Public Hearing to Consider Advanced Clean Cars II Regulations

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

Appendix C
Summary of Comments to ZEV Regulation and Agency Response

Public Hearing Date: August 25, 2022
Agenda Item No.: 22-10-1

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Summary of Comments to ZEV Regulation and Agency Response

As noted in the main body of the Final Statement of Reasons (FSOR), the California Air Resources Board (the Board, CARB) has summarized and responded to written and oral comments on the Advanced Clean Cars II (ACC II) regulations and the process by which they were adopted. These comment summaries and responses are contained in multiple appendices to the FSOR, sorted by subject matter. This appendix contains the summaries of and responses to comments related to the ACC II regulations overall, including the ACC II analyses, alternative regulatory structures, and legal authority.

The following notes about the comments and responses will help with understanding how the comments are structured and labeled:

- Each comment has a unique code, as identified in Tables 1-7 of the FSOR. Each code indicates the comment period or context of the submission, followed by a unique number for each comment submitted within that comment period or context. For example, comment "OP-1" indicates a comment received during the original (45-day) comment period ("OP" standing for "original period"), and 1 is the unique number identifying the specific comment. Certain lengthy or complex comments have been given additional code information identifying sections of the comment. For example, comment OP-155-1 would indicate a comment received during the original (45-day) comment period, unique comment identifier 155, and the first substantive portion of the comment. These additional sub-comment codes are shown in the copies of the comments included in the rulemaking file.
- Comments are grouped thematically by section and subsection. Repetitive comments are listed under the same comment number and responded to holistically. Each individual comment excerpt is preceded by "Comment:" and followed by its comment identification code, allowing readers to distinguish among repetitive individual comment excerpts that are bundled under the same comment number.
- Comments are excerpted verbatim unless otherwise noted. In some instances, comment excerpts are preceded by the statement, "Commenter says," with the comment excerpt in quotation marks. In other instances, the verbatim excerpt is presented without any preface or quotation marks. Comments that have been summarized, rather than quoted, are indicated by a preface such as "Commenter says that . . ." and are not followed by quotation marks.
- In verbatim comment excerpts, CARB has not corrected or noted errors in the original (for example, by adding "[sic]"). Comment excerpts' formatting may differ from the formatting of the original comment.
- Footnotes in comments generally have been omitted, though the footnote numbers may remain in the text of the comment excerpt.
- In general, CARB has noted where it made changes in response to the comment. Where it is not noted, no changes were made in response to the comment.

A. Stringency

Support

1. Comment: CARB received several comments supporting the ACC II ZEV proposal for 100% new car ZEV sales by 2035. [OP-2, OP-5, OP-6, OP-65, OP-85, OP-89, OP-99, OP-100, OP-108, OP-109, OP-118, OP-142, OP-147, OP-166, OP-176, B1-21, B1-26, B1-39, T1-15, T1-22, T1-24, T1-42, T1-68, T1-78, T1-79, T1-82, 15-16, 15-28, 15b-4[1],T2-4, T2-6, T2-7, T2-9, T2-12, T2-13, T2-14, T2-18, T2-21, T2-24, T2-26, T2-27, T2-33, T2-36, T2-37, T2-39, T2-40, T2-43]

   Comment: Commenter submitted 2,238 public comments from members and online activists of the Natural Resources Defense Council (NRDC) supporting adoption of the Advanced Clean Cars II Rule (ACC II), requiring 100% of new vehicle sales be electric by 2035. Individuals attached supplemental statements aligned with the main comment text. Comments submitted included a variation of the following: "*As California residents, we support adopting the Advanced Clean Cars II Rule (ACC II), requiring 100% of new vehicle sales be electric by 2035. Transportation is the largest source of emissions contributing to climate change, and this rule is one of the best ways to tackle this problem. We're already seeing more extreme wildfires and heat waves and they're only expected to get worse unless we take immediate action. Californians can't wait as our health, safety, communities, and environment are all jeopardized. ACC II will also create new jobs, improve our air quality, and protect Californians from the volatility of gas prices at the pump. It's a win for our environment, health, and economy. We urge you to ensure that the state moves to adopt these critical standards as soon as possible* [ASAP]" [OP-147][2].

