adoption of ACC II in that event? If not, why not?

Pre-Filed Answer: No. Adoption of ACC II should not be tied to a federal tax incentive program. Optimally, the EV market will continue to advance in a manner where incentives are no longer needed, as upfront vehicle prices continue to decrease, as we have seen in California (*see* section IV.a.iv.3 of the Statement of Reasons). In addition to incentives to lower the upfront cost of vehicles, automakers should commit to producing lower cost EVs.

AFAI-10f(ii): Should Illinois increase the state consumer tax credit to make up for the lost Inflation Reduction Act tax credit? If not, why not?

Pre-Filed Answer: This is speculative—the IRA is still in effect. But importantly, upfront costs are projected to continue to decrease with or without IRA, moving industry to a space where purchase incentives may not be needed in the future. Additionally Illinois uses a vehicle rebate, not a tax credit.

AFAI-11: What additional policies, actions, funding, or other measures does Illinois need to implement to support more customers buying EVs? Are these necessary only if the proposed ACC II ZEV amendments are adopted? If not, why not?

Pre-Filed Answer: There are already substantial policies, actions, funding, and other measures in Illinois to support customers buying EVs. These are discussed in the Statement of Reasons, section IV.a.iv.5. Additional funding will always support further electrification of EVs, but additional policies are not necessary for the proposed ACC II program to be implemented.

III. INDIANA, ILLINOIS, IOWA FOUNDATION FOR FAIR CONTRACTING ("IIIFFC") QUESTIONS

(Harris-Patel) IIIFFC-1: As advocates, do you believe your role in the NRDC creates any bias in your testimony, particularly since your organization has a clear environmental agenda?

Pre-Filed Answer: No, we do not believe our position has any more bias than any of the other parties to this case.

(Harris-Patel) IIIFFC-2: You state that the rules are "feasible" with a MY 2029 start date. What evidence do you have that the automotive industry in Illinois is prepared to meet the increased demand for zero-emission vehicles (ZEVs) within the specified timeframe?

Pre-Filed Answer: We provide significant evidence for the feasibility of all three of the proposed rules in the Statement of Reasons (*see* sections IV.a.iv, IV.b.iv, and IV.c.iv which contain that evidence for ACC II, ACT, and HDO respectively). We, along with the other rule proponents, note a variety of evidence including, but not limited to, ZEV sales, adoption trends, model availability, vehicle cost, incentives, and vehicle availability that show the feasibility of the rules within the specified timeframe.

(Harris-Patel) IIIFFC-3: Have you considered the potential for supply chain disruptions or technological challenges that could make the transition to ZEVs more difficult or costly than anticipated?

Pre-Filed Answer: Supply chain disruptions are impossible to predict and affect various parts of the economy. For example, prices for all new vehicles, including gas cars, increased significantly in the years since the Covid pandemic and have only now started to level out.[26] Now, battery prices are on the decline and are expected to fall almost 50% by 2026.[27]

If disruptions are significant enough that they may affect compliance for manufacturers, CARB may adopt amendments to the rules, which Illinois can then incorporate.

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[26] Nathan Borney, "New vehicle prices decline for 10th straight month," (Aug. 15, 2024), https://www.axios.com/2024/08/15/new-vehicle-prices-cars-trucks-suvs.
[27] Goldman Sachs, "Electric vehicle battery prices are expected to fall almost 50% by 2026," (Oct. 7, 2024), https://www.goldmansachs.com/insights/articles/electric-vehicle-battery-prices-are-expected-to-fall-almost-50-percent-by-2025.

(Harris-Patel) IIIFFC-4: Illinois' most significant source of transportation funding is the motor fuel tax, which generates $2.8 billion annually. Understanding the adoption of ZEVs will result in a reduction in motor fuel taxes paid on gasoline and diesel fuel, can you elaborate on what funding source you propose would make-up for this revenue deficit in future years?

Pre-Filed Answer: It should be noted that transportation funding and the motor fuel tax are not in question as part of this rulemaking and were not discussed in the statement of reasons or in our testimony.

However, NRDC supports a variety of methods to support replacing gas tax revenues.[28] NRDC has never taken the position that ZEV drivers should not pay for the upkeep of roads and bridges, but to ensure that fees on ZEV drivers are commensurate with what other drivers pay. Illinois already has an EV registration fee that is $100 in addition to other fees, collected in lieu of the motor fuel tax.[29]

(Harris-Patel) IIIFFC-5: The modeling in your testimony indicates that the rules would reduce NOx, $PM_{2.5}$, and greenhouse gas emissions, but the reductions are fairly modest between MY 2028 and MY 2029. Can you explain why the potential benefits are still worth implementing more quickly, given these marginal differences?

Pre-Filed Answer: If Illinois were to adopt the rules in time to meet MY 2028 adoption that would be preferable, because we believe that actions taken to save lives and people from hospital visits from toxic air pollution are worth it. The monetized health benefits of adopting in MY 2028 compared to MY 2029 total $40 million in avoided premature deaths, hospital visits, and cases of lung illness.

However, we recognize the reality of the current timing of the rulemaking and the legal obligations of the Board to consider the rules, and therefore support a MY 2029 implementation date as well.

[28] Max Baumhefner, "A Simple Way to Fix the Gas Tax Forever," (Aug. 2, 2019), https://www.nrdc.org/bio/max-baumhefner/simple-way-fix-gas-tax-forever.
[29] The Office of the Illinois Secretary of State, *Electric Vehicle License Plates Guide*, (2024), https://www.ilsos.gov/departments/vehicles/license_plate_guide/electric_vehicle.html.

(Harris-Patel) IIIFFC-6: Your testimony discusses environmental and health benefits but provides little detail on the potential economic downsides. Have you analyzed the possible financial impacts on industries in Illinois that rely heavily on combustion-engine vehicles, such as logistics or construction?

Pre-Filed Answer: The evidence provided in our statement of reasons does include economic costs of the transition, and is included in the net societal benefits that we cite (*see* Statement of Reasons, section IV.e). These economic costs include financial impacts for businesses that own vehicles (such as logistics and construction), including the costs of purchasing a ZEV vehicle, incremental vehicle maintenance, net fuel cost, cost of chargers, and charger maintenance.

(Harris-Patel) IIIFFC-6a: Electric vehicles are typically more expensive than their gasoline counterparts. How do you respond to concerns that the proposed rules could increase the cost of living for middle- and lower-income Illinois residents who may not be able to afford ZEVs, even with state incentives?

Pre-Filed Answer: It is true that at the moment ZEVs are on average more expensive in upfront costs than their gasoline counterparts. However, by the time the rules are in place, new EVs are expected to have equal or less of a sticker price than comparable gas cars.[30] Further, the total cost of ownership of an EV today is still cheaper than a comparable gasoline vehicle. A new report from Atlas Public Policy, published in March 2024, states, "in every case, the total cost of owning an electric vehicle is lower than the gasoline-powered alternative."[31]

Additionally, purchase price does not account for the benefits of EV ownership that go beyond purchase price, namely the total cost of ownership of the vehicle, which accounts for fuel and maintenance costs. According to the ERM analysis, the average ZEV owner will save over $20,000 in net lifecycle costs (including purchase costs).[32]

Additionally, cost savings will be gained by residents of Illinois whether or not they own an EV. Synapse analysis shows that in Illinois, each EV currently on the system delivered a net benefit between $80 and $160 from 2011–2021, with aggregate net benefits of over $30 million dollars.[33] Simply put, the revenues generated by EVs were greater than the costs

[30] Suvrat Kothari, "Plummeting Battery Prices Will Make EV Costs Equal ICE Cars By 2029: Study," (Feb. 2, 2024), https://insideevs.com/news/709746/lower-battery-prices-to-make-ev-costs-equal-gas-cars/.
[31] https://atlaspolicy.com/comparing-the-total-cost-of-ownership-of-the-most-popular-vehicles-in-the-united-states/.
[32] *See* Statement of Reasons, Ex. 3.
[33] Atlas Public Policy, *Comparing the Total Cost of Ownership of the Most Popular Vehicles in the United States*, (Mar. 2024), https://www.synapse-energy.com/sites/default/files/Electric%20Vehicles%20Are%20Driving%20Rates%20Down%20for%20All%20Customer%20Illinois%20May%202024.pdf.

associated with delivering electricity to them, meaning that EVs provided net revenues to the body of utility customers.

Finally, the proposed rules are only relevant to new vehicle sales, and new gas powered vehicles will still be available for sale until MY 2035. Even with that, middle and lower income residents are more likely to buy used vehicles, which are unaffected by this rule. The new Atlas report showing the new EV models have lower total cost of ownership compared to gasoline counterparts.

(Harris-Patel) IIIFFC-7: You argue that the rules will lead to cost savings for consumers. How do you account for the possibility that upfront costs of ZEVs, infrastructure changes, and potential maintenance issues could offset any long-term savings?

Pre-Filed Answer: The upfront costs of ZEVs, infrastructure costs, and maintenance costs are all accounted for in the ERM analysis (Statement of Reasons Exhibit 3) and in the linked studies referenced in the previous question.

(Harris-Patel) IIIFFC-8: Could you provide specific examples of how the proposed rules will ensure equitable access to the benefits of ZEVs, especially for populations that may already struggle with transportation costs or access?

Pre-Filed Answer: There are many factors that ensure equitable access, as described in the Statement of Reasons, Section IV.a, and Section IV.b. Overall, the proposed rules will increase the availability of ZEVs overall, which will lead to significant benefits for all populations, and more rapidly increase the number of used zero-emissions vehicles in the secondary market. Since the majority of drivers purchase vehicles in the used market, the sooner Illinois can transition the new vehicle market towards zero-emission vehicles, the sooner drivers of used vehicles will be able to reap the economic benefits associated with EVs.

Additional examples of how these proposed rules increase equitable access to the benefits of ZEVs include:

1. Public Health Benefits: low and middle income populations suffer disproportionately from air pollution, leading to premature death, hospital visits, and various lung and heart illnesses related to tailpipe pollution. Increasing the number of zero-emission vehicles on the road will directly benefit communities suffering from the health impacts of dirty air.

2. Cost Savings: lifetime vehicle savings from zero emissions, described in previous answers, will reduce transportation cost burdens for

all communities. The proposed rules increase the availability of these vehicles, and use economies of scale to drive down the upfront cost of the vehicles, increasing access. Additionally, large scale EV usage will lower utility costs for households and businesses by spreading more fixed costs over a larger amount of kilowatt hours.

3. Used Vehicles: Many communities that have high transportation costs do not often purchase new vehicles, but the proposed rules will increase the quality and quantity of electric vehicles, ensuring they last longer and enter into the secondary market, further increasing access.

4. EJ Credits: Under ACC II, manufacturers can achieve compliance by (1) providing new ZEVs and PHEVs discounted by at least 25% for use in community-based clean mobility programs; (2) selling off-lease (used) ZEVs and PHEVs to dealerships participating in a financial assistance program targeted to lower-income consumers; and (3) delivering for sale new ZEVs and PHEVS below the established MSRP threshold.

(Harris-Patel) IIIFFC-9: You acknowledge that ERM's analysis supports the benefits of the rules starting in MY 2029. Wouldn't it be more prudent to allow for more comprehensive stakeholder input and planning rather than rushing the rules for a MY 2028 start date?

Pre-Filed Answer: The Pollution Control Board Process allows for stakeholder input and comment, and the process is likely to extend past January 2, 2025. Therefore, we are updating our proposal to reflect a MY 2029 start date. However, as mentioned previously, if Illinois were to adopt the rules in time to meet MY 2028 adoption that would be preferable, because we believe that actions taken to save lives and people from hospital visits from toxic air pollution are worth it. The monetized health benefits of adopting in MY 2028 compared to MY 2029 total $40 million in avoided premature deaths, hospital visits, and cases of lung illness.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R2024-017
PROPOSED CLEAN CAR AND TRUCK STANDARDS	)	(Rulemaking – Air)

RULE PROPONENTS' ANSWERS TO PRE-FILED TESTIMONY OF TOM CACKETTE

I. BOARD STAFF ("PCB") QUESTIONS

PCB-12: On page 5 of your testimony, you state that EV sales growth is projected to exceed 50 percent nationwide by 2030 absent new regulations.

PCB-12a: Please comment on whether this projected increase is mainly due to federal tax incentives for consumers.

Pre-Filed Answer: The major factor influencing national electric vehicle ("EV") sales growth is battery EVs reaching price parity with internal combustion engine ("ICE") vehicles before 2030, and the lower operating cost of electricity compared to gasoline, factors that are projected to increase EV sales to 34% even in the absence of the Inflation Reduction Act ("IRA"). However, the IRA will accelerate EV growth. For example, an International Council on Clean Transportation ("ICCT") report shows national 2030 EV sales will reach 54% assuming an average IRA purchase incentive of $5,000, 20 percentage points higher than without the IRA. When the IRA expires at the end of 2032, national sales in 2033 are projected to drop by 10 percentage points, but continue to rise thereafter, again due to the favorable EV economics.[1]

[1] The study predated the 2024 final EPA GHG standards. Statistics include ACC II only in California. ICCT, *Analyzing the Impact of the Inflation Reduction Act on Electric Vehicle Uptake in the United States*, (Jan. 2023), https://theicct.org/wp-content/uploads/2023/01/ira-impact-evs-us-jan23-2.pdf.

PCB-12b: Do you expect light duty EV sales growth in Illinois to keep up with the national projection without new regulations?

Pre-Filed Answer: I expect EV sales growth in Illinois to continue growing, because the economics of EV ownership compared to combustion engine vehicles are becoming more favorable with time, which will keep sales increasing. However, EV sales are not guaranteed to keep up with the national average without state-level standards, due to a number of factors other than the economics of EV ownership. These could include the impact of other states adopting the more rapid Advanced Clean Cars II ("ACC II") sales requirement which could cause manufacturers to divert EVs to the states that have adopted ACC II, whether the recent Environmental Protection Agency Greenhouse Gas ("EPA GHG") rule which encourages EV sales remains in place, and whether the stringency of the current EPA GHG rule is not increased beyond 2032 while ACC II sales requirements in other states continue to increase.

PCB-13: On page 6 of your testimony, you state that new regulations in Germany increased ZEV [zero emission vehicle] sales by 20 percent in two years. Please describe the key elements of the German regulations, including any mandates to increase the percentage of EVs similar to the proposed rules in R24-17 as well as any governmental incentives such as tax credits.

Pre-Filed Answer: The EU has established fleet average CO_2 emission limits for passenger vehicles. These typically are revised to a more stringent level every five years, which vehicle manufacturers have been able to comply with mostly combustion vehicles. The large increase in German EV sales between 2021 and 2023 has been attributed to robust government purchase incentives (about $4,900), increasing environmental awareness among consumers, significant investments in charging infrastructure development, and a wider availability of electric vehicle models from major German car manufacturers.

For 2025–2030 the CO_2 standard is more stringent by about 20%, and manufacturers are expecting to have to produce more EVs to comply. The EU has recently adopted a more stringent CO_2 standard for 2030 and a 100% emission reduction requirement for 2035. There is no percentage sales requirement similar to ACC II.

PCB-14: On page 6 of your testimony, you note that vehicle cost is a critical consideration and up-front purchase price of EVs are expected to be cheaper than gas powered vehicles by MY [model year] 2027. Further you state that EV owners are expected to save money over the life of the vehicle due to their significant fuel and maintenance savings. Considering these factors, do you believe the proposed ACC [Advanced Clean Cars] rule will have any negative impact on Illinois residents purchasing MY 2028 advanced clean cars in terms of the price paid at the dealerships?

Pre-Filed Answer: There should be no impact because the purchase price for most categories of EV light-duty vehicles is expected to be equal to or less than a comparable gasoline vehicle by 2028, and when taking into consideration the lower cost of operation (low cost overnight charging and less maintenance) the purchaser should expect significant savings from buying an EV. For the purchaser of an ACC II gasoline car, the expected price increase for lower smog emissions is a few dollars. For the largest pickups and vans, many of which are diesel-powered, the average cost increase relative to EPA's recently adopted multi-pollutant standard will be minimal.

PCB-15: At page 60 of the Statement of Reasons, the proponents refer to CARB's [California Air Resources Board] agreement with reservation to harmonize the Low NOx rule with USEPA's Clean Truck Program finalized in January 2023. SR at 60. Proponents state that "CARB has yet to take any action to align the LOW NOx rules with [US]EPA's Clean Truck Program. Mr. Cackette's pre-filed testimony at page 17 reports that CARB "does not plan to issue a rulemaking notice until the third quarter of 2025. If CARB does take action, Rule Proponents intend to update this proposal." SR at 60.

Based on Mr. Cackette's testimony on this expected action in the third quarter of 2025, how and when do proponents intend to update this proposal?

Pre-Filed Answer: Because CARB has not yet issued a rulemaking notice to amend the Low NOx rule for 2027 models and beyond, Rule Proponents are not in a position to comment on exactly how or when their proposal will need to be updated in response. Rule Proponents expect that future amendments to the rule adopted by the CARB would be made through a separate proceeding, currently planned for later 2025.

In my professional experience, CARB has historically adopted amendments to its vehicle emission standards with ample lead time, allowing 177 states to adopt those amendments at least two model years

before they go into effect and providing manufacturers with sufficient time to ensure successful compliance.

II. ALLIANCE FOR AUTOMOTIVE INNOVATION ("AFAI") QUESTIONS

AFAI-12: In your pre-filed testimony, you state that EV sales represented 9.1% of all new light-duty vehicle sales nationwide, yet in Illinois the 2023 EV market share was 7.8%. How do you explain the fact that EV demand in Illinois lags the nation as a whole?

Pre-Filed Answer: California accounts for roughly 10 percent of U.S. passenger vehicle sales, and its early sales requirements and complementary policies have resulted in 25% of passenger vehicle sales in 2023 being EVs, the highest of any state. The national average is 7.3% if you remove California from the national average. Thus, Illinois EV sales are a little better than the national average, when excluding California. Additionally, manufacturers face incentives to direct their ZEVs to states where the ZEVs count toward compliance with vehicle emission standards, so it is expected that sales percentages will be above-average in states with ZEV standards in place (such as California) and below-average in states that do not (such as Illinois).

AFAI-13: In your pre-filed testimony, you state that "[r]apid EV sales growth is expected to continue" in the future. Are you aware that there is currently a backlog of EVs sitting on dealer's lots nationwide? If so, how do you explain your statement that rapid EV sales growth has occurred and is expected to continue?

Pre-Filed Answer: With respect to my statement that rapid growth has occurred, the data speaks for itself. Using AAI's data, national EV sales have increased from 4.4% in 2021 to 9.5% in 2023. Year-on-Year percentage increases were 90%, 62%, and 35%, which I call rapid growth. Sales in the first half of 2024 have slowed, yet in Q2/24 compared to Q2/23, national EV sales continued increasing, by 0.9 percentage points.[2] CarEdge reports that Q3 2024 EV sales are up 11% compared to Q3 2023.[3]

As for forecasts of continuing EV sales growth in the longer term, our Statement of Reasons at 39 provides sources that have concluded that EV sales will increase to around 50%, which I consider rapid growth. Most

[2] Alliance for Automotive Innovation, *Get Connected: Electric Vehicle Quarterly Report Q2 2024*, https://www.autosinnovate.org/posts/papers-reports/Get%20Connected%20EV%20Quarterly%20Report%202024%20Q2.pdf.
[3] Justin Fischer, "Electric Vehicle Sales and Market Share (US – Q3 2024 Updates)," (Oct. 15, 2024), https://caredge.com/guides/electric-vehicle-market-share-and-sales.

Alliance for Automotive Innovation ("AAI") members have publicly stated goals in the range of 50% EV sales by 2030. The adoption of the ACC II regulation will help assure EV sales will continue to grow by providing car buyers with a wide choice of EVs to consider.

I am aware there is currently a backlog of some EVs on dealer lots. Some short-term periods of faster and slower growth are expected within the overall trend toward rapid EV adoption that has occurred and that is projected to continue.

AFAI-14: In your pre-filed testimony, you state that the feasibility of a transition to 100% new ZEV sales by MY 2035 depends in part on the charging and refueling infrastructure.

AFAI-14a: What is your best estimate for the number of publicly available chargers that would be necessary to support the number of electric vehicles required under the proposed Illinois ACC II program, if adopted, in 2030? In 2032? And in 2035?

Pre-Filed Answer: Please refer to Rule Proponents' response to Truck and Engine Manufacturers Association pre-filed questions #3 and #4, Rule Proponents' response to Illinois Automobile Dealers Association pre-filed question #22, Rule Proponents' response to IEPA pre-filed question #4, and Kathy Harris and Muhammed Patel's response to Alliance for Automotive Innovation pre-filed question #3. Questions about projected charger needs in Illinois are best addressed to Ms. Harris and Mr. Patel, who are most familiar with the Environmental Resources Management, Inc. ("ERM") analysis of ACC II adoption scenarios.

AFAI-14b: What is your best estimate for the total cost of building out the number of publicly available chargers set forth above in each year? What is your position concerning who should bear those costs?

Pre-Filed Answer: Please refer to Rule Proponents' response to Truck and Engine Manufacturers Association pre-filed questions #3 and #4, Rule Proponents' response to Illinois Automobile Dealers Association pre-filed question #22, Rule Proponents' response to IEPA pre-filed question #4, and Kathy Harris and Muhammed Patel's response to Alliance for Automotive Innovation pre-filed question #3. Questions about projected charger needs in Illinois are best addressed to Ms. Harris and Mr. Patel, who are most familiar with the ERM analysis of ACC II adoption scenarios.

AFAI-15: In your pre-filed testimony, you state that the feasibility of a transition to 100% new ZEV sales by MY 2035 depends in part on consumer demand. Are you aware of how much money California has spent on incentives for consumer rebates and charging infrastructure to date, and how much is budgeted to achieve their ACC II goals?

Pre-Filed Answer: I am generally aware that California has made significant investments in consumer incentives and charging infrastructure, although I am not personally aware of the specific amount. I do know that California's early investments to spur consumer demand and develop a robust ZEV market have benefitted ZEV markets outside of California, and that incentives will become less necessary as the economics of ZEV ownership continue to improve. For these reasons, it is unlikely that states like Illinois will need to make the same level of investment in market development that California has made over the past several decades.

AFAI-15a: What level of consumer rebates over the next ten years would be necessary to support the level of electric vehicle sales required under the proposed ACC II amendments?

Pre-Filed Answer: Sales growth of EVs will become less dependent on purchase incentives as the purchase price of EVs reaches parity with ICE vehicles, which studies indicate will occur for most passenger vehicle types later this decade. The federal IRA credit of up to $7,500 is available through 2032, and accelerates the date upon which price parity is reached.

AFAI-15b: What is your proposal for funding the consumer rebates discussed above?

Pre-Filed Answer: Illinois can decide if state incentives beyond the federal IRA credit are beneficial to increase EV sales.

AFAI-15c: Will the addition of an Illinois rebate, in addition to current federal incentives, be capable of ensuring EV sales grow from 7.3% in Illinois to 59% by MY 2029?

Pre-Filed Answer: Studies referred to in our Statement of Reasons indicate that the positive economics of EV ownership and the IRA incentive can result in 50 to 60% EV sales by the turn of the decade. The ACC II EV regulation focuses on assuring OEMs provide an adequate supply of new EVs that meet potential purchasers' needs.

AFAI-16: Do you agree that achieving 100% electric vehicle sales by 2035 will require a massive increase in at-home charging capabilities?

Pre-Filed Answer: I agree the number of home chargers will increase as ZEV sales ramp up. "Massive" implies the increase in home charging installations will be challenging and perhaps disruptive. I don't agree with that. Purchasers with access to a garage or parking area near their home will want to install a 220-volt charger which can recharge a ZEV overnight, when electricity demand on the grid is low. The charging circuit can be quickly installed, and the cost averages about $1,500, which is soon recovered by the much lower cost of electricity when compared to gasoline. Additionally, investor owned utilities in Illinois provide consumer rebates for installing residential chargers.[4]

Please refer to Rule Proponents' response to Truck and Engine Manufacturers Association pre-filed questions #3 and #4, Rule Proponents' response to Illinois Automobile Dealers Association pre-filed question #22, Rule Proponents' response to IEPA pre-filed question #4, and Kathy Harris and Muhammed Patel's response to Alliance for Automotive Innovation pre-filed question #3. Questions about projected charger needs in Illinois are best addressed to Ms. Harris and Mr. Patel, who are most familiar with the ERM analysis of ACC II adoption scenarios.

AFAI-16a: Currently, what percentage of single-family residences in Illinois are equipped to handle level 2 charging?

Pre-Filed Answer: Please see the general response to this question AFAI-16 above. Level 2 charging requires capability to provide 240V electrical service. Because 240V service is used to power many appliances commonly used in single-family homes, such as clothes dryers, most single-family residences are equipped to provide this level of electrical service. Additionally, under ACC II, all ZEVs are required to have Level 2 charging cords included with each vehicle.

AFAI-16b: Currently, how many level 2 chargers are available in multi-unit dwellings?

Pre-Filed Answer: Please see the general response to this question AFAI-16 above.

[4] ComEd, *Electric Vehicle Charger and Installation Rebate Program*, (2024), https://www.comed.com/about-us/clean-energy/electric-vehicle-charger-and-installation-rebate

AFAI-16c: Currently, what percentage of Illinois residents in multi-unit dwellings have access to at-home level 2 charging?

Pre-Filed Answer: Please see the general response to this question AFAI-16 above.

AFAI-16d: What is your best estimate of the number of level 2 charging stations that would need to be installed in multi-unit dwelling locations throughout Illinois in order to achieve 100% electric vehicle sales by 2035?

Pre-Filed Answer: Please see the general response to this question AFAI-16 above.

AFAI-16e: What is your best estimate of the total costs of the number of required level 2 chargers referenced above? What is your position concerning who should bear those costs?

Pre-Filed Answer: Please see the general response to this question AFAI-16 above.

AFAI-16f: What is the difference in cost between public charging and at-home charging on a per-kilowatt basis?

Pre-Filed Answer: Home electricity prices vary by region and by the utility that provides it. Public charging costs also vary so there is no single answer to your question. As an example, my utility charges about 11 cents per kw-hr for late night charging. The price per kw-hr at the large Tesla fast-charging network varies by time of day and the charger's delivery power, and is commonly around 45 cents per kw-hr. To put this in perspective, home charging saves about $1,000 per year compared to a 32 mpg Honda Accord. If only fast charging is used, both cars would have about the same fuel cost.

AFAI-16g: To the extent that an EV owner lacks access to at-home charging and thus must therefore rely on public charging, please explain how it is fair and equitable to expect such an EV owner to incur the extra cost and inconvenience to charge their vehicles publicly?

Pre-Filed Answer: As the above example shows, fast charging costs about the same as gasoline, so there is no extra cost. As for inconvenience, current model EVs can recharge to 80% of maximum range in as little as fifteen minutes. Compared to five minutes for gasoline refueling. Also, as EVs grow in number, multi-family dwellings are likely to install level 2 chargers to meet occupant demand.

AFAI-16h: Will this same light-duty infrastructure be usable by medium- and heavy-duty vehicles that are required to electrify under adoption of the proposed ACT [Advanced Clean Trucks] program? And how much additional infrastructure investment will be required for ACT?

Pre-Filed Answer: Most medium- and heavy-duty vehicles will recharge overnight at their home depots. Longer distance trucks which may not return to the depot each night can recharge at truck stop-like stations being installed near major highways.

AFAI-17: What is your best estimate concerning how much implementation of the proposed ACC II program would increase demand for electricity in Illinois?

Pre-Filed Answer: Please refer to Rule Proponents' response to Illinois Automobile Dealers Association pre-filed questions #1 and #4. Questions about projected charging and demand needs in Illinois are best addressed to Ms. Harris and Mr. Patel, who are most familiar with the ERM analysis of ACC II adoption scenarios.

