

California Air Resources Board

Amendments to the Advanced Clean Trucks Regulation and the Zero-Emission Powertrain Certification Test Procedure

Final Statement of Reasons for Rulemaking, Including Summary of Comments and Agency Response

Public Hearing Date: October 24, 2024
Agenda Item No.: 24-5-5

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I. General

The California Air Resources Board (CARB or Board) adopted the Advanced Clean Trucks (ACT) regulation on January 26, 2021. The ACT regulation is a central component of California's comprehensive strategy to reduce harmful emissions from medium- and heavy-duty vehicles to the greatest degree feasible, and requires manufacturers to introduce increasing numbers of zero-emission vehicles (ZEVs) in the medium- and heavy-duty on-road vehicle classes beginning in the 2024 model year. Promoting the development and use of zero-emission trucks will contribute to the goals set by the Governor's Executive Order N-79-20 and the Sustainable Freight Action Plan, and will help achieve emission reductions as outlined in the State Implementation Plan, Senate Bill (SB) 350 (de León, Stats. 2015, ch. 547), Assembly Bill (AB) 32 (Nuñez, Stats. 2006, ch. 488), and SB 32 (Pavley, Stats. 2016, ch. 249), and AB 1279 (Muratsuchi, Stats. 2022, ch. 337). This effort is part of a broader strategy to increase clean, affordable transportation options such as zero-emission technologies, innovative methods to improve freight activity, and efficiency of transportation systems in California.

In July 2019, CARB adopted the Zero-Emission Powertrain Certification (ZEP Certification) test procedure which establishes alternative certification procedures for heavy-duty battery-electric and fuel-cell vehicles and the zero-emission powertrains propelling such vehicles. The ZEP Certification establishes a process that can be used to provide additional transparency, consistency, and stability in heavy-duty zero-emission market segments targeted by CARB's technology-forcing regulatory measures or incentives geared to deploying more-commercialized zero-emission vehicles. The ACT regulation requires manufacturers to utilize ZEP Certification starting with the 2024 model year for heavy-duty and incomplete medium-duty ZEVs to earn ZEV credits.

The amendments to the ACT regulation primarily provide manufacturers additional flexibility to comply with the ACT regulation, address issues that have arisen during CARB's implementation of the regulation, and honor commitments made by CARB in the Clean Truck Partnership agreement. These amendments include extending the period that manufacturers must offset deficits from one to three years, and clarifying that compliance determinations and sales reporting requirements are both defined when vehicles are produced and delivered for sale in California, instead of when the vehicles are delivered to the ultimate purchaser. The amendments to the ZEP Certification regulation provide manufacturers the option to now certify complete medium-duty ZEVs under the ZEP Certification regulation. The amendments encompass minor, administrative changes that are projected to result in a total net decrease in compliance costs as compared to the baseline conditions, and are not projected to significantly increase emissions impacts.

II. Procedural Summary

On March 26, 2024, CARB released the 45-Day Notice of Public Hearing and Staff Report: Initial Statement of Reasons for Rulemaking (Staff Report), entitled "Public Hearing to Consider Proposed Amendments to the Advanced Clean Trucks Regulation and the Zero-

Emission Powertrain Certification Test Procedure”, for public review. The Staff Report contains a detailed description of the problem that the proposed amendments are intended to address, and the rationale for the proposed amendments. The 45-Day Notice included all references relied upon and identified in the Staff Report.

The proposed amendments were initially presented to the Board at a public hearing held on May 23, 2024. At the Hearing, numerous vehicle upfitters and dealers spoke about their current inability to receive vehicles powered by combustion engines from manufacturers in California, and primarily attributed the issue of limited chassis availability to the ACT regulation. In response to these comments, the Board deferred its vote on the proposed amendments to a future hearing and directed staff to work with industry to further assess the product shortage situation. CARB staff subsequently released a memo to the Board on September 25, 2024, that summarizes staff’s findings based on conversations with the affected parties.

In response to comments received during the 45-day comment period and at the May Hearing, CARB staff proposed additional changes, in addition to supporting documents, made available for a 15-day comment period through a “Notice of Public Availability of Modified Text” (15-Day Notice). The 15-Day Notice and modified regulatory language were posted on October 7, 2024, for public review and comment through October 22, 2024. CARB staff has reviewed and responded to the comments in section V of this document and determined that no further changes to the Regulation Order is necessary.

On October 24, 2024, CARB staff presented the proposed amendments for the Board’s consideration. At that Hearing, the Board adopted Resolution 24-5. Resolution 24-5 approved for adoption new section 1963.6 and amendments to sections 1956.8, 1963, 1963.1, 1963.2, 1963.3, 1963.4, and 1963.5, of title 13, California Code of Regulations, and further directed the Executive Officer (EO) to determine if additional conforming modifications were appropriate. If the EO determined additional modifications were appropriate, the modified regulatory language and any additional conforming modifications were required to be made available for public comment, with any additional supporting documents and information, for a period of at least 15 days. The Board further directed the EO to consider written comments submitted during the public review period and make any further modifications that are appropriate available for public comment for at least 15 days, and, if there was any possibility that modifications to the regulation made available for one or more 15-day public comment periods would affect the conclusion of the environmental analysis, to prepare and circulate any additional environmental analysis to the extent required by CARB regulations set forth in California Code of Regulations, title 17, section 6004.

In response to comments received during the first 15-day comment period and at the October Hearing, CARB staff proposed additional changes, in addition to supporting documents, made available for a 15-day comment period through a “Second Notice of Public Availability of Modified Text” (Second 15-Day Notice). The Second 15-Day Notice and modified regulatory language were posted on November 21, 2024, for public review and comment through December 6, 2024. CARB staff has reviewed and responded to the comments in section V of this document and determined that no further changes to the Regulation Order is necessary.

This Final Statement of Reasons (FSOR) updates the Staff Report for this rulemaking by identifying and providing the rationale for the modifications made to the originally proposed regulatory text, including non-substantive modifications, and regulatory text circulated for public comment during the 15-day comment periods. The FSOR also contains a summary of the comments received by CARB on the proposed amendments during the formal rulemaking process in addition to CARB's responses to those comments. The Staff Report is incorporated by reference herein.

A. Mandates and Fiscal Impacts to Local Governments and School Districts

The Board has determined that this regulatory action will not result in a mandate to any local agency or school district the costs of which are reimbursable by the state pursuant to Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code because this action neither compels local agencies to provide new governmental functions (i.e., it does not require such agencies to provide additional services to the public)¹ nor compels such agencies to increase the actual level or quality of services that they already provide the public.² For the foregoing reasons, any costs incurred by local agencies to comply with this regulatory action are not reimbursable.³

B. Consideration of Alternatives

For the reasons set forth in the Staff Report, in staff's comments and responses at the Hearing, and in this FSOR, the Board determined that no alternative considered by the agency would be more effective in carrying out the purpose for which the regulatory action was proposed, or would be as effective and less burdensome to affected private persons, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law than the action taken by the Board.

For this rulemaking action, CARB determined that the only reasonable alternatives to the proposed regulatory action were proposals relating to for the time period in which manufacturers are allowed to offset deficits. CARB's determination was based on its assessment that the length of that allowable offset period has the greatest impact on manufacturers' ability to comply with the regulation, and consequently on the costs and emissions impact of the regulatory action. This section includes evaluations for such alternatives and provides reasons why they were rejected. The deficit makeup period as proposed by CARB ensures that manufacturers will continuously produce ZEV and NZEVS for each model year of the makeup period to make significant progress towards offsetting the

¹ County of Los Angeles v. State of California (1987) 43 Cal.3d 46, 56.

² San Diego Unified School Dist. v. Commission on State Mandates (2004) 33 Cal.4th 859, 877.

³ County of Los Angeles v. State of California, *supra*, at 58.

outstanding deficit while providing sufficient flexibility in meeting the annual compliance requirements.

1. Alternative 1: No Action

Alternative 1 maintains the pre-existing one-year deficit make-up period, i.e., would not make any changes to the initially adopted ACT regulation. Alternative 1 would not be expected to cause any changes to the emissions, health benefits, or costs associated with the initially adopted ACT regulation.

Under this concept, the time provided to manufacturers to offset a credit shortfall would be unchanged. Alternative 1 was rejected because the current makeup period does not provide sufficient time to manufacturers facing potential market fluctuations and other factors outside of the manufacturers' control, including supply chain constraints, that may prevent them from satisfying the deficiency. For these reasons, Alternative 1 was rejected.

2. Alternative 2: No Deficit Makeup Period

Alternative 2 eliminates the time provided to manufacturers to offset deficits accrued from retiring fewer ZEV or NZEV credits than required for a given model year while maintaining all other requirements. This is a more stringent alternative and would remove the pre-existing one-year make-up period, which is flexibility provided to manufacturers that assists in meeting compliance requirements and addressing market fluctuations. Alternative 2 is not expected to cause significant increases to emissions benefits or health benefits because of the short time frame. The costs of Alternative 2 are expected to be about the same as the proposed ACT amendments since similar changes to the reporting requirements and ultimate purchaser requirements are included in this alternative.

Alternative 2 was rejected because removing the deficit makeup period eliminates the ability for a manufacturer to account for unforeseen market fluctuations and other factors that may affect compliance for a given year and increases the uncertainty that manufacturers will be able to meet their compliance requirements. Additionally, eliminating the deficit makeup period could cause some manufacturers to take other measures to remain compliant, such as reducing the total vehicle sales should the number of ZEV sales not be as expected or if external factors cause unexpected delays in ZEV production. For these reasons, Alternative 2 was rejected.

3. Alternative 3: Extend Deficit Makeup Period to Five Model Years with No Conditions

Alternative 3 increases the time provided for manufacturers to offset deficits accrued from retiring fewer ZEV or NZEV credits than required for a given model year. This alternative would increase the deficit makeup period from the proposed three model years to five model years and would not apply any conditions to ensure that manufacturers remain close to their compliance targets. This is a less stringent alternative and would provide greater flexibility to

manufacturers in meeting compliance requirements but would increase the likelihood for some manufacturers to potentially produce no ZEVs for several years while also delaying investments during the extended period, in order to take advantage of declining cost trends for components during such extended periods. Staff did not perform an emissions analysis due to the speculative nature of the number of manufacturers that may use the delay; however, extending flexibility needs to be balanced with guarding against the potential abuse of the flexibility. Alternative 3 would likely result in significant losses in both emissions and health benefits and would be likely to create a competitive disadvantage for manufacturers that did not delay their ZEV deployments.

Alternative 3 was rejected because providing a five-year deficit makeup timeframe is excessive and unnecessary compared to the proposed three-year timeframe. Extending the makeup period to five model years without requirements for manufacturers to remain close to their compliance targets creates uncertainty associated with a manufacturer's ability to rectify a deficit and meet compliance requirements and could discourage early investments by other manufacturers. By permitting manufacturers to produce no ZEVs for several years, this concept could also cause significant uncertainty in the market for investments made by infrastructure and supply chain providers, further delaying progress in ZEV deployment. For these reasons, Alternative 3 was rejected.

4. Small Business Alternative

Section 11346.9(a)(5) of the Government Code provides that the FSOR shall contain an "explanation setting forth the reasons for rejecting any proposed alternative that would lessen the adverse economic impact on small businesses." The ACT regulation does not apply directly to small businesses. The Board has not identified any reasonable alternatives that would lessen any adverse impact on small business.

III. Modifications Made to the Original Proposal

A. Modifications Provided for in the 15-Day Comment Periods

After the May 23, 2024 Board Hearing, CARB staff proposed modifications to the original proposal and addressed comments submitted during the 45-day public comment period. CARB staff released the 15-Day Notice on October 7, 2024, which notified the public of additional proposed modifications to the regulatory text (Notice of 15-Day Changes). After the October 24, 2024 Board Hearing, CARB staff released the Second 15-Day Notice on November 21, 2024, which notified the public of further proposed modifications to the regulatory text (Second Notice of 15-Day Changes).

This section provides a high-level summary of the changes that were made to the initial proposal in response to stakeholder concerns and were made available for public comment as provided during both the Notice of 15-Day Changes and the Second Notice of 15-Day Changes. The summary of changes does not include any edits made for clarity or those used to restructure. CARB staff proposed modifications to the Proposed Amendments in sections

1963, 1963.2, 1963.3, 1963.4, and 1963.5 of Title 13 California Code of Regulations. For more detailed information on each change and their purpose and rationale, see the 15-Day Notice on CARB's website: <https://ww2.arb.ca.gov/rulemaking/2024/advancedcleantrucks>.

1. Section 1963, Advanced Clean Trucks Purpose, Applicability, Definitions, and General Requirements

Language to existing definitions as well as new definitions were added to coincide with other changes that were made and to harmonize with other CARB regulations. A vehicle labeling option with specific parameters was added to identify vehicles intended for sale in California for accurate accounting of credits and deficits.

2. Section 1963.1, Advanced Clean Trucks Deficits

Language was added to specify that manufacturers do not accrue deficits for any on-road vehicles produced or delivered for sale in California that are powered by new 2026 model year heavy-duty engines compliant with the Heavy-Duty Engine and Vehicle Omnibus regulation.

3. Section 1963.2, Advanced Clean Trucks Credit Generation, Banking, and Trading

An option was added for secondary vehicle manufacturers to participate in the credit trading and transfer system under the ACT regulation. Language was added to specify that heavy-duty and incomplete Class 3 vehicles must meet the ZEP Certification requirements in order to receive ZEV credit. Incomplete Class 3 vehicles are also permitted to alternatively meet the requirements of the Advanced Clean Cars II regulation to receive ZEV credit beginning with the 2026 model year. Language was added to specify that complete medium-duty vehicles and incomplete Class 2b vehicles may receive ZEV credit if they meet the certification requirements of ZEP Certification, Advanced Clean Cars I, Advanced Clean Cars II, or the certification procedures in sections B, D, and F(1-5) of the "California Exhaust Emission Standards and Test Procedures for 2018 and Subsequent Model Year Zero-Emission Vehicles and Hybrid Electric Vehicles, in the Passenger Car, Light-Duty Truck and Medium-Duty Vehicle Classes" as amended on September 3, 2015. Lastly, language was added to establish that a Class 2b-3 ZEVs or NZEVs may generate credits under the Advanced Clean Cars I, Advanced Clean Cars II, or Advanced Clean Trucks, but not more than one of these regulations. ZEVs and NZEVs not claiming credits under the ACT regulation may also be excluded from the reporting and recordkeeping requirements.

4. Section 1963.3, Advanced Clean Trucks Compliance Determination

Language was added to further specify the parameters and requirements of the deficit makeup period in addition to permitting up to 50 percent of the deficits under the makeup period to be offset with NZEV credits.