   Comment: The ACC II rule is not only an opportunity for California to take back its position as a global ZEV leader, it is also a critically important opportunity to clean the air, especially in the most overburdened communities, and slow the climate crisis. [OP-85]

   Comment: In order for CA to achieve statewide emissions reduction goals, we support CARB setting a stringency standard for manufacturers of 68% by 2030, as this will help move the industry to a tipping point where the ZEV market is on a path to becoming self-sustainable. [OP-108]

   Comment: In addition to being more protective of health and having higher emissions reductions, a higher target will allow more ZEV choices for buyers. Automakers will need to address the entire vehicle market including a range of vehicle sizes. A higher ZEV credit requirement will also ensure that automakers have certainty in vehicle

[1] This comment was submitted during the second 15-day notice, the scope of which was solely additional documents relied upon being added to the record. As such, this comment is beyond the scope of the comment period and no response is required. Nevertheless, it is responded to here.

[2] Where appropriate, individual comments that differed from this Comment A-1 summary have been included in other comment summaries for OP-147.

emissions rules and encourage more research and development…The ARB model redesign analysis shows that manufacturers could meet increased stringency targets while remaining on a conventional redesign schedule and not having to prematurely terminate or redesign an existing model… ACCII and ZEV requirements will help ensure that automakers once again prioritize the California market for clean vehicles. [OP-172]

Comment: The proposed ACC II regulations will reduce exposure to vehicle pollution in communities that are often disproportionately affected by motor vehicle pollution, such as near-roadway communities, by reducing emissions from ICEVs and accelerating the transition to ZEVs. Further, the proposed ZEV assurance measures will ensure these emissions benefits are long lasting and support the development of a robust used ZEV market. In addition, the ZEV regulation incentivizes automakers to invest in community carshare programs, produce more affordable ZEVs, and ensure that more used ZEVs are available. [OP-109]

Comment: We are pleased to see CARB's proposal to accelerate the transition to 100% ZEV sales by 2035 and support CARB setting an aggressive ramp-up in stringency leading up to this date, as this measure will bring substantial emissions reductions throughout the state and helping alleviating transportation costs for many consumers. [T1-35]

Agency Response: CARB appreciates support for the ACC II regulations. CARB adopted the final ACC II regulations at its August 25, 2022, hearing.

2. Comment: CARB received comments of general support for ZEVs or CARB's leadership role in the transitions to ZEVs or electrification. [OP-37, OP-54, OP-90, OP-143, OP-114, 15-27, T1-14, OP-98, T1-18, T1-73, OP-28, B1-31, OP-127, OP-26, OP-76, OP-59, OP-78, OP-147, OP-158]

   Agency Response: CARB appreciates support for ZEVs and for the role it has played in setting zero-emission standards in California. CARB adopted the final ACC II regulations at its August 25, 2022, hearing.

Opposition – Strengthen ZEV Stringency

3. Comment: CARB received several comments in support of a 100% ZEV phase-in or requirement by the 2030 model year (MY). [OP-1, OP-10, OP-11, OP-12, OP-14, OP-15, OP-18, OP-23, OP-27, OP-39, OP-58, OP-67, OP-68, OP-69, OP-84, OP-90, OP-102, OP-111, OP-126, OP-128, OP-131, OP-132, OP-149, OP-158, OP-169, OP-180, OP-181, B1-13, B1-25, B1-37, T1-27, T1-28, T1-29, T1-30, T1-31, T1-32, T1-45, T1-48, T1-51, T1-52, T1-61, T1-67, T1-70, T1-71, T1-73, T1-74, T1-75, T1-80, T1-84, T1-88, T1-90, 15-1, 15-4, 15-7, 15-8, 15-34, T2-32, T2-52]

   Comment: The 2030 100% ZEV mandate is feasible. According to some estimates, cost parity between ICEVs and ZEVs has already been reached without the use of incentives, and experts have concluded that EVs are already cheaper to own and maintain over their lifetimes. In fact, experts predict that ZEV sticker prices will match

their ICEV counterparts as early as 2023 to 2025, primarily due to declining battery costs. [OP-180]

Comment: Since transportation is one of the biggest sources of climate emissions in California, it is imperative that we address this when we are combatting climate change. Therefore, we must have 100% ZEV sales by 2030 or sooner. We need aggressive targets for clean cars, and bold leadership from the state that demonstrates our government's commitment to combatting climate change. [OP-23]

Comment: While we appreciate CARB's critical leadership on this issue, we believe a 100% ZEV sales mandate is possible before 2035, and that more ambitious interim targets are possible and needed to meet California's climate goals….According to a recent report, all new cars and light-duty trucks sold in California must be zero-emission by 2030 to reach the 2045 carbon neutrality goal laid out in SB 32. Therefore, we support more ambitious ZEV sales targets for both MY 2026 and MY 2030. [OP-179]