AFAI-17a: What published studies or reports are you relying on for your answer to this question?

Pre-Filed Answer: Rule Proponents relied on analysis by ERM,[5] Synapse Energy Economics,[6] and the Illinois Citizens Utility Board[7] to estimate the ACC II rule's impact on electricity demand and rates. Please refer to Rule Proponents' response to Illinois Automobile Dealers Association pre-filed questions #1 and #4, pages 48–49 of the Statement of Reasons, and pages 21–22 of the pre-filed testimony of Brian Urbaszewski for additional detail. An additional recent publication by Synapse Energy Economics finds that over the past 11 years, EV drivers in Illinois have contributed $18 million more to utilities than their associated costs to the grid, driving down electricity rates for all customers.[8] Questions about projected

[5] Exhibit 2: ERM, Illinois Advanced Clean Cars II Program at 17; Exhibit 4: ERM, Analysis Update: Illinois Advanced Clean Cars II Program at UtilityImpacts page.
[6] Synapse Energy Economics, *Electric Vehicles Are Driving Electric Rates Down*, (Dec. 2022), https://www.synapse-energy.com/sites/default/files/EV%20Impacts%20December%202022.pdf, at 1; S*ynapse Energy Economics, Electric Vehicles Are Driving Rates Down: National Update*, (June 2023), https://www.synapse energy.com/sites/default/files/Electric%20Vehicles%20Are%20Driving%20Rates%20Down%20Factsheet.pdf, at 1.
[7] Citizens Utility Board (CUB), *Charging Ahead: Deriving Value from Electric Vehicles for All Electricity Customers*, (Mar. 26, 2019), https://www.citizensutilityboard.org/wp-content/uploads/2019/03/Charging-Ahead-Deriving-Value-from-Electric-Vehicles-for-All-Electricity-Customers-v6-031419.pdf, at 12.
[8] Synapse Energy Economics, *Electric Vehicles are Driving Rates Down for All Customers: State Factsheet: Illinois* (Apr. 2024), https://www.synapse-energy.com/sites/default/files/Electric%20Vehicles%20Are%20 Driving%20Rates%20Down%20for%20All%20Customer%20Illinois%20May%202024.pdf, at 1.

charger needs in Illinois are best addressed to Ms. Harris and Mr. Patel, who are most familiar with the ERM analysis of ACC II adoption scenarios.

AFAI-17b: If you have no estimate or data in response to this question, do you agree that the matter should be assessed by the Illinois Power Agency before adoption of ACC II?

Pre-Filed Answer: No, I do not agree with that statement. See response to AFAI-17a above.

AFAI-18: To what extent would the electric grid in Illinois need to be expanded and improved to accommodate the increase in demand identified in the previous question?

Pre-Filed Answer: Please refer to Rule Proponents' response to Illinois Automobile Dealers Association pre-filed questions #1 and #4. Questions about projected charging and demand needs in Illinois are best addressed to Ms. Harris and Mr. Patel, who are most familiar with the ERM analysis of ACC II adoption scenarios.

AFAI-18a: What published studies or reports are you relying on for your answer to this question?

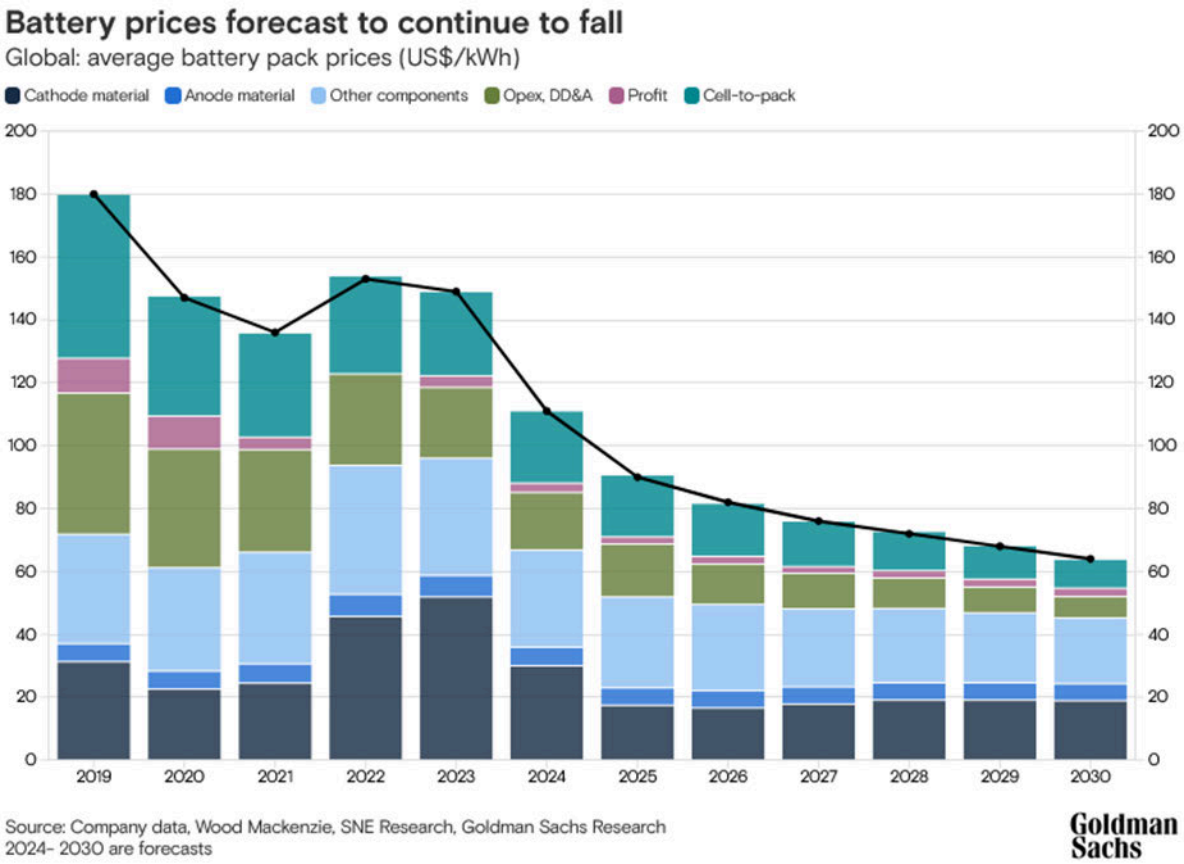
Pre-Filed Answer: Please see the response to question AFAI-17a above.

AFAI-18b: If you have no estimate or data in response to this question, do you agree that the matter should be assessed by the Illinois Power Agency before adoption of ACC II?

Pre-Filed Answer: No. Please see the response to question AFAI-17b above.

AFAI-19: In the Statement of Reasons, it was stated that it is expected that ZEVs will cost $3,000 less than gas-powered vehicles by MY2030. The Statement of Reasons also states that battery costs have fallen to below $100/kWh in 2023 based on a 2021 BloombergNEF study. Are you aware of a more recent study completed in 2024 by Argonne National Lab that states these costs are closer to $146/kWh in 2023?

Pre-Filed Answer: An October 7, 2024 article by Goldman Sachs explains their projected trend in battery costs, shown in the graph below.[9] The declining cost of batteries paused in 2022 and 2023 due to "green inflation" increasing the price of lithium from about $3/lb in 2021 to $35/lb in 2023, yielding a $149/kWh battery cost similar to Argonne.[10] However, the price of lithium in mid-2024 has returned to $5/lb. Goldman Sachs now projects a battery cost of $111/kWh by the end of 2024 and $80/kWh by 2026.



[9] Goldman Sachs, "Electric vehicle battery prices are expected to fall almost 50% by 2026," (Oct. 7, 2024), https://www.goldmansachs.com/insights/articles/electric-vehicle-battery-prices-are-expected-to-fall-almost-50-percent-by-2025.

[10] Daily Metal Price, *Lithium Prices*, (Nov. 2024), https://www.dailymetalprice.com/metalpricecharts.php?c=li&u=lb&d=0.

AFAI-19a: Assuming battery costs are closer to $146/kWh, where do you estimate the cost delta of EVs to ICEs will be by 2030?

Pre-Filed Answer: The assumption that battery cost will remain at or near $146/kWh is inconsistent with the Goldman Sachs projection and those of others that battery costs will continue to decline through at least 2030. The graph above indicates a 2030 battery cost of about $60/kWh, less than half your hypothetical projected cost. Since many studies indicate new battery EV price parity with gasoline vehicles will be reached before 2030, the graph reinforces this conclusion.

AFAI-20: What additional policies, actions, funding, or other measures does Illinois need to implement to support more customers buying EVs? Are these necessary or only if the proposed ACC II amendments are adopted? If no, why not?

Pre-Filed Answer: The most important policy is adoption of the ACC II regulation, which helps increase EV sales by assuring that a wide range of EVs models are available for purchase, and that the EVs OEMs offer for sale meet prospective purchasers' desires and needs. Supporting home charger installation can remove an uncertainty for the prospective buyer. Incentives can help low-income purchasers buy an EV, new or used, and benefit from the lower cost of operating an electric vehicle, compared to a gasoline vehicle. While these additional policies can support ZEV adoption, it is not "necessary" that Illinois adopt additional policies beyond the ones currently in place in order to successfully implement ACC II, due to the increasingly favorable economics of EV ownership that I have discussed in responses to other questions.

III. INDIANA, ILLINOIS, IOWA FOUNDATION FOR FAIR CONTRACTING ("IIIFFC") QUESTIONS

(Cackette) IIIFFC-1: Can you explain how your experience in California's regulatory environment directly translates to Illinois, which may have different economic and infrastructure challenges?

Pre-Filed Answer: Cities in both our states experience urban air pollution, and everyone is experiencing the effects of, and the need to address, climate change. Zero-emission vehicles are part of the solution for both. California's early efforts to address these pollution problems identified barriers, developed programs to remove them, and found solutions for the growing pains of a new industry. With many of these early challenges behind us, California and Illinois are now at a place where an EV early commercial market exists, and we face common challenges to grow this market sustainability. These challenges are well understood, such as consumer education and providing convenient charging infrastructure, and are common to our states as are the available solutions. The ACC II regulation provides the assurance that EVs will be available for purchase, and the transition to zero emissions occurs at a pace that is consistent with addressing our pollution and climate problems.

(Cackette) IIIFFC-2: You state that ZEVs are reliable and can meet the majority of driving needs. However, isn't it true that rural areas and colder climates, like parts of Illinois, may face unique challenges with ZEV infrastructure and performance compared to more urban or temperate regions like California?

Pre-Filed Answer: There are now more EVs on the road in Norway than gasoline vehicles, and 90% of new vehicle sales are EVs. Norway can be cold and has many rural areas, yet the EV market flourishes. Many EVs now use heat pumps for cabin and battery warming, which reduce the loss of range due to use of cabin grid heaters. With home charging, driving ranges even in colder weather can be 200 or more miles, and a growing number of interstate highway recharging stations are becoming available. These charging opportunities will allow EVs to meet the driving needs of many rural residents even in winter. Also, plug-hybrid vehicles count as EVs in ACC II, allowing a mix of electric and gasoline fueling.

(Cackette) IIIFFC-3: You emphasize the growth of ZEV models and sales. Do you have data on whether the increased availability of ZEVs has corresponded to lower costs for consumers in Illinois specifically, or is your analysis based on national or California trends?

Pre-Filed Answer: I do not have data specific to Illinois.

(Cackette) IIIFFC-4: Your testimony cites studies showing that ZEVs will achieve price parity with combustion vehicles by 2027. How confident are you that this timeline will hold, given potential supply chain disruptions, inflation, or fluctuating costs of raw materials like lithium for batteries?

Pre-Filed Answer: As I discuss in response to AFAI-19, the large spike in the price of lithium in 2022 and 2023 was short term, and the price of lithium has dropped back to early 2020 levels. Battery prices are projected to continue to decline through 2030 due to improvements in manufacturing and battery chemistries using more common metals.

(Cackette) IIIFFC-5: While your analysis points to long-term savings from ZEVs, have you accounted for the upfront cost burdens on lower-income consumers or small businesses, who may struggle to afford even subsidized ZEVs or the associated charging infrastructure?

Pre-Filed Answer: As I point out, price parity with gasoline vehicles is expected before 2030, and lower operating costs and the total cost of ownership ("TCO") are favorable now for many urban-based EVs. The market has also grown enough that used EVs are available, allowing lower income residents with access to home charging to avail themselves of a lower operating cost. Focusing incentives for low-income residents can help assure equitable participation in the EV transition.

(Cackette) IIIFFC-6: You mention that the feasibility of ZEV adoption depends largely on the availability of charging and refueling infrastructure. What evidence do you have that Illinois is currently prepared to scale up this infrastructure quickly enough to meet the increased demand under these regulations?

Pre-Filed Answer: U.S. Department of Energy ("DOE") reports the number of public EV chargers available by state.[11] As of September 2024, Illinois has 28 registered EVs per public charge port. California has 29 registered EVs per public charge port. It appears that Illinois has been increasing charging ports to meet the needs of the growing number of EVs, similar to California.

(Cackette) IIIFFC-7: What specific challenges do you anticipate Illinois facing in building out this infrastructure, particularly in less densely populated areas, and how would these challenges be addressed before the implementation deadlines?

Pre-Filed Answer: Home charging is available to rural residents, and with low demand for electricity at night providing capacity for charging that should not challenge the grid. The number of fast chargers being installed along highways is increasing and would support longer trips. For those rural residents with driving needs that can't be met with home and interstate highway charging, purchasing a plug hybrid EV is another alternative.

(Cackette) IIIFFC-8: You assert that the ACT rule's ZEV sales requirements are achievable because the market trends show increasing ZEV availability for medium- and heavy-duty vehicles. However, many truck operators rely on long-haul capabilities that ZEVs currently struggle to meet. Can you clarify how this issue will be addressed, particularly for industries that require long-haul trucking in Illinois?

Pre-Filed Answer: The ACT caps the percent sales requirement for large tractor trucks at 40% through 2035, with the expectation that compliance would be met by tractor trucks used in urban and regional use rather than long haul. This provides more time for developing long range tractor trucks and highway fast charging infrastructure. Note that Tesla's is currently selling a Semi tractor truck with a range of up to 500 miles, which is supportive of regional operation.

[11] DOE, *Alternative Fuel Station Counts by State*, (Jan. 2, 2024), https://afdc.energy.gov/stations/states?count=public&include_temporarily_unavailable=false&date=2024-01-02.

(Cackette) IIIFFC-9: You mention that ZEVs for trucks will soon reach total cost of ownership parity with diesel vehicles. How do you account for the significant upfront costs that fleet operators will still face, and do you have evidence showing that these costs won't deter ZEV adoption, especially for smaller operators?

Pre-Filed Answer: Studies included in our Statement of Reasons have found the purchase price of urban EV trucks will reach parity with diesel trucks on or before 2030. The remaining up front cost would be installation of depot-based chargers. Studies show this cost will be offset by the lower cost of EV operation (compared to a diesel truck). An option for smaller operators to avoid up front is trucks-as-a-service, where emerging firms provide the charging infrastructure and the EV truck based on a monthly payment or similar arrangement. Because EV economics are favorable, I do not expect ZEV adoption will be deterred.

(Cackette) IIIFFC-10: The Low-NOx rule sets ambitious targets for heavy-duty vehicle emissions. Are you confident that the technology required to meet these standards is ready for widespread commercial use, or will manufacturers face difficulties in scaling up production of compliant vehicles?

Pre-Filed Answer: CARB and EPA studies at the nation's premier independent technology and testing laboratory have demonstrated the feasibility of achieving lower NOx and PM emissions from diesel trucks. Diesel engine manufacturers have experienced delays in introducing some lower emitting engines in 2024, but this problem is short term and there is no doubt that trucks can and will comply with the low emission NOx standards in future years.

(Cackette) IIIFFC-11: You mention that adopting the Low-NOx rule would only result in a 5.8% increase in the cost of new trucks. Can you explain how this cost increase, in conjunction with other potential regulatory costs, won't disproportionately affect smaller trucking companies or consumers who rely on affordable shipping?

Pre-Filed Answer: Compliance with the low NOx rules involves improvements in exhaust aftertreatment and some engine component changes, which will increase the cost of a new truck. The rationale for adopting the low NOx standards, in addition to the need to reduce the disproportionate impact of heavy trucks on the environment, is the benefit of avoiding adverse health effects from truck tailpipe pollution far exceeds the regulatory cost by a factor of 8. Also, the Clean Truck Partnership Agreement between CARB and the engine manufacturers will bring CARB's Omnibus regulation in closer agreement with the recent USEPA clean truck regulation. This may reduce

the cost of the compliance, allowing each truck model to meet both federal and CARB requirements.

(Cackette) IIIFFC-12: The ACT rule allows for credit banking and trading, offering manufacturers flexibility in meeting the sales requirements. Is there a risk that this flexibility could be exploited by larger manufacturers, thereby delaying the actual adoption of ZEVs by smaller, more resource-constrained companies?

Pre-Filed Answer: The purpose of the regulatory flexibilities is manifold. They incentivize manufacturers to over comply by creating a bank of credits that can be used to accommodate their plans for introducing new products with the annual regulatory compliance schedule. Another purpose is to allow a compliance deficit should planned sales fall short of expectations. Shortfalls can be made up over the next several years. Also, manufacturers may purchase credits from other manufacturers that exceed the ZEV sales requirement. Manufacturers that only produce ZEVs (i.e., have 100% ZEV sales) will have credits to sell. These flexibilities apply to large and small manufacturers. I don't believe the hypothetical scenario you suggest will become a reality.

(Cackette) IIIFFC-13: How do you ensure that the compliance flexibilities in the ACT rule won't lead to uneven progress in ZEV adoption across different sectors, such as local delivery trucks versus long-haul trucking?

Pre-Filed Answer: The ACT regulation allows manufacturers to choose the size and type of EV trucks they sell, and average them together to demonstrate compliance. Thus, it is possible and anticipated that more ZEV models of certain sizes and types will be sold than others. Especially in the early years, this allows manufacturers to sell vehicles into the markets that are best prepared to purchase EVs.

The only exception is the tractor truck category in which compliance must be demonstrated by the sale of trucks within this class. This provision was designed to assure that some ZEV tractor trucks are developed and sold. This is important because large tractor trucks, although a more challenging ZEV vehicle to design, represent about half of the smog-forming emissions from all trucks, and should not be left to be the last category to begin the transition to ZEV.

(Cackette) IIIFFC-14: You draw on the success of ZEV programs in California and other jurisdictions. Can you provide specific examples of how lessons from these states apply to Illinois, particularly in terms of the economic and geographic differences that may affect the success of similar regulations here?

Pre-Filed Answer: One of the most important learning was that consumers, once they experienced driving an EV, loved the performance, quietness and innovative design. The idea that EVs were glorified golf carts that would have to be forced on consumers went away. Second, range anxiety created by the 100 mile or less range of the earliest EVs evaporated when manufacturers introduced vehicles with 300 miles range or more. And the concern that batteries would have to replaced at high cost has eased as battery failures are few, ACC II requires an 8 year battery warranty, and high mileage EVs are losing only a small portion of their range as batteries age.

The credit goes to the manufacturers who have embraced EVs as the future and are investing heavily to assure ZEVs are desirable, durable and reliable vehicles to purchase. A remaining consumer concern is the reliability of public chargers. Charger companies are scrambling to improve reliability in part because Tesla has shown that its chargers have extremely high reliability. The switch of almost all vehicle manufacturers to using the Tesla charger cable is allowing access to Tesla's extensive charging station network, implying competition between charging station operators will resolve the non-Tesla charging reliability issue. These are just some of the things that California learned while it was the pioneer of a nascent EV market.

Given the declining price of EVs, the battery advancements providing long range, and the large number of EV models for sale or under development, states considering adoption of CARB's regulations will not be faced with many of the challenges that initially prevented market commercialization. While a growing market for ZEVs will continue, the adoption of ACC II (and ACT) provides clarity and certainty to manufacturers to continue investment that assures the transition to ZEVs will occur at a rate consistent with the public health needs of achieving clean air to breath and contributing to preventing further climate degradation.

(Cackette) IIIFFC-15: In your opinion, how much of Illinois' regulatory success will depend on federal or other tax incentives or policies, and what risks do you foresee if those incentives were to decrease or change in the coming years?

Pre-Filed Answer: In my opinion, the success of the ACC II and ACT rules in Illinois does not depend on incentives due to the increasingly favorable economics of EV ownership, although incentives can support implementation where they are available. Incentives help drop the price paid to purchase an EV, and lower prices typically stimulate sales. However, the state budget impact of passenger EV purchase incentives, if not capped, becomes large when the number of EVs sold each year increases, as it has in California (25% of new passenger vehicle sales in 2024 are ZEVs).

California has refocused its passenger vehicle purchase incentives to help low-income residents trade in older cars and purchase a new or used EV. These incentives can be up to about $10,000. Many California electric utilities offer incentives to help pay for home chargers and circuit installation, typically about $1,000. California has continued purchase incentives for heavy-duty EV trucks to stimulate the initial market, and public utilities are generally paying for depot charger installation impacts upstream of the charger.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R2024-017
PROPOSED CLEAN CAR AND TRUCK STANDARDS	)	(Rulemaking – Air)

RULE PROPONENTS' ANSWERS TO PRE-FILED TESTIMONY OF DR. PETER ORRIS

Pursuant to the August 13, 2024, Hearing Officer Order entered in this above-captioned proceeding, Rule Proponents hereby provide the following Pre-Filed Answers of witness Dr. Peter Orris. The following Pre-Filed Answers address each question timely submitted in this docket directed at Dr. Orris and are organized by entity using the numbering provided by that entity. When called to testify at the hearing scheduled in this matter for December 2 and 3, 2024, Dr. Orris will affirm that the following are his answers and testimony in response to the Pre-Filed Questions:

I. BOARD STAFF ("PCB") QUESTIONS

PCB-9: Your testimony provides a summary of health impacts of air pollution from motor vehicles, with a focus on low-income populations and communities of color.

PCB-9a: Please comment on whether you have studied how these impacts are affected by the potential implementation of the new federal vehicle emission standards promulgated in 2024 (89 Fed. Reg. 27842).

Pre-Filed Answer: I have not published nor performed original studies on the effects of the new federal vehicle emission standards. To be clear, though, my testimony in this matter is about how air pollution affects individual and public health and does not involve reviewing how specific regulations will or may lead to different levels of air pollution.

PCB-9b: If so, please comment on whether the early (MY 2027) implementation of the federal standards would also have a significant impact on mitigation of health effects described in your testimony.

Pre-Filed Answer: Not applicable.

II. INDIANA, ILLINOIS, IOWA FOUNDATION FOR FAIR CONTRACTING ("IIFFC") QUESTIONS

(Orris) IIIFFC-1: Dr. Orris, your testimony draws heavily on your experience in occupational and environmental medicine. Could you clarify how your work with air pollution directly relates to vehicle emissions, as opposed to other forms of pollution?

Pre-Filed Answer: Almost all my teaching and publications on air pollution cover vehicle emissions as a component. After all, vehicle emissions are a major source of air pollution. Since most air pollution is composed of similar components, the source of air pollution is often not relevant, in my clinical experience, to understanding and attempting to mitigate the effects of that air pollution on my patients' health.

(Orris) IIIFFC-2: You argue that low-income and minority communities suffer more from vehicle emissions due to proximity to highways and truck traffic. Can you provide specific data showing how these areas have higher pollution levels solely from vehicles, and not from industrial or other sources?

Pre-Filed Answer: For the first part of that question, it is well established in the scientific literature that motor vehicles drive on roads and that, therefore, the pollution those vehicles emit will be emitted into the atmosphere around those roads. Thus, it is not that I "argue" that people living near roads experience higher levels of road-related air pollution, it is rather a statement well documented by actual measurements in the literature.

To answer the question in the second sentence, one would need to design and implement site-specific studies to look at the relevant location and consider the various air pollution sources and atmospheric conditions that bear on its air quality factors holistically. Of course, mobile sources of pollution (cars, trucks, etc.) are one of the major sources of air pollution, and they are the sources of air pollution at issue in this proceeding; that is why I focused on them in my Pre-Filed Testimony. More importantly, as I stated in my Pre-Filed Testimony, truck traffic is more often concentrated near low-income and minority housing, producing higher levels of pollution. This health burden is amplified by the fact that there are also higher rates of chronic cardiovascular and pulmonary diseases in these communities, which places the inhabitants at a higher risk of more and more severe health impacts when exposed to these relatively higher levels of air pollution from vehicles, in addition to whatever air pollution burdens they experience from industrial or other sources.

(Orris) IIIFFC-3: Regarding the increase in heat-related illnesses, is it possible that other interventions, such as better urban planning or heat management strategies, could mitigate these effects more effectively than adopting the proposed vehicle standards?

Pre-Filed Answer: No. The most effective method of mitigating pollution is to stop or reduce it at its source, and the proposed vehicle standards accomplish this goal directly, in contrast to the other interventions referenced in this question.

(Orris) IIIFFC-4: You emphasize the health benefits of the proposed regulations but do not mention the potential economic costs. Do you have any data or studies that weigh the public health benefits of these rules against the potential economic harm, such as job losses or increased consumer costs in the automotive industry?

Pre-Filed Answer: I am not testifying about studies that weigh public health benefits against economic impacts. The expertise for the requested studies is in the field of economics, not health science, which is my area of expertise. Although the economic impact of these interventions is important for the public's health, their impact is complex. Often, as the Director General of the World Health Organization emphasizes, they present win-win scenarios and are not the economic burden preconceived notions would suggest. As an example, over the last three decades, we have often found positive economic impacts of interventions to reduce the carbon footprint and pollution in general of health care providers. The actual calculation of these economic impacts is outside my area of expertise, and I defer to other expert testimony referenced in the Petition for such.

(Orris) IIIFFC-5: Some experts argue that the current air quality standards already adequately protect public health. How would you respond to the claim that more stringent regulations may not yield proportional health improvements?

Pre-Filed Answer: I do not believe that current air quality standards adequately protect public health because I believe current air quality is a significant source of serious public health problems, and that people's health would improve with lower levels of air pollution. More stringent regulations will lead to health improvements because they will lower the amount of air pollutants, which, in turn, will lead to lower prevalence of pollution-related ailments. I am also not sure what is meant by "proportional" in the context of this question, but the relationship between air pollution and public health harms is direct and very strong, though not perfectly linear.

The argument summarized in the first sentence of this question represents a public policy judgment, not an expert opinion focused on the public health impact. The asserted judgments of unnamed "experts" in the question, would, I suppose, depend on the value those "experts" place on a human life and disability. I also find it problematic that this question cites "some experts" without offering any citations or specific references; it is difficult to respond to a vague opinion that is also both unattributed and unsubstantiated.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R2024-017
PROPOSED CLEAN CAR AND TRUCK STANDARDS	)	(Rulemaking – Air)

RULE PROPONENTS' ANSWERS TO PRE-FILED TESTIMONY OF DANIEL HORTON

Pursuant to the August 13, 2024, Hearing Officer Order entered in this above-captioned proceeding, Rule Proponents hereby provide the following Pre-Filed Answers of witness Daniel Horton. The following Pre-Filed Answers address each question timely submitted in this docket directed at Professor Horton and are organized by entity using the numbering provided by that entity. When called to testify at the hearing scheduled in this matter for December 2 and 3, 2024, Dr. Horton will affirm that the following are his answers and testimony in response to the Pre-Filed Questions:

I. BOARD STAFF ("PCB") QUESTIONS

PCB-10: On page 6 of your testimony, your modeling shows that hotspots of NO_2 and $PM_{2.5}$ in the Chicago metropolitan area are concentrated along major roadways.

PCB-10a: Please clarify whether these hot spots also correspond to areas of low-income communities and communities of color.