5. Section 1963.4, Advanced Clean Trucks Reporting and Recordkeeping

Language was added to establish that beginning with the 2027 model year, the latest known status of a vehicle delivery into California, the name of the person or entity that is the vehicle's recipient, and the physical address of the vehicle's last known delivery destination are optional to report unless requested by the Executive Officer. Manufacturers are required to report additional information, including the applicable engine family name or zero-emission powertrain family name, whether the ZEV is certified to the ZEP Certification requirements, whether the Class 2b-3 ZEV or NZEV will be excluded from the ACT credit and deficit calculations, whether the reporting manufacturer is exempt under the Low Volume Exemption, and whether the vehicle meets the requirements of section 1963.1(a)(1). Language was added to permit manufacturers to correct a vehicle report for up to three previous model years if it is determined that a given vehicle was delivered for sale in California or was delivered for sale outside of California. Language was added to subject secondary vehicle manufacturers to credit transfer reporting if they elect to participate in the credit trading and transfer system under the regulation. The Class 2b-3 Credit Declaration section was removed to coincide with other changes. Language was added to specify the acceptable documentation from a secondary vehicle manufacturer showing delivery of a manufacturer's vehicle in California. Lastly, the manufacturer's Statement of Origin was made subject to the record retention requirements.

6. Section 1963.5, Advanced Clean Trucks Enforcement

Language was modified to specify that a credit or deficit amount will be corrected if it is determined that the credit or deficit amount was based on false information. Language was added to coincide with the addition of the labeling option in section 1963(g) that describes how credit and deficit reports shall be updated should it be determined that a ZEV or NZEV was or was not produced and delivered for sale in California.

IV. Non-Substantial Modifications

Subsequent to the 15-day public comment periods mentioned above, staff identified the following additional non-substantive changes to the regulation:

Section 1963(c): In the complete vehicle definition, the reference was updated from 17 CCR section 95662(b)(1) to 17 CCR section 95662(a)(26)(B)(1) as part of the reference was erroneously excluded. This aligns with the original intent of the language.

Section 1963.3(b): The pre-existing regulatory text specified that a manufacturer with a cumulative net deficit may elect to offset that deficit in a consecutive three-model year period, "beginning with the first model year following the model year in which the manufacturer had a net deficit." Staff also included non-binding text to illustrate that operative requirement. Specifically, it included a description of how that requirement would apply to a manufacturer that first accrued a net deficit in the 2024 model year, but due to staff oversight, stated that in

that situation, the manufacturer needed to offset its total net deficit balance by the end of the 2026 model year.

That example did not accurately reflect the operative regulatory requirement, so staff has accordingly modified the explanatory text to specify that in the above-mentioned example, the manufacturer would need to offset its total net deficit balance by the end of the 2027 model year.

The above-described modification constitutes a non-substantial change to the regulatory text because it corrects an apparent typographical error in the text that is non-binding, and the text only serves to illustrate the operative regulatory requirement, which is described earlier in the subsection.

V. Documents Incorporated by Reference

The regulation and the incorporated test procedure adopted by the Executive Officer incorporate by reference the following documents:

Title 40, Code of Federal Regulations section 1037.801, last amended by the United States Environmental Protection Agency (U.S. EPA) on January 24, 2023.

California Air Resources Board, “California Standards and Test Procedures for New 2021 and Subsequent Model Heavy-Duty Zero-Emission Powertrains,” last amended on March 19, 2025.

These documents were incorporated by reference because it would be cumbersome, unduly expensive, and otherwise impractical to publish them in the California Code of Regulations. In addition, some of the documents are copyrighted, and cannot be reprinted or distributed without violating the licensing agreements. The documents are lengthy and highly technical test methods and engineering documents that would add unnecessary additional volume to the regulation. Distribution to all recipients of the California Code of Regulations is not needed because the interested audience for these documents is limited to the technical staff at a portion of reporting facilities, most of whom are already familiar with these methods and documents. Also, the incorporated documents were made available by CARB upon request during the rulemaking action and will continue to be available in the future. The documents are also available from college and public libraries, or may be purchased directly from the publishers.

VI. Summary of Comments and Agency Response

Written comments were received during the 45-day comment period in response to the May 23, 2024 public hearing notice. These comments are shown below in Table 1, identifying the date the written comments were submitted, commenter name, and affiliation. Listed in Table 2 and Table 3 are the organizations and individuals that provided oral and written comments at the first Board Hearing, respectively. Written comments were received during the first 15-day comment period from October 7, 2024, through October 22, 2024. These are shown in Table 4, identifying the date the written comments were submitted, commenter name, and affiliation.

Listed in Table 5 and Table 6 are the organizations and individuals that provided oral and written comments at the second Board Hearing, respectively. Written comments were received during the second 15-day comment period from November 21, 2024, through December 6, 2024. These are shown in Table 7, identifying the date the written comments were submitted, commenter name, and affiliation.

Table 1. Written Comments Received During the 45-Day Comment Period

Commenter (Date Submitted)	Affiliation
Gonzalez, Lisa (April 17, 2024)	La Habra Fence Co., Inc.
Schwartz, Andy (May 1, 2024)	Tesla, Inc.
Ricker, Jeffrey (May 7, 2024)	Individual
Herrera, Vivianna (May 7, 2024)	Individual (10 form letter submissions)
Tyrrel, Kimberly (May 8, 2024)	Individual
Ammari, Yazan (May 9, 2024)	Individual
Flores, David (May 9, 2024)	Individual
Salciccioli, Katie (May 12, 2024)	Ford
Miller, Paul (May 13, 2024)	Northeast States for Coordinated Air Use Management (NESCAUM)
French, Timothy (May 13, 2024)	Truck & Engine Manufacturers Association (EMA)
Stewart, Julie (May 13, 2024)	Individual
Butzlaff, Trent (May 13, 2024)	Plaza Towing Inc.
Henley, Marlk (May 13, 2024)	California Tow Truck Association (CTTA)
Moreno Sr., Richard (May 13, 2024)	Individual
Coin, Teddy (May 13, 2024)	American Automotive Policy Council
Olivarez, Andrea (May 13, 2024)	Individual

Foor, Jeff (May 13, 2024)	Stellantis
Hurner, Greg (May 13, 2024)	Miller Industries, Inc.
Blackburn, Kirk (May 13, 2024)	CTTA/Emergency Road Service Coalition of America
Peeples, Mark (May 13, 2024)	Individual

Table 2. Oral Comments Presented at the First Board Hearing⁴

Commenter	Affiliation
Baatz, Mark	Tow Industries Los Angeles
Lovelace, Joshua	Miller Industries
Banks, Brian	Firstline Road Solutions
Hurner, Greg	Miller Industries
Wheeler, James	Municipal Maintenance Equipment (MME)
Wheeler, Frank	MME
Wheeler, Tim	MME
Birch, Becky	West Coast Towing Equipment
Borst, John	West Coast Towing Equipment
Corby, Kristian	California Electric Transportation Coalition (CalETC)
Neal, Brandon	Truck Body Sales Inc.
Fahy, James	Mercedes-Benz
Van Lingen, Robert	B&K Inglewood Towing
Wright, James	J&K Truck Service and Towing

⁴ The oral comments table is in the order that the oral comments were presented at the Board Hearing.

Commenter	Affiliation
Ruacho, Mariela	American Lung Association
Walsh, James	Golden West Towing Equipment, West Coast Towing Equipment
Van Lingen, Sean	Individual
Blackburn, Kirk	CTTA
Ortiz, Guillermo	Natural Resources Defense Council
Wilson, Sam	Union of Concerned Scientists
Modarres, Kamy	Southern California Tow Equipment
Trigueros, Jessica	Tow Industries

Table 3: Written Comments Received at the First Board Hearing

Commenter	Affiliation
Takahashi, John	Individual

Table 4. Written Comments Received During the 15-Day Comment Period

Commenter (Date Submitted)	Affiliation
Brimhall, Chris (October 12, 2024)	Individual
Frank, Ron (October 17, 2024)	California Department of Transportation
Rice, Nicole (October 18, 2024)	California Renewable Transportation Alliance
Rasmussen, Greg (October 18, 2024)	Individual
Ochs, Michael (October 21, 2024)	Recreational Vehicle (RV) Industry Association
Curtis, Deborah (October 21, 2024)	Individual

Commenter (Date Submitted)	Affiliation
Brown, Kevin (October 21, 2024)	Manufacturers of Emissions Controls Association
Reece, Chad (October 21, 2024)	Winnebago Industries, Inc.
O'Toole, Megan (October 22, 2024)	NESCAUM
Blackburn, Kirk (October 22, 2024)	CTTA
Ingber, Daniel (October 22, 2024)	National Automobile Dealers Association
Kastner, Michael (October 22, 2024)	The Work Truck Association (NTEA)
Palin, Catherine (October 22, 2024)	Alliance for Automotive Innovation
Taylor, Tim (October 22, 2024)	National Federation of Independent Business
Foor, Jeff (October 22, 2024)	Stellantis
Hurner, Greg (October 22, 2024)	Hurner Government Relations and Advocacy
Bacis, Gilbert (October 22, 2024)	CTTA
French, Timothy (October 22, 2024)	EMA
Bento, Anthony (October 22, 2024)	California New Car Dealers Association (CNCDA)
Smith, David (October 22, 2024)	Oshkosh Corp.
Nevers, Chris (October 22, 2024)	Rivian
Fahy, James (October 22, 2024)	Mercedes-Benz R&D North America
Vergara, Michael (October 22, 2024)	MME
Okurowski, Peter (October 22, 2024)	CA Council for Environmental and Economic Balance

Commenter (Date Submitted)	Affiliation
Saliccioli, Katie (October 22, 2024)	Ford
Pratt, Grace (October 22, 2024)	CNCDA
Miller, George (October 22, 2024)	Chair, Assembly California Legislature
Hurner, Greg (October 22, 2024)	California Safe Roads Coalition
Verdugo, Frank (October 22, 2024)	Individual

Table 5. Oral Comments Presented at the Second Board Hearing

Commenter	Affiliation
Ruacho, Mariela	American Lung Association
Wheeler, James	MME
Wheeler, Frank	MME
Baatz, Mark	Tow Industries
Lovelace, Joshua	Miller Industries
VanderBee, Adam	TEC Equipment
Bento, Anthony	CNCDA
Neel, Brandon	Truck Body Sales Inc.
Porter, Ashley	TEC Equipment
Wong, Brandon	CALSTART
Banks, Brian	Action Towing
Post, Timothy	Firstline Road Solutions
Cady, JR	Firstline

Commenter	Affiliation
Lenz, Nicholas	Civic Center Tow
Mandel, Jed	EMA
Blackburn, Kirk	CTTA
Shimoda, Chris	California Trucking Association
Kenny, Ryan	Clean Energy
Magavern, Bill	Coalition for Clean Air
Tunnel, Mike	American Trucking Associations
Moffatt, John	California Renewable Transportation Alliance
Swenson, Tom	Cummins Inc.
Hurner, Greg	Miller Industries
Snyder, Joe	Freightliner Custom Chassis
Rosenbaum, Mark	Mike Thompson RV
Tubman, Casey	Newmar Corporation, Winnebago Industries
Ortiz, Guillermo	Natural Resources Defense Council
DeMartini, Tim	DeMartini RV Sales
Camacho, Omar	Titan Tow
Gasper, Trevor	Thor Industries
Ochs, Michael	RV Industry Association
Howard, Lee	Individual
King, Steven	Environment California

Commenter	Affiliation
McCoy, Kimberly	Central California Asthma Collaborative
Corby, Kristian	CalETC
Sasseen, Tim	Tim Sasseen New Energy Solutions
Wilson, Sam	Union of Concerned Scientists
Salazar, William	Royal Coaches Towing
Marquez, Cristina	International Brotherhood of Electrical Workers Local 569

Table 6. Written Comments Presented at the Second Board Hearing

Commenter	Affiliation
Porter, Ashley (October 24, 2024)	TEC Equipment
Sales, Mark (October 24, 2024)	Individual
Bento, Anthony (October 24, 2024)	CNCDA
Hursh, Gavin (October 24, 2024)	Individual
Rios, Wilson (October 24, 2024)	Individual
Hamilton, Kevin (October 24, 2024)	Central California Asthma Collaborative
Spears, Matthew (October 24, 2024)	Cummins Inc.
DeMartini, Tim (October 24, 2024)	Individual

Table 7. Written Comments Received During the Second 15-Day Comment Period

Commenter (Date Submitted)	Affiliation
Piazzisi, Robert (November 24, 2024)	Individual

Commenter (Date Submitted)	Affiliation
French, Timothy (December 5, 2024)	EMA
Palin, Catherine (December 6, 2024)	Alliance for Automotive Innovation
Fahy, James (December 6, 2024)	Mercedes-Benz
Brown, Lee (December 6, 2024)	Western States Trucking Association
Saliccioli, Katie (December 6, 2024)	Ford
Cox-Winter, Barbara (December 6, 2024)	Individual
Bento, Anthony (December 6, 2024)	CNCDA
Kenny, Ryan (December 6, 2024)	Clean Energy
Tunnell, Mike (December 6, 2024)	American Trucking Association
Pardo, Veronica (December 6, 2024)	Resource Recovery Coalition of California
Rice, Nicole (December 6, 2024)	California Renewable Transportation Alliance
Hurner, Greg (December 6, 2024)	Miller Industries
Foor, Jeff (December 6, 2024)	Stellantis

The following is a summary of each objection or recommendation regarding the proposed action, together with an agency response providing an explanation of how the proposed action has been changed to accommodate the objection or recommendation or the reason(s) for making no change. The comments have been grouped by topic wherever possible. Comments not involving objections or recommendations specifically directed towards the rulemaking or to the procedures followed by CARB in this rulemaking are not summarized below.

A. 45-Day Comment Period and First Board Hearing Public Comments with Agency Responses

Comments submitted during the 45-day comment period are denoted with “-45d” following the name of the commenter. Oral testimony comments provided at the first Board Hearing are denoted with “-OT1” following the name of the commenter. Written testimony comments submitted during the first Board Hearing are denoted with “-WT1” following the name of the commenter. Comments submitted during the first 15-day comment period are denoted with “-15d1” following the name of the commenter. Oral testimony comments provided at the second Board Hearing are denoted with “-OT2” following the name of the commenter. Written testimony comments submitted during the second Board Hearing are denoted with “-WT2” following the name of the commenter. Comments submitted during the second 15-day comment period are denoted with “-15d2” following the name of the commenter.