Comment: CARB received several comments in support of a 75% ZEV requirement by 2030 model year. [OP-26, OP-35, OP-36, OP-40, OP-41, OP-43, OP-47, OP-48, OP-49, OP-51, OP-52, OP-55, OP-60, OP-61,OP-70, OP-85, OP-90, OP-99, OP-135, OP-136, OP-142, OP-144, OP-156, OP-166, OP-172, OP-179, B1-3, B1-8, B1-15, B1-26, B1-30, B1-32, B1-33, B1-34, B1-40, B1-41, T1-5, T1-15, T1-22, T1-24, T1-26, T1-33, T1-36, T1-38, T1-39, T1-50, T1-53, T1-54, T1-63, T1-76, T1-85]

Comment: Commenter wants to see a bare minimum of 75 percent ZEVs by 2030. [T1-45]

Comment: CARB received several comments in support of a 45% requirement by 2026. [T1-33, T1-36, T1-54, B1-25]

Comment: CARB received several comments in support of stronger ZEV requirements than staff had proposed, without specific percentages recommended, for reasons including but not limited to reducing emission, increasing the number of ZEVs in California, increasing public benefits, or that staff's proposal is failing to deliver necessary emission reductions. [OP-68, OP-126, OP-178, 15-32, OP-90, OP-37, T1-34, T1-35, OP-3, T1-69, T1-1, T1-2, B1-7, B1-31, T1-40, T1-89, OP-143, OP-85, OP-110, OP-125, OP-151, OP-76, OP-143, T1-3, T1-5, T1-39, OP-151, T2-36, OP-59, OP-143, T2-50, OP-116]

Comment: The 2030 100% ZEV mandate is feasible. According to some estimates, cost parity between ICEVs and ZEVs has already been reached without the use of incentives, and experts have concluded that EVs are already cheaper to own and maintain over their lifetimes. In fact, experts predict that ZEV sticker prices will match their ICEV counterparts as early as 2023 to 2025, primarily due to declining battery costs. [OP-180]

Comment: Commenter states that we need at least 80% of new car sales to be electric only by 2025. [OP-90]

Comment: Set an interim target of 70% by 2027 - including trucks. [OP-90]

Comment: Commenter submitted comments from 25 people who support the strongest possible EV sales targets in the Advanced Clean Cars program update. Individuals attached additional comments with similar views while some comments were outside of the scope of the regulation. [OP-171]

Comment: Rivian has consistently supported the most ambitious possible regulatory standards and policies to decarbonize transportation. We believe a 100 percent ZEV sales requirement earlier than 2035 is achievable and more likely to be a forcing function for manufacturers than the existing requirement. [OP-127]

Comment: Strengthen stringency, especially in 2026-2030, to drive ZEV sales beyond BAU. As a starting point, the proposed stringency of the regulation appears to be low. This means that a market for values is unlikely to materialize in any significant way under ACC II, and automakers are unlikely to plan for strategies to accumulate extra values, including through Environmental Justice Vehicle Values, Early Compliance Values, or the proposed Exceptional Efficiency Values. This unnecessarily limits CARB's ability to influence automaker behavior beyond the minimum technical and ZEV assurance requirements or to drive equity investments or other outcomes through ACC II… Rather than lagging automaker's planned activities, ACC II should strive to accelerate the transition to ZEVs more quickly and completely than already planned. We encourage CARB to consider a regulation with constant 5-6 percentage point increases in stringency over its lifetime. This would lead to annual ZEV value requirements of 46-55% in 2026 and 70-75% in 2030, on the way to 100% in 2035. As described next, this increased stringency could be coupled with increased crediting from "exceptional efficiency values," to provide additional compliance flexibility while advancing mass market availability of ZEVs and equity outcomes. [OP-154]

Comment: Commenter urges the Board to adopt a stronger proposal, with recommendations ranging from 70 percent to 100 percent ZEV phase-in by 2030 [OP-171].

Comment: Commenter wants to see a bare minimum of 75 percent ZEVs by 2030. [T1-45]

Comment: We agree that the [Staff Report: Initial Statement of Reason] ISOR's proposed 35% ZEV sales share requirement for MY 2026 represents a business-as-usual" target. We call on CARB to do what it has historically done successfully: pass a regulation that will put us on a path to more rapid growth than the market would do on its own. CARB should follow its own precedent of setting more ambitious targets than what is expected by increasing the stringency of the MY 2026 ZEV requirement to 45% for the 2026 model year, as supported by many organizations in their comments on the October 2021 workshop and in a recent letter to the CARB Board. [OP-179]