Pre-Filed Answer: Yes, the geography of hotspots in the Chicago metropolitan area generally correspond to where communities of color live, though there are large non-Hispanic white populations near some major roadways. As explained in one of my papers[1]:

> *At the domain level, the largest NO2 reductions (that is, highest magnitude pollutant decreases in the highest (10th) decile) occur where Black (24%), Asian (9%) and Hispanic or Latino (18%) populations represent a relatively high proportion of the total population within that decile (Fig. 5a), while the smallest reductions (that is, lowest magnitude decreases in the lowest (1st) decile) occur where non-Hispanic white populations predominate (90% of the population within the 1st decile Fig. 5a). Health benefits, in the form of reduced mortality rates, largely mirror*

[1] S.F. Camilleri, A. Montgomery, M.A. Visa, J.L. Schnell, Z. Adelman, M. Janssen, E. Grubert, S.C. Anenberg & D.E. Horton, *Air quality, health and equity implications of electrifying heavy-duty vehicles*, (2023), Nature Sustainability, https://doi.org/10.1038/s41893-023-01219-0, at 5.

NO2 concentration declines; however, the Black population is overrepresented in the highest decile, indicating an outsized health benefit for this community (46%; Fig. 5b), largely driven by higher underlying baseline mortality rates and susceptibilities (Supplementary Fig. 10).

Within Chicago city limits, our equity findings are more nuanced. People of colour constitute the majority of the racial/ethnic composition for all Chicago NO_2 concentration change deciles (>50%; Fig. 5c). However, in contrast to our domain-level findings, NO_2 reductions are distributed more equally across population subgroups (Fig. 5c). This difference is reflective of the racial/ethnic make-up of the city and the proximity of non-Hispanic white populations to the northern branch of Interstate-90, where large reductions in NO_2 concentrations are simulated (Fig. 5e and Supplementary Fig. 13a).

PCB-10b: Also, please comment on whether there is a significant overlap between areas of low-income communities and communities of color in the Chicago metropolitan areas.

Pre-Filed Answer: My studies in this area "facilitate[ ] an equity-focused analysis that characterizes racial/ethnic disparities in the air quality and public health"[2]; these studies did not specifically examine data about relative income levels.

PCB-11: On page 7 of your testimony, you describe high spatial resolution air quality modeling of 30 percent transition of diesel HDVs to electric HDVs. Your testimony states that you found significant decreases in NO_2 and fine $PM_{2.5}$ but slight increase in ozone. Considering the transition to electric HDVs would also decrease VOM emissions (ozone precursor), please comment on why the modeling indicated increase in ozone concentration.

Pre-Filed Answer: The formation of ozone (O_3) in the atmosphere is the product of atmospheric conditions and interactions among various chemical compounds in the air, including how pollutants regulated by the Proposed Rules interact with other pollutants like the VOM emissions referred to in this question. The models described in my testimony predict O_3 levels will marginally increase as a greater proportion of vehicles on the road become electric because NOx emissions are expected to decrease. NOx emissions decrease when combustion engines are replaced by electric vehicles. NO

[2] *Id.* at 4.

and NO_2 are the two gases that comprise NOx. NO destroys or "titrates" ozone in the atmosphere. In areas with high NOx to volatile organic compound ratios, reducing NOx emissions leads to less NO, which leads to less O_3 titration. This phenomenon is similar to the so-called "Weekend Effect" where urban ozone concentrations are slightly elevated on weekends when fewer NOx-emitting vehicles are on the roadways. To address this, regulators should focus on reducing both NOx—as the Proposed Rules do—and VOM emissions simultaneously. This combined approach could prevent potential increases in ozone levels in urban areas and provide even greater improvements in overall air quality than the Proposed Rules alone.

II. INDIANA, ILLINOIS, IOWA FOUNDATION FOR FAIR CONTRACTING ("IIIFFC") QUESTIONS

(Horton) IIIFFC-1: In your testimony, you acknowledge that ozone (O_3) levels could increase in urban areas as a result of the vehicle electrification transition. Can you explain why the model predicts this and how you believe this potential negative outcome should be mitigated in the implementation of these regulations?

Pre-Filed Answer: The formation of Ozone (O_3) in the atmosphere is the product of atmospheric conditions and interactions among various chemical compounds in the air, including how pollutants regulated by the Proposed Rules interact with other pollutants like Volatile Organic Compounds (VOCs). The models described in my testimony predict O_3 levels will marginally increase as a greater proportion of vehicles on the road become electric because NOx emissions are expected to decrease. NOx emissions decrease when combustion engines are replaced by electric vehicles. NO and NO_2 are the two gases that comprise NOx. NO destroys or "titrates" ozone in the atmosphere. In areas with high NOx to VOC ratios reducing NOx emissions leads to less NO, which leads to less O_3 titration. This phenomenon is similar to the so-called "Weekend Effect" where urban ozone concentrations are slightly elevated on weekends when fewer NOx-emitting vehicles are on the roadways. To address this, regulators should focus on reducing both NOx—as the Proposed Rules do—and VOCs emissions simultaneously. This combined approach could prevent potential increases in ozone levels in urban areas and provide even greater improvements in overall air quality than the Proposed Rules alone.

(Horton) IIIFFC-2: You project that increases in ozone levels would contribute to an additional 50 premature deaths annually. How does this outcome reconcile with the projected overall health benefits of the proposal, and why should this trade-off be considered acceptable?

Pre-Filed Answer: First, the results reported in my research are dependent on the specific data inputs and assumptions explained in my publications. Within the modelling results, the projected increase in ozone levels, and resulting projected public health impacts, are just one part of the broader shift in air quality and chemistry that the model predicts will occur when the amount, type, and proportion of air pollutants changes. Removing pollutants like NO_2 from the atmosphere—which, alongside particulate matter ($PM_{2.5}$), contribute significantly to premature deaths at levels much higher than premature deaths associated with O_3 levels—brings us closer to solving the overall public health crisis posed by air pollution from mobile sources. Indeed, research has demonstrated that ozone levels may rise slightly in some areas as NOx levels are reduced (*see* previous answer, Horton IIIFFC-2). While marginal increases in O_3 and associated premature deaths are predicted, the health benefits from reducing NO_2 and $PM_{2.5}$ are substantial: reducing these pollutants would prevent far more premature deaths annually than additional ozone would cause.

That said, I do not consider this a "trade-off." My models did not assume that VOC reductions would be achieved. As described above, if VOCs are also reduced, then O_3 levels could hypothetically be reduced alongside reductions in NOx that result from implementation of the Proposed Rules. A coordinated reduction of both NOx and VOCs would further mitigate any unintended rise in ozone, helping to maximize the health benefits of the proposal. Additionally, my research does not speak to whether any such "trade-off" is "acceptable" or not, but provides policy makers with scientifically sound predictions about the broader health impacts and benefits of electrifying motor vehicles. Again, my analyses show that reductions in $PM_{2.5}$ and NO_2 would prevent far more premature deaths than the projected increase in O_3 would cause.

(Horton) IIIFFC-3: Given the complexity of factors influencing health outcomes in marginalized communities, can you elaborate on how you isolated the specific impact of vehicle emissions from other environmental or social factors that contribute to these communities' health burdens?

Pre-Filed Answer: To address the complexity of factors that contribute to health outcomes within a specific community, my modeling focused on mortality rates at the census-tract level. Using census tract-level data on mortality is a way to evaluate the overall impact of various factors, which helps capture varying susceptibility across different areas without attempting to disentangle the individual impact of the various factors influencing health outcomes. By examining mortality data specific to each tract, we gained insights into the relative overall health burdens in these communities. This approach assumes social determinants of health are reflected in differential mortality rates, allowing us to isolate the impact of vehicle emissions more effectively by understanding baseline differences in mortality that reflect other environmental or social factors. In other words, our analysis keeps constant all non-vehicle pollution factors influencing a census tract-sized population and then changes only the level of vehicle pollution to which that population would be exposed.

(Horton) IIIFFC-4: Your model focused on the Chicago metropolitan area, but the proposed regulations would apply statewide. Given that Illinois has a mix of urban, suburban, and rural areas with vastly different traffic patterns and emission sources, how reliable is it to generalize the findings from Chicago to the entire state?

Pre-Filed Answer: This question misrepresents my research and testimony. While Chicago is at the center of the modeling domain examined in my cited studies, the model's geography is not focused solely on the Chicago metropolitan area. We modeled emissions across a broad region, including northern Illinois, southern Wisconsin, western Michigan, and western Indiana, which capture, as the question puts it, "a mix of urban, suburban, and rural areas with vastly different traffic patterns and emissions sources." The model has been validated against air pollution observations across these diverse geographic settings, and has demonstrated reliable predictive performance not only in densely populated areas but also in suburban and rural areas. This broader geographic scope helps ensure that the findings are applicable beyond Chicago and relevant across the varied landscapes of Illinois.

(Horton) IIIFFC-5: Your analysis assumes a significant shift to electric heavy-duty vehicles (HDVs). Did your model account for the current state of electric vehicle (EV) infrastructure in Illinois, such as charging station availability, and how such infrastructure gaps might affect the success of the vehicle electrification transition?

Pre-Filed Answer: My research has not focused on the "current state of electric vehicle (EV) infrastructure in Illinois" and my research does not attempt to predict the pace of vehicle electrification. The underlying model assumes certain levels of EV adoption, as described in my articles, and then predicts air pollution and public health effects based on the assumed levels of EV adoption.

(Horton) IIIFFC-6: Given the time needed for infrastructure development, especially in rural and underserved areas, how did your model adjust for potential delays in EV adoption, and how would this affect the expected health benefits?

Pre-Filed Answer: Again, my modeling assumes certain levels of adoption, it does not predict the pace of EV adoption or consider what might affect the level of EV adoption. That said, as a general matter lower EV adoption would be expected to lead to smaller air pollution reductions and, in turn, lower levels of health benefits. This is a strong and direct, though not perfectly linear, relationship.

(Horton) IIIFFC-7: In your testimony, you highlight the potential reduction in greenhouse gas emissions through electrification. However, does your model take into account the environmental costs associated with manufacturing, maintaining, and disposing of electric vehicle batteries, particularly regarding rare-earth materials?

Pre-Filed Answer: No. While life cycle analysis of electric vehicle (EV) batteries is not my area of expertise, studies from experts in that field indicate that, despite the higher greenhouse gas emissions associated with battery manufacturing, there are significant long-term carbon dioxide savings when EVs are compared to internal combustion vehicles. Additionally, most of the "environmental costs," to which this question seems to refer, such as those related to the extraction and processing of rare-earth materials, are upfront and occur outside of Illinois. Environmental effects of disposal are also difficult to predict given the significant potential for EV battery reuse and recycling.

Additionally, the environmental impacts of both mining and battery disposal turn not only on the level of EV adoption, but significantly on the various and changing methods used in those processes and the

implementation of entirely different sets of laws and regulations across multiple domestic and international jurisdictions. My analysis focuses on the air quality impacts of vehicle electrification in our analysis domain, it does not conduct a life cycle analysis.

(Horton) IIIFFC-8: Electric vehicles require significant energy inputs for production and charging, especially if Illinois's energy grid relies on fossil fuels, how did you factor in the potential environmental impact of increased electricity demand in your analysis?

Pre-Filed Answer: We used a Contiguous United States (CONUS)-scale vehicle-to-electricity generation unit (EGU) electricity assignment algorithm. Further discussion of this algorithm can be found in the supplemental information provided in the below study which was included in my Pre-Filed Testimony.[3]

(Horton) IIIFFC-9: You estimate that reductions in NO_2 and $PM_{2.5}$ would prevent hundreds of premature deaths annually. Can you explain the assumptions behind these calculations and whether they account for variables such as population growth, changes in healthcare access, or advancements in medical treatments for pollution-related diseases?

Pre-Filed Answer: The calculations for estimated reductions in NO_2 and $PM_{2.5}$ are based on several key assumptions and do not specifically account for population growth, changes in healthcare access, or medical advancements in treating pollution-related diseases. The latter two sets of considerations would be particularly difficult to predict and credibly model. That said, access to healthcare is something that correlates with census tract, so that factor is likely captured by our modeling approach using census tract-level mortality data.

The primary assumption regarding the relationship between levels of air pollution and premature deaths is that we are focused on long-term exposure to pollutants, rather than short-term fluctuations. The health impact estimates we use in the model are drawn from well-established health-response functions from public health literature, based on large and robust cohort studies, which were summarized in a meta-analysis by the Health Effects Institute (HEI) in 2022.[4] Additionally, the model assumes

[3] M.A. Visa, S.F. Camilleri, A. Montgomery, J.L. Schnell, M. Janssen, Z. Adelman, S.C. Anenberg, E. Grubert & D.E. Horton, *Neighborhood-scale air quality, public health, and equity implications of multi-modal vehicle electrification*, (2023), Environmental Research: Infrastructure & Sustainability, https://doi.org/10.1088/2634-4505/acf60d.

[4] Health Effects Institute, *Systematic Review and Meta-analysis of Selected Health Effects of Long-Term Exposure to Traffic-Related Air Pollution*. Special Report 23, (2022), https://www.healtheffects.org/publication/systematic-review-and-meta-analysis-selected-health-effects-long-term-exposure-traffic.

an even distribution of pollution across a given census tract to provide a standardized approach to estimating exposure and health outcomes.

(Horton) IIIFFC-10: Were the projections for premature deaths based solely on air pollution reductions, or were other health determinants, such as socioeconomic status or pre-existing conditions in affected populations, considered in your analysis?

Pre-Filed Answer: The projections for premature deaths were based primarily on reductions in air pollution, without directly accounting for other health determinants like socioeconomic status or pre-existing conditions. However, these factors are implicitly captured through our use of mortality rates at a very granular census-tract level, reflecting varying susceptibility across census tract populations.

(Horton) IIIFFC-11: Your model predicts benefits from a hypothetical 30% transition to electric heavy-duty vehicles. If the actual transition rate turns out to be lower due to economic, infrastructure, or political challenges, how would that affect your projections of reduced emissions and premature deaths?

Pre-Filed Answer: Again, my modeling assumes certain levels of adoption, it does not predict the pace of EV adoption or consider what might affect the level of EV adoption. That said, as a general matter lower EV adoption would be expected to lead to smaller air pollution reductions and, in turn, lower levels of health benefits. This is a strong and direct, though not perfectly linear, relationship.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R2024-017
PROPOSED CLEAN CAR AND TRUCK STANDARDS	)	(Rulemaking – Air)

RULE PROPONENTS' ANSWERS TO PRE-FILED TESTIMONY OF JULIANA PINO

Pursuant to the August 13, 2024, Hearing Officer Order entered in this above-captioned proceeding, Rule Proponents hereby provide the following Pre-Filed Answers of witness Juliana Pino. The following Pre-Filed Answers address each question timely submitted in this docket directed at Ms. Pino and are organized by entity using the numbering provided by that entity. When called to testify at the hearing scheduled in this matter for December 2 and 3, 2024, Ms. Pino will affirm that the following are her answers and testimony in response to the Pre-Filed Questions:

I. INDIANA, ILLINOIS, IOWA FOUNDATION FOR FAIR CONTRACTING ("IIIFFC") QUESTIONS

(Pino) IIIFFC-1: In your testimony, you highlight the high volumes of truck traffic in Environmental Justice (EJ) communities such as Little Village and McKinley Park. Did your organization conduct any studies to evaluate how much of this traffic is due to necessary local commerce versus through traffic that could be redirected?

Pre-Filed Answer: No, the study did not attempt to evaluate which trucks were due to "local commerce" and which were due to "through traffic," as there is no feasible way to do this.

(Pino) IIIFFC-2: You mention that over 400 trucks per hour move through some intersections in EJ communities like McKinley Park and Archer Heights. How do you account for potential variables, such as time of day or day of the week, that could impact the accuracy of these truck traffic counts?

Pre-Filed Answer: This question misunderstands the study, as each location was counted only once for a specific 24-hour period, not repeatedly over multiple days. Therefore, the truck counts in the study specifically reflect the day and time at which each count was recorded, without averaging across other days or times. The study utilized camera footage to capture truck traffic, including overnight, to provide a comprehensive 24-hour snapshot of activity at each location. The data cited in my Pre-Filed Testimony includes a by-hour graph, showing that truck traffic generally peaks

between 9:00 AM and 2:00 PM, including peak activity figures like the over 400 trucks counted in a single hour as mentioned in this question.

(Pino) IIIFFC-3: You mention that a 2023 study, which Little Village Environmental Justice Organization (LVEJO) helped lead, identified high truck traffic near schools and retirement homes in Little Village. Was there any research conducted to compare the health outcomes of residents in these areas to those in similar neighborhoods without such heavy traffic, to isolate the specific impact of vehicle emissions?

Pre-Filed Answer: Determining the specific impact of vehicle emissions on health outcomes independent of all other variables in real-world settings is extremely challenging due to the cumulative nature of pollution sources. It is also unclear how it would be possible to identify a "similar neighborhood without such heavy traffic" for purposes of making the comparison this question requests. That said, the City of Chicago performed a cumulative impacts analysis in 2023 that culminated in a report that highlights that areas with intense truck traffic, like Little Village, experience compounded health risks including asthma and respiratory issues, cancer, coronary heart disease, and mental health impacts from multiple environmental social stressors and at higher rates than other areas of the City. This finding reinforces the need for cleaner trucks to help reduce the overall pollution burden.

While attributing the precise proportion of health outcomes in a given community to vehicle emissions alone is not feasible, the point remains that vehicle emissions add to these cumulative air pollution impacts in high-traffic areas and contribute to the relatively worse health outcomes in those communities. The question seems to suggest that it would only be appropriate to try to reduce vehicle emissions if vehicle emissions were the only environmental cause of health problems in a particular community; in fact, the opposite is true: the public health imperative to address vehicle emissions is at its greatest for those communities also facing additional environmental burdens that combine with vehicle emissions to produce well-documented health outcome inequities.[1]

[1] *See* City of Chicago, *Chicago Cumulative Impact Assessment 2023 Summary Report,* (updated Oct. 11, 2023), https://www.chicago.gov/city/en/depts/cdph/supp_info/Environment/cumulative-impact-assessment.html.

(Pino) IIIFFC-4: In your testimony, you advocate for adopting the Advanced Clean Cars II (ACC II) and Advanced Clean Truck (ACT) standards to reduce pollution in EJ communities. How do you account for the potential economic impact on low-income residents in these areas who may not be able to afford electric vehicles, despite environmental justice vehicle credits?

Pre-Filed Answer: The question assumes that environmental justice (EJ) vehicle credits in the Proposed Rules will not be effective to incentivize vehicle manufacturers' efforts to ensure lower income drivers have access to EVs. But these credits are specifically designed to make electric vehicles (EVs) more accessible to low-income residents by giving manufacturers an additional incentive to sell EVs in those communities. Additionally, as witness Urbaszewski details, existing government and utility financial supports for EVs and charger purchases already include a myriad of income-based approaches that dedicate particular support for lower-income drivers.

Moreover, the used car market will continue to be important for low-income vehicle purchasers and will offer greater numbers of lower-cost EVs over time, so residents will still have a range of choices. It is also worth noting that vehicle affordability—whether electric or internal combustion—is already a challenge in many EJ communities, who suffer from income inequality generally. The goal of programs like ACC II and ACT is to improve air quality and health outcomes for residents, including truck drivers and warehouse workers, in ways that recognize and try to mitigate against these broader economic concerns, but these air pollution regulations cannot solve income inequality.

(Pino) IIIFFC-5: You state that EJ communities experience disproportionately higher rates of asthma and other health issues due to vehicle emissions. Were there any other contributing factors, such as housing quality or industrial pollution, that were controlled for in studies linking vehicle emissions to health disparities?

Pre-Filed Answer: As I explained in my response to question IIIFFC-3 above, this question is based on a fundamentally false premise. It is not less important to reduce vehicle emissions where there are other environmental burdens or "contributing factors" to unacceptable health outcomes, it is more important. I did not author the studies referenced in the Petition, but—as explained by witness Horton, who did author some of those studies—studies that use data about health impacts broken down by geographic area (i.e., data on health outcomes organized by small geographic units like census tracts) capture the effects of other "contributing factors," because those factors are also strongly correlated with location and distributed inequitably.

(Pino) IIIFFC-6: You highlight the need for prompt adoption of the clean vehicle standards to avoid another model year of higher-polluting vehicle sales. However, considering the existing infrastructure challenges for electric vehicles, particularly in low-income areas, how realistic is it to expect a rapid shift to cleaner vehicle technology in these communities?

Pre-Filed Answer: I am unclear what the questioner specifically means by "realistic" and "rapid shift," but it seems evident that this "shift" will be more "rapid" if regulators create market conditions that expedite it.

Our communities are currently experiencing the effects of diesel pollution which requires solutions that acknowledge these realities and promptly addresses these life-threatening issues. We see that in the high asthma rates in the neighborhood and in the compounding impacts cumulative exposure to pollution has on individuals who don't have access to healthcare. Adopting the Proposed Rules is a matter of ensuring that diesel pollution, a key driver of poor air quality, is reduced and that people in Little Village and frontline communities across Illinois can breathe cleaner air. This is a priority for our organization given that lives are at risk.

Electrifying heavy-duty vehicles will deliver the greatest health benefits to the areas most impacted by vehicle pollution, including those who reside in those areas and to truck drivers operating those vehicles, many of whom are also community members. Any perceived challenges to passenger EV affordability or to deploying passenger EV infrastructure in low-income communities do not apply to transitioning to medium- and heavy-duty EVs.

Additionally, it is important to note that addressing infrastructure build-out is within the jurisdiction of other agencies and the Proposed Rules will work in concert with statutory provisions and goals assigned to other state agencies.[2] I refer to Rule Proponents' Pre-Filed Answers to General Questions and to witness Urbaszewski's Pre-Filed Testimony and Pre-Filed Answers, particularly as to the Beneficial Electrification Plans required under the Clean and Equitable Jobs Act (CEJA), which contains a number of equity provisions.

For example, the Illinois EV rebate program administered by IEPA prioritizes low-income consumers. Utilities' Beneficial Electrification Plans under CEJA include infrastructure incentives and rebates specifically earmarked for Equity Investment Eligible Communities (EIECs), and our organization and many others weighed in on how those incentives should be implemented during proceedings at the Illinois Commerce Commission. Moreover, as witness Urbaszewski notes, those

[2] *See* Rule Proponents' Statement of Reasons at 45–46.

plans also include specific programs and technical support to assist commercial and industrial vehicle fleets in transitioning to electrified vehicles.

It is for the Board to set pollution standards that protect public health; the Commerce Commission is already charged with preparing the electrical grid and expediting the rollout of EV infrastructure.

(Pino) IIIFFC-7: You emphasize the importance of environmental justice vehicle credits to ensure access to zero-emission vehicles for EJ communities. How do you propose ensuring these credits reach the most vulnerable populations, and what safeguards are in place to prevent wealthier individuals from taking advantage of such programs?

Pre-Filed Answer: First, this question misunderstands the way the Proposed Rules work. The credits for EV sales in EJ communities are not designed to "reach" individual purchasers in those communities; the credits go to the manufacturers and give the manufacturers an incentive to sell EVs in low-income communities. Manufacturers would only earn those credits by selling EVs in communities identified by the Illinois Solar for All program, which the State already uses effectively and which has broad-based support.

That said, not only does this question ask the Proposed Rules to solve a problem that is not actually relevant to the manufacturers' credit structure of the Proposed Rules, but the question asks the Proposed Rules to solve a problem that is a fundamental challenge to any program structured around income-eligibility. Ensuring that any credits designed to help low-income people reach the most vulnerable populations is a common program design challenge encountered in basically every sort of program that seeks to direct resources to low-income individuals or communities.

Using specific income thresholds to set qualifications for credits almost invariably creates a "creaming effect," where the individuals closest to the top of any defined income range take advantage of the credits at a higher rate. Mitigating the "creaming effect" and preventing wealthier individuals from accessing benefits at the exclusion of lower income individuals is complex, but the focus of this proceeding should be on reducing air pollution in EJ communities, which can improve public health regardless of individual vehicle ownership. Again, ensuring EVs are more affordable is addressed in EV rebate and other programs administered and overseen by other state agencies.

(Pino) IIIFFC-8: You advocate for vehicle electrification as a solution for air pollution in EJ communities, but have you considered the environmental and health impacts of mining and manufacturing the materials needed for electric vehicles? How does your proposal address these concerns?

Pre-Filed Answer: While the proposal primarily focuses on reducing air pollution emissions in EJ communities and does not, therefore, relate directly to mining and manufacturing impacts, I recognize the broader environmental and health concerns associated with mining and manufacturing the materials for EVs.

Addressing environmental and health impacts caused by the full EV lifecycle, including mining and manufacturing impacts, is critical, but regulating mining and manufacturing is outside the scope of the Board authority to adopt the Proposed Rules under § 10 of the IEPA Act; the board's authority is to "adopt regulations" that are "standards and conditions regarding the sale . . . of any . . . vehicle . . . determined by the Board to constitute an air-pollution hazard."[3] Other environmental rules would apply and should be improved to address the environmental impacts of mining and manufacturing.

For example, where EVs are manufactured in Illinois, those factories will require permits from IEPA for the air emissions, water discharges, and waste created by their operations. That said, I fully support those and other complementary programs and regulatory efforts focused on recycling and sustainable component sourcing, which can help mitigate these impacts in the long term. Such programs play a vital role in managing EV-related environmental concerns beyond what this particular proposal cover.

(Pino) IIIFFC-9: You mentioned a study where students documented truck traffic near their school. Was any data collected on the types of trucks or their emissions standards to verify that the pollution levels in the area were directly attributable to older, more polluting vehicles, or could some of the trucks have been newer, cleaner models?

Pre-Filed Answer: No. The particular study where students documented truck traffic near their school was conducted by an Advanced Placement Statistics class. The students focused on gathering basic traffic counts, as no other entity—neither the City nor State agencies—was actively monitoring truck activity near their school despite requests from the community to do so. The students could not have possibly collected data on the make, model, or emissions characteristics of individual trucks as those trucks rumbled past their classroom.

[3] 415 ILCS 5/10(A)(d).

(Pino) IIIFFC-10: Have you considered the economic impact of this transition on businesses in EJ communities that rely on diesel trucks, and how do you propose mitigating those effects?

Pre-Filed Answer: The question is a bit unclear—for example, plenty of massive companies reporting record profits operate "businesses in EJ communities" by driving diesel trucks through those communities. It does not seem necessary to "mitigate" the costs companies like Amazon or Walmart incur in electrifying delivery or logistics fleets. That said, I have considered the potential economic impact on businesses in EJ communities that currently rely on diesel trucks. While the transition to cleaner fleets could present challenges for small businesses and businesses owned and operated by people in low-income communities, mitigation strategies such as financial incentives and technical support will help offset the costs and smooth the transition. Witness Urbaszewski describes many such programs, including Illinois electric utilities' "beneficial electrification plans," which direct certain proportions of resources toward low-income communities, as required under CEJA, and provide specific technical support and financial incentives to support electrifying small commercial and industrial fleets.

Additionally, as the electric vehicle market grows, with the adoption of the Proposed Rules, more electric vehicles will be available for purchase and more electric vehicles will be entering the used market. This has the opportunity to lower the costs of electric vehicles, making these vehicles more accessible.

Lastly, because truck drivers are a part of our community, and are continuously exposed to diesel exhaust via the nature of their job, the adoption of the Proposed Rules would bring direct health benefits to truck drivers, which would also bring about economic benefits to the businesses and fleets employing them. Economic savings could take the form of fewer and lower hospital bills and medical expenses to treat respiratory illnesses caused by breathing in diesel pollution while on the job, and fewer missed work days.

(Pino) IIIFFC-11: How do you reconcile the potential economic burden of electric vehicle adoption on working-class families in EJ communities? Is there a plan in place to ensure an equitable transition?