1. Deficit Makeup Period

a) Increasing, modifying, or eliminating the 30 percent threshold

Comment: The commenter requests the complete removal or increase of the 30 percent threshold to ensure that manufacturers may make up their entire net deficit throughout the three-year timeframe. (Jeff Foor-45d, Kristian Corby-OT1)

Agency Response: No changes were made in response to these comments. The flexibility to make up a deficit requires that the net deficit balance be reduced to below 30 percent by the end of the first and second years of the makeup period if the net deficit balance is more than 30 percent of the deficits generated from the most recent model year. Retaining criteria for manufacturers to utilize the makeup period ensures that ZEVs and NZEVs are consistently being produced each year as opposed to not ensuring any progress is being made until the final year of the makeup period. Therefore, removing the threshold may negatively impact the amount of progress made towards a successful zero-emission market over the three-model year period. Additionally, the 30 percent threshold was determined to be reasonable and attainable while providing enough flexibility to the manufacturers to make up the deficit. Increasing this threshold would allow manufacturers to further decrease progress each model year towards offsetting the deficit, negatively impacting the emissions benefits of the ACT regulation.

b) Reducing the 30 percent threshold to 20 percent

Comment: The commenter requests that the 30 percent threshold be reduced to 20 percent. (Andy Schwartz-45d)

Agency Response: No changes were made in response to this comment. The 30 percent threshold was determined to be reasonable and attainable while providing enough flexibility to the manufacturers to make up the deficit. Reducing the threshold to 20 percent would

significantly reduce this flexibility, making it more difficult for a manufacturer to make up a deficit within the three-model year timeframe.

c) Replace 30 percent threshold with custom manufacturer plan

Comment: The commenter requests that a provision be included that would allow manufacturers to approach CARB with their plan to resolve a deficit instead of being required to reduce the net deficit below 30 percent by the end of the first year. (Katie Saliccioli-45d)

Agency Response: No changes were made in response to this comment. Incorporating the 30 percent threshold establishes consistent requirements among all the regulated manufacturers and ensures that each manufacturer produces a sufficient number of ZEVs each model year respective to their annual requirement, which provides a level playing field and ultimately ensures the emissions benefits of the ACT regulation are achieved.

d) Allow near-zero-emission vehicle credit contribution

Comment: The commenter requests that credits generated by the sale and delivery of NZEVs in California be allowed to cover up to 50 percent of the deficit due to the early stage of the market. (Kristian Corby-OT1)

Agency Response: Changes were made in response to these comments. Credits generated by the sale and delivery of NZEVs in California would be permitted to cover up to 50 percent of the net deficit utilizing the makeup period. This change provides manufacturers with additional flexibility to offset a deficit under the makeup period and to align with other flexibility in the rule that permits NZEVs to account for up to one half of the total annual weighted deficits.

2. Reporting and Recordkeeping Requirements

a) Updating reports from the previous three model years

Comment: The commenter requests that manufacturers be permitted to report new ZEVs for up to three previous model years. (Katie Saliccioli-45d)

Agency Response: Changes were made in response to this comment. Manufacturers are permitted to update a vehicle report for up to three previous model years if they determine that a vehicle is or is not operated in California. This change ensures that vehicles reported as delivered for sale in California are actually delivered for sale in California and placed in service in California as a new vehicle. Permitting updates to reports for up to three model years also aligns with ZEV reporting under the Advanced Clean Cars (ACC) regulations.

b) Updating reports for the 2021-2023 model years

Comment: The commenter requests that corrections and updates be allowed for the 2021-2023 model years (MY) for up to 180 days following the end of the initial 90-day reporting period for the 2025 MY. (Timothy French-45d)

Agency Response: Changes were made in response to this comment. As discussed in the previous response, staff made changes to allow manufacturers to update a vehicle report for up to three previous model years. Only permitting manufacturers to update reports for the 2021-2023 MYs prevents necessary updates to reports for future model years should it be determined that a vehicle was or was not delivered for sale in California. Additionally, given that vehicle reports can be updated for up to three previous model years, manufacturers will be permitted to update reports for the 2022 and 2023 MYs upon implementation of these amendments in 2025.

c) Limiting reports of vehicle delivery information

Comment: The commenter states that reporting the delivery status, recipient name, and delivery address of sections 1963.4(a)(11-13) should only be reported on an as-requested basis as opposed to being part of the annual report. (Katie Salcioccioli-45d)

Agency Response: Changes were made in response to this comment. Manufacturers will be required to report vehicle delivery information, until the end of the 2026 model year. Beginning in 2027 MY, this information is optional to report unless requested by the Executive Officer. This change reduces the reporting burden on manufacturers following the 2026 MY. Requiring manufacturers to initially provide this information to CARB leading up to the 2027 MY as part of the annual report would ensure manufacturers track the last known delivery status and would permit staff to closely monitor the information and ensure proper compliance with the rule. Following the 2026 MY, requiring the information on an as-requested basis would continue to hold stakeholders accountable to maintain vehicle delivery information and appropriately comply with the rule while simultaneously reducing the reporting burden.

d) Credit retirement order for banked credits

Comment: The commenter requests that it be specified that banked credits from previous model years can be used to meet annual compliance before credits earned in the most recent model year are used. (Timothy French-45d)

Agency Response: No changes were made in response to this comment. The regulation already specifies that credits must be retired by order of model year expiration, starting with the earliest expiring credit, which includes banked credits. Therefore, providing additional language as suggested by the commenter is unnecessary.

e) Include Advanced Clean Cars credit election

Comment: The commenter requests that the election for ACC credits that currently exists as a feature in the ACT reporting site be formally included as part of the reporting requirements in section 1963.4(a). The commenter requests the subsequent removal of the Class 2b-3 credit declaration of section 1963.4(d). (Katie Salcioccioli-45d)

Agency Response: Changes were made in response to this comment. Credit election for ACC was changed to be part of the reporting requirements and section 1963.4(d) has been

removed. This change aligns the regulation text with the ACT reporting system for ZEV credits as it currently includes an ACC credit election feature. The removal of section 1963.4(d) is necessary because it originally complimented the Grouped Sales Reporting option that has also been removed.

f) Clarify record retention requirements

Comment: The commenter requests that the recordkeeping requirements clarify that only one of the listed vehicles tracking documents be required for retention as opposed to all listed. (Timothy French-45d)

Agency Response: Changes were made in response to this comment. Clarifying language was added to state that at least one of the listed documents for tracking vehicle sales is necessary for retention.

3. Zero-Emission Powertrain Certification

a) Remove “incomplete” from the Zero-Emission Powertrain Certification requirement under Advanced Clean Trucks

Comment: The commenter requests that "incomplete" be removed from the ZEP Certification requirement in section 1963.2(h) of the ACT regulation. (Katie Saliccioli-45d)

Agency Response: No changes were made in response to this comment. The certification requirements for manufacturers to receive ZEV credit for complete medium-duty ZEVs are described separately in section 1963.2(i), which includes additional certification options other than ZEP Certification for increased flexibility. Therefore, removing “incomplete” from section 1963.2(h) is not necessary.

b) Permit manufacturers to certify an incomplete medium-duty vehicle to Advanced Clean Cars II

Comment: The commenter requests that manufacturers be permitted to certify an incomplete medium-duty vehicle to ACC II and earn credits under the ACT regulation. (James Fahy-45d, James Fahy-OT1)

Agency Response: Changes were made in response to these comments. Incomplete medium-duty ZEVs may meet the certification requirements under ACC II (13 CCR section 1962.4) and receive ZEV credit under the ACT regulation.

c) Allow clearer certification pathway for complete medium-duty zero-emission vehicles

Comment: The commenter requests that the ZEP Certification not be required as the appropriate ZEV assurance measure for “complete” medium-duty (8,501-14,000 lbs.) ZEVs no

sooner than the 2028 MY, to allow sufficient lead-time to implement significant changes for diagnostics and diagnostic communication protocols. (Jeff Foor-45d)

Agency Response: Changes were made in response to this comment. Vehicle manufacturers can now generate ACT ZEV credit for Class 2b-3 complete medium-duty ZEVs that certify in accordance with "California Exhaust Emission Standards and Test Procedures for 2018 and Subsequent Model Year Zero-Emission Vehicles and Hybrid Electric Vehicles, in the Passenger Car, Light-Duty Truck and Medium-Duty Vehicle Classes" as amended on September 3, 2015. This change provides an additional option for manufacturers to certify and generate ACT ZEV credits for complete medium-duty ZEVs. Referring to the specified version of the test procedure is necessary given that 13 CCR section 1962.2 is only applicable through the 2025 model year.

d) Exempt manufacturers from the communication requirements

Comment: The commenter requests that the ZEP Certification requirements be adjusted to allow a clearer certification pathway for complete medium-duty vehicles for the 2026-27 MYs by exempting manufacturers from the communication requirements. (Jeff Foor-45d)

Agency Response: No changes were made in response to this comment. The ZEP Certification already permits manufacturers to submit an alternative communication protocol that can be used with approval from the Executive Officer. Alternatively, manufacturers are permitted under the ZEP Certification to use the procedure described under 17 CCR section 95663(a), which allows the certification of vehicles without any communication protocol requirements. Therefore, adjusting the ZEP Certification requirements as suggested is unnecessary.

e) Confirm the use of SAE J1979-2 and J1979-3

Comment: The commenter requests that CARB staff confirm in the FSOR that SAE J1979-2 can be used for ZEP Certification test procedures. The commenter additionally requests that CARB staff confirm in the FSOR that manufacturers can request authorization to use SAE J1979-3 through alternate communications protocols option contained in Section 3.1 of ZEP Certification test procedures. The commenter requests that CARB revise the relevant regulatory provisions to reflect this additional flexibility for communication protocols. (Timothy French-45d)

Agency Response: No changes were made in response to this comment. Under the provisions of the ZEP Certification regulation, a manufacturer may use SAE J1979-2 and J1979-3, subject to the advanced approval of the Executive Officer during the certification process, if the manufacturer successfully demonstrates that such hardware and/or protocols do not create undue burden or costs for owners and third-party repair establishments requesting access to powertrain diagnostic information. As a result, no change in the ZEP Certification regulation is necessary as these pathways are already allowed through the existing provisions.

f) Permit alternative diagnostic communication tools

Comment: The commenter requests that "vehicle controller area network communications protocol" be simplified to "vehicle communications protocol". The commenter also requests that manufacturers be permitted to install a connector meeting the requirements in subsection (c)(2) of title 13, CCR, section 1962.5 that are applicable to zero emission vehicles with a vehicle network communication protocol that is capable of connection and communication with scan tools that meet the requirements in subsection (c)(3) of title 13, CCR, section 1962.5 that are applicable to zero emission vehicles. (Timothy French-45d)

Agency Response: No changes were made in response to this comment. The ZEP Certification already permits manufacturers to submit an alternative communication hardware or protocol that can be used with approval from the Executive Officer if the manufacturer successfully demonstrates that such hardware and/or protocols do not create undue burden or costs for owners and third-party repair establishments requesting access to powertrain diagnostic information. As a result, no change in the ZEP Certification regulation is necessary as alternative communications hardware and protocols are already allowed through the existing provisions.

4. Product Availability Concerns

Comment: The commenters state that constraints brought on by the ACT and Heavy-Duty Engine and Vehicle Omnibus (HD Omnibus) regulations are restricting the availability of compliant engines. They state that engine orders are not being filled and holds are being placed on intake due to a lack of supply. As a result, fleet and city managers are fearful of fines and can't find a path to support compliance. The commenters state that minimal inventory to build tow trucks remain, which will force some equipment dealers to close their businesses within the current year. The commenters state that it's taking 2-3 years for trucks to be delivered due to the limited chassis and part availability, and lack of supply from COVID. (Kamy Modarres-OT1, Frank Wheeler-OT1, Tim Wheeler-OT1)

Agency Response: No changes were made in response to these comments. As explained in the memo to the Board posted on September 25, 2024, CARB staff determined through numerous discussions with the manufacturers that the product availability issues for the 2024 MY are not driven by the ACT regulation. This is evidenced by the excess of ZEV credits available based on the ACT credit summary through the 2023 MY.⁵ Therefore, amending the ACT regulation would not resolve the general issues raised by the commenters. Additionally, the manufacturers are well-situated to comply with the ACT regulation's requirements for the 2024 MY and there are more than enough available ACT credits that manufacturers could purchase, if necessary, to sell dealers what is needed.

⁵ California Air Resources Board, Advanced Clean Trucks Credit Summary Through the 2023 Model Year, 2024 (web link: <https://ww2.arb.ca.gov/resources/fact-sheets/ACT-Credits-Summary%202023>, last accessed September 2024).

Moreover, in 2023, the Board approved amendments to the HD Omnibus regulation to reduce the potential for availability issues to occur based on the best information available at the time. However, manufacturer sales forecasts turned out to be incorrect and it is evident that the changes that the manufacturers asked for were insufficient to avoid the current situation. As a result, heavy-duty engine manufacturers are currently unable to fulfill market demand for internal combustion engine vehicles, resulting in some unanticipated sales restrictions in certain applications. Many additional factors, such as continued supply chain issues, are also contributing to the availability issue.

Staff has engaged with the industry on these issues and has collaboratively developed solutions that will help ensure product availability, while maintaining the emissions benefits of existing regulations. This included proposing amendments to the HD Omnibus regulation, adopted by the Board in 2023, that will allow manufacturers to sell the needed medium heavy-duty engines into California, providing significant relief to dealers and fleets for the current product availability issues.

5. Exempt Vehicle Body Types

a) Exempt towing and recovery vehicles from accruing deficits under Advanced Clean Trucks

Comment: The commenter requests that a manufacturer not accrue deficits for towing and recovery vehicles until the Executive Officer determines that the same class of on-road ZEV or NZEV is available that can perform towing or recovery services equivalent to the lowest-emission available gasoline or diesel models. (Greg Hurner-45d)

Agency Response: No changes were made in response to this comment. The regulation already gives manufacturers flexibility on how they choose to comply, and which models they elect to phase-in as ZEVs. Manufacturers can decide when or whether they begin introducing zero-emission tow recovery service vehicles. In addition, any changes to exempt groups of vehicles from the deficit generation requirements would undermine the goals of the ACT regulation to reduce emissions and increase the penetration of the first wave of zero-emission heavy-duty technology. The ACT regulation was structured to provide flexibility for manufacturers to strategically begin introducing ZEV models that are most suitable for electrification and includes the ability for manufacturers to trade credits with other manufacturers while continuing to sell internal combustion engine vehicles to meet customer demand. Lastly, NZEVs have similar operating characteristics as internal combustion engine vehicles but contribute to the credit generation requirements under the regulation as ZEVs do. Therefore, these vehicles are already capable of performing towing or recovery services equivalent to the lowest-emission available gasoline or diesel models.

b) Exempt tow trucks

Comment: The commenter requests an exemption for tow trucks or for tow trucks to be classified as exempt emergency vehicles. The commenter requests that manufacturers be exempt from accruing deficits for any tow truck under California Vehicle Code (CVC) Section

165 that renders towing or recovery service or emergency road service to motorists. The commenter requests such an exemption indefinitely or until the technology suited for the tow industry exists. (Yazan Ammari-45d, Julie Stewart-45d, Trent Butzlaff-45d, Mark Henley-45d, Richard Moreno Sr.-45d, Greg Hurner-45d, Mark Peeples-45d, Greg Hurner-OT1, Robert Van Lingen-OT1, Sean Van Lingen-OT1, Frank Wheeler-OT1, Jamie Wright-OT1, Brandon Neal-OT1)

Agency Response: No changes were made in response to these comments. Emergency vehicles as defined in CVC Section 165 are already exempt. CARB also does not have the authority to modify the Vehicle Code.

The ACT regulation provides manufacturers with flexibility to produce ZEVs in applications they determine are best suited for electrification while continuing to sell internal combustion engine vehicles. Manufacturers have the ability to focus their efforts in specific vehicle segments, to bank credits for future requirements, and to purchase credits from other manufacturers in order to meet their requirements while continuing to produce the internal combustion engine vehicles as needed. Therefore, exempting specific vehicle types, like tow trucks, is not necessary.