Comment: The 2035 requirement is not enough. California shouldn't be selling gasoline today, much less 20, 30 years in the future, as 2034 gas cars will still pollute for decades down the road. And California, with our US and global leadership, can make automakers pick up the pace by choosing a stronger target than ACC2. I call on the board to implement a stronger regulation, pulling forward targets to 100% all-

EV by 2030 or even earlier, and further work to reduce car usage in general and shift people from cars to cleaner transport methods. This is what Norway is doing, which is nearing its 2025 EV-only sales requirement already in 2022, and the biggest auto company in the world by market cap has been all EV since 2008. So these targets can be met, and California shouldn't be a global laggard on this issue. [15b-1[3], T1-90]

Comment: Commenter supports a ZEV-phase in of 100 percent by 2030, but requests CARB raise its interim 2030 target well above the current 68% goal; even a commitment to reach 80 percent in 2030 would bring us closer to carbon neutrality [OP-180].

Comment: With modest technology and price improvements to electric vehicles, 100% ZEV sales by 2030, five years ahead of the proposed regulations, is achievable for the ACC II standard. Tesla agrees with CARB that [battery electric vehicle] (BEV) technology is proven and rapidly improving, battery costs are falling, and the BEV markets are rapidly expanding....Given the acceleration of public health and welfare impacts associated with criteria emissions and climate change, it is incumbent upon CARB to recognize the appropriate level of ZEV technology that can be delivered at the start of ACC II and it should inform the implementation of a more stringent standard. Consistent with this pathway Tesla recommends CARB increase the stringency of the ZEV standard by raising the annual targets by 8% each year from the proposed levels starting with MY 2027 requirement rising to 51% (MY 2028 to 67%; MY 2029 to 84%; and MY 2030 to 100%). These targets are more than reasonable given the current state of ZEV sales and reductions in real ZEV deliveries that occur, as described below, under the proposed flexibilities…The pace of electric vehicle innovation, cost-reduction, and deployment coupled with the public health and welfare imperatives to address criteria air pollution and accelerating impacts of climate change support an increase in overall stringency of the ACC II proposal. Accordingly, Tesla believes the proposal should be amended to achieve and overall stringency level of 100% ZEVs by 2030. [OP-78]

Comment: We must increase and accelerate targets for vehicle electrification. We must set policies such that by 2026, 50% of all new light-duty vehicle [LDV] sales in California are zero-emissions vehicles, and 100% by 2030. [OP-50].

Comment: Commenter suggests CARB speed the transition to 100 percent ZEVs as soon as possible—by 2025 for passenger vehicles. [B1-19].

Comment: Commenter asks the Board to accelerate the 100% ZEV phase-in to at least 2032, and preferably 100% by 2030 [15-3].

Comment: Commenter suggests CARB accelerate the 100% ZEV transition to 2035 or 2030 [15-6].

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[3] This comment was submitted during the second 15-day notice, the scope of which was solely additional documents relied upon being added to the record. As such, this comment is beyond the scope of the comment period and no response is required. Nevertheless, it is responded to here.

Comment: I am writing to ask CARB to require automakers to reach a target of 90% of their new vehicles being zero-emission in 2030, in order to maximize pollution reductions and the number of clean cars in the market. [OP-38]

Agency Response: The comments above all relate to the stringency of the ZEV requirements in the ACC II regulations and assert they are overly lenient. These comments oppose the final stringency as too weak (but do support at least the stringency proposed), CARB appreciates the support they offer for setting standards at least at the level proposed but is also responding to the portions of the comments arguing for increased stringency. CARB received many comments, in addition to these, making similar comments disputing the stringency of the annual ZEV sales requirements, along with raising other points of concern. Many also commented on the potential effects on the stringency and production by manufacturers of vehicles in response to the options in the regulations for manufacturers to generate, bank, and trade additional vehicle values used in determining compliance with the ZEV sales requirements.

These comments generally fell into two categories. Many, including those above, supported more stringent standards. Many opposed the regulations by requesting less stringent standards. Similarly, many supported the flexibilities but thought they should be more generous, while many others thought they should be reduced or eliminated.

At their root, these comments suggested alternative regulatory requirements for the effective stringency of the ZEV sales requirements that CARB should consider. CARB's responses to these comments are premised on the extent of its obligations to consider alternatives and its evaluation of potential alternatives.

CARB must consider a range of reasonable alternatives that are:

- equally effective at achieving the goals of the regulation but that are:
  - less burdensome or
  - more cost-effective,
  - lessen impacts on small businesses
  - more effective
  - provide additional benefits, and
  - a next-best alternative.