Pre-Filed Answer: This question is confusing: with what am I being asked to reconcile the "burden of electric vehicle adoption"? The question raises several points, but it's important to note that affordability and infrastructure are key considerations in the broader societal transition to EVs, and efforts are already in place to address these challenges. Please see my pre-filed answers above, as well as the testimony of witness Urbaszewski.

While concerns about the cost of electric vehicle adoption for individual low-income vehicle purchasers are valid, the Proposed Rules must be viewed as part of a multifaceted effort to accomplish an equitable transition to EVs. The Proposed Rules require manufacturers to play their part by ensuring they are selling more low- and zero-emissions vehicles as a means to reduce diesel and greenhouse gas pollution, which have the most immediate health impacts in EJ communities. In addressing that part of the broader problem the Proposed Rules include the environmental justice vehicle credits to incentivize manufacturers to do their part with equity as a key objective by finding ways themselves to sell more EVs in low-income areas and thereby earn those credits.

Again, as noted above and by witness Urbaszewski, other policy mechanisms are already being used to provide financial support for EV purchases by low-income individuals and ensure more equitable access to charging infrastructure. The goal in this specific proceeding, though, is to reduce air pollution hazards in these communities, which can improve overall health outcomes in the long run. In that way, I can "reconcile" the costs of transitioning to EVs by considering the massive public health benefits that such a transition will bring, particularly in those very EJ communities currently disproportionately burdened by diesel air pollution and climate change.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R2024-017
PROPOSED CLEAN CAR AND TRUCK STANDARDS	)	(Rulemaking – Air)

RULE PROPONENTS' ANSWERS TO PRE-FILED TESTIMONY OF BRIAN URBASZEWSKI

Pursuant to the August 13, 2024, Hearing Officer Order entered in this above-captioned proceeding, Rule Proponents hereby provide the following Pre-Filed Answers of witness Brian Urbaszewski. The following Pre-Filed Answers address each question timely submitted in this docket directed at Brian Urbaszewski and are organized by entity using the numbering provided by that entity. When called to testify at the hearing scheduled in this matter for December 2 and 3, 2024, Brian Urbaszewski will affirm that the following are his answers and testimony in response to the Pre-Filed Questions:

I. BOARD STAFF ("PCB") QUESTIONS

PCB-16: On pages 19 through 22 of your testimony, you testify as to why the ACC II and ACT rules are feasible and equitable. As part of your analyses, please comment on whether you considered the impact of transitioning from gas-powered vehicles to EVs on the State's fuel tax revenue and the Motor Fuel Tax Fund, which is generally used for construction and maintenance of the State's roadways.

Pre-Filed Answer: For Rule Proponents' collective response to this question, please refer to the response to this question in Rule Proponents' Pre-Filed Answers to Questions Not Addressed to Specific Witnesses. I will add here my own individual observations.

I understand the Motor Fuel Tax Fund is, at this time, a primary way that the state pays for road construction. However, I did not specifically consider impacts on the State's fuel tax revenue and Motor Fuel Tax Fund in my analysis because my testimony is aimed to help the Board in considering whether to adopt "[s]tandards and conditions regarding the sale, offer, or use of any fuel, vehicle, or other article determined by the Board to constitute an air-pollution hazard."[1] Determining the best ways to fund road construction is beyond the scope of the Board's authority, as I

[1] 415 ILCS 5/10.

understand it. In any event, all EVs that are sold, under the Proposed Rules or otherwise, will still need roads to drive on, so I believe the General Assembly will address road funding as part of its power to tax and spend. Indeed, since 2019, Illinois has already had an EV fee for any car that does not use gas, showing that the General Assembly is already attentive to this issue and suggesting one way it could be addressed.[2]

PCB-17: On page 20 of your testimony, you note that an increase of new ZEVs will eventually lead to an increase in availability of used ZEVs in the market. Please comment on the availability of federal or state incentives for purchase of used ZEVs.

Pre-Filed Answer: There are already significant incentives to purchase used EVs at the federal, state and utility levels in Illinois. At this point in time, the federal government offers a federal tax credit of $4,000 for a used EV.[3] As of this year, that credit can be transferred to the dealership selling the vehicle, thereby lowering the purchase prices of the vehicle.[4] Such credits offer up-front savings and potentially lower the monthly payments and interest that consumers pay if the vehicle is financed. The Climate and Equitable Jobs Act ("CEJA") also provides rebates for purchasing used EVs.[5] Recently, ComEd announced that used EVs were eligible for point-of-purchase rebates for certain classes of customers, which lowers the up-front cost of purchase.[6] As one representative of auto dealers described it: '"As EV adoption grows in Illinois, so does the interest in certified, pre-owned EVs,' said Jennifer Morand, President of Chicago Automobile Trade Association (CATA). 'CATA new-car dealers are committed to supporting vehicle electrification for interested consumers, and being able to offer a wide selection of pre-owned EVs that can benefit from a ComEd Pre-Owned Electric Fleet Vehicle Rebate is one of the many ways dealers are staying at the forefront of the EV revolution.'"[7]

[2] *See* 625 ILCS 5/3-805(a).
[3] IRS, *Used Clean Vehicle Credit*, (Nov. 15, 2024), https://www.irs.gov/credits-deductions/used-clean-vehicle-credit.
[4] IRS, "IRS issues guidance for the transfer of clean vehicle credits and updates frequently asked questions," (Oct. 6, 2023), https://www.irs.gov/newsroom/irs-issues-guidance-for-the-transfer-of-clean-vehicle-credits-and-updates-frequently-asked-questions.
[5] 415 ILCS 120/27.
[6] BusinessWire, "ComEd Rebates Now Available for Pre-Owned Electric Fleet Vehicles," (Oct. 29, 2024), https://www.businesswire.com/news/home/20241029462522/en/ComEd-Rebates-Now-Available-for-Pre-Owned-Electric-Fleet-Vehicles.
[7] *Id.*

PCB-18: On page 21 of your testimony, you note savings to Illinois electricity customers based on a study by the Citizens Utility Board that "researched the impact of EV ownership on electricity prices under a scenario where EV owners practiced optimized charging."

PCB-18a: Are you aware of any current or planned programs for educating EV owners on the optimal times to charge their vehicle? If so, please submit pertinent information on such programs into the record.

Pre-Filed Answer: I am aware of some programs for educating EV owners about optimal charge times. In fact, the Electric Vehicle Act, amended by CEJA, specifically points out that utilities, in their Beneficial Electrification ("BE") plans must consider using and promoting time-of-use rates for EV charging customers.[8] The state's electric utilities have been following CEJA's requirements. For instance, with ComEd, actual rates for EV charging customers are determined by which rate the customer picks, which includes rates that reward charging off-peak.[9] The Citizens Utility Board already promotes awareness of that program and its benefits. Moreover, ComEd requires recipients of EV charger rebates to consider opting in to the optimal time-of-use rate.[10]

Indeed, in its ongoing BE Plan, approved in 2023, ComEd described its development of time of use rates as follows:

> "ComEd's Residential EV Charging Infrastructure Sub-program is paired with participation in a time variant pricing rate or the Residential Optimized Charging Pilot to most fully implement a signal of the best time to charge an EV. Furthermore, pursuant to the Commission Order at 263, ComEd will work with Staff and stakeholders in the development of the new proposed residential distribution TOU rate. Only a price signal that varies in concert with the grid conditions can fully signal local system conditions, critical peak periods, and times of potential renewable energy curtailment. Through this structure, participating residential customers will have a strong incentive to charge their EVs at hours that would be most beneficial to the grid and will capture associated savings."[11]

[8] 20 ILCS 627/45(b)(1).
[9] Citizens Utility Board, "ComEd's Time-of-Day Pricing Program," https://www.citizensutilityboard.org/time-use-pricing-plans/.
[10] ComEd, "Electric Vehicle Charger and Installation Rebate Program," (2024), https://www.comed.com/about-us/clean-energy/electric-vehicle-charger-and-installation-rebate.
[11] ComEd Beneficial Electrification Plan, Compliance Filing, No. 22-0432/0442 (cons.) (May 25, 2023), https://www.icc.illinois.gov/docket/P2022-0432/documents/338224, at 46 ("ComED BE Compliance Filing").

When the Commerce Commission approved ComEd's BE Plan in 2023, it ordered ComEd to include a proposed time of use rate open to all customers, not just EV customers, with "an incentive for EV owners (i.e., monthly/annual bill credits)" to go on the time of use rate.[12]

Ameren also prioritized ensuring optimized charger use in its current BE Plan:

> "For example, a foundational element of the BE Plan is Ameren Illinois' Rider Optional Electric Vehicle Charging Program (EVCP), herein after referred to as the "ChargeSmart" program. ChargeSmart, originally implemented in October 2021, is a rider onto Ameren Illinois' standard residential and business rates that encourages electric customers to charge EVs during preferred non-peak periods of the day. In July 2023, the BE Plan amended the ChargeSmart customer types, expanded incentives, and more strongly focused on equity investment eligible and/or low-income communities (EIEC)."[13]

Finally, both ComEd and Ameren are seeking approval for their second round of BE plans. Up-to-date, exhaustive information on how this topic is being addressed in those plans would require looking at the dockets as they proceed. The dockets are listed in the footnote below.[14]

Moreover, Illinois utilities are accelerating the development and implementation of time of use rates through other Commerce Commission proceedings. Though I am not personally involved in these other proceedings and so cannot speak to the precise details or evolving status, I understand that the Rate Design Investigation proceedings may also be relevant to answering the Board Staff's question here. In ComEd's ongoing Rate Design Investigation proceeding, ComEd proposed a Rider EVEN (Electric Vehicle Elective Notification) that would provide EV owners $2 per month for up to 24 months as the incentive to participate in ComEd's proposed Time of Use rate option.[15]

Rule Proponent EDF has intervened in that proceeding to argue for an even higher time of use incentive based on a ComEd residential time of use pilot program which showed that EV owners increased overnight "off-

[12] S*ee* ICC Final Order, No. 22-0432/0442 (cons.) (Mar. 23, 2023), https://www.icc.illinois.gov/docket/P2022-0432/documents/349478/files/610872.pdf, at 162–163.
[13] Ameren Beneficial Electrification Plan, Compliance Filing, No. 22-0431/0443 (cons.) (Apr. 1, 2024), https://www.icc.illinois.gov/docket/P2022-0431/documents/348862, at 3 ("Ameren BE Compliance Filing").
[14] ComEd, No. 24-0484, https://www.icc.illinois.gov/docket/P2024-0484, and Ameren, No. 23-0494, https://www.icc.illinois.gov/docket/P2024-0494.
[15] ComEd Ex. 3.0, (Direct Testimony of Kathleen E. Kremer), No. 24-0378, (Oct. 10, 2024), (https://www.icc.illinois.gov/docket/P2024-0378/documents/350962/files/613753.pdf, at 44–45.

peak" charging under time of use rates.[16] Ameren has yet to file its Rate Design Investigation, but that is anticipated to include proposals related to implementing time of use incentives aimed at dampening demand at peak times.

PCB-18b: Also on page 21, you note that optimized charging "assumes all EV charging occurs between 12 AM and 6AM." Please comment on the savings that might be projected if EV charging does not take place entirely within that six-hour period.

Pre-Filed Answer: This question is difficult to answer because projected savings will vary depending on the time periods outside that six-hour period that are examined to answer it. I did not conduct the referenced study, and therefore cannot re-do the analysis with different parameters. Nevertheless, the Citizens Utility Board study recognizes that unoptimized charging during peak hours would lead to higher market prices. However, the study did not specifically address what effects unoptimized charging during non-peak hours would entail, which may be slightly more realistic. Additionally, as described in my answer to the previous question, there are already programmatic ways to encourage optimized charging and many incentives for EV owners to charge optimally—most notably that it is cheapest for them to do so—which means that a realistic implementation of the program likely will have strong consumer participation in optimal charging.

[16] CUB-EDF Ex. 1.0, (Direct Testimony of Richard McCann), No. 24-0378, (July 24, 2024,), https://www.icc.illinois.gov/docket/P2024-0378/documents/353266/files/618390.pdf, at 21–22.

II. ALLIANCE FOR AUTOMOTIVE INNOVATION ("AFAI") QUESTIONS

AFAI-21: In your pre-filed testimony, you state that the "Rules would require that the EV supply has a place to be sold, thus providing a solid, long term source of demand that increases over time..." (Pre-filed Testimony Brian, 10). Please explain how your assertion that building more EVs in Illinois will result in an increase in consumers buying them.

Pre-Filed Answer: This question mispresents my Pre-Filed Testimony. My assertion was that the rules will require selling more EVs, which means more EVs will need to be produced. I also asserted that there are EV manufacturers in Illinois that would be part of that increased production, and producing more EVs in Illinois would result in more EV manufacturing jobs, which would benefit Illinois. However, it also seems generally obvious that building more EVs in Illinois would then allow more consumers to buy more EVs because the supply will have increased. Some of those vehicles built in Illinois would be sold in Illinois even if many would likely be sold in other states. The rules also incentivize manufacturers to hit sales targets, meaning the manufacturers will try to promote consumer demand themselves. It is also basic economics that increasing the supply of EVs should reduce their price and, therefore, lead to greater demand.

AFAI-22: What is the difference in cost between public charging and at-home charging on a per kilowatt basis?

AFAI-22a: Please explain

Pre-Filed Answer: This question is beyond the scope of my Pre-Filed Testimony, and I do not know how to answer it at the entirely generic level at which it is asked. I am also not aware of one comprehensive source that can answer this question because many factors can impact the price over many different times and locations. For instance, some factors that influence the cost of home charging include: who is the electric provider; what are the rates/incentives they offer; what time of day the charging is done; what is the power capability of the charging device; etc. For public charging, many factors also determine the price, such as: who is the vendor; what are their market set rates; what incentives do they offer (say for customer loyalty cost savings); etc.

Furthermore, the cost of public charging will likely decrease. There is nothing prohibiting landlords and associations from offering low or even no-cost charging as an amenity at a residential development. Moreover, some public charging is also provided free to drivers, as an incentive to generate customers at a business location or a workplace perk. For instance, at least one company (Volta) offers free charging now in

commercial shopping center parking lots.[17] And, as with competition between gas stations, consumers will be able to choose lower-cost charging options. Such competition for EV charging customers in the market put downward pressure on public charging prices over time.

AFAI-22b: How it is fair and equitable to expect non-homeowners to pay more to charge their vehicles publicly, and have to wait while their vehicles are charging, each week, than those who have charging available at home?

Pre-Filed Answer: This question is confusing to me because it does not seem to relate to the Proposed Rules here or to the Board's jurisdiction. The disadvantages asserted in this question are more reflective of the disadvantages that non-homeowners generally face in society—one could just as easily ask "how is it fair and equitable that non-homeowners must search for street parking or pay to rent a parking space while homeowners have garages?"

Nevertheless, this concern is being addressed by other public entities that do have authority to address it. In fact, legislation passed last year[18] first guaranteed that renters and condominium owners have the right to charge where they lived.[19] Moreover, the laws ensure that such residents cannot be unilaterally prevented from installing charging equipment for their vehicle, tied to their electric bill.

AFAI-22c: How do you think the lack of EV charging at home will affect EV sales growth?

Pre-Filed Answer: I have not studied this question as I am not an expert on consumer behavior. However, there are many initiatives to increase access to at-home EV charging. There is state legislation that requires EV capable infrastructure in all new homes.[20] The Beneficial Electrification Plans I described above include various rebates for residential EV chargers and charger installation, which provide for higher rebate levels in low-income communities. Moreover, in 2023, Chicago began requiring new residential developments, including single family homes, to be EV ready.[21] Some EV manufacturers are even including chargers and installation as part of the purchase of a vehicle.[22]

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[17] ChargeHub, "Volta EV Charging Network," https://chargehub.com/en/networks/volta.html.
[18] Illinois General Assembly P.A. 103-0053; P.A. 103-0572 (trailer legislation).
[19] 765 ILCS 1085/5.
[20] 765 ILCS 1085.
[21] City of Chicago, "City Council Approves EV Charging Ordinance to Continue Support for Electric Vehicles in Chicago," (Sept. 15, 2023), https://www.chicago.gov/city/en/depts/bldgs/provdrs/bldg_code/news/2023/september/ev_charging.html.
[22] Eric Stafford, "New Ford EV Customers Get a Free Charger and Home Installation," (Sept. 30, 2024), https://www.caranddriver.com/news/a62412739/ford-ev-customers-free-charger-home-installation/.

And access to public chargers is improving rapidly. Indeed, CEJA recognizes in its stated goals that "[w]idespread adoption of electric vehicles requires increasing public access to charging equipment throughout Illinois, especially in low-income and environmental justice communities, where levels of air pollution burden tend to be higher."[23] In line with this goal, the Governor is opening public chargers supported by state funding on the very day these Pre-Filed Answers are being filed, and the state, according to Illinois EPA, is on track to triple public fast charging ports in the next two years. Nationally, public funding is creating more publicly accessible charging too. "Since the start of the Biden-Harris Administration, the number of publicly available EV chargers has doubled. Now, there are over 192,000 publicly available charging ports with approximately 1,000 new public chargers being added each week." [24]

AFAI-23: How do you propose that EV market share in Illinois will increase over 800% from its current 7.3% to 59% in 4 model years and continue to 100% in 10 model years (1400% increase)?

Pre-Filed Answer: The EV market share growth will likely occur in the same way that it has in the other states that have adopted the Proposed Rules. Moreover, the state of Illinois, via CEJA, already has a legislative goal of having one million EVs on the road by 2030.[25] Indeed, the "Beneficial electrification" provisions in CEJA were enacted to support that goal and specifically prepare the state to "ensure that electric vehicle adoption and increased electricity usage and demand do not place significant additional burdens on the electric system and create benefits for Illinois residents."[26] CEJA specifically calls for "[e]xpanded infrastructure Investment [that] will help Illinois more rapidly decarbonize the transportation sector," among other listed strategies and goals.[27] The Beneficial Electrification framework in CEJA requires utilities to create plans to accomplish these goals, subject to Commerce Commission oversight and approval, and to update those plans every three years.[28] By creating an iterative process that must consider and react to changing market circumstances periodically, Illinois already has a regulatory structure to ensure EV infrastructure needs are updated and expanded as EV sales continue to grow under these Proposed Rules or otherwise.

[23] 20 ILCS 627/45(a)(7).
[24] U.S. Dep't of Transp., "INVESTING IN AMERICA: Number of Publicly Available Electric Vehicle Chargers Has Doubled Since Start of Biden-Harris Administration," (Aug. 27, 2024), https://www.transportation.gov/briefing-room/investing-america-number-publicly-available-electric-vehicle-chargers-has-doubled.
[25] 20 ILCS 627/45.
[26] 20 ILCS 627/45(a).
[27] 20 ILCS 627/45(a)(5).
[28] 20 ILCS 627/45(f).

It is also important to note again, as pointed out in my Pre-Filed Testimony, that the State has made significant direct investments in EV charging infrastructure, including roughly $70 million to build publicly accessible chargers and dedicating $12.6 million of Illinois' share of the Volkswagen settlement to charging infrastructure.[29]

Additionally, the pace of growth is also not the main point and is short-sighted. Consumer demand is forward-looking when it comes to EVs already, as a recent BCG survey of 3,000 consumers found "38%...intend to purchase an EV as their next vehicle. Another 27% are considering buying one in the future."[30] Such legislative goals—the various statutory provisions in CEJA aimed at creating the policy and infrastructure environment to achieve them—and consumer interest will help achieve the estimated market share.

It is important to note, however, that the Proposed Rules will not necessarily result in the precise Illinois market shares described in the question as the Proposed Rules have both built-in compliance flexibilities and allow for enforcement discretion, if ACC II requirements are not hit. Manufacturers could use compliance flexibilities across ACC II states or across compliance years, meaning the market share story would play out differently. Additionally, if manufacturers fail to meet requirements, agencies would have enforcement discretion on how to respond, and both the California Air Resources Board and the Illinois Pollution Control Board could always consider adjustments in reaction to significant market condition changes.

AFAI-24: If the Board adopts the proposed ACC II amendments, the sale of internal combustion engine ("ICE") vehicles will be banned by MY2035, correct?

Pre-Filed Answer: This assertion is incorrect. The ACC II amendments apply to only new vehicles, not to used vehicles, and apply to only certain classes of light-duty vehicles.

[29] *See* Pre-Filed Testimony of Brian Urbaszewski at 6, n. 11.
[30] BCG, "Can OEMs Catch the Next Wave of EV Adopters?" (Mar. 20, 2024), https://www.bcg.com/publications/2024/can-oems-catch-the-next-wave-of-ev-adopters.

AFAI-24a: How will this affect the economy in Illinois if the state must meet California's investments in incentives and EV charging infrastructure to meet a ZEV mandate of 59% sales in MY2029 and banning of ICE vehicles by MY2035?

Pre-Filed Answer: This question rests on a false premise. There is no requirement being proposed that Illinois "meet California's investments in incentives and EV charging infrastructure." Moreover, assuming that Illinois must meet California's incentives, while other states that have adopted the Proposed Rules have not matched California's incentives and investments, is just illogical. Each state that has adopted the Proposed Rules has created its own individualized paths for developing and incentivizing EV charging infrastructure. Indeed, in this respect, Illinois is better positioned than most states because it already has an ambitious statutory framework in place specifically aimed at electrifying the transportation sector through the various provisions of CEJA, as I have described elsewhere. Additionally, please see the Rule Proponents Pre-Filed Answers to Questions Not Addressed to Specific Witnesses, particularly to IEPA questions 5 and 6, for additional information on charging infrastructure needs and projections.

All that said, there will be significant benefits to Illinois' economy. Under the federal Inflation Reduction Act ("IRA"), extensive federal resources are being used to build high speed charging networks along major roads and within communities.[31] There are also federal tax incentives that lower the cost of building EV charging resources.[32]

Illinois itself is dedicating over $82 million in state resources to building out public charging statewide, and, as previously mentioned, the Governor is opening public chargers on the same day these Pre-Filed Answers are being filed. As mentioned in my Pre-filed Testimony, Illinois has also applied for and received at least $14.9 million and $7 million to expand charger availability.[33] The EV industry is poised to perform well since investments have already occurred and will accelerate.[34]

[31] Illinois Dep't of Transp., *Drive Electric Illinois*, (2024), https://idot.illinois.gov/transportation-system/environment/drive-electric.html.
[32] DOE, *Tax Credits for Electric Vehicles and Charging Infrastructure*, https://afdc.energy.gov/laws/ev-tax-credits.
[33] Pre-Filed Testimony of Brian Urbaszewski at 6.
[34] *See* Joint Supplemental Testimony of Kathy Harris and Muhammed Patel at 4.

AFAI-24b: What will the effect be on the Illinois economy if consumers must visit other states to buy an ICE vehicle?

Pre-Filed Answer: First, I refer the questioner to the answer to question 44 the Illinois Automobile Dealers Association in Rule Proponents' Pre-Filed Answers to Questions Not Addressed to Specific Witnesses. The Proposed Rules prohibit purchasing ICE vehicles out-of-state and then registering them in Illinois. Thus, I have no reason to believe that significant numbers of consumers will visit other states to buy an ICE vehicle. Moreover, many ICE vehicles will still be sold in Illinois, particularly over the first years the Proposed Rules are in effect.

AFAI-25: Are you aware that in March 2024, the U.S. Environmental Protection Agency ("EPA") finalized its multi-pollutant rule that will reduce criteria pollutants by 50% over the lifetime of the program?

Pre-Filed Answer: Yes.

AFAI-25a: Is it correct that the EPA regulations will be in place for the U.S. as a whole and provide criteria emission benefits nearly identical to those promulgated under California's ACC II Low Emissions Vehicle IV program?

Pre-Filed Answer: For Rule Proponents' collective response to this question, please refer to the response to this question in Rule Proponents' Pre-Filed Answers to Questions Not Addressed to Specific Witnesses. I will add here my own individual observations.

This question assumes that these federal regulations will not be repealed or modified by the new presidential administration or via legal challenge. Even if these U.S. EPA rules remain in place and are fully implemented, the benefits for Illinois are not nearly identical to the benefits Illinois will enjoy if it adopts ACC II as proposed in this proceeding. Analyses of the U.S. EPA regulations in place find that, in 2032, the projected U.S. EPA regulations are likely to result in battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs) comprising 69% of all new passenger vehicle sales.[35] In contrast, implementing the ACC II is expected to result in ZEVs and PHEVs being 82% of all new passenger vehicle sales. Thus, implementing the ACC II in Illinois can be expected

[35] EV Hub, "Under new EPA emissions rule, EVs could make up 69 percent of all passenger vehicle sales by 2032," (Mar. 25, 2024), https://www.atlasevhub.com/weekly-digest/under-new-epa-emissions-rule-evs-could-make-up-69-percent-of-all-passenger-vehicle-sales-by-2032/.

to result in air emission reduction benefits commensurate with that significant 13% difference in projected EV sales.[36]

Additionally, the ACC II includes model years up to 2035 while the federal regulation covers only model years 2027–32. Even if one assumes that the ACC II and new U.S. EPA regulations result in the same number of sales over the span of 2027–32—which, again, the study above suggests it will not—there will be additional benefits from implementing the ACC II since it covers additional years. In fact, the later years of the ACC II are where most of the highest proportion of ZEV and PHEV sales will occur, since these are the years where percentage of sales increase incrementally from around 80% to 100%.[37] The sales are cumulative, thus an increase in percentage of sales will result in even more total sales. Though I cannot predict what would happen in the national EV market in 2033, 2034, and 2035 after the expiration of the U.S. EPA rules referenced here, the largest annual air pollution reduction benefits in Illinois, then, will accrue in the last few years of the ACC II's implementation (MY '33–'35), which would be lost or lowered if one simply relies on the federal regulations that expire in 2032.[38]

The assertion in this question is incorrect for yet another reason because U.S. EPA projects that manufacturers will be comply with these federal rules—which require manufacturers meet national fleet-wide averages for the greenhouse gas emissions of their vehicles—through increasing BEV and PHEV sales percentages within their entire national new automobile fleets. Since ACC II states are requiring higher amounts of ZEVs and PHEVs to be sold within their state under the ACC II provisions that include state-level enforcement mechanisms, and other states do not have these requirements, it is likely that manufacturers will seek to comply with nation-wide fleet requirements by concentrating EV sales in those ACC II states. As more ZEVs and PHEVs will be sold in those states that have adopted ACC II, manufacturers will likely offer proportionately fewer EVs in non-ACC II states. After all, the manufacturers will have direct financial and regulatory incentives to try to hit their sales targets in the ACC II states first.

If Illinois fails to adopt ACC II, it would logically be expected to see less benefit from the federal standards, as manufactures would have no requirement to meet the national average target set by U.S. EPA within Illinois. Thus, Illinois would see less health and economic benefits than

[36] *See* CARB, *Advanced Clean Cars II*, (2024), https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii. While the definition of ZEV under the Proposed Rules does include fuel cell vehicles, it should be noted that last year such vehicles made up less than 2% of the ZEVs in use in California. https://calmatters.org/environment/2023/08/california-hydrogen-cars-funding/.
[37] *See* Statement of Reasons at 34.
[38] *See id.* at 147.

assumed for a national average. Even if these federal standards remain in place, benefits to Illinois will therefore still be maximized by making sure it is an ACC II state during the effective years of the federal standards and, most importantly, during the later years after the federal rules sunset and while ACC II is delivering its largest benefits.

AFAI-25b: Can you please explain how adoption of California's Advanced Clean Cars II program will improve the air quality in Illinois if manufacturers must already meet the federal regulations?