Further, granting an exemption for tow trucks indefinitely would delay progress in the zero-emission market, effectively ensuring that no zero-emission product becomes available for this vehicle type and would undermine the reductions achieved by the regulation. Lastly, as explained in the memo to the Board posted on September 25, 2024, the product availability issue is not driven by the ACT regulation and, therefore, exempting tow trucks would not alleviate the current product availability issue.

c) Permit manufacturers to exclude up to 500 on-road vehicles per year

Comment: The commenter requests that manufacturers be allowed to exclude up to 500 on-road vehicles per year when imported into California for purposes of further assembly as a towing or recovery vehicle until the end of 2035 MY. The commenter states that this is the same flexibility that is provided to low volume manufacturers. (Greg Hurner-45d)

Agency Response: No changes were made in response to this comment. Please see responses to issues raised in section “Exempt tow trucks” in “Exempt Essential Service Vehicles” of the “45-Day Comment Period and First Board Hearing Public Comments with Agency Responses.” The Low Volume Exemption was designed for smaller manufacturers to be exempt from the ZEV sales requirement due to investment costs to design and build ZEVs and limited sale volume. The premise of this flexibility, therefore, does not apply to larger manufacturers as they are in a better position to recoup investment costs compared to the smaller manufacturers. Additionally, as explained in the memo to the Board posted on September 25, 2024, the product availability issue is not driven by the ACT regulation and, therefore, extending another form of exemption to all manufacturers subject to the rule would not alleviate the current product availability issue and would undermine the goals of the ACT regulation.

d) Exempt emergency vehicles

Comment: The commenter requests that manufacturers be exempt from accruing deficits for emergency vehicles as specified in CVC Section 165. (Greg Hurner-45d)

Agency Response: No changes were made in response to this comment. Emergency vehicles, as defined in the CVC section 165, are already exempt from the requirements of the ACT regulation.

e) Exempt the California Department of Transportation's Freeway Service Patrol Program

Comment: The commenter requests an exemption for the California Department of Transportation's Freeway Service Patrol program until it can be determined that the technology for tow trucks has matured and can meet the program's needs. (John Takahashi-WT1)

Agency Response: No changes were made in response to this comment. Please see responses to issues raised in section "Exempt tow trucks" in "Exempt Essential Service Vehicles" of the "45-Day Comment Period and First Board Hearing Public Comments with Agency Responses." Additionally, as explained in the memo to the Board posted on September 25, 2024, the product availability issue is not driven by the ACT regulation and, therefore, exempting the specified program would not alleviate the current product availability issue.

6. Zero-Emission Vehicle Suitability

a) Concerns with deploying zero-emission vehicles in the tow industry

Comment: The commenters express concerns over the availability of zero-emission tow trucks in addition to the feasibility of deploying a zero-emission tow truck, referencing issues related to costs, range, infrastructure availability, and fueling times. The commenters state that the technology does not yet exist to make a ZEV that can support towing and recovery efforts nor have any manufacturers clearly indicated plans to develop such technology. (Yazan Ammari-45d, David Flores-45d, Mark Henley-45d, Kimberly Tyrel-45d, Kirk Blackburn-OT1, John Borst-OT1, James Walsh-OT1, Jessica Trigueros-OT1, Jamie Wright-OT1, Sean Van Lingen-OT1, Brandon Neal-OT1, Becky Birch-OT1)

Agency Response: No changes were made in response to these comments. The ACT regulation does not require the conversion of combustion tow trucks to ZEVs. The ACT regulation requires manufacturers to sell ZEVs as a percentage of their annual total sales and the rule's structure provides flexibility for manufacturers focus their efforts in specific vehicle segments. Manufacturers may meet their compliance obligation by producing ZEVs in markets that are best served for a given year or purchase credits from other manufacturers regardless of the truck type sold. Therefore, tow truck fleets are not specifically regulated by the ACT regulation.

b) Delay the amendments until tow bodies can be mounted onto zero-emission vehicle chassis

Comment: The commenter requests that the amendments be delayed until tow bodies are able to be mounted onto ZEV chassis. (Greg Hurner-45d, Joshua Lovelace-OT1)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section "Concerns with deploying zero-emission vehicles in the tow industry" in "Zero-Emission Vehicle Suitability" of the "45-Day Comment Period and First Board Hearing Public Comments with Agency Responses." Delaying the amendments would not affect nor improve the ability for a tow body to be mounted onto a ZEV chassis.

7. Enforcement

Comment: The commenter requests that section 1963.5(a)(2) be revised to state that credits "may be", as opposed to "will be", deemed invalid if the Executive Officer determines that the credit was obtained based on false information should a secondary vehicle manufacturer provide false information. (Timothy French-45d)

Agency Response: No changes were made in response to this comment. The purpose of this requirement is to ensure that manufacturers do not receive credits for vehicles which were not placed in California. The source of the false information is therefore irrelevant as the requirements to generate a credit would ultimately not have been met and a manufacturer would otherwise have additional credits they did not actually earn. Therefore, the change as suggested by the commenter is not consistent with the intent of the requirement. Additionally, correcting a credit or deficit amount should it be determined that it was based on false information from a secondary vehicle manufacturer is a circumstance that is already encompassed by the requirement.

8. Support for Comments Submitted by Miller Industries

Comment: The commenter requests that the Board adopt the changes proposed by Miller Industries. (Vivianna Herrera-45d, Kirk Blackburn-45d, Mark Peeples-45d, Jessica Trigueros-OT1, Jamie Wright-OT1, Robert Van Lingen-OT1, Kamy Modarres-OT1)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in sections "Exempt essential service vehicles from accruing deficits under Advanced Clean Trucks," "Permit manufacturers to exclude up to 500 on-road vehicles per year," and "Exempt tow trucks" in "Exempt Essential Service Vehicles" of the "45-Day Comment Period and First Board Hearing Public Comments with Agency Responses."

9. Miscellaneous Issues

a) Hydrogen-fueled internal combustion engines

Comment: The commenter requests that CARB staff reconsider whether medium-duty and heavy-duty vehicles powered by hydrogen-fueled internal combustion engines can be treated as ZEVs under the ACT regulation for some number of years or perhaps on a slightly discounted basis with respect to the generation of credits. (Timothy French-45d)

Agency Response: No changes were made in response to this comment. The ACT regulation is designed to increase the penetration of the first wave of vehicles that emit no criteria or greenhouse gas (GHG) emissions, i.e. ZEVs, as well as technologies which meet this requirement a portion of the time i.e. NZEVs until 2035. More research into the emission impacts of hydrogen engine technology is needed since engine test data is not readily available. There currently is insufficient information to assume tailpipe NOx emissions from hydrogen engines will be lower than with other fuels and it is unlikely that GHG emissions reductions would occur if hydrogen is produced by steam methane reformation from natural gas. Further, hydrogen engines for trucks are still being developed and none have been certified to the HD Omnibus regulation's requirements.

b) Determining the all-electric range use in the near-zero-emission vehicle credit calculation

Comment: The commenter requests clarification and confirmation of the acceptable manufacturer test procedures and documentation for determining the all-electric range used in the NZEV credit calculation (Teddy Coin-45d).

Agency Response: No changes were made in response to this comment. The ACT regulation already identifies the acceptable manufacturer test procedures and documentation for determining the all-electric range used in the NZEV credit calculation by referring to the testing requirements of 17 CCR section 95663(d). This section refers to the test procedures set forth in the "California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles," adopted October 21, 2014, as last amended September 9, 2021, which is incorporated by reference herein.

c) Secondary vehicle manufacturer exclusion from the manufacturer definition

Comment: The commenter requests that the language proposed regarding secondary vehicle manufacturers be clear about prohibiting the conversion of new ZEVs to alternative-fueled combustion models as the commenter states that, as written, the language may present a loophole. (Sam Wilson-OT1)

Agency Response: No changes were made in response to this comment. If a secondary vehicle manufacturer were to convert a new ZEV to an internal combustion engine vehicle model, they would be tampering with the vehicle's emission control system and existing law

(Vehicle Code Section 27156) already prohibits this type of action. Therefore, modifying the language to address this potential issue would be unnecessary.

d) Credit system structure disincentivizes the development of electric technology

Comment: The commenter states that issuing credits at the time of vehicle registration disincentivizes body manufacturers from developing electric technology and, in turn, slows down the supply of electric trucks. (James Wheeler-OT1)

Agency Response: No changes were made in response to this comment. The amendments to the ACT regulation establish that compliance is based on the reported sales of vehicles delivered for sale in California instead of being based on when vehicles reach the ultimate purchaser. Therefore, the registration of a new ZEV or NZEV is not the sole point in which credits are generated.

e) Permit manufacturers to purchase 50-state emissions trucks

Comment: The commenter states that manufacturers should have the opportunity to purchase 50-state emissions trucks and purchase the offset credits for ACT. (James Wheeler-OT1)

Agency Response: No changes were made in response to this comment. Per California Health and Safety Code sections 43151–43153 and 43156, all new heavy-duty trucks that are intended to be primarily used in California must be California-complaint, which means that all excess emissions from the truck engine must have been offset. Manufacturers are permitted to purchase credits from another manufacturer or secondary vehicle manufacturer under the ACT regulation, but the excess emissions from the engines in these heavy-duty trucks are still required to have been offset regardless of whether a manufacturer acquires credits from another party. Therefore, the change as suggested by the commenter is not necessary.

f) Align Advanced Clean Trucks with Advanced Clean Fleets

Comment: The commenter states that the ACT regulation needs to align with the ACF regulation so that ACF-protected vehicles that are not available in ZEV configurations are consistent in supply. (James Wheeler-OT1)

Agency Response: No changes were made in response to this comment. We disagree with the premise of the comment. First, the ACT regulation can be successfully implemented without a complementary purchase requirement on fleets. Second, the ACT regulation gives manufacturers complete discretion on which models they offer as ZEVs or whether they use credits from other manufacturers to meet some or all of their compliance obligation. The ACF regulation requires fleets to purchase ZEVs, and includes exemptions when fleet owners would be unable to comply when manufacturers have chosen not to make a ZEV available in the needed configuration.

g) Hold signatories of the Clean Truck Partnership agreement accountable

Comment: The commenter states there should be accountability for manufacturers in the Clean Truck Partnership agreement who constrict supply of vehicles. (James Wheeler-OT1)

Agency Response: No changes were made in response to this comment. The manufacturers have been granted significant flexibilities to choose how to meet the requirements of the regulations referenced in the agreement. There currently is also an excess of ZEV credits available based on the ACT credit summary through the 2023 MY that can be used to support an increased supply of vehicles.

h) Include a credit pooling provision

Comment: The commenter requests that credit pooling be included in the ACT regulation. (Catherine Palin-15d1, Jeff Foor-15d1)

Agency Response: No changes were made in response to these comments. In the interest of expeditiously completing these amendments, the pooling concept is being considered in a separate rulemaking. CARB staff introduced incorporating a pooling concept into the ACT regulation at a workshop in November 2023. Staff has since been working towards a final proposal, but finalization will not conclude within an appropriate timeframe for the concept to be included in this rulemaking.

10. General Support

a) Supports the implementation of Advanced Clean Trucks

Comment: The commenters express support for the ACT regulation and urges CARB to continue implementation. (Mariela Ruacho-OT1, Guillermo Ortiz-OT1)

Agency Response: No changes were made in response to these comments. CARB staff appreciate the supportive comments and thank the commenters.

b) Removing ultimate purchaser language

Comment: The commenters support the clarification that compliance determinations and sales reporting requirements are both defined when vehicles are produced and delivered for sale in California, not when the vehicle reaches the ultimate purchaser. (Paul Miller-45d, Timothy French-45d, Jeff Foor-45d)

Agency Response: No changes were made in response to these comments. CARB staff appreciate the supportive comments and thank the commenters.

c) Extending makeup deficit period from one to three years

Comment: The commenters support extending the deficit makeup period from one to three model years. (Paul Miller-45d, Timothy French-45d, Jeff Foor-45d)

Agency Response: No changes were made in response to these comments. CARB staff appreciate the supportive comments and thank the commenters.

d) Clarifying regulation language to prevent double counting

Comment: The commenters support changes to regulation language to clarify how ZEVs count toward compliance and prevent double counting. (Andy Schwartz-45d, Paul Miller-45d)

Agency Response: No changes were made in response to these comments. CARB staff appreciate the supportive comments and thank the commenters.

11. General Opposition

Comment: The commenters state that the amendments as written or the ACT regulation generally will put them out of business. The commenters state that the ACT regulation results in many costs with no benefits. (David Flores-45d, Jeffrey Ricker-45d Brian Banks-OT1, Sean Van Lingen-OT1)

Agency Response: No changes were made in response to these comments. The ACT regulation's manufacturer requirements apply to medium- and heavy-duty manufacturers and secondary vehicle manufacturers and do not directly impose requirements on fleets, small businesses, nor individuals. The ACT regulation is anticipated to have minimal effects on the state's economy and is projected to result in a slight increase in economic indicators. The amendments are expected to ultimately result in a total net decrease in costs when compared to the baseline. The ACT regulation is also expected achieve significant emission reductions in addition to health benefits to Californians and benefits to businesses. The amendments do not affect these benefits.

12. Out of Scope or Irrelevant Comments

Comment: The comments include statements related to Senate Bill 210 and characteristics of their towing businesses. (Lisa Gonzalez-45d, Andrea Olivarez-45d, Mark Baatz-OT1)

Agency Response: No changes were made in response to these comments. The comments are not directed at the ACT regulation or to the procedures followed by the agency in adopting amendments to the ACT regulation and accordingly no response is required.

B. First 15-Day Comment Period Public Comments with Agency Responses

1. Deficit Makeup Period

Comment: The commenter requests that the 30 percent threshold under the deficit makeup period be replaced with a more linear and equally proportioned approach, such as 33% offset after one year (rather than 70%) and 66% offset after two years. (Jeff Foor-15d1)

Agency Response: No changes were made in response to this comment. The 30 percent threshold was determined in collaboration with the manufacturers to be reasonable and attainable while providing enough flexibility to the manufacturers to make up the deficit. It also ensures that each manufacturer utilizing the flexibility produces a sufficient number of ZEVs each model year respective to their annual requirement and that necessary emissions reductions are occurring to protect California's air quality. Increasing the threshold as suggested would decrease certainty that a manufacturer is making sufficient progress to offset the outstanding deficit throughout the three model-year period compared to the 30 percent threshold and would reduce the effectiveness.