(Gov. Code, §§ 11346.2, subd. (b)(4)(A), (B), 11346.5, subd. (a)(13), Cal. Code Regs., tit. 13, § 2003(e)(2), (3).) CARB does not have to consider alternatives that do not meet the goals of the proposal or that are unreasonable.

The Notice of Public Hearing described the goals of these regulations as amending and extending existing regulations that reduced on-board exhaust and evaporative emissions to further reduce harmful pollution from light- and medium-duty motor vehicles. The proposed regulations would increase the stringency of the existing regulations to ensure emissions are reduced under a wider range of conditions under which vehicles are used and increase required sales in California of new vehicles to 100% ZEVs by 2035. (CARB, Notice of Public Hearing to Consider Proposed Advanced Clean Cars II Regulations, March 29, 2022, pp. 2, 7.) These regulations must meet several statutory constraints. These include obtaining the maximum feasible emission

reductions and their cost-effectiveness and technological feasibility in the time allowed. CARB must also consider several external factors, including impacts on jobs, businesses, the environment, and disproportionately impacted, low-income, and minority communities. (See, e.g, Health & Saf. Code, §§ 38560, 38562, 39003, 39602.5, 43013, 43018, 43018.5; 42 U.S.C. §§ 7521, 7543.) The goals of the proposal and these factors defined the range of reasonable alternatives CARB analyzed and weighed in proposing and adopting regulations that reduce exhaust and evaporative on-board emissions from regulated vehicles.

Overall, CARB adopted the regulations it determined are most effective at achieving the statutory goals to feasibly reduce exhaust and evaporative on-board emissions to the maximum extent from the vehicles subject to the ACC II regulations, while imposing the least burdens and impacts on the directly regulated parties and individuals and small businesses in California. The regulations have several beneficial attributes. They encourage and recognize early and volunteer action, while minimizing administrative burdens and leakage of emissions.

None of the alternatives would be more effective considering the costs and burdens. CARB concluded this after considering the benefits, costs, and burdens of a range of reasonable alternatives for meeting the statutory goals of reducing exhaust and evaporative emissions on-board emissions from the vehicles subject to the regulations. These alternatives comprised requirements that were either more stringent, less stringent, or that provided different options for manufacturers to generate, bank, and trade additional vehicle values used in determining compliance with the requirements. CARB relied on this master response when responding to comments that raised particular aspects of the stringency and options that are separately addressed in CARB's responses to comments.

CARB considered alternatives for more stringent ZEV sales requirements. These alternatives encompass the comments requesting such changes to the ACC II regulations as proposed. CARB considered two alternatives in its Initial Statement of Reasons (ISOR): an alternative with lower ZEV requirements than that which CARB adopted, and an alternative with more stringent ZEV requirements at the start of the regulation period. Staff considered an additional more stringent alternative in its Standardized Regulatory Impact Assessment (SRIA), which was a 100% ZEV and plug-in hybrid vehicle (PHEV) requirement by 2032. The more stringent alternatives considered throughout the rulemaking process were assessed in terms of costs, burden, and feasibility for manufacturers, consumer readiness, and the benefits to California. The final ACC II ZEV stringency adopted was increased throughout the workshop and stakeholder process due to new data and stakeholder feedback.

"Alternative 2" considered in the SRIA (and discussed beginning on page 174 of the ISOR) was rejected due to a lower cost-to-benefit ratio compared to Staff's proposal. While this alternative resulted in higher emission benefits, those benefits did not track with the dramatic cost increases associated with this alternative. Other more stringent alternatives, as suggested by commenters would result in similar worsening cost-to-benefit and cost-effectiveness ratios with higher ZEV penetrations.

CARB disagrees with commenters that ACC II ZEV stringency is not sufficient to provide the necessary emission reductions. California requires significant reductions in emissions from multiple sectors and will continue to do so but cannot achieve its air quality and climate goals without (or even wholly from) dramatic reductions from the transportation sector—reductions of the kind that can only be achieved by requiring zero emissions from vehicles. If the ACC II regulations did not require all light-duty vehicles to be 100% ZEVs and PHEVs, criteria emissions would not be reduced to the same degree and would further frustrate attaining the National Ambient Air Quality Standards (NAAQS) and meeting California's requirements to reduce greenhouse gas (GHG) emissions. (See ISOR, pp. 134-135; Emission Inventory Methods and Results for the Proposed Amendments, ISOR, App. D, pp. 13-17.) As adopted and included in the 2022 Scoping Plan which shows a path to carbon neutrality, the ACC II regulations are aggressive and will result in more than 50% fewer GHG emissions and nearly 40% fewer oxides of nitrogen (NOx) emissions by 2040 for light-duty vehicles. It will also result in over 12 million ZEVs and PHEVs on the road in California by 2035.