Pre-Filed Answer: ACC II can be expected to produce benefits above those achieved by the federal standards for the reasons described in the response to question AFAI-25a above and to the response to this question in Rule Proponents' Pre-Filed Answers to Questions Not Directed at Specific Witnesses: ACC II will drive greater EV adoption than the federal rule; it extends beyond the model year 2027–2032 period covered by the federal standards; it will bring EVs to Illinois that manufacturers may otherwise direct to other states; and it could maintain protective standards if the federal standards are weakened or repealed. Factors such as these drive ERM's projection that adopting ACC II will reduce cumulative $PM_{2.5}$ emissions by up to 4,655 metric tons, NOx emissions by up to 48,389 metric tons, and GHG emissions by up to 174 million metric tons by 2050, relative to a baseline scenario that includes the new federal standards.[39]

III. INDIANA, ILLINOIS, IOWA FOUNDATION FOR FAIR CONTRACTING ("IIIFFC") QUESTIONS

(Urbaszewski) IIIFFC-1: You referenced multiple studies throughout your testimony. Were any of these studies funded or produced by organizations with vested interests in the proposed rules, and how do you address potential biases in the sources of the data you relied on?

Pre-Filed Answer: I am not sure what this question means by "vested interest." One could argue that everyone has a vested interest in breathing clean air and in fostering a livable stable climate. However, none of the studies were done by, or to my knowledge funded by, corporations that sell only zero-emission vehicles or EV chargers. In fact, several of the studies were produced by, or relied on studies conducted by, the Health Effects Institute, which is predominantly funded by the automobile industry. One could conclude that automakers that produce automobiles with internal combustion engines have a financial incentive to underestimate the harms

[39] *See* Joint Supplemental Testimony of Kathy Harris and Muhammed Patel at 3–4; Ex. 4, Emissions page.

of air pollution emissions from those types of engines. In any event, every study cited described its methodology and many were peer reviewed, meaning one can identify biases if they exist and can scrutinize the data and methodology.

(Urbaszewski) IIIFFC-2: You mentioned that 71% of Illinois' population live in areas failing to meet EPA's health-based standards for ozone pollution. Would reducing emissions solely from vehicles be enough to bring these areas into compliance?

Pre-Filed Answer: This question misunderstands how the U.S. EPA's National Ambient Air Quality Standards ("NAAQS") work. Moreover, the question is a bit confusing because it does not specify the time for compliance with the U.S. EPA's standards referenced. The current ozone standard was set in 2015 and reaffirmed in 2020. U.S. EPA deemed the Chicago area out of compliance in 2018, and U.S. EPA required Illinois to be in compliance by mid-2021. Again, Illinois failed to reach attainment with the standard, and U.S. EPA downgraded the region. That downgrade provided three additional years for the state to achieve the ozone standard but came with additional stringency measures designed to reduce emissions. Though Illinois was required to bring the Chicago area into attainment by mid-2024, the current data do not appear to support the case that it has. Thus, it is likely that U.S. EPA will be required to again downgrade the region, add additional requirements to reduce pollution, and give the state three more years to achieve that standard. Therefore, Illinois would be required to prove that it achieved compliance with the ozone standard in mid-2027, based on air quality data from the three-year period of 2024–26. Given that the vehicle standards would not go into effect immediately and would be delayed at least two model years, the mismatch between the deadline for meeting the ozone NAAQS and the start of vehicle rule requirements means the emissions reductions from vehicle rules would not appreciably appear until after the current deadline Illinois faces to meet the ozone standard in the Chicago area.

However, it is important to note that National Ambient Air Quality Standards are not static; they have changed over time through U.S. EPA's periodic review process and tend to be tightened as new peer-reviewed science is published. Even as progress is made towards achieving an older NAAQS, an area can also find itself in nonattainment with a newer, more protective NAAQS standard. Thus, while we know most of Illinois' population lives in areas failing to meet the ozone NAAQS now, according to the U.S. EPA, we do not yet know what the standards will be when the Proposed Rules actually take effect, nor whether parts of Illinois will comply with them. Nevertheless, in trying my best to answer the question, reducing emissions solely from vehicles would result in

reductions of pollution, and any reduction would help reach compliance with the NAAQS at any given time.

(Urbaszewski) IIIFFC-3: You emphasized the harmful effects of NO_2 and $PM_{2.5}$ emissions. Given that these pollutants are already regulated under national standards, do the proposed rules address pollutants that current regulations fail to mitigate? Or are existing regulations sufficient if properly enforced?

Pre-Filed Answer: This question is unclear, but I will assume it again refers to NAAQS and answer as best as I can. I do not believe it would be justified to say that the NAAQS are protecting everyone or are "sufficient if properly enforced." It is also safe to say that reducing pollution to levels below the NAAQS would bring additional health benefits beyond meeting the NAAQS.

While the level of NAAQS standards is informed by a periodic scientific review process, the actual decision as to where it is set is made by a political appointee, the U.S. EPA administrator. More importantly, for pollutants like $PM_{2.5}$, U.S. EPA's scientific reviews have not identified a pollutant concentration at which harms from breathing the pollutant cease, even at concentration levels far below the standard. Until, and unless a concentration where no health harms are caused is found, only a level of zero $PM_{2.5}$ can be certain as having no negative health impacts.

Simply said, based on what is known now, any amount of $PM_{2.5}$ in the air people breathe causes health damage. The NAAQS level simply reflects how much pollution and damages will be allowed under the specific political policy decision that the Clean Air Act assigns to the U.S. EPA Administrator before specific, required statutory actions occur. Such actions involve developing and implementing plans that reduce the amount of that pollutant in the air. Periodic reviews of U.S. EPA NAAQS standard have resulted in air quality standards being tightened as new science comes to light documenting higher and more varied risks from air pollutants, and the collected science has shown negative health impacts at lower concentrations. For example, the $PM_{2.5}$ NAAQS originally set in 1997 was strengthened in 2006, 2012, and 2024. In fact, many public health and medical advocacy organizations, including my own, advocated for a lower $PM_{2.5}$ concentration than was ultimately chosen by the U.S. EPA Administrator earlier this year. I specifically provided comment in that process.[40]

(Urbaszewski) IIIFFC-4: You assert that Illinois has committed significant funding to EV infrastructure development. However, are there any independent analyses

[40] Public Comment of Brian Urbaszewski, Respiratory Health Association, No. EPA-HQ-OAR-2015-0072-4564, (May 3, 2023), https://www.regulations.gov/comment/EPA-HQ-OAR-2015-0072-4564.

that demonstrate Illinois will have sufficient charging infrastructure to support the anticipated growth in electric vehicle sales within the timeframe set by these rules?

Pre-Filed Answer: What is the definition of "independent analyses," and how does it differ from the first question about biases and "vested interests"? In attempting to answer the question, I believe the state electric vehicle coordinator mentioned the need for 36,000 public charging ports to support one million EVs.[41] Additionally, Rule Proponents have supplied an analysis that estimates the number, capacity, and location distribution of charging stations to support the on-road vehicles resulting from the ACT and ACC II rules at each year of the program, which can be found in the Statement of Reasons on pages 139 and 150, Please see the Rule Proponents Pre-Filed Answers to Questions Not Addressed to Specific Witnesses, particularly to IEPA questions 5 and 6, for additional information on charging infrastructure needs and projections.

This question, however, does not ask for a projection of what charging infrastructure needs will be, but to "demonstrate" that Illinois will meet those needs. Given all the variables (i.e., the flexibility allowed to manufacturers in complying with the Proposed Rules, flexibility given to utilities in implementing CEJA, innumerable commercial decisions of individual businesses and people, etc.) and timeframes involved, I am not aware of how such a study to "demonstrate Illinois will have sufficient charging infrastructure" could be done credibly.

(Urbaszewski) IIIFFC-5: Can you provide specific examples of how EV infrastructure will be equitably distributed across both affluent and low-income communities, particularly those already suffering from environmental injustices?

Pre-Filed Answer: I would encourage the questioner to review utilities' Beneficial Electrification Plans and the Clean and Equitable Jobs Act, which requires those Plans be approved and overseen by the Illinois Commerce Commission and has a whole range of specific equity provisions aimed at this question precisely. Additionally, Illinois must comply with Federal Justice 40 requirements in spending the considerable amounts of federal monies allocated it to it under various federal statutes that is designated for or may be used to address EV charging infrastructure over the past four years, which is also aimed explicitly at reducing inequity.[42] For example, Illinois received $14.9 million dollars from the Illinois Finance

[41] Cole Longcor, "With influx of state and federal funding, Illinois looks to add enough chargers to support 1 million EVs," (Feb. 17, 2024), https://capitolnewsillinois.com/news/with-influx-of-state-and-federal-funding-illinois-looks-to-add-enough-chargers-to-support-1-million-evs/.
[42] The White House, *Justice40*, https://www.whitehouse.gov/environmentaljustice/justice40/.

Authority.[43] Meanwhile, the City of Chicago received $15 million.[44] Moreover, the Illinois EV rebate program administered by the EPA prioritizes low-income consumers.

CEJA specifically requires Beneficial Electrification Plans to provide incentives or programs that speed up adoption of electric vehicles in low-income communities.[45] Or, the BE plan must "offer support to low-income communities who are, experiencing financial and accessibility barriers such that electric vehicle ownership is not an option."[46] The utilities are complying with CEJA. Through its Beneficial Electrification Plan, ComEd provides dedicated funding for EV charger rebates and Make-Ready infrastructure in areas deemed at greater risk from air pollution exposure. ComEd also offers higher rebates for low-income consumers, to advance equity.[47] Ameren similarly has complied, offering charging equipment/installation rebates, education on benefits, and financial assistance to low-income consumers.[48]

Finally, as noted before, both ComEd and Ameren are seeking approval for their second round of BE plans. Up-to-date, exhaustive information would require looking at the dockets as they proceed. The dockets are listed in the footnote below.[49]

(Urbaszewski) IIIFFC-6: You mentioned that vehicle electrification could reduce electricity rates for all utility customers, citing optimized charging scenarios. However, does this analysis account for the costs of upgrading the grid infrastructure to handle increased demand, and if so, could these costs offset the projected benefits?

Pre-Filed Answer: I am not aware of any reason to believe that grid infrastructure costs could reasonably be expected to offset projected benefits of vehicle electrification. Indeed, in looking only at the impact on electricity rates—and ignoring all other benefits for the moment—I believe that evidence of the downward pressure on all electricity rates offered by expanded EV use is becoming more powerful. For example, one recent study compared "electric utility revenues from EV charging with utility costs associated

[43] State of Illinois, "Gov. Pritzker Announces $14.9M in Federal Funding for Illinois' Community Charging Program," (Jan. 11, 2024), https://www.illinois.gov/news/press-release.29498.html.
[44] Chicago Construction News, "$15 M federal boost will help Chicago expand EV charging infrastructure," (Sept. 10, 2024), https://www.chicagoconstructionnews.com/15-m-federal-boost-will-help-chicago-expand-ev-charging-infrastructure/.
[45] 20 ILCS 627/45(b)(11).
[46] 20 ILCS 627/45(b)(14).
[47] ComEd BE Compliance Filing, *supra* note 10, at 5.
[48] *See* Ameren BE Compliance Filing, *supra* note 12, at 5.
[49] ComEd, No. 24-0484, https://www.icc.illinois.gov/docket/P2024-0484, and Ameren, No. 23-0494, https://www.icc.illinois.gov/docket/P2024-0494

with serving EV load," in Illinois.[50] "The results of [that] analysis indicate that in Illinois, EVs have increased utility revenues more than they have increased utility costs, leading to downward pressure on electric rates for EV-owners and non-EV owners alike."[51] I point you to the Rule Proponents' Pre-Filed Answers to Questions Not Addressed to Specific Witnesses being filed contemporaneously and specifically to questions raised by the Illinois Automobile Dealers Association that address grid impacts and refer to projections already provided in Exhibit 4 to Rule Proponents' the Statement of Reasons.

Electric utilities may be better positioned to add information to answer this question because they have proprietary knowledge of their grids, but I believe this question, as phrased, would be difficult for the utilities to answer with confidence because the grid is constantly evolving, and the responsibility to pay for specific infrastructure costs varies. The effect of any specific grid infrastructure upgrade cost on "all utility customers" will vary significantly because the costs of different grid infrastructure upgrades can be allocated in different proportions between being socialized among all ratepayers as opposed to being paid by the specific entities requiring the particular infrastructure upgrade.

Additionally, Illinois utilities' Beneficial Electrification Plans propose spending significant sums of money on charging infrastructure and carefully consider the costs of that spending, presenting comparisons of those costs to estimated benefits, including benefits in changes to rates among other types of monetary and non-monetary benefits. Even if those benefit estimations understate to some extent the non-monetary benefits of vehicle electrification, the cost-benefit analyses of these plans provided to and approved by the Illinois Commerce Commission show benefits significantly exceeding costs.

It is important to note that increased EV charging, when done at optimal times, will not necessarily strain grid infrastructure significantly. The study cited in my Pre-Filed Testimony observed that "[o]ff-peak EV charging would not increase capacity requirements, while unmanaged charging would lead to a need for more contracted capacity, potentially higher auction prices, and increased costs to consumers."[52] The timing of increased demand could minimize the cost of any necessary grid improvements. Indeed, the various efforts required under CEJA and

[50] Shenstone-Harris, et al., "Electric Vehicles are Driving Rates Down for All Customers. State Factsheet: Illinois," (Apr. 2024), https://www.synapse-energy.com/sites/default/files/Electric%20Vehicles%20Are%20Driving%20Rates%20Down%20for%20All%20Customer%20Illinois%20May%202024.pdf, at 1.
[51] *Id.* at 3.
[52] Citizens Utility Board, "Charging Ahead: Deriving Value from Electric Vehicles for All Electricity Customers," (March 26, 2019), https://www.citizensutilityboard.org/wp-content/uploads/2019/03/Charging-Ahead-Deriving-Value-from-Electric-Vehicles-for-All-Electricity-Customers-v6-031419.pdf at 14.

carried out in utilities Beneficial Electrification planning, discussed in my response to questions PCB-18a and PCB-18b above, should minimize grid infrastructure costs associated with EV charging by encouraging off-peak charging.

Moreover, CEJA also builds off a long line of energy legislation that is driving additional energy savings through improved energy efficiency programs that reduce power demand. Likewise, CEJA is accelerating the deployment of rooftop and community solar on and near where the power is needed, which also reduces stress on the grid.

Finally, as noted above, both ComEd and Ameren are seeking approval for their second round of BE plans. Up-to-date, exhaustive information would require looking at the dockets as they proceed. The dockets are listed in the footnote below.[53]

(Urbaszewski) IIIFFC-7: Your testimony suggests that these regulations will address environmental justice issues by reducing air pollution in low-income and minority communities. How do you ensure that these communities won't be disproportionately affected by the higher costs of electric vehicles or any economic dislocation resulting from changes in vehicle manufacturing and fuel infrastructure?

Pre-Filed Answer: This question has a misleading premise; I do not know why it is certain or likely that such economic dislocation would occur. Indeed, a study on electric vehicle charging stations found that deploying chargers "notably enhance [nearby] businesses in underprivileged areas, defined as disadvantaged and/or low-income areas designated by both California and Justice40."[54] Thus, accelerating the expansion of public charging stations, as the State is doing aggressively, as I have described, could actually result in benefits to the low-income communities and their businesses, instead of economic dislocation.

As to the "higher costs of electric vehicles," referenced in this question, it is undeniable that technological, manufacturing, and supply chain improvements that have been set in motion by a worldwide shift to electric vehicles have dramatically lowered the costs of manufacturing EVs, and it is hard to see how that worldwide trend not continue. Moreover, EVs

[53] ComEd, No. 24-0484, https://www.icc.illinois.gov/docket/P2024-0484, and Ameren, No. 23-0494, https://www.icc.illinois.gov/docket/P2024-0494.
[54] Yunhan Zheng, et al., "Effects of electric vehicle charging stations on the economic vitality of local businesses," (Sept. 4, 2024), *Nature* 15, 7437, https://www.nature.com/articles/s41467-024-51554-9.

generally save money for anyone driving them.[55] Additionally, the used EVs market will provide EVs at a lower cost to consumers. In fact, industry data earlier this year also showed that used EV prices in the US were actually below similar aged gasoline-powered vehicles, even before federal EV incentives.[56] This shows in the more affordable used vehicle market used EVs have lower purchase prices. Furthermore, as mentioned in my testimony, the state has directly prioritized providing rebates to low-income EV purchasers.[57]

Finally, I am aware that the state has been attempting to reduce the possibility of economic dislocation. Illinois, through CEJA, also offers workforce training hubs that offer skills development for entry-level jobs in the clean energy industry, providing support to these communities.[58] The program received $37.9 million in funding in 2023 to establish a network of 13 hubs.[59] These programs are currently focused on renewable energy but provide a framework that can be used to address vehicle electrification and show that the State already has models in place to address economic dislocation concerns.

(Urbaszewski) IIIFFC-8: The Clean Car and Truck Standards aim to promote ZEV adoption. How do you ensure that low-income communities, where vehicle ownership rates are generally lower, will benefit from these policies?

Pre-Filed Answer: The question, again, misses the point. The benefits of the Proposed Rules are not enjoyed by only people driving low- and zero-emission vehicles. The benefits of the Proposed Rules come from people breathing cleaner air and experiencing a more stable climate when those vehicles—whoever is driving or owning them—stop emitting so much pollution. Diesel trucks drive through low-income communities and reducing these emissions will significantly benefit those communities by improving their health outcomes and quality of life. Witnesses Horton, Orris, and Pino all speak to the concentration of these public health benefits in low-income communities where air pollution problems associated with transportation emissions are currently the direst.

[55] InsideEVs, "How Much Will An EV Really Cost Me?" (Oct. 30, 2024), https://insideevs.com/features/739161/evs-total-cost-of-ownership/.
[56] Laurance Yap, "Used EVs Are Now Cheaper Than Used Gas Cars," (June 24, 2024), https://www.greencars.com/news/used-evs-are-now-cheaper-than-used-gas-cars.
[57] Pre-Filed Testimony of Brian Urbaszewski at 4.
[58] 20 ILCS 730/5-20.
[59] State of Illinois, "Gov. Pritzker Announces $38 Million for CEJA Workforce Hubs," (July 21, 2023), https://dceo.illinois.gov/news/press-release.26742.html.

(Urbaszewski) IIIFFC-9: You argue that the rules align with the Climate and Equitable Jobs Act (CEJA) and Illinois' long-term goals. Can you clarify if Illinois has conducted a cost-benefit analysis to measure the economic impact of these regulations in achieving CEJA targets, compared to other possible solutions?

Pre-Filed Answer: I am confused about what comparisons could be made and by whom. To what other possible solutions should the Proposed Rules be compared? I am not aware of any cost-benefit analysis of "achieving CEJA's targets" conducted by Illinois. However, the Rule Proponents have provided extensive analyses of the costs and benefits of the Proposed Rules, as discussed in the testimony of other witnesses and the ERM modeling attached to the Petition. I also know that the Board asked the Department of Commerce and Economic Opportunity to conduct a study of the Proposed Rules, but DCEO declined to do so.

(Urbaszewski) IIIFFC-10: Given that vehicle turnover rates are slow, how do you address the argument that the proposed regulations may not result in significant emissions reductions in the short term?

Pre-Filed Answer: I do not understand the "argument" posited by this question, and it is difficult to respond to an "argument" that is unexplained, unattributed, and unsupported by any facts. Indeed, the question seems to mislabel a feature of the Proposed Rules as a bug. A central feature of the Proposed Rules is to ramp-up regulations over time to allow for manufacturers and markets to adjust, thereby easing the adoption of EVs. Thus, the fact that emissions reductions will start smaller and increase over time is precisely because the goal of the Proposed Rules is to give producers and consumers enough time to adjust.

When it comes to combatting climate change and addressing the deeply complex problem of local air pollution from America's 20th century on-road transportation system, the goals must be long-term and systemic. This approach will deliver massive societal benefits through those long-term air pollution reductions, as described in my testimony, the Pre-Filed Testimony and Answers of other witnesses and the Statement of Reasons.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R2024-017
PROPOSED CLEAN CAR AND TRUCK STANDARDS	)	(Rulemaking – Air)

RULE PROPONENTS' ANSWERS TO PRE-FILED TESTIMONY OF MYRNA V. SALGADO-ROMO

Pursuant to the August 13, 2024, Hearing Officer Order entered in this above-captioned proceeding, Rule Proponents hereby provide the following Pre-Filed Answers of witness Myrna V. Salgado-Romo. The following Pre-Filed Answers address each question timely submitted in this docket directed at Myrna Salgado-Romo and are organized using the numbering provided by the Indiana, Illinois, Iowa Foundation for Fair Contracting, which is the sole party addressing Pre-Filed Questions to Ms. Salgado-Romo. When called to testify at the hearing scheduled in this matter for December 2 and 3, 2024, Ms. Salgado-Romo will affirm that the following are her answers and testimony in response to the Pre-Filed Questions:

I. INDIANA, ILLINOIS, IOWA FOUNDATION FOR FAIR CONTRACTING'S ("IIIFFC") QUESTIONS FOR MYRNA V. SALGADO-ROMO

(Salgado-Romo) IIIFFC-1: Are you aware of the current federal and state regulations that already exist to limit vehicular emissions? How do you believe the proposed standards will significantly improve conditions beyond the existing regulations?

Pre-Filed Answer: Yes, I am generally aware that there are federal and state regulations related to vehicle emissions, such as under the federal Clean Air Act and state-specific standards like California's tailpipe regulations. It is my impression that these regulations have made significant progress in improving air quality over the years. What we need now are larger and faster improvements to air quality, and since those regulations have worked to achieve some air quality benefits, I believe we could use more regulations, such as the Proposed Rules, to achieve more air quality benefits. I am also aware of my community and the air pollution burdens we face. Members of the Chicago Environmental Justice Network (CEJN),

such as myself, are not only aware of applicable federal and state regulations; we are familiar with the local character of the places in Illinois most affected by these regulations. My community, and so many others like it, would especially benefit from reductions in vehicle emissions because of the heavy traffic that especially pollutes our air.

I understand that the Proposed Rules build off of other regulations already in place in California and that they are designed to accelerate the transition to cleaner vehicles, especially medium- and heavy-duty trucks, which remain a significant source of pollution. I understand the Proposed Rules to be designed to make a meaningful difference by pushing for more rapid adoption of zero-emission technologies, which is essential to address the cumulative impact of vehicle emissions on public health, especially in communities already overburdened by pollution. Again, while existing regulations have helped, I understand that the Proposed Rules will lead to greater reductions in tailpipe emissions from vehicles than would be required under existing regulations applicable in Illinois. Since I am aware that tailpipe emissions are affecting my community, I am confident that the Proposal is a step in the right direction.

As for the significance of such improvements, I would say that any improvement in air quality is significant to me. I have a personal history of reactive airway disease, and I witnessed chest pains, asthma attacks, and labored breathing as a first aid administrator at a local public school. In addition, other members of my family have suffered from the consequences of oppressive air pollution. For example, my mother struggled with ALS and, in her final days, was unable to enjoy time outdoors due to the air quality. Every possible improvement to Chicago's air, particularly in McKinley Park and other South Side neighborhoods, would be significant to its members and their families, who have suffered disparate and substantial health impacts for far too long. Since vehicular air pollution is still hurting me, my family members, and my community, any existing regulations cannot solve the issues I have testified to from my experience and observations.

(Salgado-Romo) IIIFFC-2: As someone involved in the Chicago Environmental Justice Network (CEJN), have you considered the potential economic impacts of these regulations on local businesses that rely on heavy-duty vehicles for transportation whereby these regulations could lead to economic displacement or job losses in your community?

Pre-Filed Answer: Yes, economic impacts are an important consideration, and I understand that businesses relying on heavy-duty vehicles will need to adapt to stricter regulations. It's crucial to approach these transitions in a way that supports affected industries, particularly small businesses. However, we must also consider the broader long-term economic benefits of reducing air pollution, such as improved public health outcomes and new green jobs in the clean energy and transportation sectors. Those public health improvements are specifically what I believe the Illinois Pollution Control Board should focus on when considering these Proposed Rules. I would also refer to the other witnesses put forward by Rule Proponents, as I know they offer more insights on these public health outcomes, economic impacts, and the need for a broad and thoughtful approach to this transition.

We at CEJN also advocate for policies supporting and incentivizing businesses to transition, such as grants, tax credits, or access to affordable clean vehicle technologies. More light can be shed on this by my colleague, Juliana Pino, of the Little Village Environmental Justice Organization, which is a CEJN member, who is also testifying on this matter. By working collaboratively, we can minimize disruption while ensuring that we are making meaningful strides in addressing the public health crisis caused by pollution.

There are economic impacts on both sides of the issue: avoiding or delaying costs to change to EVs may benefit some industry interests, but in my community, the health and economic impacts of current dirty diesel trucks are felt through absences on the job and healthcare costs as well. I personally know and have met local industrial workers and truck drivers, as well as friends and neighbors of those at CEJN, who have spoken at length about the serious health problems they attribute to the poor air quality where they work. One such truck driver could feel his breathing slowly become more labored the longer he worked; he would blow his nose or cough and find blackened mucus. Every day he drove to work, it

smelled horrible, and after arriving, he couldn't wait to leave. Surely there is an economic impact when employees miss days of work due to their own respiratory problems associated with air pollution or simply dread arriving at the workplace they believe is making them sick.

(Salgado-Romo) IIIFFC-3: You referenced CEJN's air quality monitoring efforts. Could you provide more information on the accuracy and reliability of these monitors compared to government data sources? Have these community monitors provided data that differs from government air quality assessments?

Pre-Filed Answer: Our air quality monitoring efforts are designed to provide additional, localized insights into pollution levels in individual neighborhoods. Government monitoring, which relies on a thin spread of equipment spread over the entire state, does not provide an assessment as local as CEJN's monitoring provides. For context, Illinois EPA operates 34 monitoring sites for $PM_{2.5}$ spread across the entirety of Illinois and only eight such monitoring sites for NO_2.[1] I am not sure to what the question is referring when it asks about "government air quality assessments," but the most important difference between the data from community air monitors and government air quality monitoring is simply that the community collects local data in places that government air quality monitors simply ignore.

While government data gives a broad overview, our community monitors can capture real-time, hyper-local data, which is particularly valuable in areas with disproportionate exposure to pollutants. As such, there is no difference between government data and our data in terms of the general types of data collected; instead, we are gathering community data with the local specificity that the government data does not capture. We are currently in the process of developing an air monitoring network where we will follow U.S. EPA instructions on calibration methods and have learned from U.S. EPA educational seminars and from direct conversations with U.S. EPA Region 5 staff. We continue to discuss the creation of our network with U.S. EPA about the creation of our network and will share data collected by our monitors throughout the process. Our communication and transparency with the U.S. EPA is not to question the

[1] IEPA Bureau of Air, *State of Illinois Ambient Air Monitoring 2024 Network Plan*, (Oct. 2023), https://epa.illinois.gov/content/dam/soi/en/web/epa/topics/air-quality/outdoor-air/air-monitoring/documents/2024-network-plan.pdf at 6 ($PM_{2.5}$ monitoring site count) and 8 (NO_2).

accuracy or reliability of government data or to contradict government-collected data with potentially less accurate or reliable data, as the questions suggests, but instead to strengthen collective understanding to protect the air we breathe.

Currently, in our data collection, CEJN uses predominantly PurpleAir sensors, which historically have not been used by U.S. EPA in enforcement or compliance assessments; however, according to the manufacturer, they have been used in peer-reviewed air quality research across the United States.[2] The accuracy of these monitors has been further validated through comparisons with government data. In some cases, we have observed that our monitors highlight pollution hotspots that are not fully captured in the far sparser government monitoring networks. U.S. EPA has told us that they use our community monitoring results to identify potential concerns and investigate further.