2. Reporting and Recordkeeping Requirements

a) Add dealership address from which vehicle was delivered

Comment: The commenters request that the dealership address from which the vehicle was delivered be added as an option under section 1963.4(a)(15). (Timothy French-15d1)

Agency Response: Changes were made in response to this comment. The physical address of the dealership that delivered the vehicle to person or entity that is the vehicle's recipient was added to section 1963.4(a)(15).

b) Add additional acceptable documentation for tracking vehicles

Comment: The commenter requests that, as part of the recordkeeping requirements, CARB add proof of the manufacturer's Statement of Origin and the label declaring the intended state of sale to be "CA" as an option for acceptable documentation for tracking vehicles produced and delivered for sale in California. (Timothy French-15d1)

Agency Response: Changes were made in response to this comment. The manufacturer's Statement of Origin is now subject to the record retention requirements. However, this is not an acceptable form of documentation on its own for tracking vehicles produced and delivered for sale in California because it does not show proof of delivery for sale in California.

c) Add contracting documents between dealers and manufacturers

Comment: The commenters request that, as part of the recordkeeping requirements for transactions between the manufacturer and the ultimate purchaser, the contracting documents

between the dealer and the manufacturer must be included as they typically sell vehicles through a dealer and not directly to the ultimate purchaser. (Timothy French-15d1)

Agency Response: No changes were made in response to this comment. The regulation currently allows for several options such as an invoice, receipt, contract, or purchase order between the manufacturer and dealership that shows the delivery destination to a dealership in California as part of the recordkeeping requirements under section 1963.4(d)(2). Manufacturers may keep the record if that is their preferred option, however not all manufacturers use dealers and therefore, it would be inappropriate to assume that all do.

d) Allow revisions for up to three previous model years

Comment: The commenters request that CARB allow all reported information, such as the ACC credit election and vehicle recipient information, to be updated for up to three previous model years instead of restricting that time extension for reporting information related to whether a vehicle is or is not delivered for sale into California. (Katie Saliccioli-15d1)

Agency Response: No changes were made in response to this comment. Manufacturers are solely permitted to update a vehicle report if they determine there is a change in previously reported information regarding whether a vehicle was or was not delivered for sale in California. This change ensures accurate credit and deficit accounting for the purpose of compliance determination. Permitting modification of reported information related to compliance strategies creates significant uncertainty in determining whether manufacturers are in compliance and could create retroactive issues in compliance determination and credit trading if a manufacturer adjusts a previous year's compliance strategy. In addition, manufacturers are expected to plan appropriately and utilize the numerous flexibilities already provided in the ACT regulation when necessary to comply with the requirements. Further, the amendment already encompasses instances where the vehicle recipient state changes from whether a vehicle was reported as produced and delivered for sale in California or not and a subsequent update in the report is required.

3. Vehicle Labeling

a) Concerns with labeling term

Comment: The commenters state that the "for sale in California" term would likely cause confusion on credit and deficit accounting for both manufacturers and other states adopting California's rules due to accounting with other CARB regulations, such as ACC and Omnibus. The commenters request that, as part of the labeling requirements, manufacturers be permitted to simply include a "CA" designation, which would align with the current Omnibus regulation. (Timothy French-15d1, Catherine Palin-15d1, Katie Saliccioli-15d1, Jeff Foor-15d1)

Agency Response: Changes were made in response to these comments. Section 1963(g)(1) was updated to remove "for sale in" from the two occurrences of the phrase "for sale in CA". This aligns the optional vehicle labeling requirements with the heavy-duty vehicle labeling

requirements of the Omnibus regulation so that manufacturers are not required to design and produce multiple labels for vehicles produced and delivered for sale in California. Additionally, to ensure accurate credit accounting for Class 2b-3 vehicles, section 1963.4(a)(11) requires the manufacturer to report whether these vehicles should be excluded from ACT credit and deficit calculations.

b) Subject secondary vehicle manufacturers

Comment: The commenter states that CARB should consider whether secondary vehicle manufacturers should be subject to the labeling provisions. (Megan O'Toole -15d1)

Agency Response: No changes were made in response to this comment. The regulation's credit and deficit generation procedures do not apply to secondary vehicle manufacturers. Further, subjecting secondary vehicle manufacturers to the labeling option would not be logical as the regulated manufacturers certify the chassis.

c) Requirements are inconsistent with Clean Truck Partnership

Comment: The commenters state that the labeling requirement is inconsistent with the Clean Truck Partnership agreement as it requires new vehicle labels in order for manufacturers to use "produced and delivered for sale" accounting for ACT. (Catherine Palin-15d1, Jeff Foor-15d1)

Agency Response: Changes were made in response to these comments. In the 2nd 15-day changes, CARB staff clarified that vehicle labeling was optional. Manufacturers are not required to indicate if their vehicles were or were not intended for sale in California on a vehicle label. In lieu of vehicle labeling, credit and deficit accounting will be enforced based on the documentation provided per section 1963.4(d).

d) Lead time concerns

Comment: The commenters state that production of medium-duty vehicles for the 2025 model year that are subject to the ACT regulation began on January 2, 2024. The commenters state that the labeling requirement, therefore, would be retroactive, is inconsistent with lead time requirements under the Clean Truck Partnership agreement, and should be extended to the 2026 model year or later. (Catherine Palin-15d1, Katie Saliccioli-15d1, Timothy French-15d1, James Fahy-15d1)

Agency Response: Changes were made in response to these comments. In the second 15-day changes, CARB staff clarified that vehicle labeling was optional. Manufacturers are not required to indicate if their vehicles were or were not intended for sale in California on a vehicle label for any model year. Manufacturers have the option to use the labeling provisions for any future model year.

e) Requirement causes burden for states adopting Advanced Clean Trucks

Comment: The commenters state that the labeling requirement would create an extraordinary administrative burden for businesses in states adopting the ACT regulation as possible unique labels may be necessary, as well pose significant logistical challenges. The commenters state that the environmental benefits of this requirement remain unclear, and the commenter encourages CARB to re-evaluate the necessity and practicality of this provision. (Catherine Palin-15d1, Katie Saliccioli-15d1, James Fahy-15d1)

Agency Response: Changes were made in response to these comments. In the second 15-day changes, CARB staff clarified that vehicle labeling was optional. Manufacturers are not required to indicate if their vehicles were or were not intended for sale in California on a vehicle label. Choosing to label vehicles provides manufacturers with additional flexibility for documenting compliance and presumably would be used by a manufacturer to reduce their administrative burden.

f) Requirement exceeds California's authority

Comment: The commenter states that the requirement for manufacturers to label vehicles "not intended for sale as a new vehicle in California" may exceed California authority as this could be a new requirement for vehicles not subject to California regulations. (Catherine Palin-15d1)

Agency Response: No changes were made in response to this comment. Labeling vehicles as for sale in California is optional and does not include a requirement to label vehicles as "not intended for sale as a new vehicle in California". To use the optional vehicle labeling flexibility, manufacturers must: 1) label the vehicle with the term "CA" and 2) disclose the vehicle is intended for sale in California on the manufacturer's Statement of Origin.

g) Reported data is already sufficient

Comment: The commenters state that manufacturer-supplied information at the time of final reporting supports data sufficient for CARB and manufacturers to compare with registration, as needed. (Catherine Palin-15d1, Katie Saliccioli-15d1)

Agency Response: No changes were made in response to these comments. CARB staff agree that the manufacturer-supplied information at the time of final reporting along with the required documentation in section 1963.4(d) provides sufficient documentation to verify compliance as it indicates if a vehicle was placed in service in California. Optional vehicle labeling provides manufacturers with additional flexibility for documenting compliance.

4. Enforcement of Vehicle Labeling Requirements

a) Modify or remove sections 1963.5(2)(A-B)

Comment: The commenter requests that sections 1963.5(a)(2)(A-B) be removed or modified and that section 1963.5(a)(2) be revised to state that credits will be revoked if they were obtained based on false information in addition to deficits being modified if the Executive Officer finds any new vehicles produced and delivered for sale in California were not included in the manufacturer's report. The commenter requests that references to where vehicles are newly registered or domiciled under sections 1963.5(a)(2)(A-B) be changed to delivered for sale. (Megan O'Toole-15d1)

Agency Response: Changes were made in response to this comment. Section 1963.5(a)(2)(A-B) was not removed; however, changes were made to this section to further specify the intent and align the point of compliance. The references to where vehicles are newly registered or domiciled was replaced with "was ultimately not produced and delivered for sale" to establish consistency in the point at which compliance is determined and to remain consistent with the Clean Truck Partnership. Further modifications were made to ensure appropriate stakeholder interpretation of the requirements that a manufacturer is not exempt from all penalties should the requirements of section 1963(g) be met. Additionally, modifications were made to section 1963.4(b) to clarify that a manufacturer must update their vehicle report if a manufacturer determines there is a change in previously reported information regarding whether a vehicle is or is not delivered for sale in California.

b) Add new enforcement provision

Comment: The commenter requests that a new provision be added to section 1963.5 and clearly state that failure to meet the requirements of section 1963(g) is a violation of the ACT regulation and violators will be subject to penalty. (Megan O'Toole-15d1)

Agency Response: No changes were made in response to this comment. Including a new provision as suggested is not necessary as CARB already has statutory authority to assess penalties for violations. Additionally, the provision outlined in section 1963(g) is optional and not participating in said option would therefore not be a violation of the regulation.

c) Concerns with enforcement requirements

Comment: The commenters state that absent manufacturers adding labels, credit and deficit accounting would default to using registration accounting as described in sections 1963.5(a)(2)(A-B), which raises several concerns including administration difficulties, uncertain registration timelines affecting compliance, and limited manufacturer influence on dealer inventory and where customers register vehicles. The commenters state that so long as original equipment manufacturers (OEM) have a form of acceptable documentation for tracking vehicles produced and delivered for sale in California, they will not be subject to revoked credits or added deficits if the label has not been added to a new vehicle. The commenters express concerns that the proposed language in 13 CCR § 1963.5(a)(2)(A-B) automatically

eliminates credits (BEV discrepancy) or adds deficits (any vehicle not on the total CA production list) without any investigation. (Jeff Foor-15d1, Timothy French-15d1, Catherine Palin-15d1)

Agency Response: Changes were made in response to these comments. Please see responses to issues raised in section "Modify or remove sections 1963.4(2)(A-B)" in "Enforcement of Vehicle Labeling Requirements" of the "First 15-Day Comment Period Public Comments with Agency Responses."

5. Request for Vehicle Exemption

a) Exempt motorhomes

Comment: The commenters request that the Board exempt motorhomes from the ACT regulation, similar to emergency vehicles, or defer compliance for motorhomes until the ZEV chassis motorhome market becomes available. The commenter states that, due to the manufacturer-imposed policy of selling one electric chassis for every three internal combustion chassis, suppliers are relaying to RV manufacturers that there will be no chassis for motorhomes that can be certified for a vehicle being sold or registered in California. (Michael Ochs-15d1, Chad Reece-15d1)

Agency Response: No changes were made in response to these comments. The ACT regulation provides manufacturers with flexibility to produce ZEVs in applications that are best suited for electrification. Manufacturers also have the ability to focus their efforts in specific market segments, to bank credits for future requirements, and to purchase credits from other manufacturers, in order to meet their requirements and to produce the internal combustion engine vehicles needed. Therefore, exempting specific vehicle types, including motorhomes, is not necessary.

Emergency vehicles are defined in CVC section 165 which CARB does not have the authority to modify; therefore, making such a modification would require an act of legislation. Further, granting an exemption indefinitely would delay progress in the zero-emission market and effectively ensure no zero-emission product becomes available. The ACT regulation is designed to ensure that zero-emission technologies become available in a wide variety of vocations across the medium- and heavy-duty sector, which cannot be achieved if segments that have not been electrified are carved out of the regulation. Such an argument could be used on any truck application that is not available today, delaying future progress. Lastly, as explained in the memo to the Board posted on September 25, 2024, the product availability issue is not driven by the ACT regulation and, therefore, permitting a complete motorhome exemption from the rule's requirements would not alleviate the current product availability issue. CARB staff has been working with the motorhome industry and manufacturers to better understand the issues regarding motorhome chassis availability, and it appears the issue is primarily driven by one manufacturer. This manufacturer has unnecessarily limited their compliance options for the ACT regulation by choosing to not engage in the flexibilities allowed within the regulation and by limiting deliveries of vehicles to only those customers where

current zero-emission options exist. CARB staff is continuing to work with the motorhome industry and encouraging the manufacturer to use the flexibility provided in the rule so as not to disrupt the motorhome market.

b) Exempt tow trucks

Comment: The commenters request that tow trucks and recovery vehicles be exempt from the ACT regulation until electric tow truck chassis are readily available that can perform the same work done by traditional tow trucks. (Frank Verdugo-15d1, Kirk Blackburn-15d1, Greg Hurner-15d1, Tim Taylor-15d1)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section "Exempt tow trucks" in "Exempt Essential Service Vehicles" of the "45-Day Comment Period and First Board Hearing Public Comments with Agency Responses."

c) Exempt essential internal combustion engine vehicles from deficit generation

Comment: The commenter requests to exempt Classes 5-8 or Class 4-8 group of medium- and heavy-duty on-road internal combustion engine vehicles from OEM deficit generation for a limited duration of time. Additionally, the commenter requests that CARB develop a process that grants orders for entities who provide essential public and health safety services by authorizing specific OEMs to produce the requested number of internal combustion engine vehicles and that exempting OEMs from deficit generation would not generate a deficit for the manufacturer. (Michael Vergara-15d1)

Agency Response: Changes were made in response to this comment. Vehicles produced and delivered for sale in California that are powered by new 2026 model year heavy heavy-duty engines certified to the engine standard established in the HD Omnibus regulation are excluded from the deficit generation requirements under the ACT regulation.

Exempting all vehicles identified in the comment from generating deficits would significantly weaken the regulation's requirements and delay the reductions of pollutants needed to protect California's air quality. Progress in the zero-emission market for these classes would also be negatively impacted without compliance requirements established by the regulation.