CARB further disagrees with the commenters that its stringency is not sufficient from a feasibility or economic basis. CARB conducted robust analyses of the technological feasibility of the ACC II regulations, including manufacturers' ability to comply in the time provided. As shown and discussed beginning on page 39 of the ACC II ISOR, manufacturers are, in aggregate, projecting to deliver for sale more than 30% of their new light-duty vehicle sales as ZEV and PHEVs through 2025 MY. This means that some manufacturers will be above the ACC II ZEV requirements for 2026 MY and some will likely be below, according to 2021 survey results. Setting standards in this way acknowledges differences in automobile manufacturer market positions and allows market competition to play out within reasonable constraints, which serves to minimize costs and burdens across the industry. CARB considered this and other factors to determine the stringency of the ZEV requirements over the time of the regulations, including vehicle redesign frequency every 5 to 7 years, in line with typical industry practice. CARB also considered robust economic and environmental analyses under its obligations in the Administrative Procedure Act (APA), California Environmental Quality Act (CEQA), and the Health and Safety Code.

The flexibilities within the regulations do not undermine its stringency. They give options for manufacturers to choose the most cost-effective means of compliance, including distributing compliance by temporarily offsetting production through earned or acquired vehicle values. Fundamental to the ACC II ZEV regulation was its structure: a fleet performance standard, which allows for banking, trading, and deficits, while encouraging early and targeted deployment of vehicles under such a standard. As explained beginning on page 44 of the ACC II ISOR, allowing for banking, trading, and fulfillment of deficits appropriately affords manufacturers the flexibility needed to transition to zero-emission technologies and handle year-to-year sales fluctuations and vehicle redesign schedules.

To ensure the regulation results in actual vehicles, staff proposed a fundamental change in the sequence of how annual ZEV compliance is calculated to align with how it is done for both criteria pollutant and GHG fleet average standards. The manufacturer's current MY performance (i.e., number of ZEVs and PHEVs produced) is

first compared to the annual performance requirement before allowing any usage of credits from trading or banking. In this manner, manufacturers are far more limited in their ability to create stockpiles of credits to stave off future requirements or dip into earned reserves while simultaneously banking newly earned surpluses. Other flexibilities, such as using ACC I ZEV credits, follow this same pattern and are only allowed where a manufacturer has failed to produce enough vehicles. This restructuring, in staff's estimation, will assure requirements set for 2026 through 2035 MY will cause vehicles, rather than excess values.

Besides allowing for flexibility for manufacturers, the ACC II ZEV regulation includes several provisions to ensure that increased ZEV deployment meets the goals of the regulations to reduce and eliminate emissions and so it promotes early and equitable access to clean transportation. These flexibilities include environmental justice (EJ) values and early compliance values, both of which were added into the regulation to encourage manufacturers to build markets and to engage in on-going EJ projects. Not every manufacturer is automatically given those values, but instead will need to engage in significant investments to earn those values, which only may be used towards the first few years of the ACC II ZEV regulation.

Additionally, every flexibility adopted by CARB included an appropriate allowance, meaning a limit to the maximum amount that a manufacturer can use in any year of a manufacturer's annual ZEV compliance. These credits also have a limited lifetime and will be phased out entirely by the 2031 MY.

On the other hand, CARB disagrees the regulations do too much. Considering CARB's obligation to reduce emissions from vehicles, CARB disagrees the regulations are too stringent, require too rapid a transition, or ban the sale or use of conventional vehicles.

As a threshold matter, CARB did not propose or adopt a phase-out or ban of all internal combustion engines on the road. To the extent a comment concerns a phase-out or ban, it is beyond the scope of this rulemaking in terms of either the proposed or adopted regulations or an alternative that should be considered because CARB did not propose such requirements. The regulations allow continued use of existing vehicles and sales of PHEVs which are anticipated to contain conventional engines.

The regulations are feasible for the industry and the market. The new vehicle sales requirements beginning with 35% ZEVs in 2026 and reaching 100% in 2035 are not arbitrary but are in line with CARB's statutory duties and obligations and are supported by the record. The 2026 MY requirements start at 35% to reflect the state of the industry. As summarized on pages 38-40 of the ISOR, manufacturers annually submit alternative fuel vehicle sales projections to CARB, including projections for battery electric vehicles (BEV), PHEVs, and hydrogen fuel-cell electric vehicles (FCEVs), primarily to help staff with future infrastructure planning. Moving from 12% of actual new vehicle sales in 2021, the manufacturer-provided data projects steady growth of ZEVs and PHEVs through the 2025 MY to over 30% of sales. And these include only manufacturers delivering vehicles for sale in California at the time of projections, and do not include companies in the process of certification or have announced their first product lines and projected numbers publicly. For example, Rivian, an ZEV

manufacturer, is not included in these projections. For this reason, and in conjunction with assumptions made by the United States Environmental Protection Agency (U.S. EPA) in its 2021 Notice of Proposed Rulemaking for its Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards, 86 Fed. Reg. 43,726, August 10, 2021, CARB chose to start requirements at 35% in 2026 MY.