It is important to emphasize that we view this data as complementary to government assessments, not in competition with them, and we believe it strengthens the case for targeted interventions in the communities most affected by poor air quality. Specifically, overlaying community-gathered data with government data helps shed more light on the cumulative impacts that are disproportionately experienced in certain communities. It is how CEJN works with both locally collected information and broader government data to understand the environmental impacts of vehicles in Chicago communities. Again, witness Pino, who is also testifying on this matter, understands these issues very well, so I would also point to her Pre-Filed Testimony and Pre-Filed Answers.

[2] PurpleAir, Real-Time Air Quality Monitoring, https://www2.purpleair.com/.

(Salgado-Romo) IIIFFC-4: You state your community is in close proximity to industrial corridors and railyards. Besides the proposed Clean Car and Truck standards, are there specific initiatives targeting industrial pollution, other local sources, or alternative solutions that you think would be equally or more effective?

Pre-Filed Answer: I find this question confusing: how could an initiative targeting industrial pollution—which I think refers to things like factories—effectively reduce truck air pollution? I do not understand why the question assumes that we can only address one or the other. I am not an expert on designing regulations, so cannot speak generally to alternatives that would be "equally or more effective" than the Proposed Rules. Indeed, I do not understand how policies aimed at reducing industrial pollution—which is also very important—can be more effective at reducing vehicle pollution than policies like the Proposed Rules that are aimed directly at reducing vehicle pollution.

We recognize that vehicle emissions are just one part of the pollution picture, especially in communities near industrial corridors and railyards. In addition to advocating for stronger clean vehicle standards, we also support initiatives to reduce emissions from industrial sources, such as stricter enforcement of pollution control regulations, incentives for industries to adopt cleaner technologies and improved air quality monitoring around these sites. We also believe that promoting cleaner alternatives to traditional fuels—like electrification of industrial equipment, cleaner freight and rail technologies, and renewable energy sources—can help tackle the broader and cumulative air pollution issue. We do not suggest that one solution is enough; instead, we believe in a comprehensive approach that combines different efforts to address all sources of pollution to protect the health and well-being of our communities. The Proposed Rules are part of that comprehensive approach, the part that will directly reduce how much new motor vehicles contribute such harmful air emissions in our communities.

I know my community, and I know the industrial corridors and railyards around us. The heavy vehicle traffic from these areas is a great concern to CEJN. Particularly, the heavy truck pollution worries me—CEJN counted 200 trucks per day leaving the MAT asphalt plant on Pershing Road, right by my neighborhood. My community is dynamic and complex, and there are multiple sources of pollution nearby that harm it. One category of such

sources is vehicles, especially trucks coming into and exiting the industrial facilities. The Proposed Rules will help to address this source of harmful air pollution, which is a particularly important health risk among many of Chicago's communities—including mine.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R2024-017
PROPOSED CLEAN CAR AND TRUCK STANDARDS	)	(Rulemaking – Air)

RULE PROPONENTS' ANSWERS TO PRE-FILED TESTIMONY OF JUSTIN FLORES

I. INDIANA, ILLINOIS, IOWA FOUNDATION FOR FAIR CONTRACTING ("IIIFFC") QUESTIONS

(Flores) IIIFFC-1: While you express concern for air quality and noise pollution, have you considered the economic impact that the proposed standards might have on the local trucking or shipping industries, particularly in neighborhoods like Pilsen where transportation is a major industry?

Pre-Filed Answer: I believe that advancing the transition to clean vehicles will have significant positive impacts on the local economy in Pilsen, including the local trucking and shipping industries. The proposed standards do not prohibit the local trucking or shipping industries, but instead require that cleaner vehicles be made available to those industries. This will help reduce air pollution in Pilsen, while creating new economic opportunities.

In my experience, local residents and businesses are ready to embrace these opportunities, and to adopt the clean vehicles that the proposed standards will make available to them. When I walk to the Walgreens in my neighborhood to pick up my asthma medication, I have frequently seen Frito Lay using all-electric small freight trucks to deliver stock to Walgreens and other local stores. A bit further away, several electric vehicle chargers have recently been installed in a Target parking lot. And on my block alone, at least four people now drive electric vehicles. This is a significant portion of my neighbors, given that much of my block is filled with non-residential buildings.

(Flores) IIIFFC-2: Much of your testimony focuses on vehicle pollution as a source of health risks. Given the industrial nature of the surrounding area, how confident are you that vehicle emissions are the primary contributor to poor air quality in Pilsen, rather than emissions from nearby factories or other stationary sources?

Pre-Filed Answer: I am very confident that vehicle emissions are a significant contributor to poor air quality in Pilsen. As in many Environmental Justice communities, pollution from multiple sources combines to create a high cumulative pollution burden for people in Pilsen. I am concerned that risk factors like this cumulative pollution burden make me and other Pilsen residents even more vulnerable to vehicle pollution, and I believe this makes it even more important to reduce vehicle pollution in my neighborhood.

I am especially confident that vehicle pollution contributes to the poor air quality that I experience because I see this pollution firsthand. When I walk through my neighborhood, I see plumes of black smoke coming out of trucks' tailpipes all the time. This leaves no doubt in my mind that vehicles are contributing to air pollution immediately around me. While factories in the area also contribute to pollution, they are not as close to me as the vehicles that I see, hear, and smell on the streets when I am walking, driving, and looking out the windows of my apartment. I often see serious damage to the roads in my neighborhood, which is a testament to the high volume of heavy truck traffic in the area. My experience is confirmed by research like the Chicago truck traffic study performed by the Little Village Environmental Justice Organization ("LVEJO") and its partners, as I described in my pre-filed testimony.[1] This study found that the intersection of Blue Island Avenue and Damen Avenue, about half a mile from my home, had some of the heaviest truck traffic of any intersection examined in the study.

[1] Carolina Macias, et al., *Chicago Truck Data Portal*, (2023), https://apps.cnt.org/truck-count-tracker/.

ATTACHMENT 1

LANGUAGE OF PROPOSED RULE
(35 Ill. Admin. Code § 102.202(a)),
Clean Version

LANGUAGE OF PROPOSED RULE
(35 Ill. Admin. Code § 102.202(a))

Pursuant to 35 Ill. Adm. Code 102.202(a), Rule Proponents provide the following language of the proposed amendments, which would add a new code section, 35 Ill. Admin. Code 242:

SUBTITLE B

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER II: POLLUTION CONTROL BOARD

PART 242
ILLINOIS CLEAN CAR AND TRUCK STANDARDS

SUBPART A: GENERAL

Section

SUBPART B: LOW EMISSION VEHICLE REGULATION

Section

SUBPART C: ZERO EMISSION VEHICLE REGULATION

Section

SUBPART D: HEAVY-DUTY LOW NO_X REGULATION

Section

SUBPART E: ADVANCED CLEAN TRUCKS REGULATION

Section

AUTHORITY: Implementing Section 10 and authorized by Section 27 of the Environmental Protection Act (415 ILCS §§ 5/10; 5/27).

SOURCE: Adopted as Chapter 2: Air Pollution, Rule 242: Clean Car and Truck Standards, R24__, __ PCB ___, __/__/____, filed and effective __/__/____.

SUBPART A: GENERAL

Section 242.101 Purpose and Applicability

a) This Part establishes emission standards and associated requirements for new motor vehicles and new motor vehicle engines pursuant to Section 10 of the Environmental Protection Act (415 ILCS 5/10) and Section 177 of the federal Clean Air Act (42 USC 7507).

b) This Part applies to all new passenger cars, light-duty trucks, medium-duty passenger vehicles, medium-duty vehicles, heavy-duty vehicles, engines, and emissions control systems offered for sale or lease, or sold, or leased, for registration in Illinois, except as provided in Section 242.105 of this Part or otherwise provided herein.

c) The provisions of this Part apply throughout the State of Illinois.

d) The provisions of this Part apply to motor vehicles of the United States and its agencies that would be registered or required to be registered in Illinois; and to motor vehicles of the State of Illinois and its agencies and political subdivisions.

Section 242.102 Definitions

For the purposes of this Part, the following definitions apply. If a definition in this Section 242.102 is found to conflict with a definition elsewhere in Illinois law, the definition in this Section 242.102 shall apply to the provisions of this Part unless context requires otherwise.

"Agency" means the Illinois Environmental Protection Agency.

"Authorized Emergency Vehicle" has that meaning given in the Illinois Vehicle Code, Section 1-105 (625 ILCS § 5/1-105).

"CARB" means the California Air Resources Board, as defined in California's Health and Safety Code, Division 26, Part 1, Chapter 1, Section 39003.

"Certification" means a finding by the CARB that a motor vehicle, motor vehicle engine, or emissions control system satisfies the criteria adopted by CARB for the control of specified air contaminants from vehicular sources.

"Community-Based Clean Mobility Program" means a program that: 1) provides access to clean mobility solutions other than vehicle ownership including zero emission vehicle car sharing, ride-sharing, vanpools, ride-hailing, or on-demand first-mile/last-mile services; 2) serves an "equity investment eligible community," as defined in Illinois by 20 ILCS 627/45(b), 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.

"Director" means the Director of the Illinois Environmental Protection Agency, unless the context requires otherwise.

"Emissions Control System" means equipment designed for installation on a motor vehicle or motor vehicle engine for the purpose of reducing the air contaminants emitted from the motor vehicle or motor vehicle engine, or a system or engine modification on a motor vehicle or motor vehicle engine which causes a reduction of air contaminants emitted from the motor vehicle or motor vehicle engine, including but not limited to exhaust control systems, fuel evaporation control systems and crankcase ventilating systems.

“Financial assistance program” means a vehicle purchase incentive program where approved dealerships accept a point-of-sale incentive for used zero emission vehicles and plug-in hybrid electric vehicles for lower-income consumers. Qualifying programs in Illinois will be approved by the Agency and posted on the Agency’s designated website.

“Greenhouse Gas” or “GHG” means the following gases: carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons.

“GVWR” means “gross vehicle weight rating.”

“Heavy-Duty Engine” means an engine which is used to propel a heavy-duty vehicle.

“Heavy-Duty Vehicle” means any motor vehicle having a manufacturer's gross vehicle weight rating greater than 8,500 pounds, except passenger cars.

“Hydrogen fuel-cell electric vehicle” or “FCEV” means a vehicle with an electric motor where energy for the motor is supplied by an electrochemical cell that produces electricity via the non-combustion reaction of hydrogen.

“Light-Duty Truck” means any motor vehicle certified to the standards in California Code of Regulations, Title 13, Section 1961.4 rated at 8,500 pounds’ gross vehicle weight or less, and any other motor vehicle, rated at 6,000 pounds’ gross vehicle weight or less, which is designed primarily for purposes of transportation of property or is a derivative of such a vehicle, or is available with special features enabling off-street or off-highway operation and use.

“Medium-Duty Passenger Vehicle” means any medium-duty vehicle with a gross vehicle weight rating of less than 10,000 pounds that is designed primarily for the transportation of persons. The medium-duty passenger vehicle definition does not include any vehicle which: (1) is an “incomplete truck” i.e., is a truck that does not have the primary load carrying device or container attached; or (2) has a seating capacity of more than 12 persons; or (3) is designed for more than 9 persons in seating rearward of the driver's seat; or (4) is equipped with an open cargo area of 72.0 inches in interior length or more. A covered box not readily accessible from the passenger compartment will be considered an open cargo area, for purposes of this definition.

“Medium-Duty Vehicle” means any heavy-duty low-emission, ultra-low-emission, super-ultra-low-emission or zero-emission vehicle certified to the standards in California Code of Regulations, Title 13, Section 1961.4 or 1956.8(h) having a manufacturer's gross vehicle weight rating between 8,501 and 14,000 pounds.

“Military Tactical Vehicles and Equipment” means all land combat and transportation vehicles, excluding rail-based, which are designed for and are in use by any of the United States armed forces, or in use as an Authorized Emergency Vehicle by or for a governmental agency.

“Model year” means the annual production period that includes January 1st of a calendar year, or if the manufacturer has no annual production period, the calendar year. The model year for a motor vehicle manufactured in two or more stages is the model year in which the chassis is completed. For vehicles subject to California Code of Regulations, Title 13, Sections 1963 to 1963.5, the term is defined as provided in California Code of Regulations, Title 13, Section 1963(c).

“Neighborhood Electric Vehicle” or “NEV” means a motor vehicle that meets the definition of Low-Speed Vehicle either in the California Vehicle Code Division 1 VEH Section 385.5, or in 49 CFR 571.500 (as it existed on July 1, 2000) and is certified to Zero Emission Vehicle standards.

“New Motor Vehicle” means a vehicle with an odometer reading of less than 7,500 miles the equitable or legal title to which has never been transferred to the ultimate purchaser.

“Near-zero-emission vehicle” or “NZEV” shall have the meaning given in California Code of Regulations, Title 13, Section 1963(c).

“Passenger Car” means any motor vehicle designed primarily for transportation of persons and having a design capacity of twelve persons or less.

“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.

“Plug-In Hybrid Electric Vehicle” or “PHEV” means any vehicle that is off-vehicle charge capable, that is not a zero-emission vehicle, and that can draw propulsion energy from both of the following on-vehicle sources of stored energy: 1) a consumable fuel and 2) an energy storage device such as a battery, capacitor, or flywheel.

“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 Illinois Secretary of State.

“Used Motor Vehicle” means a motor vehicle that has accumulated 7,500 miles or more of use as of the date of sale or lease.

“Vehicle” or “motor vehicle” means any passenger car, light-duty truck, medium-duty passenger vehicle, medium-duty vehicle, or heavy-duty vehicle, as appropriate.

“Zero Emission Vehicle” or “ZEV” means a vehicle that produces zero or near-zero exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas under any possible operational modes or conditions.

Section 242.103 Incorporations by Reference

This Regulation incorporates and adopts by reference the sections of Title 13 of the California Code of Regulations identified in the table below. All references to the California Code of Regulations in this Part mean the versions specified in the table.

For the purposes of applying the incorporated sections of the California Code of Regulations, unless the context requires otherwise, "California" means Illinois. Depending on context, "CARB" or "Air Resources Board" means the Illinois Environmental Protection Agency, and "Director" means the Director of the Illinois Environmental Protection Agency.

Table 1.
Code of California Regulations, Title 13. Motor Vehicle, Division 3. Air Resource Board

Section	Title	Section Amended Date
Chapter 1 Motor Vehicle Pollution Control Devices		
Article 1. General Provisions		
1900	Definitions	*November 30, 2022*
Article 2. Approval of Motor Vehicle Pollution Control Devices (New Vehicles)		
1956.8	Exhaust Emissions 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.	*October 24, 2024*
1961.3	Greenhouse Gas Exhaust Emission Standards and Test Procedures – 2017 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.	*November 30, 2022*
1961.4	Exhaust Emission Standards and Test Procedures--2026 and Subsequent Model Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.	*November 30, 2022*
1962.3	Electric Vehicle Charging Requirements	*November 30, 2022*
1962.4	Zero-Emission Vehicle Requirements for 2026 and Subsequent Model Year Passenger Cars and Light-Duty Trucks.	*November 30, 2022*
1962.5	Data Standardization Requirements for 2026 and Subsequent Model Year Light-Duty Zero Emission Vehicles and Plug-in Hybrid Electric Vehicles.	*November 30, 2022*
1962.6	Battery Labeling Requirements.	*November 30, 2022*
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.	*November 30, 2022*
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.	*November 30, 2022*

Section	Title	Section Amended Date
1963	Advanced Clean Trucks Purpose, Applicability, Definitions, and General Requirements	*October 24, 2024*
1963.1	Advanced Clean Trucks Deficits	*October 24, 2024*
1963.2	Advanced Clean Trucks Credit Generation, Banking, and Trading	*October 24, 2024*
1963.3	Advanced Clean Trucks Compliance Determination	*October 24, 2024*
1963.4	Advanced Clean Trucks Reporting and Recordkeeping	*October 24, 2024*
1963.5	Advanced Clean Trucks Enforcement	*October 24, 2024*
1965	Emission Control and Smog Index Labels – 1979 and Subsequent Model Year Vehicles	*November 30, 2022*
1968.2	Malfunction and Diagnostic System Requirements – 2004 and Subsequent Model Year Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles	*November 30, 2022*
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.	*November 30, 2022*
1971.1	On-Board Diagnostic System Requirements - 2010 and Subsequent Model-Year Heavy-Duty Engines	*May 31, 2024*
1976	Standards and Test Procedures for Motor Vehicle Fuel Evaporative Emissions	*November 30, 2022*
1978	Standards and Test Procedures for Vehicle Refueling Emissions	*November 30, 2022*
Article 6. Emission Control System Warranty		
2035	Purpose, Applicability and Definitions	*April 1, 2022*
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	*April 1, 2022*
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	*November 30, 2022*
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	*November 30, 2022*
2039	Emission Control System Warranty Statement	*December 26, 1990*
2040	Vehicle Owner Obligations	*October 1, 2019*
2041	Mediation; Finding of Warrantable Condition	*December 26, 1990*
2046	Defective Catalyst	*February 15, 1979*
Chapter 2 Enforcement of Vehicle Emission Standards and Enforcement Testing		
Article 1. Assembly-Line Testing		

Section	Title	Section Amended Date
2062	Assembly-line Test Procedures 1998 and Subsequent Model years	*August 7, 2012*
Article 1.5. Enforcement of Vehicle Emission Standards and Surveillance Testing for 2005 and Subsequent Model Year Heavy-Duty Engines and Vehicles		
2065	Applicability of Chapter 2 to 2005 and Subsequent Model Year Heavy-Duty Engines and Vehicles	*April 1, 2019*
Article 2. Enforcement of New and In-use Vehicle Standards		
2109	New Vehicle Recall Provisions	*December 30, 1983*
Article 2.1. Procedures for In-Use Vehicle Voluntary and Influenced Recalls		
2111	Applicability	*April 1, 2022*
2112	Definitions	*April 1, 2022*
2113	Initiation and Approval of Voluntary and Influenced Emission-Related Recalls	*April 1, 2022*
2114	Voluntary and Influenced Recall Plans	*April 1, 2022*
2115	Eligibility for Repair	*April 1, 2022*
2116	Repair Label	*April 1, 2022*
2117	Proof of Correction Certificate	*April 1, 2022*
2118	Notification	*April 1, 2022*
2119	Recordkeeping and Reporting Requirements	*April 1, 2022*
2120	Other Requirements Not Waived	*January 26, 1995*
2121	Penalties	*April 1, 2022*
Article 2.2. Procedures for In-Use Vehicle Ordered Recalls		
2122	General Provisions	*December 8, 2010*
2123	Initiation and Notification of Ordered Emission-Related Recalls	*April 1, 2022*
2124	Availability of Public Hearing	*January 26, 1995*
2125	Ordered Recall Plan	*April 1, 2022*
2126	Approval and Implementation of Recall Plan	*April 1, 2022*
2127	Notification of Owners	*April 1, 2022*
2128	Repair Label	*April 1, 2022*
2129	Proof of Correction Certificate	*April 1, 2022*
2130	Capture Rates and Alternative Measures	*April 1, 2022*
2131	Preliminary Tests	*April 1, 2022*
2132	Communication with Repair Personnel	*January 26, 1995*
2133	Recordkeeping and Reporting Requirements	*April 1, 2022*
2134	Penalties	*January 26, 1995*
2135	Extension of Time	*January 26, 1995*
Article 2.3. In-Use Vehicle Enforcement Test Procedures		
2137	Vehicle, Engine, and Trailer Selection	*April 1, 2022*
2139	Testing	*November 30, 2022*
2140	Notification and Use of Test Results	*November 30, 2022*
Article 2.4. Procedures for Reporting Failure of Emission-Related Components		
2141	General Provisions	*April 1, 2022*

Section	Title	Section Amended Date
2142	Alternative Procedures	*April 1, 2022*
2143	Failure Levels Triggering Recall	*April 1, 2022*
2144	Emission Warranty Information Report	*April 1, 2022*
2145	Field Information Report	*April 1, 2022*
2146	Emissions Information Report	*April 1, 2022*
2147	Demonstration of Compliance with Emission Standards	*November 30, 2022*
2148	Evaluation of Need for Recall	*April 1, 2022*
2149	Notification of Subsequent Action	*April 1, 2022*
Article 5. Procedures for Reporting Failures of Emission-Related Equipment and Required Corrective Action		
2166	General Provisions	*April 1, 2022*
2166.1	Definitions	*April 1, 2022*
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	*April 1, 2022*
2168	Required Corrective Action and Recall for Emission-Related Component Failures	*April 1, 2022*
2169	Required Recall or Corrective Action Plan	*April 1, 2022*
2169.1	Approval and Implementation of Corrective Action Plan	*April 1, 2022*
2169.2	Notification of Owners	*April 1, 2022*
2169.3	Repair Label	*April 1, 2022*
2169.4	Proof of Correction Certificate	*April 1, 2022*
2169.5	Preliminary Tests	*April 1, 2022*
2169.6	Communication with Repair Personnel	*April 1, 2022*
2169.7	Recordkeeping and Reporting Requirements	*April 1, 2022*
2169.8	Extension of Time	*April 1, 2022*

This regulation does not include any later amendments or editions of the regulations incorporated by reference. The incorporated regulations are available online at:

https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I789FF3B05A1E11EC8227000D3A7C4BC3&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)

Copies of the incorporated regulations are also available for a reasonable charge from:

Barclays Official California Code of Regulations
50 California Street Second Floor
San Francisco, CA 94111

Section 242.104 Prohibition

Subject to an applicable exemption, starting with the 2029 model year and for each model year thereafter, it is unlawful for any person to sell or register, offer for sale or lease, deliver, import, purchase, or lease a new motor vehicle unless that new motor vehicle has been certified to California emission standards and meets all other applicable requirements of California Code of Regulations, Title 13, Sections 1956.8, 1961.3, 1961.4, 1962.3 to 1962.8, 1963 to 1963.5, 1965, 1968.2, 1969, 1971.1, 1976, 1978, and 2065.

Section 242.105 Exemptions

This Part does not apply to the following vehicles:

a) A used motor vehicle;

b) A new motor vehicle sold to be wrecked or dismantled;

c) A new motor vehicle sold for registration out-of-state;

d) A new motor vehicle sold exclusively for off-highway use;

e) A new motor vehicle acquired by a resident of this State for the purpose of replacing a vehicle registered to such resident which 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 owned vehicle was either damaged or became inoperative or was stolen;

f) A new motor vehicle transferred by inheritance;

g) A new motor vehicle transferred by court decree;

h) A new motor vehicle sold after the effective date of this regulation if the vehicle was registered in this State before such effective date;

i) A new motor vehicle having a certificate of conformity issued pursuant to the federal Clean Air Act (42 USC Section 7401 et seq.) and originally registered in another state by a resident of that state who subsequently establishes residence in this State and who upon registration of the vehicle in this State provides satisfactory evidence to the Illinois Secretary of State or its assigned designee of the previous residence and registration;

j) A new motor vehicle certified to standards adopted under authority granted by the federal Clean Air Act (42 USC Section 7521) and in possession of a rental agency in Illinois and that is next rented with a destination outside of the state;

k) A new diesel-fueled transit bus sold to a transit agency; however, nothing in this Section 242.105(k) or Part 242 shall be construed as an exemption to the requirements of 70 ILCS 3615/2.10a;

l) An authorized emergency vehicle;

m) A military tactical vehicle.

Section 242.106 Enforcement

a) A person who violates any provision of this Part shall be subject to civil penalties in accordance with Section 42 of the Environmental Protection Act (415 ILCS 5/42).

b) Failure to submit any of the required reports, test data, inspection data, or other information required in this Part shall be considered a violation of this Part.

c) Each instance of violation of any provision of this Part shall be considered a separate violation.

Section 242.107 Severability

Each provision of this Part shall be deemed severable, and if any provision of this Part is held to be invalid, the remainder of this regulation shall continue in full force and effect.

Section 242.108 Effective Date

This Part becomes effective when filed. Once effective, the emission standards adopted under this Part are enforceable consistent with Section 177 of the federal Clean Air Act (42 USC 7507), provided that a waiver has been issued by the U.S. Environmental Protection Agency to the State of California for such standards.

SUBPART B: LOW EMISSION VEHICLE REGULATION

Section 242.110 Requirement

Starting with the 2029 model year, all new passenger cars, light-duty trucks, medium-duty passenger vehicles, and medium-duty vehicles or engines produced and delivered for sale or lease in Illinois shall be certified to the applicable standards set forth in California Code of Regulations, Title 13, Sections 1961.4 (LEV IV criteria emission standards), 1961.3 (GHG emission standards), 1956.8(h) (carbon dioxide emission standards for medium-duty vehicles), and meet all other applicable requirements of California Code of Regulations, Title 13, Sections 1900, 1965, 1968.2, 1969, 1976, 1978, 2035, 2037 to 2041, 2046, 2062, 2109, 2111 to 2121, 2122 to 2135, 2139, and 2141 to 2149.

Section 242.111 Fleet Average Emissions

a) For 2029 and subsequent model years, manufacturers of passenger cars, light-duty trucks, and medium-duty passenger vehicles produced and delivered for sale in Illinois shall not exceed the fleet average greenhouse gas exhaust emission levels set forth in California Code of Regulations, Title 13, Section 1961.3. For 2029 and subsequent model years, manufacturers of medium-duty vehicles produced and delivered for sale or lease in Illinois shall not exceed the carbon dioxide emission standards set forth in California Code of Regulations, Title 13, Section 1956.8 (h)(6). Credits and debits may be accrued and utilized based upon each manufacturer's sales of vehicles in Illinois, pursuant to the provisions set forth in California Code of Regulations, Title 13, Section 1961.3.

b) For 2029 and subsequent model years, manufacturers of passenger cars, light-duty trucks, and medium-duty vehicles produced and delivered for sale in Illinois shall not exceed the fleet average non-methane organic gas plus oxides of nitrogen emission values as set forth in California Code of Regulations, Title 13, Section 1961.4. Credits and debits may be accrued and utilized based upon each manufacturer's sales of vehicles subject to this regulation in Illinois, pursuant to the provisions set forth in California Code of Regulations, Title 13, Section 1961.4(d).

Section 242.112 Certification Testing

a) Assembly-line quality audit emission testing and reporting shall be performed for 2029 and subsequent model year motor vehicles subject to this Subpart B.

b) All manufacturers of new vehicles subject to this Subpart B shall comply with all applicable California Assembly Line and In-Use Requirements.

c) The Agency shall accept the results of quality audit testing and inspection testing determinations and findings made by CARB to demonstrate compliance.

d) Remedial action plans for model year 2029 and subsequent model years are required. If the State of California requires a remedial action plan based upon full calendar or partial calendar quarter testing pursuant to California Code of Regulations, Title 13, Section 2109, such plan will apply to all vehicles certified to the California standards and intended for sale in Illinois. Such plan will not apply to vehicles that have previously been sold to ultimate purchasers in Illinois.

Section 242.113 Reporting Requirements

a) *Certification Reporting*—For the purposes of determining compliance with this Subpart B, the Agency may require any vehicle manufacturer subject to this Subpart B to submit any documentation the Agency deems necessary to the effective administration and enforcement of this Subpart B including but not limited to all certification materials submitted to CARB.

b) *Fleet Average Reporting*—For 2029 and subsequent model years, each manufacturer must report to the Agency, using the same format used to report the information to CARB, the fleet average non-methane organic gas plus oxides of nitrogen emissions and fleet average greenhouse gas emissions of its vehicles delivered for sale in Illinois. Non-methane organic gas plus oxides of nitrogen reports must be submitted to the Agency by March 1 of the calendar year after the end of the model year. GHG reports must be submitted to the Agency by May 1 of the calendar year after the end of the model year.

c) *Assembly Line Testing Reporting*—Upon request by the Agency, for 2029 and subsequent model years, a manufacturer shall provide reports on all assembly-line emission testing and functional test results collected during compliance with this Subpart B and California Code of Regulations, Title 13, Section 2062.

d) *Warranty Reporting*—Upon request by the Agency, for 2029 and subsequent model years, a manufacturer shall submit warranty claim reports submitted to CARB to the Agency as required by California Code of Regulations, Title 13, Sections 2141 to 2149.

e) *Recall Reporting*—Upon request by the Agency, for 2029 and subsequent model years, a manufacturer shall submit recall plans and progress reports submitted to CARB to the Agency, using the same format and information as required by California Code of Regulations, Title 13, Sections 2119 and 2133.