6. Advanced Clean Trucks Credits

a) Apply limited multiplier to credits traded to secondary vehicle manufacturers

Comment: The commenter requests that CARB apply a limited multiplier of 1.4 to credits traded to secondary manufacturers from EV-only manufacturers. The commenter states that this will ensure that secondary manufacturers are on a level playing field with the OEMs due to higher marginal costs. (Chris Nevers-15d1)

Agency Response: No changes were made in response to this comment. Implementing a multiplier to credits traded to a secondary vehicle manufacturer would permit secondary vehicle manufacturers to generate credits without producing and delivering any ZEVs for sale in California, which is counter to the credit generation requirements under ACT. This strategy would result in fewer ZEVs produced and delivered for sale in California, ultimately leading to a decrease in emissions benefits. Further, a manufacturer could intentionally purchase credits from secondary vehicle manufacturers to offset more of their requirement compared to credits purchased from another manufacturer. Lastly, applying a multiplier to credits traded to secondary vehicle manufacturers from EV-only manufacturers places internal combustion engine vehicle manufacturers subject to ACT at a direct disadvantage in the credit market.

b) Permit secondary vehicle manufacturers to purchase credits

Comment: The commenter requests that secondary vehicle manufacturers be permitted to purchase ZEV or NZEV credits in addition to trading, selling, and transferring with manufacturers as specified in section 1963.2(e). (Ron Frank-15d1)

Agency Response: Changes were made in response to this comment. In section 1963.2(e), the language “purchased” was added. This change is necessary to establish that secondary manufacturers may purchase ZEV or NZEV credits in addition to trading, selling, and otherwise transferring.

c) Permit plug-in hybrid electric vehicles to generate credits under Advanced Clean Cars II

Comment: The commenter asks for modification of the regulations to ensure medium-duty plug-in hybrid electric vehicles (PHEV) can optionally generate an ACC II ZEV credit as intended in the ACT rule. (Jeff Foor-15d1)

Agency Response: No changes were made in response to this comment. The ACT regulation does not regulate nor intend to regulate PHEVs and their ability to generate ZEV credits under the ACC II regulation. Thus, the requested change cannot be made under the ACT rulemaking as it is out of the scope of this rulemaking. Additionally, the ACT regulation specifies the conditions a vehicle must meet in order to be classified as an NZEV.

d) Concerns with permitting secondary vehicle manufacturers to participate in the credit trading system

Comment: The commenters urge CARB to reject expanding the ACT credit market to include secondary vehicle manufacturers. The commenters raise concerns that the amendments were introduced without adequate analysis or outreach, potentially creating an unregulated and speculative financial market. The commenters argue that secondary vehicle manufacturers lack direct control over chassis allocation, which could result in unequal access and increased financial risk. Additionally, the commenters express concerns about increased competition for a limited number of credits, potentially raising credit and truck costs. The commenters suggest that CARB staff analyze the potential impacts thoroughly and consider alternative credit market

participants, such as dealers or end-users, who are more directly connected to the vehicles. (Nicole Rice-15d1, Michael Kastner-15d1, Peter Okurowski-15d1)

Agency Response: No changes were made in response to these comments. This flexibility intends to provide secondary vehicle manufacturers with a greater ability to procure internal combustion engine vehicles in instances where an OEM is restricting sales of these vehicles and is choosing not to purchase credits. Subsequently, CARB staff does not expect a large increase in trading participants that would negatively impact the credit market nor the prices of trucks. Alternatively, allowing secondary vehicle manufacturers to participate in the credit trading system could lead to a more fluid market with potentially less cost pressures. Increasing the pool of trading participants would also make it more likely for a manufacturer to take advantage of the flexibility. Additionally, in cases where secondary vehicle manufacturers purchase credits and transfer them to an OEM, the impact of the transaction on credit price is negligible.

Lastly, permitting dealers to trade credits would not increase the number of internal combustion vehicles they have access to as manufacturers independently allocate vehicles to their dealers. Secondary vehicle manufacturers are typically not tied to a single manufacturer the way other potential credit market participants, including dealers, would be and have greater vehicle allocation options. Therefore, secondary vehicle manufacturers have the best ability to procure and trade credits.

7. Delay Implementation of Advanced Clean Trucks

Comment: The commenter requests that CARB delay implementation of the ACT regulation to harmonize with other federal regulations to commence in 2027. (Grace Pratt-15d1)

Agency Response: No changes were made in response to this comment. As demonstrated by the number of early ZEV sales, the ACT regulation's requirements are feasible. Further, the adoption of ACT is critical for the State to meet its air quality and climate mitigation targets, which the manufacturers are also committed to meeting. Harmonizing with the federal regulations, such as Phase 3 of the GHG Emissions Standards for Heavy-Duty Vehicles, would weaken California's standards and ultimately result in lost emissions benefits. Lastly, delaying implementation of ACT will only delay necessary emissions reductions needed to meet these goals.

8. Product Availability Concerns

Comment: The commenters state that they are unable to supply necessary vehicles as they are grappling with a 100 percent reduction in new heavy-duty truck inventory for 2024, primarily due to the stringent regulations set by CARB, including the HD Omnibus and Advanced Clean Trucks regulations. The commenters request that CARB amend the HD Omnibus and ACT regulations to ensure that the availability of chassis is not limited, thereby ensuring that new tow and recovery vehicles can continue to be assembled and sold in California. (George Miller-15d1, Grace Pratt-15d1)

Comment: Commenter remains concerned about the broader impacts of the ACT rule and the Omnibus Low-NOx rule. More specifically, regarding the inventory and allocation of medium- and heavy-duty (MHD) vehicles, challenges related to state-adoption of ACT under section 177 of the Clean Air Act, and difficulty manufacturers will have with meeting the ACT targets on a state-by-state basis. (Daniel Ingber-15d1)

Agency Response: No changes were made to the ACT regulation in response to these comments. Please see responses to issues raised in section “Product Availability Concerns” of the “45-Day Comment Period and First Board Hearing Public Comments with Agency Responses.” Additionally, the existing regulations provides flexibilities to manufacturers that assists in meeting compliance requirements, and it is ultimately the OEMs’ internal business decisions that is directly causing issues. The ACT regulation gives manufacturers considerable flexibility and does not restrict the sales of tow trucks in California nor specify which models a manufacturer uses to comply with the ZEV sales requirements. In addition, staff concluded the ACT regulation was not the reason for the 2024 product availability issues.

9. Zero-Emission Vehicle Suitability

Comment: The commenter states that mandating electric tow trucks will not work as the technology has not yet come about and buying electric is out of reach for small tow companies. (Gilbert Bacis-15d1)

Agency Response: No changes were made in response to this comment. Please see responses to issues raised in section “Concerns with deploying zero-emission vehicles in the tow industry” in “Zero-Emission Vehicle Suitability” of the “45-Day Comment Period and First Board Hearing Public Comments with Agency Responses.”

10. Near-Zero-Emission Vehicles Counted Towards Advanced Clean Cars II Requirements

Comment: The commenter requests that CARB clarify section 1963.2(j) to permit NZEVs counted towards the requirements of ACC II to not be counted as a credit nor a deficit in the determination of the manufacturer’s ZEV deficit under ACT. (Katie Saliccioli-15d1)

Agency Response: Changes were made in response to this comment. In section 1963.2(j), the language “or NZEVs” was added to specify that NZEVs elected to count towards the requirements of ACC II will not be counted as a credit nor a deficit in the determination of the manufacturer’s ZEV deficit under ACT. This change aligns treatment of NZEVs in both the ACC II and ACT regulations.

11. Issues with Advanced Clean Trucks Test Procedures

Comment: The commenters address issues with ACC II emissions standards claiming the BEV test procedure is out of date and should include SAE J1634-2012 and 2017. The commenters state that the PHEV SAE J1711-2010 should be updated to SAE J1711-2023 to be the same as EPA and the FCEV test procedure SAE J2572-2008 should be updated to SAE J2572-

2014. The commenters state that the ACC I test procedure that will be used for 2026MY+ requires the use of several SAE test procedures for advanced technology vehicles (BEV, FCEV, and PHEV), which are older versions that have been superseded. The commenters subsequently request that manufacturers be permitted to use newer versions of the SAE standards. (Catherine Palin-15d1, Jeff Foor-15d1)

Agency Response: No changes were made in response to these comments. Modifying test procedures within an existing test procedure is effectively creating a new test procedure, which would be outside the scope of this rulemaking. However, CARB staff would be open to revisiting this topic in a future rulemaking.

12. Medium-Duty Vehicle Certification

Comment: The commenters state that incomplete medium-duty ZEVs from 8,501 through 10,000 lbs GVWR do not appear to have a clear pathway to generate ZEV credits under 13 CCR 1963.2. The commenters therefore request that the credit pathways proposed in 13 CCR 1963.2(i) be available for all medium-duty ZEVs, including complete and incomplete vehicles with a GVWR between 8,501 and 14,000 lbs. The commenters subsequently request that references to medium-duty vehicles be removed from 13 CCR 1963.2(h). (Catherine Palin-15d1, Katie Saliccioli-15d1, James Fahy-15d1)

Agency Response: Changes were made in response to these comments. Incomplete Class 2b vehicles between 8,501 and 10,000 lbs GVWR can receive ACT ZEV credit by certifying to the credit pathways listed under section 1963.2(i). Incomplete Class 3 medium-duty vehicles between 10,001 and 14,000 lbs GVWR may alternatively certify to the requirements of ACC II beginning with the 2026 model year, as outlined in section 1963.2(h). Permitting all incomplete medium-duty vehicles to certify to the requirements of ACC I would result in regression for the current Class 3 requirements under the ZEP Certification. Permitting certification of incomplete Class 2b vehicles to the requirements of ACC I is intended to address circumstances where other certification pathways may present issues. The pathways outlined in sections 1963.2(h-i) are otherwise consistent with existing certification procedures.

13. Miscellaneous Issues

a) Hydrogen-fueled internal combustion engines

Comment: The commenter recommends that CARB expand its analysis to include hydrogen-fueled ICEs in harmonization with EPA's zero carbon emissions vehicle qualifications and determinations. (Kevin Brown-15d1)

Agency Response: No changes were made in response to this comment. Please see responses to issues raised in section "Hydrogen-Fueled Internal Combustion Engines" in "Miscellaneous Issues" of the "45-Day Comment Period and First Board Hearing Public Comments with Agency Responses."

b) Include a credit pooling provision

Comment: The commenter requests that credit pooling be included in the ACT regulation. (Catherine Palin-15d1, Jeff Foor-15d1)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section “Include a credit pooling provision” in “Miscellaneous Issues” of the “45-Day Comment Period and First Board Hearing Public Comments with Agency Responses.”

c) Classify motorhome manufacturers as secondary vehicle manufacturers

Comment: The commenter believes that motorhome manufacturers should be classified as secondary vehicle manufacturers and requests that CARB clarify this definition in the final rulemaking package. (Michael Ochs-15d1)

Agency Response: No changes were made in response to this comment. The definition of secondary vehicle manufacturer is consistent with federal regulations. Further, manufacturers that produce motorhomes by finalizing vehicle assembly from an incomplete chassis would meet the definition of a secondary vehicle manufacturer.

d) Test procedures for near-zero-emission vehicles

Comment: The commenter requests that CARB revise section 1963.2(b) to directly reference a single test procedure document covering NZEV all-electric range testing requirements for ACT credit. (Catherine Palin-15d1, Katie Saliccioli-15d1)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section “Determining the all-electric range use in the near-zero-emission vehicle credit calculation” in “Miscellaneous Issues” of the “45-Day Comment Period and First Board Hearing Public Comments with Agency Responses.”

e) Impact of certification pathways on greenhouse gas averaging set

Comment: The commenter requests that CARB more explicitly state in 13 CCR 1963 that ZEV credit certification pathway, including ZEP certification, does not impact GHG averaging set for medium-duty vehicles. (Catherine Palin-15d1, Katie Saliccioli-15d1)

Agency Response: No changes were made in response to these comments. The GHG averaging sets are assigned to each vehicle based on the certification method. The suggested change, therefore, cannot be implemented as it would require broader amendments to other CARB regulations that are outside the scope of this rulemaking.

f) CARB to monitor vehicle market in Section 177 states

Comment: The commenter suggests that CARB monitor the new and used MHD vehicle market in the states that have adopted the ACT regulation under Section 177, and require staff to provide a report on the market in those states, including a discussion of OEM compliance plans, the availability of CARB compliant models (as there are product gaps regarding electric models to replace every diesel vehicle at this time), and sales data, during the first quarter of 2025. (Daniel Ingber-15d1)

Agency Response: No changes were made in response to this comment. The states that have adopted the ACT regulation under Section 177 are monitoring the medium- and heavy-duty vehicle market for implementation of the regulation in their respective states. CARB staff regularly coordinates with representatives from these states and also shares CARB-developed resources. CARB staff has made available on its website a list of CARB certified zero-emission vehicles found at: <https://ww2.arb.ca.gov/applications/list-certified-medium-and-heavy-duty-zevs>. Further, CARB is working with these states and manufacturers to develop a credit “pooling” framework that will provide additional flexibilities for manufacturers to support compliance across the states that will be considered by the Board in a subsequent rulemaking.

g) CARB to share new and used truck market update to the Board

Comment: The commenter recommends that CARB staff bring an informational update on the state of the medium and heavy-duty vehicle market in California to the Board in the first quarter of 2025. This update should include a discussion of the OEM compliance plans for ACT and the Low NOx rules and the availability of compliant models for both rules. The commenter also recommends that CARB staff brings data to the Board consisting of new vehicle sales over time for Class 2b-8 vehicles and registrations of used Class 2b-8 vehicles from out of state. The commenter recommends CARB monitor new and used vehicle sales and inventory in the marketplace monthly. CNCDA anticipates that if customers are unable to purchase new vehicles, they will turn towards used vehicles, including non-California-compliant used vehicles from out of state. (Anthony Bento-15d1, Anthony Bento-OT2)

Agency Response: No changes were made in response to these comments. CARB staff do not currently have the ability to track new and used vehicle registrations directly. However, CARB staff do receive data from the California Department of Motor Vehicles which is used in modeling efforts and to update the emissions inventory. Through that process CARB staff can determine if there are increases in used vehicles coming in from out of state, or if the regulation is not achieving the expected emission reductions. Additionally, as part of the ACT regulation, manufacturers must already report the volume of vehicles produced and delivered for sale in California. CARB staff aggregate the data and annually publish an ACT credit report. CARB staff will continue to monitor this data and determine if modifications or additional actions are needed in future planning or regulatory proceedings.

h) Permit dealers to sell diesel vehicles

Comment: The commenter requests that CARB permit dealers to sell diesel vehicles until OEM production and infrastructure catches up. (Grace Pratt-15d1)

Agency Response: No changes were made in response to this comment. The ACT regulation does not prohibit dealers from selling diesel vehicles. The ACT regulation allows manufacturers to continue selling diesel vehicles while also achieving the ZEV sales targets of the regulation.

i) Concerns with rulemaking process

Comment: The commenter states that the proposed amendments provide inadequate time for CARB and its Board to review written public comments before the Board Hearing. (Peter Okurowski-15d1)

Agency Response: No changes were made in response to this comment. CARB disagrees with this comment. This rulemaking was promulgated in full compliance with the Administrative Procedures Act.

14. Out of Scope or Irrelevant Comments

Comment: The commenter states that aiming for zero emissions is unrealistic and that truck drivers delivering goods and services in California would be crushed, causing everything to significantly increase in price. (Chris Brimhall-15d1)

Comment: The commenter states that new CARB regulations could raise gas prices and that all CARB taxes and fees should be stopped. (Greg Rasmussen-15d1)

Comment: The commenter states that there isn't a viable solution for battery recycling and those that live near battery recycling plants are negatively impacted. The commenters request that all CARB discussions be paused until there is an accurate cost for what individuals will be paying for gas. (Deborah Curtis-15d1)

Agency Response: No changes were made in response to these comments. The comments are not directed at the proposed amendments or to the procedures followed by the agency in proposing or adopting the proposed amendments. Therefore, no response is required.