The pace aligns with manufacturing practices. As explained on page 41 and 42 of the ISOR, staff created scenarios based on approximately 350 individual vehicle model redesign schedules, which ranged from 4 years to over 10 years, though most commonly every 5 to 7 years, to predict how the industry could successfully redesign each model. Overall, staff concluded this analysis of model turnover showed a feasible pathway for manufacturers to introduce new ZEVs at the pace to meet the stringency targets while remaining on a conventional redesign schedule and not having to prematurely terminate or redesign an existing model.

This is also further supported by real-world demand and manufacturer investments. Surveys show a growing market interest in ZEVs, with 74% of Californians expressing at least some interest and 40% considering going electric for their next vehicle. Ford Motor Company has suspended reservations for its full-size F150 Lightening BEV truck given that demand far exceeds their planned production volumes. As evidenced on pages 20 and 21 of the ISOR, there is growing interest in alternative powertrain technology by car buyers and industry.

As discussed on page 37 of the ISOR, and supported by ISOR Appendix G, every light-duty vehicle manufacturer has made commitments to produce vehicles that could meet a zero-emission standard, including manufacturers who announced that they would only produce ZEVs within the ACC II timeframe, prior to the public workshop for the stringency of this rulemaking. For instance, in January 2021, General Motors announced plans to become carbon neutral by 2040, including significant investments in battery technology and a goal to shift its light-duty vehicles entirely to zero-emissions by 2035.[7]

As explained on page 40 of the ISOR, the ACC II ZEV requirement increases by eight percentage points per year for the first five years, and then moderates to six percentage points per year for the latter five years to reach 100% in 2035. The proposed trajectory for 2026 through 2030 aligns with what the industry as a whole has stated in projections of ZEVs and PHEVs. These survey responses and public announcements show manufacturers are not only adding specialty low-volume ZEV models but transitioning high-volume gasoline models into ZEVs. Therefore, by their own planning, the year-over-year trajectory proposed is feasible and appropriate.

CARB also considered other vehicle mix alternatives, including less stringent ZEV sales requirements in the earlier MYs and only 70% ZEV sales in 2035. Ultimately, the alternatives considered were rejected because they would not meet the regulatory objectives, would be infeasible, or would not maximize feasible emissions reductions. See Final Environmental Analysis Chapter 7.D and ISOR Chapter XI for more discussion on alternatives considered.

The emission reductions from the regulations are critically important. The regulations are a part of the State's program to achieve the maximum technologically feasible and cost-effective reductions in motor vehicle emissions to achieve the statewide GHG emissions limit, and to attain federal and State ambient air quality standards and reduce toxic emissions.

In developing the ACC II ZEV regulation, CARB used the best available information and good engineering judgment to determine the ultimate stringency of the rule. Ultimately, CARB's analysis of technology, costs, product plans, and other relevant factors, and the structure of the regulations in increasing compliance stringency over time while including numerous compliance flexibilities, show the requirements are technologically feasible in the time available, and are cost-effective, necessary, and designed to provide benefits equitably.

Further, infrastructure, incentives, and model availability are increasing and will continue to increase with time, increasing awareness and confidence and supporting the requirements adopted by CARB. Numerous public and private actions are underway to ensure the infrastructure is available to meet demand. See Master Response 1 on page 6 in the Response to Comments on the Draft Environmental Analysis for more information on grid impacts and readiness.

As discussed starting on page 25 of the ACC II ISOR, CARB is committed with 28 California State agencies to support a zero-emission transportation future. CARB remains committed to working to develop maximum feasible and cost-effective regulations to reduce emissions in California, and on developing complementary policies outside of the ZEV regulation to provide consumers with incentives to purchase vehicles under the ACC II ZEV standard, and infrastructure to support such vehicles.

In sum, CARB adopted the most stringent regulations based on the record before it, that would require manufacturers to innovate, considering the costs, impacts, and burdens. The record before CARB does not compel more or less stringent standards.