Section 242.114 Inspection and Access to Records

a) The Agency, or the Illinois Secretary of State, or an authorized representative of either agency, may conduct inspections and surveillance of 2029 and subsequent model year motor vehicles for the purposes of determining compliance with and enforcing this Subpart B.

b) Inspections and vehicle testing may be conducted on any premises owned, operated, used, leased, or rented by any new or used car dealer.

c) Any person subject to this Subpart B must, upon oral or written request by a duly authorized official, employee, or designee of the Agency, furnish or permit access to all records relating to those vehicles subject to regulation.

d) Any person subject to this Subpart B must retain all relevant records for at least three years from the creation of such records.

e) Nothing in this Section 242.114 or in this Part 242 shall limit the Agency's authority to investigate pursuant to 415 ILCS § 5/30.

Section 242.115 Fleet Average Enforcement

If the report issued by a manufacturer under Section 242.113(b) of this Subpart B demonstrates noncompliance with the fleet average under Section 242.111 for a model year, the manufacturer must, within 60 days, file a report with the Director to document the noncompliance. The report must identify all motor vehicle models delivered for sale or lease in the state, the models' corresponding certification standards, and the percentage of each model delivered for sale in this State and California in relation to total fleet sales in the respective state.

Section 242.116 Warranty Requirements

For all motor vehicles subject to this part, the manufacturer must provide warranty defect coverage that complies with California Code of Regulations, Title 13, Sections 2035, 2037 to 2041, and 2046.

Section 242.117 Recall Requirements

For all motor vehicles subject to this Subpart B and subject to recall in California, the manufacturer must undertake recall campaigns in Illinois pursuant to California Code of Regulations, Title 13, Sections 2111 to 2121 and 2122 to 2135, unless the manufacturer demonstrates to the Agency that such recall is not applicable to vehicles registered in Illinois.

Section 242.118 Environmental Performance Labels

Starting with the 2029 model year, all motor vehicles subject to this Subpart B must be affixed with emission control labels and environmental performance labels according to California Code of Regulations, Title 13, Section 1965.

SUBPART C: ZERO EMISSION VEHICLE REGULATION

Section 242.120 Applicability

a) Starting with the 2029 model year, each manufacturer's sales fleet of passenger cars and light-duty trucks in the State of Illinois are subject to the zero-emission vehicle (ZEV) credit percentage requirements set forth in California Code of Regulations, Title 13, Section 1962.4.

b) Starting with the 2029 model year, this Subpart C applies to zero emission medium-duty vehicles produced and delivered for sale in Illinois that the manufacturer optionally chooses to certify to the provisions of this Subpart C; and to neighborhood electric vehicles (NEVs) produced and delivered for sale in Illinois.

Section 242.121 ZEV Standard

Certification for ZEV Emission Standards of new 2029 and subsequent model year passenger cars, light-duty trucks, and medium-duty vehicles delivered for sale in Illinois shall be made pursuant to California Code of Regulations, Title 13, Sections 1969, 1962.4, 1962.5, 1962.6, 1962.7 and 1962.8. Zero-emission medium-duty vehicles delivered for sale in Illinois shall be required to meet the ZEV requirements in either this Subpart C or Subpart E.

Section 242.122 Annual ZEV Requirements

Starting with the 2029 model year, each manufacturer's sales fleet of passenger cars and light-duty trucks produced and delivered for sale in Illinois shall contain at least the same percentage of ZEVs subject to the same requirements set forth in the California Code of Regulations, Title 13, Section 1962.4 (c)(1)(B) using Illinois specific vehicle production volumes calculated per California Code of Regulations, Title 13, Section 1962.4 (c)(1)(C).

Section 242.123 ZEV Credit Generation

a) ZEV and plug-in hybrid electric vehicle (PHEV) values can be earned per vehicle delivered for sale in Illinois pursuant to California Code of Regulations, Title 13, Sections 1962.4(d) and (e).

b) Environmental Justice Vehicle Values can be earned per vehicle delivered for sale in Illinois and will be subject to the limitations and allowance pursuant to California Code of Regulations, Title 13, Section 1962.4.

    1) New ZEVs and PHEVs Provided for Use in Community-Based Clean Mobility Programs—New 2026 through 2031 model year ZEVs and PHEVs provided for use in community-based clean mobility programs in Illinois will earn additional vehicle values that can be used to meet a portion of the manufacturer's Annual ZEV Requirement pursuant to California Code of Regulations, Title 13, Section 1962.4(e)(2)(A).

    2) Vehicles in Illinois Sold at the End of Lease to Participating Dealerships—ZEVs or PHEVs initially leased in Illinois and sold at the end of lease to an Illinois dealership participating in a financial assistance program will earn additional vehicle values that can be used to meet a portion of the manufacturer's Annual ZEV Requirement pursuant to California Code of Regulations, Title 13, Section 1962.4(e)(2)(B).

3) New ZEVs and PHEVs below MSRP Threshold—An additional vehicle value will be earned by a manufacturer for each 2026 through 2029 model year ZEV or PHEV delivered for sale in Illinois with an MSRP less than or equal to $20,275 for passenger cars and less than or equal to $26,670 for light-duty trucks. For purposes of this Subpart C, the MSRP values shall be adjusted annually, beginning in 2026 model year, per California Code of Regulations, Title 13, Section 1962.4(e)(2)(F).

c) Early Compliance Vehicle Values—Manufacturers may fulfill a portion of their total Annual ZEV Requirement with early compliance vehicle values earned according to California Code of Regulations, Title 13, Section 1962.4(e)(3). The Early Compliance Vehicle Values can be earned for model years 2027 through 2028 in Illinois. The early compliance vehicle values earned in model years 2027 through 2028 can be used to meet manufacturers' Annual ZEV Requirement in model year 2029 through 2031 in Illinois.

Section 242.124 ZEV Credit Bank

a) Beginning no later than model year 2029, each manufacturer subject to this Part must open an account in the California ZEV Credit System for banking credits earned in Illinois.

b) *Calculating ZEV Requirement Performance for the Model Year*—Each manufacturer shall calculate its ZEV requirement performance at the end of each model year in accordance with California Code of Regulations, Title 13, Section 1962.4(f).

c) *Limitations on Fulfilling a ZEV Requirement Shortfall*—A manufacturer who has a shortfall in a given model year, calculated according to California Code of Regulations, Title 13, Section 1962.4(f)(2), may use any combination of excess ZEV, PHEV, or environmental justice vehicle values, early compliance vehicle values, converted ZEV and PHEV values, pooled ZEV and PHEV values, or proportional FCEV values, to fulfill its shortfall, subject to the limitations on usage per California Code of Regulations, Title 13, Section 1962.4(g).

d) *Pooled ZEV and PHEV Values*—Manufacturers may transfer excess 2026 through 2030 model year ZEV and PHEV values earned in Illinois, California or a Section 177 ZEV state to satisfy shortfalls or deficits in 2026 through 2030 model years earned in Illinois, California or a Section 177 ZEV state. A manufacturer may not transfer more excess ZEV or PHEV values than are necessary to fulfill a shortfall within a given year or a deficit carried forward from a previous model year.

e) Calculation of Proportional FCEV Allowance and Earning of Proportional FCEV Values shall be earned and used according to California Code of Regulations, Title 13, Section 1962.4(g)(4).

f) Excess vehicle values may be banked and carried over for use in future model years according to California Code of Regulations, Title 13, Section 1962.4(f)(3).

g) A manufacturer may only trade excess ZEV, excess PHEV, excess environmental justice, early compliance, or converted ZEV and PHEV vehicle values and only if the conditions in California Code of Regulations, Title 13, Section 1962.4(f)(4) are met.

Section 242.125 ZEV Reporting Requirements

a) In order to verify the status of each manufacturer's compliance with the Annual ZEV Requirements for 2029 and subsequent model years, each manufacturer shall submit a report to the Director at least annually, prior to May 1 of the calendar year following the close of the model year, that identifies the necessary delivery and placement data of all vehicles generating ZEV vehicle values or deficits, and all transfers and acquisitions of ZEV values pursuant to California Code of Regulations, Title 13, Section 1962.4.

b) *Projected Sales of ZEVs and PHEVs for Future Model Years*—Each manufacturer subject to the Annual ZEV Requirements of the California Code of Regulations, Title 13, Section 1962.4(c) shall submit a projected ZEV and PHEV sales report by April 1 of each calendar year beginning with the 2029 calendar year. The report shall include the manufacturer's projected number of ZEVs and PHEVs to be produced and delivered for sale in Illinois for the next model year not yet currently being produced and delivered for sale in Illinois, plus each of the subsequent four model years pursuant to California Code of Regulations, Title 13, Section 1962.4(j).

c) The reports submitted to the Director by each manufacturer shall be in the same format as the reports submitted to CARB.

Section 242.126 Requirement to Make Up a ZEV Deficit

a) *Demonstrating Compliance*—Each manufacturer must report in accordance with California Code of Regulations, Title 13, Section 1962.4(j), its ZEV requirement performance for the model year under California Code of Regulations, Title 13, Section 1962.4(f) and the resulting surplus or shortfall in values for the model year after applying any values according to California Code of Regulations, Title 13, Section 1962.4(g).

b) *Incur and Carry Forward a ZEV Deficit*—If a shortfall in meeting the Annual ZEV Requirement remains after determining compliance under California Code of Regulations, Title 13, Section 1962.4(h)(1), the manufacturer shall incur a deficit for the model year. A manufacturer must make up the deficit within three model years following the model year in which the deficit was earned by submitting a commensurate amount, within applicable allowances for fulfilling a ZEV requirement shortfall, under California Code of Regulations, Title 13, Section 1962.4(g)(1) for the model year in which the deficit was earned, of excess ZEV, PHEV, or environmental justice vehicle values, early compliance vehicle values, or pooled ZEV or PHEV values to the Director. For example, a manufacturer must resolve a 2029 model year deficit by the conclusion of the 2032 model year.

c) *Penalty*—Any manufacturer that fails to submit an appropriate number of credits and does not make up ZEV deficits within the time specified in California Code of Regulations, Title 13, Section 1962.4 is subject to civil penalties pursuant to 415 ILCS § 5/42.

SUBPART D: HEAVY-DUTY LOW NO_X REGULATION

Section 242.130 Requirement

a) Starting with the 2029 engine and vehicle model year, any manufacturer that certifies new heavy-duty diesel-cycle and Otto-cycle engines used in heavy-duty vehicles with a gross vehicle weight rating (GVWR) over 14,000 pounds for sale in Illinois must comply with the emission standards and associated requirements set forth in California Code of Regulations, Title 13, Sections 1956.8, 1971.1, 2036, 2121, 2137, 2139, 2140, 2166, 2166.1, 2167, 2168, 2169, 2169.1, 2169.2, 2169.3, 2196.4, 2169.5, 2169.6, 2169.7, 2169.8 and in this Subpart D.

Section 242.131 Recalls

a) For all 2029 and subsequent model year heavy-duty engines and vehicles subject to recall in California, each manufacturer shall undertake recall campaigns in Illinois pursuant to California Code of Regulations, Title 13, Sections 2109 to 2135, unless the manufacturer demonstrates to the Agency that such recall is not applicable to vehicles registered in Illinois.

b) Any voluntary or influenced emission-related recall campaign initiated by any manufacturer under California Code of Regulations, Title 13, Sections 2113 to 2121 for vehicles subject to the requirements incorporated by reference in Section 242.103, must extend to all applicable vehicles registered in Illinois. If the manufacturer can demonstrate to the Director's satisfaction that said campaign is not applicable to vehicles registered in Illinois, then the campaign will not apply in Illinois.

c) For vehicles subject to an order of enforcement action under Section 242.131(a) of this rule, each manufacturer must send owners of vehicles registered in the State of Illinois a notice that complies with the requirements in California Code of Regulations, Title 13, Sections 2118 or 2127. The manufacturer must provide a telephone number that Illinois consumers can use to learn information about any recall that affects Illinois vehicles.

Section 242.132 Inspections and Information Requests

a) The Agency may inspect new and used motor vehicles and related records for the purposes of determining compliance with the requirements of this Subpart D. The Agency may perform inspections, as necessary, during regular business hours on public property or on any premises owned, operated, or used by any truck dealer or truck rental agency for the purposes of determining compliance with the requirements of this Subpart D.

b) For the purposes of determining compliance with this Subpart D, the Agency may require any truck dealer or truck rental agency to submit to the Agency any documentation that the Agency deems necessary to the effective administration and enforcement of this Subpart D. This provision does not require the creation of new records.

SUBPART E: ADVANCED CLEAN TRUCKS REGULATION

Section 242.140 Requirement

For model years 2029 through 2035, any manufacturer that certifies new on-road vehicles with a gross vehicle weight rating (GVWR) over 8,500 pounds for sale in Illinois must comply with the ZEV sales requirement and associated provisions set forth in California Code of Regulations, Title 13, Sections 1963, 1963.1, 1963.2, 1963.3, 1963.4 and 1963.5, using Illinois specific vehicle numbers.

Section 242.141 Deficit Generation

For model years 2029 through 2035, any manufacturer that certifies new on-road vehicles over 8,500 pounds GVWR shall annually incur deficits based on the manufacturer's annual sales volume of on-road vehicles produced and delivered for sale in Illinois pursuant to California Code of Regulations, Title 13, Section 1963.1. Deficits are incurred when the on-road vehicle is sold to the ultimate purchaser in Illinois.

Section 242.142 Credit Generation, Banking, and Trading

Starting with the 2025 model year, any manufacturer that certifies on-road vehicles over 8,500 pounds GVWR for sale in Illinois may generate, bank, and trade ZEV and NZEV credits for such vehicles pursuant to California Code of Regulations, Title 13, Section 1963.2.

Section 242.143 Compliance Determinations

Annual compliance determinations, including requirements to make up a deficit and credit retirement ordering, shall be determined pursuant to California Code of Regulations, Title 13, Section 1963.3.

Section 242.144 Reporting and Recordkeeping

Starting with the 2026 model year, and no later than 90 days following the end of each model year, any manufacturer that certifies on-road vehicles over 8,500 pounds GVWR for sale in Illinois must report the sales, credit transfer, and credit declaration information specified in California Code of Regulations, Title 13, Section 1963.4 to the Agency. Manufacturers must also comply with the recordkeeping provisions set forth in California Code of Regulations, Title 13, Section 1963.4.

Section 242.145 Enforcement

a) Any manufacturer that certifies on-road vehicles over 8,500 pounds GVWR for sale in Illinois is subject, by Illinois, to the enforcement provisions set forth California Code of Regulations, Title 13, Section 1963.5.

b) Penalty for Failure to Meet Credit and Deficit Requirements—any manufacturer that fails to retire an appropriate amount of ZEV or NZEV credits as specified in Section 1963.3(c) and does not make up deficits within the specified time allowed by Section 1963.3(b) shall be subject to civil penalties contemplated by Illinois statutes and regulations applicable to a manufacturer who does not comply with emission standards or the test procedures adopted by the Illinois Pollution Control Board such as those in this Part 242. The cause of action shall be deemed to accrue when the deficit is not balanced by the end of the specified time allowed by Section 1963.3(b). For the purposes of 415 ILCS § 5/42, the number of noncompliant, violating vehicles shall be equal to one half of the manufacturer's outstanding deficit.

ATTACHMENT 2

LANGUAGE OF PROPOSED RULE
(35 Ill. Admin. Code § 102.202(a)),
Redlined Version

LANGUAGE OF PROPOSED RULE
(35 Ill. Admin. Code § 102.202(a))

Pursuant to 35 Ill. Adm. Code 102.202(a), Rule Proponents provide the following language of the proposed amendments, which would add a new code section, 35 Ill. Admin. Code 242:

SUBTITLE B

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER II: POLLUTION CONTROL BOARD

PART 242
ILLINOIS CLEAN CAR AND TRUCK STANDARDS

SUBPART A: GENERAL

Section

SUBPART B: LOW EMISSION VEHICLE REGULATION

Section

SUBPART C: ZERO EMISSION VEHICLE REGULATION

Section

SUBPART D: HEAVY-DUTY LOW NO_X REGULATION

Section

SUBPART E: ADVANCED CLEAN TRUCKS REGULATION

Section

AUTHORITY: Implementing Section 10 and authorized by Section 27 of the Environmental Protection Act (415 ILCS §§ 5/10; 5/27).

SOURCE: Adopted as Chapter 2: Air Pollution, Rule 242: Clean Car and Truck Standards, R24__, __ PCB ___, __/__/____, filed and effective __/__/____.

SUBPART A: GENERAL

Section 242.101 Purpose and Applicability

a) This Part establishes emission standards and associated requirements for new motor vehicles and new motor vehicle engines pursuant to Section 10 of the Environmental Protection Act (415 ILCS 5/10) and Section 177 of the federal Clean Air Act (42 USC 7507).

b) This Part applies to all new passenger cars, light-duty trucks, medium-duty passenger vehicles, medium-duty vehicles, heavy-duty vehicles, engines, and emissions control systems offered for sale or lease, or sold, or leased, for registration in Illinois, except as provided in Section 242.105~~1(e)~~ of this Part or otherwise provided herein.

c) The provisions of this Part apply throughout the State of Illinois.

d) The provisions of this Part apply to motor vehicles of the United States and its agencies that would be registered or required to be registered in Illinois; and to motor vehicles of the State of Illinois and its agencies and political subdivisions.

Section 242.102 Definitions

For the purposes of this Part, the following definitions apply. If a definition in this Section 242.102 is found to conflict with a definition elsewhere in Illinois law, the definition in this Section 242.102 shall apply to the provisions of this Part unless context requires otherwise.

"Agency" means the Illinois Environmental Protection Agency.

"Authorized Emergency Vehicle" has that meaning given in the Illinois Vehicle Code, Section 1-105 (625 ILCS § 5/1-105).

"CARB" means the California Air Resources Board, as defined in California's Health and Safety Code, Division 26, Part 1, Chapter 1, Section 39003.

"Certification" means a finding by the CARB that a motor vehicle, motor vehicle engine, or emissions control system satisfies the criteria adopted by CARB for the control of specified air contaminants from vehicular sources.

"Community-Based Clean Mobility Program" means a program that: 1) provides access to clean mobility solutions other than vehicle ownership including zero emission vehicle car sharing, ride-sharing, vanpools, ride-hailing, or on-demand first-mile/last-mile services; 2) serves an "equity investment eligible community," as defined in Illinois by 20 ILCS 627/45(b), 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.

"Director" means the Director of the Illinois Environmental Protection Agency, unless the context requires otherwise.

"Emissions Control System" means equipment designed for installation on a motor vehicle or motor vehicle engine for the purpose of reducing the air contaminants emitted from the motor vehicle or motor vehicle engine, or a system or engine modification on a motor vehicle or motor vehicle engine which causes a reduction of air contaminants emitted from the motor vehicle or motor vehicle engine, including but not limited to exhaust control systems, fuel evaporation control systems and crankcase ventilating systems.

“Financial assistance program” means a vehicle purchase incentive program where approved dealerships accept a point-of-sale incentive for used zero emission vehicles and plug-in hybrid electric vehicles for lower-income consumers. Qualifying programs in Illinois will be approved by the Agency and posted on the Agency’s designated website.

“Greenhouse Gas” or “GHG” means the following gases: carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons.

“GVWR” means “gross vehicle weight rating.”

“Heavy-Duty Engine” means an engine which is used to propel a heavy-duty vehicle.

“Heavy-Duty Vehicle” means any motor vehicle having a manufacturer's gross vehicle weight rating greater than 8,500 pounds, except passenger cars.

“Hydrogen fuel-cell electric vehicle” or “FCEV” means a vehicle with an electric motor where energy for the motor is supplied by an electrochemical cell that produces electricity via the non-combustion reaction of hydrogen.

“Light-Duty Truck” means any motor vehicle certified to the standards in California Code of Regulations, Title 13, Section 1961.4 rated at 8,500 pounds’ gross vehicle weight or less, and any other motor vehicle, rated at 6,000 pounds’ gross vehicle weight or less, which is designed primarily for purposes of transportation of property or is a derivative of such a vehicle, or is available with special features enabling off-street or off-highway operation and use.

“Medium-Duty Passenger Vehicle” means any medium-duty vehicle with a gross vehicle weight rating of less than 10,000 pounds that is designed primarily for the transportation of persons. The medium-duty passenger vehicle definition does not include any vehicle which: (1) is an “incomplete truck” i.e., is a truck that does not have the primary load carrying device or container attached; or (2) has a seating capacity of more than 12 persons; or (3) is designed for more than 9 persons in seating rearward of the driver's seat; or (4) is equipped with an open cargo area of 72.0 inches in interior length or more. A covered box not readily accessible from the passenger compartment will be considered an open cargo area, for purposes of this definition.

“Medium-Duty Vehicle” means any heavy-duty low-emission, ultra-low-emission, super-ultra-low-emission or zero-emission vehicle certified to the standards in California Code of Regulations, Title 13, Section 1961.4 or 1956.8(h) having a manufacturer's gross vehicle weight rating between 8,501 and 14,000 pounds.

“Military Tactical Vehicles and Equipment” means all land combat and transportation vehicles, excluding rail-based, which are designed for and are in use by any of the United States armed forces, or in use as an Authorized Emergency Vehicle by or for a governmental agency.

“Model year” means the annual production period that includes January 1st of a calendar year, or if the manufacturer has no annual production period, the calendar year. The model year for a motor vehicle manufactured in two or more stages is the model year in which the chassis is completed. For vehicles subject to California Code of Regulations, Title 13, Sections 1963 to 1963.5, the term is defined as provided in California Code of Regulations, Title 13, Section 1963(c).

“Neighborhood Electric Vehicle” or “NEV” means a motor vehicle that meets the definition of Low-Speed Vehicle either in the California Vehicle Code Division 1 VEH Section 385.5, or in 49 CFR 571.500 (as it existed on July 1, 2000) and is certified to Zero Emission Vehicle standards.

“New Motor Vehicle” means a vehicle with an odometer reading of less than 7,500 miles the equitable or legal title to which has never been transferred to the ultimate purchaser.

“Near-zero-emission vehicle” or “NZEV” shall have the meaning given in California Code of Regulations, Title 13, Section 1963(c).

“Passenger Car” means any motor vehicle designed primarily for transportation of persons and having a design capacity of twelve persons or less.

“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.

“Plug-In Hybrid Electric Vehicle” or “PHEV” means any vehicle that is off-vehicle charge capable, that is not a zero-emission vehicle, and that can draw propulsion energy from both of the following on-vehicle sources of stored energy: 1) a consumable fuel and 2) an energy storage device such as a battery, capacitor, or flywheel.

“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 Illinois Secretary of State.

“Used Motor Vehicle” means a motor vehicle that has accumulated 7,500 miles or more of use as of the date of sale or lease.

“Vehicle” or “motor vehicle” means any passenger car, light-duty truck, medium-duty passenger vehicle, medium-duty vehicle, or heavy-duty vehicle, as appropriate.

“Zero Emission Vehicle” or “ZEV” means a vehicle that produces zero or near-zero exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas under any possible operational modes or conditions.

Section 242.103 Incorporations by Reference

This Regulation incorporates and adopts by reference the sections of Title 13 of the California Code of Regulations identified in the table below. All references to the California Code of Regulations in this Part mean the versions specified in the table.

For the purposes of applying the incorporated sections of the California Code of Regulations, unless the context requires otherwise, "California" means Illinois. Depending on context, "CARB" or "Air Resources Board" means the Illinois Environmental Protection Agency, and "Director" means the Director of the Illinois Environmental Protection Agency.