C. Second Board Hearing Public Comments with Agency Responses

1. Motorhome Industry

a) Exempt motorhomes

Comment: The commenters request that motorhomes, particularly diesel and Class A RVs, be exempted from the ACT regulation to prevent significant economic losses to California's

motorhome industry and RV dealers. They emphasize the lack of viable electric alternatives and suggest either a full exemption or a deferral of compliance until zero-emission motorhome chassis become available and practical for consumers. (Tim DeMartini-WT2, Tim DeMartini OT-2, Mark Rosenbaum-OT2, Casey Tubman-OT2, Michael Ochs-OT2, Joe Snyder-OT2)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section "Exempt motorhomes" in "Request for Vehicle Exemption" of the "First 15-Day Comment Period Public Comments with Agency Responses."

b) Concerns with ZEV availability in the motorhome industry

Comment: The commenters claim that the ACT regulation is severely impacting the diesel motorhome market by limiting the supply of diesel engines and chassis, with no viable electric or near-zero-emission alternatives available. The commenters state that this will result in zero Class A diesel motorhomes for sale by 2025, harming businesses. Additionally, the commenters highlight that major manufacturers are refusing to sell products in California and other S177 states, and chassis manufacturers are unwilling to engage in credit purchasing to support the RV industry. (Tim DeMartini-WT2, Trevor Gasper-OT2)

Agency Response: Changes were made in response to these comments. The ACT regulation provides manufacturers with flexibility to produce ZEVs in applications that are best suited for electrification while continuing to serve their customer's needs. Manufacturers also have the ability to strategically focus their electrification efforts in specific vehicle models, to bank credits for future requirements, and to purchase credits from other manufacturers, in order to meet their requirements and to produce the internal combustion engine vehicles needed. The second 15-day changes included additional flexibilities to help manufacturers comply including: lengthening the amount of time manufacturers have to make up shortfalls, simplifying credit accrual, and allowing secondary manufacturers to participate in the credit market. CARB staff has been working with the RV industry and OEMs to better understand the issues regarding RV chassis availability and it appears the issue is primarily driven by one manufacturer that provides chassis for most of the largest diesel RV's and specific choices they are making to comply with the ACT regulation including limiting their use of the flexibilities available to them in the regulation. CARB staff continue to work with the RV industry and encourage the manufacturer to use the flexibility provided in the rule so as not to disrupt the RV market.

2. Product Availability Concerns

a) Concerns regarding inventory shortages

Comment: The commenters state that constraints imposed by the ACT and HD Omnibus regulations are restricting the availability of compliant engines, internal combustion engine vehicles, and diesel motorhomes. The commenters urge CARB to take immediate action to address the critical inventory shortage affecting California truck dealerships. The commenters state that if the product availability issue does not improve, materials and equipment will be outsourced outside of California, diminishing the labor force in the state. The commenters request that amendments continue to be made until there is a viable solution for the inventory

shortages. (Anthony Bento-OT2, Mike Tunnell-OT2, Chris Shimoda-OT2, Lee Howard-OT2, Frank Wheeler-OT2, Anthony Bento-WT2, Tim DeMartini-WT2, Adam Vanderbee-OT2, Brandon Neel-OT2, Brian Banks-OT2, Timothy Post OT-2)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section “Product Availability Concerns” of the “45-Day Comment Period and First Board Hearing Public Comments with Agency Responses.” CARB staff have continued to engage with the industry on the issues raised and are working towards solutions that will expand availability while maintaining emissions benefits. Please refer to the first and second⁶ set of 15-day changes to the ACT regulation.

b) Report market status to the Board through registration tracking

Comment: The commenter requests that the Board direct staff to track new and used truck registrations monthly and report back to the Board on the status of the marketplace in the first quarter of next year. (Anthony Bento-OT2)

Agency Response: No changes were made in response to this comment. Please see response to issues raised in section “CARB to share new and used truck market update to the Board” in “Miscellaneous Issues” of the “First 15-Day Comment Period Public Comments with Agency Responses.”

c) Closely monitor product availability for 2025 model year

Comment: The commenter requests that CARB closely monitor product availability for the 2025 model year and be open to additional/necessary changes. (Chris Shimoda-OT2)

Agency Response: No changes were made in response to this comment. Please see responses to issues raised in section “Product Availability Concerns” of the “45-Day Comment Period and First Board Hearing Public Comments with Agency Responses.” Similar to the 2024 model year, staff will continue to closely monitor the situation for the 2025 model year until the product availability issue gets fully resolved.

3. Advanced Clean Trucks Credits

a) Concerns with manufacturers not accepting credits from secondary vehicle manufacturers

Comment: The commenters express concerns that manufacturers are not obligated to accept credits from secondary manufacturers and request that CARB works closely with the

⁶ California Air Resources Board, Appendix A-3 Proposed Regulation Order, 2024 (web link: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/actzepcert/2nd15daya3.docx>, last accessed December 2024).

manufacturers to ensure that they act in the spirit of the Clean Truck Partnership Agreement. (James Wheeler-OT2, Greg Hurner-O2)

Agency Response: No changes were made in response to this comment. Please see responses to issues raised in section “Hold signatories of the Clean Truck Partnership agreement accountable” in “Miscellaneous Issues” of the “45-Day Comment Period and First Board Hearing Public Comments with Agency Responses.” The regulated manufacturers are not required to participate in credit trading under ACT. However, increasing the pool of those that can participate in credit trading expands the credit market and, in turn, the potential for manufacturers to take advantage of the flexibility.

b) Concerns with permitting secondary vehicle manufacturers to participate in the credit trading system

Comment: The commenter recommends that the Board adopt the original March 26th version of the ACT amendments that were presented to the Board at the May 23rd meeting and reject the proposed expansion of the ACT credit market to secondary vehicle manufacturers. (John Moffatt-OT2)

Agency Response: No changes were made in response to this comment. Please see responses to issues raised in section “Concerns with permitting secondary vehicle manufacturers to participate in the credit trading system” in “Advanced Clean Trucks Credits” of the “First 15-Day Comment Period and First Board Hearing Public Comments with Agency Responses.”

c) Secondary vehicle manufacturer classification

Comment: The commenter is unsure whether Miller Industries qualifies as a secondary manufacturer as the nuances of upfitters are not interchangeable with secondary manufacturers. (Greg Hurner-O2)

Agency Response: No changes were made in response to this comment. As defined, a secondary vehicle manufacturer includes anyone that produces a vehicle by modifying a complete vehicle or completing the assembly of a partially complete vehicle. Therefore, to the extent Miller Industries engages in such activities, it and its California distributors each independently qualify as secondary vehicle manufacturers.

4. Delay Advanced Clean Trucks

a) Delay implementation of Advanced Clean Trucks

Comment: The commenters request that CARB delay implementation of Advanced Clean Trucks to give the customers of distributors and CARB constituents time to figure out the resources needed to comply. The commenter requests that CARB delay implementation of the ACT regulation to harmonize with other federal regulations to commence in 2027. (Ashley Porter-OT2, Ashley Porter-WT2)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section “Delay Implementation of Advanced Clean Trucks” of the “First 15-Day Comment Period and First Board Hearing Public Comments with Agency Responses.” Further, the ACT regulation requires manufacturers to sell ZEVs as a percentage of their annual total sales and does not impose requirements on customers of distributors. As evidenced by the excess of ZEV credits available based on the ACT credit summary through the 2023 MY⁷, the manufacturers are currently two years ahead of compliance with the regulation and have already produced enough ZEVs to meet the 2024 and 2025 requirements. Further, delaying implementation of the ACT regulation would delay the reductions of pollutants needed to protect California’s air quality.

b) Delay Advanced Clean Trucks requirements in New York until 2027

Comment: The commenter requests a two-year pause in the ACT requirements in New York as the state has not made investments to support trucking for BEVs. The commenter requests that the ratios for 2025 begin in 2027 in New York as opposed to the 2027 ratios beginning in 2027. (Mark Sales-WT2)

Agency Response: No changes were made in response to this comment. CARB cannot dictate when other states elect to implement California regulations that those states elect to adopt under Section 177 of the federal Clean Air Act.

5. Zero-Emission Vehicle Suitability

a) Concerns with deploying zero-emission vehicles in the tow industry

Comment: The commenters claim there are currently no viable heavy-duty ZEV options available as tow trucks require highly specialized chassis to mount necessary equipment. (Joshua Lovelace-OT2, Nicholas Lenz-OT2)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section “Concerns with deploying zero-emission vehicles in the tow industry” in “Zero-Emission Vehicle Suitability” of the “45-Day Comment Period and First Board Hearing Public Comments with Agency Responses.”

b) Exempt tow trucks

Comment: The commenters request an exemption for tow trucks or for tow trucks to be classified as exempt emergency vehicles. The commenter requests that manufacturers be exempt from accruing deficits for any tow truck under California Vehicle Code (CVC) Section 165 that renders towing or recovery service or emergency road service to motorists. The

⁷ California Air Resources Board, Advanced Clean Trucks Credit Summary Through the 2023 Model Year, 2024 (web link: <https://ww2.arb.ca.gov/resources/fact-sheets/ACT-Credits-Summary%202023>, last accessed December 2024).

commenter requests such an exemption indefinitely or until the technology suited for the tow industry exists. (Omar Camacho-OT2, Mark Baatz-OT2, Kirk Blackburn-OT2, Greg Hurner-OT2, William Salazar-OT2)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section "Exempt tow trucks" in "Exempt Essential Service Vehicles" of the "45-Day Comment Period and First Board Hearing Public Comments with Agency Responses."

6. Vehicle Labeling Concerns

Comment: The commenter requests that sections 1963.5(a)(2)(A) and (B) be removed from the proposed amendments. (Kristian Corby-OT2)

Agency Response: No changes were made in response to this comment. Please see responses to issues raised in section "Modify or remove sections 1963.4(a)(2)(A-B)" in "Enforcement of Vehicle Labeling Requirements" of the "First 15-Day Comment Period Public Comments with Agency Responses."

7. Miscellaneous Issues

a) Extend the Heavy-Duty Omnibus-compliant heavy heavy-duty engine exclusion from Advanced Clean Trucks deficit generation to 2025

Comment: The commenters request that the exclusion of Omnibus-compliant heavy heavy-duty engines from generating deficits under ACT be extended to the 2025 model year. (Tom Swenson-OT2, Matthew Spears-WT2, Ryan Kenny-OT2, John Moffatt-OT2)

Agency Response: No changes were made in response to these comments. Based on discussions with manufacturers, limited flexibility in 2026 is sufficient to drive the adoption of Omnibus compliant engines in this sector, making further flexibility in earlier years unwarranted. Additionally, manufacturing plans for model year 2025 were already established at the time of the proposal and allowing this flexibility in 2025 would reward actions already planned, potentially resulting in an emissions disbenefit.

b) Extend the Heavy-Duty Omnibus legacy cap adjustments through 2026

Comment: The commenter requests to extend the HD Omnibus legacy cap adjustments through 2026. (Tom Swenson-OT2)

Agency Response: No changes were made in response to this comment. Extending the HD Omnibus legacy cap adjustments through 2026 would be outside the scope of this rulemaking.

c) Mandate the use of renewable fuels

Comment: The commenter requests that CARB mandate the use of renewable fuels in its regulations to immediately improve air quality and buy time until technological innovations allow for creative, sustainable and affordable near zero technologies across all truck brands and models. (Anthony Bento-WT2)

Agency Response: No changes were made in response to this comment. This comment is outside the scope of this rulemaking as it would establish requirements applicable to non-new (in-use) vehicles..

d) Advanced Clean Trucks requirements are ahead of infrastructure development

Comment: The commenter requests that CARB staff acknowledge that NOx reduction overlayed with ACT manufacturer sales quotas is ahead of infrastructure development. (Anthony Bento-WT2)

Agency Response: No changes were made in response to this comment. CARB meets regularly with California Public Utilities Commission, California Energy Commission (CEC), and the larger electrical utilities to share information on regulatory activities, agency proceedings, and transportation electrification programs, and to ensure that existing and pending ZEV regulations are accounted for in grid and energy resource planning.

e) Negative impacts of the amendments on the public

Comment: The commenters state that the ACT amendments are going to financially hurt the average individual. The commenters state that the demands of the ACT regulation coming in place will result in a burden on the motoring public and consumer. (JR Cady-OT2, Wilson Rios-WT2)

Agency Response: No changes were made in response to this comment. The commenters have not provided any specific evidence that the ACT amendments will financially harm the average individual, the motoring public, or the consumer. Rather, CARB has determined that the amendments will have minimal effects on the state's economy and are in fact projected to result in a slight increase in economic indicators. The amendments are expected to ultimately result in a total net decrease in costs when compared to the baseline.

f) Modify the Advanced Clean Trucks and Heavy-Duty Omnibus regulations to allow more time for technology and infrastructure development

Comment: The commenter requests that CARB enact a modification to both the ACT and HD Omnibus regulations to allow more time for technology and infrastructure to develop. (Anthony Bento-WT2)

Agency Response: No changes were made in response to this comment. The ACT regulation gradually increases ZEV sales percentages and was designed to give manufacturers flexibility to sell ZEVs while continuing to sell internal combustion engine vehicles to meet their customer's needs. Recognizing that some vehicle types are more difficult to convert to zero-emission technologies, the ACT regulation does not require ZEVs to be produced for every vehicle model, but rather allows manufacturers to focus on the vehicle types for which zero-emission technologies are most favorable first. Further, modifying the HD Omnibus regulation is outside the scope of this rulemaking and would subsequently require a separate rulemaking.

8. General Support

Comment: The commenters express support for the ACT regulation or the amendments and urge CARB to continue implementation. (Kevin Hamilton-WT2, Mariela Ruacho-OT2, Brandon Wong-OT2, Bill Magavern-OT2, Jed Mandel-OT2, Guillermo Ortiz-OT2, Steven King-OT2, Kimberly McCoy-OT2, Sam Wilson-OT2, Cristina Marquez-OT2, Tim Sasseen-OT2, Frank Wheeler-OT2)

Agency Response: No changes were made in response to these comments. CARB staff appreciate the supportive comments and thank the commenters.

9. Out of Scope or Irrelevant Comments

Comment: The commenter states that the gas prices in California are too high and the regulations on gasoline engines are too prevalent. (Gavin Hursh-WT2)

Agency Response: No changes were made in response to this comment. The comments are not directed towards the proposed amendments or to the procedures followed by the agency in proposing or adopting the amendments, so no response is required.

D. Second 15-Day Comment Period Public Comments with Agency Responses

1. Motorhome Industry

Comment: The commenters state that requiring motorhomes to comply with ACT will provide little improvement to emissions due to their low yearly miles driven. The commenters state that restricting the RV industry in this way will have huge cost impacts and job losses. The commenters request that RVs be exempt from the ACT regulation as the purpose of these vehicles are not the same as semi-tractors. (Robert Piazzisi-15d2, Barbara Cox-Winters-15d2)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section "Exempt motorhomes" in "Request for Vehicle Exemption" of the "First 15-Day Comment Period Public Comments with Agency Responses."

2. Omnibus-Compliant Heavy Heavy-Duty Engine Exclusion from Advanced Clean Trucks Deficit Generation

a) Include 2025 model year engines

Comment: The commenters request that CARB extend the proposed “2026 Model Year California Certified Engine Flexibility” to 2025 model year engines. (Lee Brown-15d2, Lewis Michael-15d2, Anthony Bento-15d2, Veronica Prado-15d2, Nicole Rice-15d2, Ryan Kenny-15d2)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section “Extend the Heavy-Duty Omnibus-compliant heavy heavy-duty engine exclusion from Advanced Clean Trucks deficit generation to 2025” in “Miscellaneous Issues” of the “First 15-Day Comment Period Public Comments with Agency Responses.”

b) Include additional vehicle classes with smaller engines

Comment: The commenters request that the “2026 Model Year California Certified Engine Flexibility” provision for heavy heavy-duty engines be expanded to include additional vehicle classes with smaller engines. (Anthony Bento-15d2, Ryan Kenny-15d2)

Agency Response: No changes were made in response to these comments. As explained in the memo to the Board posted on September 25, 2024, the manufacturers indicated that the product shortage issue was placing particular strain on the heavy-duty vehicle classes. Therefore, in response to concerns raised regarding this issue for these vehicle classes, this flexibility was implemented with the intent to increase the number of HD Omnibus-compliant engines amongst the heavy-duty classes in 2026 to alleviate some pressure. The impact on the smaller vehicle classes is not as prevalent and CARB staff subsequently determined that extending the flexibility to smaller classes as suggested is not necessary. Further, extending this flexibility to include smaller classes would delay the reductions of pollutants needed to protect California’s air quality.

3. Deficit Makeup Period

a) Modifying the 30 percent threshold

Comment: The commenter requests that the makeup period allow each deficit-generating model year to have its own three-year makeup period, independent of other deficit-generating model years. The commenter states that under this proposal, each model year would be required to reduce its deficits to below the 30% cap in the second model year, and then completely eliminate the deficits in the third model year. (Timothy French-15d2, Jeff Foor-15d2)

Agency Response: No changes were made in response to these comments. A manufacturer could perpetually have an outstanding deficit for the duration of the regulation’s requirements

should the proposed change be implemented. The deficit makeup period is intended to provide manufacturers assistance in meeting the compliance requirements, not to permit a consistent outstanding deficit. Additionally, permitting each deficit-generating model year to have its own three-year makeup period would be complicated for manufacturers to maintain and for CARB staff to oversee administratively.

b) Inconsistencies with provided example

Comment: The commenter states that the current regulatory language in section 1963.3(b) does not align with CARB's example of how the allowed carry-over can be utilized and that the model years 2025-2027 should be reflected. (Timothy French-15d2, Jeff Foor-15d2)

Agency Response: Changes were made in response to these comments. The 2026 model year in the example listed under section 1963.3(b) was updated to the 2027 model year. This modification constitutes a non-substantial change to the regulatory text because it corrects an apparent typographical error in the text that is non-binding and serves only to illustrate the operative regulatory requirement.

4. Medium-Duty Vehicle Certification

Comment: The commenter requests that CARB allow newer versions of industry standard test procedures to be used for certification, including SAE J1634-2012 for BEVs, SAE J1711-2010 for PHEVs, and SAE J2572-2008 for FCEVs. (Catherine Palin-15d2, Katie Saliccioli-15d2)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section "Medium-Duty Vehicle Certification" of the "First 15-Day Comment Period and First Board Hearing Public Comments with Agency Responses."

5. Advanced Clean Trucks Credits

a) Permit upfitters to participate in the credit market

Comment: The commenter requests that upfitters be permitted to participate in the credit market under ACT. (Greg Hurner-15d2)

Agency Response: No changes were made in response to this comment. Please see responses to issues raised in section "Permit secondary vehicle manufacturers to purchase credits" in "Advanced Clean Trucks Credits" of the "First 15-Day Comment Period and First Board Hearing Public Comments with Agency Responses."

b) Concerns with permitting secondary vehicle manufacturers to participate in the credit trading system

Comment: The commenter states that CARB is placing significant market risk on secondary manufacturers as there are with no rules on transparency or how the market operates. (Greg Hurner-15d2)

Agency Response: No changes were made in response to this comment. Please see responses to issues raised in section “Concerns with permitting secondary vehicle manufacturers to participate in the credit trading system” in “Advanced Clean Trucks Credits” of the “First 15-Day Comment Period and First Board Hearing Public Comments with Agency Responses.” Further, the requirements for credit generation and trading are clear and are set forth in section 1963.2.

c) Trading partial credits

Comment: The commenter states that it is unclear whether partial credits can be traded. (Greg Hurner-15d2)

Agency Response: No changes were made in response to this comment. As described in section 1963.2(c), the sum of ZEV or NZEV credits shall be rounded to the nearest tenth when it is not equal to a whole number. Therefore, rounded partial credits in tenths may be traded.

d) Concerns with how manufacturers value traded credits

Comment: The commenter states that there is no requirement for a manufacturer to accept a credit at its "value" for inventory under ACT, which could lead to a lose-lose situation for secondary manufacturers and increase the costs of inventory, making California-assembled vehicles uneconomical. (Greg Hurner-15d2)

Agency Response: No changes were made in response to this comment. Please see responses to issues raised in section “Concerns with permitting secondary vehicle manufacturers to participate in the credit trading system” in “Advanced Clean Trucks Credits” of the “First 15-Day Comment Period and First Board Hearing Public Comments with Agency Responses.” Further, the manufacturers are not required to participate in credit trading under the regulation and have flexibility in choosing how to meet the requirements of the credit trading system.

e) Concerns with manufacturers not accepting credits from secondary vehicle manufacturers

Comment: The commenter requests clarity on how CARB will ensure that an NZEV credit will be accepted from a secondary vehicle manufacturer if a manufacturer cannot use the NZEV credit against their deficit. (Greg Hurner-15d2)

Agency Response: No changes were made in response to this comment. The amendments to the regulation grant secondary vehicle manufacturers the option to buy and trade credits with manufacturers. However, the regulated manufacturers are not required to participate in credit trading under the ACT regulation as it is an optional flexibility.

f) Permit non-compliant manufacturers to sell credits to secondary vehicle manufacturers

Comment: The commenter requests that a secondary manufacturer not be limited from buying credits from any manufacturer even if their deficit is above 30 percent as the supply of credits would otherwise be artificially restricted. (Greg Hurner-15d2)

Agency Response: No changes were made in response to this comment. The regulation does not allow for manufacturers to sell credits unless they are in a surplus credit situation and allowing them to trade credits while in a deficit situation would not change the number of credits available for compliance. Permitting a manufacturer to trade credits when they have an outstanding deficit would be counterproductive as it would delay the ability of that manufacturer from meeting compliance requirements. Credits generated by a manufacturer must be prioritized for meeting the compliance requirements. Further, multiple manufacturers currently have surplus credits to trade and secondary vehicle manufacturers, therefore, would not need to attempt to purchase credits from a manufacturer with a deficit. Lastly, the change as suggested is not productive as a manufacturer with a deficit would not sell the credits they need to meet their compliance requirements.

g) Permit all credits from secondary vehicle manufacturers to be applied against any deficit

Comment: The commenter requests that all credits acquired by a secondary manufacturer be allowed to be applied against any deficit of a manufacturer, even if it exceeds 50 percent. (Greg Hurner-15d2)

Agency Response: No changes were made in response to this comment. Credits acquired by a secondary vehicle manufacturer can be applied against any deficit of a manufacturer. However, up to 50 percent of the deficits generated in a model year may be made up with NLEV credits. Permitting NLEV credits acquired by a secondary vehicle manufacturer to be applied to a deficit beyond this 50 percent limit would undermine the purpose of having a cap and would ultimately reduce the number of ZEVs produced and delivered for sale in California, thereby reducing the emissions benefits associated with the ACT regulation.

6. Credit Generation for Incomplete Class 3 Vehicles

Comment: The commenters request that that CARB allow optional inclusion of incomplete medium-duty ZEVs from 10,001-14,000 lbs. GVWR in section 1963.2(i). (Catherine Palin-15d2, Katie Saliccioli-15d2, James Fahy-15d2, Jeff Foor-15d2)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section "Medium-Duty Vehicle Certification" of the "First 15-Day Comment Period Public Comments with Agency Responses."

7. Permit Cross-Category Transfers for Class 7-8 Tractors

Comment: The commenters request that CARB provide manufacturers with cross-category transfers for Class 7-8 tractors. (Lee Brown-15d2, Lewis Michael-15d2)

Agency Response: No changes were made in response to these comments. Limiting the transfer of credits into the tractor group is necessary as Class 7-8 tractors are a major emissions source of transportation emissions and maximizing emissions reductions from these vehicles is an important part of ensuring there are equitable emissions reductions along major transportation corridors and in impacted communities. Allowing manufacturers to use non-tractor credits to meet their tractor requirement would increase the flexibility offered to them but would simultaneously reduce the amount of zero-emission tractors deployed. CARB staff does recognize the potential impact of the regulation's tractor credit requirement and will monitor manufacturer's ability to meet the tractor requirements to determine if additional flexibility is needed.

8. Include a Credit Pooling Provision

Comment: The commenters support a Class 2b-3 credit pooling program under the ACT regulation or a pooling program for all medium- and heavy-duty ZEVs subject to ACT, including pooling of early action credits, to maximize ZEV sales and enable compliance. (James Fahy-15d2, Catherine Palin-15d2, Katie Saliccioli-15d2, Jeff Foor-15d2)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section "Include a credit pooling provision" in "Miscellaneous Issues" of the "45-Day Comment Period and First Board Hearing Public Comments with Agency Responses."

9. Product Availability Concerns

Comment: The commenter states that the proposed modifications do not address the near-term impact ACT is having on truck sales and purchases. The commenter requests that CARB takes further actions to increase the availability of internal combustion engine vehicles by adjusting legacy sales caps/ ZEV sales percentages, fungibility of ZEV credits, and eligibility of additional low-carbon compliance options. (Mike Tunnell-15d2)

Agency Response: No changes were made in response to this comment. Please see responses to issues raised in sections "Product Availability Concerns" and "Permit Cross-Category Transfers for Class 7-8 Tractors" of the "45-Day Comment Period and First Board Hearing Public Comments with Agency Responses" and "Second 15-Day Comment Period Public Comments with Agency Responses," respectively.

10. Vehicle Labeling Concerns

Comment: The commenter states that section 1963.2(g) does not indicate an appropriate label for a vehicle that is exempt from the rule (such as those under CVC 165). The commenter also

requests clarity on the process for relabeling a vehicle if a secondary manufacturer indicates they have credits available to purchase inventory from a manufacturer. (Greg Hurner-15d2)

Agency Response: No changes were made in response to this comment. The labeling option does not apply to vehicles exempt from the rule. Further, a relabeling process would be determined by the manufacturer should communication between a manufacturer and a secondary vehicle manufacturer be established as described in the comment.

11. Miscellaneous Issues

a) Impact of certification pathway on greenhouse gas averaging set

Comment: The commenter requests that CARB more explicitly state in 13 CCR 1963 that ZEV credit certification pathway, including ZEP certification, does not impact GHG averaging set for medium-duty vehicles. (Catherine Palin-15d2, Katie Saliccioli-15d2)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section "Impact of certification pathways on greenhouse gas averaging set" in "Miscellaneous Issues" of the "First 15-Day Comment Period and First Board Hearing Public Comments with Agency Responses."

b) Test procedures for near-zero-emission vehicles

Comment: The commenter requests that CARB revise 13 CCR 1963.2(b) to directly reference a single test procedure document covering NZEV all-electric range testing requirements for ACT credit. (Catherine Palin-15d2, Katie Saliccioli-15d2)

Agency Response: No changes were made in response to these comments. Please see responses to issues raised in section "Test procedures for near-zero-emission vehicles" in "Miscellaneous Issues" of the "First 15-Day Comment Period and First Board Hearing Public Comments with Agency Responses."

c) Waiver for proposed modifications

Comment: The commenter states that CARB will need EPA approval to implement the proposed modifications as only the original ACT regulation was granted a waiver of preemption. (Mike Tunnell-15d2)

Agency Response: No changes were made in response to this comment. The subject amendments only establish minor technical revisions to the initially adopted ACT regulation that provide additional compliance flexibility to manufacturers without regulating new pollutants or imposing more stringent emissions standards on previously regulated vehicles or engines. Consequently, CARB will not need EPA to issue a new waiver of preemption under Section 209(b) of the federal Clean Air Act to implement the subject amendments.

d) Meeting the definition of secondary vehicle manufacturer

Comment: The commenter states that it is not clear that the assembly of a tow body onto a chassis meets the definition of a secondary vehicle manufacturer. (Greg Hurner-15d2)

Agency Response: No changes were made in response to this comment. As defined, a secondary vehicle manufacturer includes anyone that produces a vehicle by modifying a complete vehicle or completing the assembly of a partially complete vehicle. This would include assembling a tow body onto a chassis as it completes the assembly of a partially complete vehicle.

e) Permit delivery of vehicles not intended for sale in California for upfitting

Comment: The commenter requests that CARB clarify that manufacturers may deliver trucks not for sale in California for upfitting or secondary manufacturing if they will be delivered, sold, or transferred to an owner that will not make the first registration of the vehicle in California. (Greg Hurner-15d2)

Agency Response: No changes were made in response to this comment. This comment is not directed towards the amendments or to the procedures CARB followed in proposing or adopting the amendments, and accordingly, no response is required. Notwithstanding that response, manufacturers may deliver trucks that are not intended for sale in California to secondary vehicle manufacturers, provided such secondary vehicle manufacturers are not the ultimate purchasers of such trucks, and provided the secondary vehicle manufacturers produce new complete trucks that are produced and delivered for sale outside of California.

f) Remove all uses of “ultimate”

Comment: The commenter requests the removal of the word “ultimate” in sections 1963(g)(2), 1963.4(a)(13), and 1963.4(d)(1) to align with the Clean Truck Partnership agreement to implement a “delivered for sale in California” requirement. (Jeff Foor-15d2)

Agency Response: No changes were made in response to this comment. The references to the ultimate purchaser in sections 1963(g)(2), 1963.4(a)(13), and 1963.4(d)(1) apply in circumstances where a vehicle is delivered directly to the ultimate purchaser. The use of the ultimate purchaser term in these sections does not conflict with the amendment that credits and deficits are generated when a new on-road vehicle is produced and delivered for sale in California rather than sold to the ultimate purchaser.

g) Permit the acceptance of near-zero-emission vehicle credits under Advanced Clean Cars II

Comment: The commenter states that including NZEVs in section 1963.2(j) permits medium-duty NZEVs to generate a credit in either the ACC II or the ACT regulation, but further changes are required in ACC II in order to accept the medium-duty NZEV credits. (Jeff Foor-15d2)

Agency Response: No changes were made in response to this comment. Modifying the ACC II regulation as suggested would be outside the scope of this rulemaking.

VII. Peer Review

Health and Safety Code section 57004 sets forth requirements for peer review of identified portions of rulemakings proposed by entities within the California Environmental Protection Agency, including CARB. Specifically, the scientific basis or scientific portion of a proposed rule may be subject to this peer review process. Similar to the existing ACT regulation rulemaking, CARB determined that these amendments to the ACT regulation are based on a technical and engineering basis, rather than a scientific basis or scientific portion subject to peer review and is therefore not subject to the requirement of section 57004.