Table 1.
Code of California Regulations, Title 13. Motor Vehicle, Division 3. Air Resource Board

Section	Title	Section Amended Date
Chapter 1 Motor Vehicle Pollution Control Devices		
Article 1. General Provisions		
1900	Definitions	*November 30, 2022*
Article 2. Approval of Motor Vehicle Pollution Control Devices (New Vehicles)		
1956.8	Exhaust Emissions 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.	~~*May 31, 2024*~~ *October 24, 2024*
1961.3	Greenhouse Gas Exhaust Emission Standards and Test Procedures – 2017 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.	*November 30, 2022*
1961.4	Exhaust Emission Standards and Test Procedures--2026 and Subsequent Model Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.	*November 30, 2022*
1962.3	Electric Vehicle Charging Requirements	*November 30, 2022*
1962.4	Zero-Emission Vehicle Requirements for 2026 and Subsequent Model Year Passenger Cars and Light-Duty Trucks.	*November 30, 2022*
1962.5	Data Standardization Requirements for 2026 and Subsequent Model Year Light-Duty Zero Emission Vehicles and Plug-in Hybrid Electric Vehicles.	*November 30, 2022*
1962.6	Battery Labeling Requirements.	*November 30, 2022*
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.	*November 30, 2022*
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.	*November 30, 2022*

Section	Title	Section Amended Date
1963	Advanced Clean Trucks Purpose, Applicability, Definitions, and General Requirements	~~*March 15, 2021*~~ *October 24, 2024*
1963.1	Advanced Clean Trucks Deficits	~~*March 15, 2021*~~ *October 24, 2024*
1963.2	Advanced Clean Trucks Credit Generation, Banking, and Trading	~~*March 15, 2021*~~ *October 24, 2024*
1963.3	Advanced Clean Trucks Compliance Determination	~~*March 15, 2021*~~ *October 24, 2024*
1963.4	Advanced Clean Trucks Reporting and Recordkeeping	~~*March 15, 2021*~~ *October 24, 2024*
1963.5	Advanced Clean Trucks Enforcement	~~*March 15, 2021*~~ *October 24, 2024*
1965	Emission Control and Smog Index Labels – 1979 and Subsequent Model Year Vehicles	*November 30, 2022*
1968.2	Malfunction and Diagnostic System Requirements – 2004 and Subsequent Model Year Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles	*November 30, 2022*
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.	*November 30, 2022*
1971.1	On-Board Diagnostic System Requirements - 2010 and Subsequent Model-Year Heavy-Duty Engines	*May 31, 2024*
1976	Standards and Test Procedures for Motor Vehicle Fuel Evaporative Emissions	*November 30, 2022*
1978	Standards and Test Procedures for Vehicle Refueling Emissions	*November 30, 2022*
Article 6. Emission Control System Warranty		
2035	Purpose, Applicability and Definitions	*April 1, 2022*
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	*April 1, 2022*
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	*November 30, 2022*
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	*November 30, 2022*
2039	Emission Control System Warranty Statement	*December 26, 1990*
2040	Vehicle Owner Obligations	*October 1, 2019*

Section	Title	Section Amended Date
2041	Mediation; Finding of Warrantable Condition	*December 26, 1990*
2046	Defective Catalyst	*February 15, 1979*
Chapter 2 Enforcement of Vehicle Emission Standards and Enforcement Testing		
Article 1. Assembly-Line Testing		
2062	Assembly-line Test Procedures 1998 and Subsequent Model years	*August 7, 2012*
Article 1.5. Enforcement of Vehicle Emission Standards and Surveillance Testing for 2005 and Subsequent Model Year Heavy-Duty Engines and Vehicles		
2065	Applicability of Chapter 2 to 2005 and Subsequent Model Year Heavy-Duty Engines and Vehicles	*April 1, 2019*
Article 2. Enforcement of New and In-use Vehicle Standards		
2109	New Vehicle Recall Provisions	*December 30, 1983*
Article 2.1. Procedures for In-Use Vehicle Voluntary and Influenced Recalls		
2111	Applicability	*April 1, 2022*
2112	Definitions	*April 1, 2022*
2113	Initiation and Approval of Voluntary and Influenced Emission-Related Recalls	*April 1, 2022*
2114	Voluntary and Influenced Recall Plans	*April 1, 2022*
2115	Eligibility for Repair	*April 1, 2022*
2116	Repair Label	*April 1, 2022*
2117	Proof of Correction Certificate	*April 1, 2022*
2118	Notification	*April 1, 2022*
2119	Recordkeeping and Reporting Requirements	*April 1, 2022*
2120	Other Requirements Not Waived	*January 26, 1995*
2121	Penalties	*April 1, 2022*
Article 2.2. Procedures for In-Use Vehicle Ordered Recalls		
2122	General Provisions	*December 8, 2010*
2123	Initiation and Notification of Ordered Emission-Related Recalls	*April 1, 2022*
2124	Availability of Public Hearing	*January 26, 1995*
2125	Ordered Recall Plan	*April 1, 2022*
2126	Approval and Implementation of Recall Plan	*April 1, 2022*
2127	Notification of Owners	*April 1, 2022*
2128	Repair Label	*April 1, 2022*
2129	Proof of Correction Certificate	*April 1, 2022*
2130	Capture Rates and Alternative Measures	*April 1, 2022*
2131	Preliminary Tests	*April 1, 2022*
2132	Communication with Repair Personnel	*January 26, 1995*
2133	Recordkeeping and Reporting Requirements	*April 1, 2022*
2134	Penalties	*January 26, 1995*
2135	Extension of Time	*January 26, 1995*
Article 2.3. In-Use Vehicle Enforcement Test Procedures		
2137	Vehicle, Engine, and Trailer Selection	*April 1, 2022*

Section	Title	Section Amended Date
2139	Testing	*November 30, 2022*
2140	Notification and Use of Test Results	*November 30, 2022*
Article 2.4. Procedures for Reporting Failure of Emission-Related Components		
2141	General Provisions	*April 1, 2022*
2142	Alternative Procedures	*April 1, 2022*
2143	Failure Levels Triggering Recall	*April 1, 2022*
2144	Emission Warranty Information Report	*April 1, 2022*
2145	Field Information Report	*April 1, 2022*
2146	Emissions Information Report	*April 1, 2022*
2147	Demonstration of Compliance with Emission Standards	*November 30, 2022*
2148	Evaluation of Need for Recall	*April 1, 2022*
2149	Notification of Subsequent Action	*April 1, 2022*
Article 5. Procedures for Reporting Failures of Emission-Related Equipment and Required Corrective Action		
2166	General Provisions	*April 1, 2022*
2166.1	Definitions	*April 1, 2022*
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	*April 1, 2022*
2168	Required Corrective Action and Recall for Emission-Related Component Failures	*April 1, 2022*
2169	Required Recall or Corrective Action Plan	*April 1, 2022*
2169.1	Approval and Implementation of Corrective Action Plan	*April 1, 2022*
2169.2	Notification of Owners	*April 1, 2022*
2169.3	Repair Label	*April 1, 2022*
2169.4	Proof of Correction Certificate	*April 1, 2022*
2169.5	Preliminary Tests	*April 1, 2022*
2169.6	Communication with Repair Personnel	*April 1, 2022*
2169.7	Recordkeeping and Reporting Requirements	*April 1, 2022*
2169.8	Extension of Time	*April 1, 2022*

This regulation does not include any later amendments or editions of the regulations incorporated by reference. The incorporated regulations are available online at:

https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I789FF3B05A1E11EC8227000D3A7C4BC3&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)

Copies of the incorporated regulations are also available for a reasonable charge from:

Section 242.104 Prohibition

Subject to an applicable exemption, starting with the 2029~~8~~ model year and for each model year thereafter, it is unlawful for any person to sell or register, offer for sale or lease, deliver, import, purchase, or lease a new motor vehicle unless that new motor vehicle has been certified to California emission standards and meets all other applicable requirements of California Code of Regulations, Title 13, Sections 1956.8, 1961.3, 1961.4, 1962.3 to 1962.8, 1963 to 1963.5, 1965, 1968.2, 1969, 1971.1, 1976, 1978, and 2065.

Section 242.105 Exemptions

This Part does not apply to the following vehicles:

a) A used motor vehicle;

b) A new motor vehicle sold to be wrecked or dismantled;

c) A new motor vehicle sold for registration out-of-state;

d) A new motor vehicle sold exclusively for off-highway use;

e) A new motor vehicle acquired by a resident of this State for the purpose of replacing a vehicle registered to such resident which 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 owned vehicle was either damaged or became inoperative or was stolen;

f) A new motor vehicle transferred by inheritance;

g) A new motor vehicle transferred by court decree;

h) A new motor vehicle sold after the effective date of this regulation if the vehicle was registered in this State before such effective date;

i) A new motor vehicle having a certificate of conformity issued pursuant to the federal Clean Air Act (42 USC Section 7401 et seq.) and originally registered in another state by a resident of that state who subsequently establishes residence in this State and who upon registration of the vehicle in this State provides satisfactory evidence to the Illinois Secretary of State or its assigned designee of the previous residence and registration;

j) A new motor vehicle certified to standards adopted under authority granted by the federal Clean Air Act (42 USC Section 7521) and in possession of a rental agency in Illinois and that is next rented with a destination outside of the state;

k) A new diesel-fueled transit bus sold to a transit agency; however, nothing in this Section 242.105(k) or Part 242 shall be construed as an exemption to the requirements of 70 ILCS 3615/2.10a;

l) An authorized emergency vehicle;

m) A military tactical vehicle.

Section 242.106 Enforcement

a) A person who violates any provision of this Part shall be subject to civil penalties in accordance with Section 42 of the Environmental Protection Act (415 ILCS 5/42).

b) Failure to submit any of the required reports, test data, inspection data, or other information required in this Part shall be considered a violation of this Part.

c) Each instance ~~or day~~ of violation of any provision of this Part shall be considered a separate violation.

Section 242.107 Severability

Each provision of this Part shall be deemed severable, and if any provision of this Part is held to be invalid, the remainder of this regulation shall continue in full force and effect.

Section 242.108 Effective Date

This Part becomes effective when filed. Once effective, the emission standards adopted under this Part are enforceable consistent with Section 177 of the federal Clean Air Act (42 USC 7507), provided that a waiver has been issued by the U.S. Environmental Protection Agency to the State of California for such standards.

SUBPART B: LOW EMISSION VEHICLE REGULATION

Section 242.110 Requirement

Starting with the 2029~~8~~ model year, all new passenger cars, light-duty trucks, medium-duty passenger vehicles, and medium-duty vehicles or engines produced and delivered for sale or lease in Illinois shall be certified to the applicable standards set forth in California Code of Regulations, Title 13, Sections 1961.4 (LEV IV criteria emission standards), 1961.3 (GHG emission standards), 1956.8(h) (carbon dioxide emission standards for medium-duty vehicles), and meet all other applicable requirements of California Code of Regulations, Title 13, Sections 1900, 1965, 1968.2, 1969, 1976, 1978, 2035, 2037 to 2041, 2046, 2062, 2109, 2111 to 2121, 2122 to 2135, 2139, and 2141 to 2149.

Section 242.111 Fleet Average Emissions

a) For 2029~~8~~ and subsequent model years, manufacturers of passenger cars, light-duty trucks, and medium-duty passenger vehicles produced and delivered for sale in Illinois shall not exceed the fleet average greenhouse gas exhaust emission levels set forth in California Code of Regulations, Title 13, Section 1961.3. For 2029~~8~~ and subsequent model years, manufacturers of medium-duty vehicles produced and delivered for sale or lease in Illinois shall not exceed the carbon dioxide emission standards set forth in California Code of Regulations, Title 13, Section 1956.8 (h)(6). Credits and debits may be accrued and utilized based upon each manufacturer's sales of vehicles in Illinois, pursuant to the provisions set forth in California Code of Regulations, Title 13, Section 1961.3.

b) For 2029~~8~~ and subsequent model years, manufacturers of passenger cars, light-duty trucks, and medium-duty vehicles produced and delivered for sale in Illinois shall not exceed the fleet average non-methane organic gas plus oxides of nitrogen emission values as set forth in California Code of Regulations, Title 13, Section 1961.4. Credits and debits may be accrued and utilized based upon each manufacturer's sales of vehicles subject to this regulation in Illinois, pursuant to the provisions set forth in California Code of Regulations, Title 13, Section 1961.4(d).

Section 242.112 Certification Testing

~~d)~~a) Assembly-line quality audit emission testing and reporting shall be performed for 2029~~8~~ and subsequent model year motor vehicles subject to this Subpart B.

~~e)~~b) All manufacturers of new vehicles subject to this Subpart B shall comply with all applicable California Assembly Line and In-Use Requirements.

~~f)~~c) The Agency shall accept the results of quality audit testing and inspection testing determinations and findings made by CARB to demonstrate compliance.

~~g)~~d) Remedial action plans for model year 2029~~8~~ and subsequent model years are required. If the State of California requires a remedial action plan based upon full calendar or partial calendar quarter testing pursuant to California Code of Regulations, Title 13, Section 2109, such plan will apply to all vehicles certified to the California standards and intended for sale in Illinois. Such plan will not apply to vehicles that have previously been sold to ultimate purchasers in Illinois.

Section 242.113 Reporting Requirements

a) *Certification Reporting*—For the purposes of determining compliance with this Subpart B~~regulation~~, the Agency may require any vehicle manufacturer subject to

this Subpart B to submit any documentation the Agency deems necessary to the effective administration and enforcement of this Subpart B~~regulation~~ including but not limited to all certification materials submitted to CARB.

b) *Fleet Average Reporting*—For 2029~~8~~ and subsequent model years, each manufacturer must report to the Agency, using the same format used to report the information to CARB, the fleet average non-methane organic gas plus oxides of nitrogen emissions and fleet average greenhouse gas emissions of its vehicles delivered for sale in Illinois. Non-methane organic gas plus oxides of nitrogen reports must be submitted to the Agency by March 1 of the calendar year after the end of the model year. GHG reports must be submitted to the Agency by May 1 of the calendar year after the end of the model year.

c) *Assembly Line Testing Reporting*—Upon request by the Agency, for 2029~~8~~ and subsequent model years, a manufacturer shall provide reports on all assembly-line emission testing and functional test results collected during compliance with this Subpart B and California Code of Regulations, Title 13, Section 2062.

d) *Warranty Reporting*—Upon request by the Agency, for 2029~~8~~ and subsequent model years, a manufacturer shall submit warranty claim reports submitted to CARB to the Agency as required by California Code of Regulations, Title 13, Sections 2141 to 2149.

e) *Recall Reporting*—Upon request by the Agency, for 2029~~8~~ and subsequent model years, a manufacturer shall submit recall plans and progress reports submitted to CARB to the Agency, using the same format and information as required by California Code of Regulations, Title 13, Sections 2119 and 2133.

Section 242.114 Inspection and Access to Records

a) The Agency, or the Illinois Secretary of State, or an authorized representative of either agency, may conduct inspections and surveillance of 2029~~8~~ and subsequent model year motor vehicles for the purposes of determining compliance with and enforcing this Subpart B.

b) Inspections and vehicle testing may be conducted on any premises owned, operated, used, leased, or rented by any new or used car dealer.

c) Any person subject to this Subpart B must, upon oral or written request by a duly authorized official, employee, or designee of the Agency, furnish or permit access to all records relating to those vehicles subject to regulation.

d) Any person subject to this Subpart B must retain all relevant records for at least three years from the creation of such records.

e) Nothing in this Section 242.114 or in this Part 242 shall limit the Agency's authority to investigate pursuant to 415 ILCS § 5/30.

Section 242.115 Fleet Average Enforcement

If the report issued by a manufacturer under Section 242.113(b) of this Subpart B demonstrates noncompliance with the fleet average under Section 242.111 for a model year, the manufacturer must, within 60 days, file a report with the Director to document the noncompliance. The report must identify all motor vehicle models delivered for sale or lease in the state, the models' corresponding certification standards, and the percentage of each model delivered for sale in this State and California in relation to total fleet sales in the respective state.

Section 242.116 Warranty Requirements

For all motor vehicles subject to this part, the manufacturer must provide warranty defect coverage that complies with California Code of Regulations, Title 13, Sections 2035, 2037 to 2041, and 2046.

Section 242.117 Recall Requirements

For all motor vehicles subject to this Subpart B and subject to recall in California, the manufacturer must undertake recall campaigns in Illinois pursuant to California Code of Regulations, Title 13, Sections 2111 to 2121 and 2122 to 2135, unless the manufacturer demonstrates to the Agency that such recall is not applicable to vehicles registered in Illinois.

Section 242.118 Environmental Performance Labels

Starting with the 2029~~8~~ model year, all motor vehicles subject to this Subpart B must be affixed with emission control labels and environmental performance labels according to California Code of Regulations, Title 13, Section 1965.

SUBPART C: ZERO EMISSION VEHICLE REGULATION

Section 242.120 Applicability

a) Starting with the 2029~~8~~ model year, each manufacturer's sales fleet of passenger cars and light-duty trucks in the State of Illinois are subject to the zero-emission vehicle (ZEV) credit percentage requirements set forth in California Code of Regulations, Title 13, Section 1962.4.

b) Starting with the 2029~~8~~ model year, this Subpart C applies to zero emission medium-duty vehicles produced and delivered for sale in Illinois that the manufacturer optionally chooses to certify to the provisions of this Subpart C; and to neighborhood electric vehicles (NEVs) produced and delivered for sale in Illinois.

Section 242.121 ZEV Standard

Certification for ZEV Emission Standards of new 2029~~8~~ and subsequent model year passenger cars, light-duty trucks, and medium-duty vehicles delivered for sale in Illinois shall be made pursuant to California Code of Regulations, Title 13, Sections 1969, 1962.4, 1962.5, 1962.6~~1692.6~~, 1962.7 and 1962.8. Zero-emission medium-duty vehicles delivered for sale in Illinois shall be required to meet the ZEV requirements in either this Subpart C or Subpart E.

Section 242.122 Annual ZEV Requirements

Starting with the 2029~~8~~ model year, each manufacturer's sales fleet of passenger cars and light-duty trucks produced and delivered for sale in Illinois shall contain at least the same percentage of ZEVs subject to the same requirements set forth in the California Code of Regulations, Title 13, Section 1962.4 (c)(1)(B) using Illinois specific vehicle production volumes calculated per California Code of Regulations, Title 13, Section 1962.4 (c)(1)(C).

Section 242.123 ZEV Credit Generation

a) ZEV and plug-in hybrid electric vehicle (PHEV) values can be earned per vehicle delivered for sale in Illinois pursuant to California Code of Regulations, Title 13, Sections 1962.4(d) and (e).

b) Environmental Justice Vehicle Values can be earned per vehicle delivered for sale in Illinois and will be subject to the limitations and allowance pursuant to California Code of Regulations, Title 13, Section 1962.4.

1) New ZEVs and PHEVs Provided for Use in Community-Based Clean Mobility Programs—New 2026 through 2031 model year ZEVs and PHEVs provided for use in community-based clean mobility programs in Illinois will earn additional vehicle values that can be used to meet a portion of the manufacturer's Annual ZEV Requirement pursuant to California Code of Regulations, Title 13, Section 1962.4(e)(2)(A).

2) Vehicles in Illinois Sold at the End of Lease to Participating Dealerships—ZEVs or PHEVs initially leased in Illinois and sold at the end of lease to an Illinois dealership participating in a financial assistance program will earn additional vehicle values that can be used to meet a portion of the manufacturer's Annual ZEV Requirement pursuant to California Code of Regulations, Title 13, Section 1962.4(e)(2)(B).

3) New ZEVs and PHEVs below MSRP Threshold—An additional vehicle value will be earned by a manufacturer for each 2026 through 2029~~8~~ model year ZEV or PHEV delivered for sale in Illinois with an MSRP less than or equal to $20,275 for passenger cars and less than or equal to $26,670 for light-duty trucks. For purposes of this Subpart C, the MSRP values shall be adjusted annually, beginning in 2026 model year, per California Code of Regulations, Title 13, Section 1962.4(e)(2)(F).

c) Early Compliance Vehicle Values—Manufacturers may fulfill a portion of their total Annual ZEV Requirement with early compliance vehicle values earned according to California Code of Regulations, Title 13, Section 1962.4(e)(3). The Early Compliance Vehicle Values can be earned for model years 2027~~6~~ through~~and~~ 2028~~7~~ in Illinois. The early compliance vehicle values earned in model years 2027~~6~~ through~~and~~ 2028~~7~~ can be used to meet manufacturers' Annual ZEV Requirement in model year 2029~~8~~ through 2031~~29~~ in Illinois.

Section 242.124 ZEV Credit Bank

a) Beginning no later than model year 2029~~8~~, each manufacturer subject to this Part must open an account in the California ZEV Credit System for banking credits earned in Illinois.

b) *Calculating ZEV Requirement Performance for the Model Year*—Each manufacturer shall calculate its ZEV requirement performance at the end of each model year in accordance with California Code of Regulations, Title 13, Section 1962.4(f).

c) *Limitations on Fulfilling a ZEV Requirement Shortfall*—A manufacturer who has a shortfall in a given model year, calculated according to California Code of Regulations, Title 13, Section 1962.4(f)(2), may use any combination of excess ZEV, PHEV, or environmental justice vehicle values, early compliance vehicle values, converted ZEV and PHEV values, pooled ZEV and PHEV values, or proportional FCEV values, to fulfill its shortfall, subject to the limitations on usage per California Code of Regulations, Title 13, Section 1962.4(g).

~~a)~~d) *Pooled ZEV and PHEV Values*—Manufacturers may transfer excess 2028~~5~~6 through 2030 model year ZEV and PHEV values earned in Illinois, California or a Section 177 ZEV state to satisfy shortfalls or deficits in 2028~~5~~6 through 2030 model years earned in Illinois, California or a Section 177 ZEV state. A manufacturer may not transfer more excess ZEV or PHEV values than are necessary to fulfill a shortfall within a given year or a deficit carried forward from a previous model year.

~~b)~~e) Calculation of Proportional FCEV Allowance and Earning of Proportional FCEV Values shall be earned and used according to California Code of Regulations, Title 13, Section 1962.4(g)(4).

~~c)~~f) Excess vehicle values may be banked and carried over for use in future model years according to California Code of Regulations, Title 13, Section 1962.4(f)(3).

~~d)~~g) A manufacturer may only trade excess ZEV, excess PHEV, excess environmental justice, early compliance, or converted ZEV and PHEV vehicle values and only if the conditions in California Code of Regulations, Title 13, Section 1962.4(f)(4) are met.

Section 242.125 ZEV Reporting Requirements

a) In order to verify the status of each manufacturer's compliance with the Annual ZEV Requirements for 2029~~8~~ and subsequent model years, each manufacturer shall submit a report to the Director at least annually, prior to May 1 of the calendar year following the close of the model year, that identifies the necessary delivery and placement data of all vehicles generating ZEV vehicle values or deficits, and all transfers and acquisitions of ZEV values pursuant to California Code of Regulations, Title 13, Section 1962.4.

b) *Projected Sales of ZEVs and PHEVs for Future Model Years*—Each manufacturer subject to the Annual ZEV Requirements of the California Code of Regulations, Title 13, Section 1962.4(c) shall submit a projected ZEV and PHEV sales report by April 1 of each calendar year beginning with the 2029~~8~~ calendar year. The report shall include the manufacturer's projected number of ZEVs and PHEVs to be produced and delivered for sale in Illinois for the next model year not yet currently being produced and delivered for sale in Illinois, plus each of the subsequent four model years pursuant to California Code of Regulations, Title 13, Section 1962.4(j).

c) The reports submitted to the Director by each manufacturer shall be in the same format as the reports submitted to CARB.

Section 242.126 Requirement to Make Up a ZEV Deficit

a) *Demonstrating Compliance*—Each manufacturer must report in accordance with California Code of Regulations, Title 13, Section 1962.4(j), its ZEV requirement performance for the model year under California Code of Regulations, Title 13,

Section 1962.4(f) and the resulting surplus or shortfall in values for the model year after applying any values according to California Code of Regulations, Title 13, Section 1962.4(g).

b) *Incur and Carry Forward a ZEV Deficit*—If a shortfall in meeting the Annual ZEV Requirement remains after determining compliance under California Code of Regulations, Title 13, Section 1962.4(h)(1), the manufacturer shall incur a deficit for the model year. A manufacturer must make up the deficit within three model years following the model year in which the deficit was earned by submitting a commensurate amount, within applicable allowances for fulfilling a ZEV requirement shortfall, under California Code of Regulations, Title 13, Section 1962.4(g)(1) for the model year in which the deficit was earned, of excess ZEV, PHEV, or environmental justice vehicle values, early compliance vehicle values, or pooled ZEV or PHEV values to the Director. For example, a manufacturer must resolve a 2029~~8~~ model year deficit by the conclusion of the 2032~~1~~ model year.

c) *Penalty*—Any manufacturer that fails to submit an appropriate number of credits and does not make up ZEV deficits within the time specified in California Code of Regulations, Title 13, Section 1962.4 is subject to civil penalties pursuant to 415 ILCS § 5/42.

SUBPART D: HEAVY-DUTY LOW NO_X REGULATION

Section 242.130 Requirement

a) Starting with the 2029~~8~~ engine and vehicle model year, any manufacturer that certifies new heavy-duty diesel-cycle and Otto-cycle engines used in heavy-duty vehicles with a gross vehicle weight rating (GVWR) over 14,000 pounds for sale in Illinois must comply with the emission standards and associated requirements set forth in California Code of Regulations, Title 13, Sections 1956.8, 1971.1, 2036, 2121, 2137, 2139, 2140, 2166, 2166.1, 2167, 2168, 2169, 2169.1, 2169.2, 2169.3, 2196.4, 2169.5, 2169.6, 2169.7~~2167.7~~, 2169.8 and in this Subpart D.

Section 242.131 Recalls

a) For all 2029~~8~~ and subsequent model year heavy-duty engines and vehicles subject to recall in California, each manufacturer shall undertake recall campaigns in Illinois pursuant to California Code of Regulations, Title 13, Sections 2109 to

2135, unless the manufacturer demonstrates to the Agency that such recall is not applicable to vehicles registered in Illinois.

b) Any voluntary or influenced emission-related recall campaign initiated by any manufacturer under California Code of Regulations, Title 13, Sections 2113 to 2121 for vehicles subject to the requirements incorporated ~~herein~~ by reference in Section 242.103, must extend to all applicable vehicles registered in Illinois. If the manufacturer can demonstrate to the Director's satisfaction that said campaign is not applicable to vehicles registered in Illinois, then the campaign will not apply in Illinois.

c) For vehicles subject to an order of enforcement action under Section 242.131(a)~~242.133(a)~~ of this rule, each manufacturer must send owners of vehicles registered in the State of Illinois a notice that complies with the requirements in California Code of Regulations, Title 13, Sections 2118 or 2127. The manufacturer must provide a telephone number that Illinois consumers can use to learn information about any recall that affects Illinois vehicles.

Section 242.132 Inspections and Information Requests

a) The Agency may inspect new and used motor vehicles and related records for the purposes of determining compliance with the requirements of this Subpart D. The Agency may perform inspections, as necessary, during regular business hours on public property or on any premises owned, operated, or used by any truck dealer or truck rental agency for the purposes of determining compliance with the requirements of this Subpart D.

b) For the purposes of determining compliance with this Subpart D, the Agency may require any truck dealer or truck rental agency to submit to the Agency any documentation that the Agency deems necessary to the effective administration and enforcement of this Subpart D. This provision does not require the creation of new records.

SUBPART E: ADVANCED CLEAN TRUCKS REGULATION

Section 242.140 Requirement

~~Starting with the~~For model years 2029~~8~~ through 2035~~model year~~, any manufacturer that certifies new on-road vehicles with a gross vehicle weight rating (GVWR) over 8,500 pounds for sale in Illinois must comply with the ZEV sales requirement and associated provisions set forth in California Code of Regulations, Title 13, Sections 1963, 1963.1, 1963.2, 1963.3, 1963.4 and 1963.5, using Illinois specific vehicle numbers.

Section 242.141 Deficit Generation

~~Starting with the~~For model years 202~~8~~ through 2035~~model year~~, any manufacturer that certifies new on-road vehicles over 8,500 pounds GVWR shall annually incur deficits based on the manufacturer's annual sales volume of on-road vehicles produced and delivered for sale in Illinois pursuant to California Code of Regulations, Title 13, Section 1963.1. Deficits are incurred when the on-road vehicle is sold to the ultimate purchaser in Illinois.

Section 242.142 Credit Generation, Banking, and Trading

Starting with the 2025 model year, any manufacturer that certifies on-road vehicles over 8,500 pounds GVWR for sale in Illinois may generate, bank, and trade ZEV and NZEV credits for such vehicles pursuant to California Code of Regulations, Title 13, Section 1963.2.

Section 242.143 Compliance Determinations

Annual compliance determinations, including requirements to make up a deficit and credit retirement ordering, shall be determined pursuant to California Code of Regulations, Title 13, Section 1963.3.

Section 242.144 Reporting and Recordkeeping

Starting with the 2026~~5~~ model year, and no later than 90 days following the end of each model year, any manufacturer that certifies on-road vehicles over 8,500 pounds GVWR for sale in Illinois must report the sales, credit transfer, and credit declaration information specified in California Code of Regulations, Title 13, Section 1963.4 to the Agency. Manufacturers must also comply with the recordkeeping provisions set forth in California Code of Regulations, Title 13, Section 1963.4.

Section 242.145 Enforcement

a) Any manufacturer that certifies on-road vehicles over 8,500 pounds GVWR for sale in Illinois is subject, by Illinois, to the enforcement provisions set forth California Code of Regulations, Title 13, Section 1963.5.

b) Penalty for Failure to Meet Credit and Deficit Requirements—any manufacturer that fails to retire an appropriate amount of ZEV or NZEV credits as specified in Section 1963.3(c) and does not make up deficits within the specified time allowed by Section 1963.3(b) shall be subject to civil penalties contemplated by Illinois statutes and regulations applicable to a manufacturer who does not comply with emission standards or the test procedures adopted by the Illinois Pollution Control Board such as those in this Part 242. The cause of action shall be deemed to accrue when the deficit is not balanced by the end of the specified time allowed by Section 1963.3(b). For the purposes of 415 ILCS § 5/42, the number of noncompliant, violating vehicles shall be equal to one half of the manufacturer's outstanding deficit.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

	)	
	)	
IN THE MATTER OF:	)	
	)	R2024-017
PROPOSED CLEAN CAR AND	)	
TRUCK STANDARDS	)	(Rulemaking – Air)

CERTIFICATE OF SERVICE

I, the undersigned, on affirmation state the following:

That I have served the attached Notice of Filing; Answers to Pre-Filed Questions of Kathy Harris and Muhammed Patel; Answers to Pre-Filed Questions of Tom Cackette; Answers to Pre-Filed Questions of Dr. Peter Orris; Answers to Pre-Filed Questions of Dr. Daniel E. Horton; Answers to Pre-Filed Questions of Juliana Pino; Answers to Pre-Filed Questions of Brian Urbaszewski; Answers to Pre-Filed Questions of Myrna Salgado; Answers to Pre-Filed Questions of Justin Flores; Answers to Pre-Filed Questions Not Addressed to Specific Witnesses; and Certificate of Service, by e-mail upon the following individuals listed at the e-mail addresses indicated:

TO:

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That my e-mail address is robert.weinstock@law.northwestern.edu.

That the number of pages in the e-mail transmission is 209.

That the e-mail transmission took place before 5:00 p.m. on the date of November 18, 2024.

Date: November 18, 2024

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