4. Comment: Commenter submitted a spreadsheet containing comments from 4,099 individuals calling for a stronger and equitable clean cars rule, but also included some comments that also fell outside of the scope of this rulemaking. The comments comprised variations to a template letter that read:

   "I urge you to restore California's leadership on clean cars by accelerating the state's transition to 100% electric vehicles and requiring cleaner new gas-powered ones. Historically we've led the nation on setting strong auto emissions standards — but the current clean cars proposal falls short of the action we need. If we don't reach 100% zero-emission vehicle sales until 2035, it will be too late for California to meet its goal of carbon neutrality by 2045, since many new vehicles last 20 years or longer. Moving that target to 2030 will give our state a better chance of meeting its climate goals and remaining a global leader on clean cars. And until we reach that target in 2030, California can't ignore the climate-damaging emissions from new gas cars. It needs to take action to make sure they emit less as they drive our roads for decades. This action is also critical to protect the health of communities hit hardest by tailpipe pollution.

Cancer-causing vehicle exhaust harms people's health and particularly hurts low-income communities of color near congested freeways. California must lead the way with strong policy solutions to end tailpipe pollution and build an environmentally just transportation system. New clean car standards must ensure equitable access to electric vehicles. We urge you to adopt strong clean car rules that require: - 100% zero-emission vehicle sales by 2030. - 7% annual pollution cuts from gas-powered cars in the meantime. - Mandatory equity commitments to ensure that communities most affected by pollution benefit from electric vehicles first and foremost. This transition is a tremendous opportunity to create family-supporting, high-road jobs for Californians. We urge you to seize this moment and adopt nation-leading clean car standards that slash climate pollution, ensure equity, and promote good jobs. Thank you." [OP-158[4]]

Agency Response: See response to Comment A-3 regarding the alternatives analysis and approach to determining ACC II ZEV stringency. See also responses to comment D-6 below regarding mandatory equity provisions and FSOR Appendix E, comment D-1 regarding interim annual pollution cuts from gas-powered vehicles.

5. Comment: Commenter states to please dramatically accelerate elimination of gasoline and diesel vehicles and also stop pursuing hydrogen! [OP-90]

   Comment: Please act now to eliminate gas-powered vehicles entirely by 2030! View it as a challenging but essential goal. [OP-76]

   Comment: Ban the sale of new non ZEV light vehicles in 2025, 2026 or 2027. Auto manufacturers need the signal to expand their battery production plans now and to convert their factories. The public is ready. The electric infrastructure in most places is ready so long as charging is mostly done at off peak times, mostly overnight. [OP-90]

   Comment: Commenter supports more aggressive internal combustion engine vehicles to be phased out no later than 2030 based on the Scoping Plan and asserts California cannot reach its climate goals without reaching 8 million ZEVs on the road in 2030. The commenter urges CARB to adopt concrete plans to achieve GHG reductions laid out in the Scoping Plan. [OP-71]

   Comment: To this end, I strongly recommend CARB take bold action by requiring, at minimum, a target of 75% new BEV sales by 2030. This target should include the call to terminate the sale of any two-axle vehicle constructed with an internal combustion engine. [OP-90]

   Comment: We must do more to regulate emissions…by forcing the removal of millions of already purchased gas vehicles off the road. [OP-90]

   Comment: Commenter asks the Board to make the sale of gasoline cars after 2030 illegal. [OP-19]

[4] Where appropriate, individual comments that differed from this Comment A-4 summary have been included in other comment summaries for OP-158.

Agency Response: CARB did not propose or adopt a phase-out or ban of all passenger vehicles or internal combustion engines (ICE), and so to the extent the commenters are making or basing their comments on a phase-out or ban of all vehicles including those already on the road, the comments are outside the scope of this rulemaking for emission standards for new vehicles. To the extent these commenters are referring to new car sales, then see response to Comment A-3.

One comment called for CARB to stop pursuing hydrogen, which CARB did not propose or subsequently modify its proposal in light of this comment. The ACC II regulations do not require any single technology, but set a standard that manufacturers must meet by delivering for sale vehicles that produce zero emissions. One current means of doing so is through FCEVs, which can be powered by hydrogen. CARB chose not to limit the means by which manufacturers met the ZEV requirements in part to minimize costs to the industry while still achieving the needed emissions reductions. This is in line with the APA's encouragement of performance rather than prescriptive standards.

These regulations do not affect existing (on-road or in-use) gasoline and diesel vehicles. Regulations regarding continued use of existing vehicles were not within the scope of the proposed regulations.

6. Comment: Commenter states that the proposed new standards for 100% zero-emission vehicle sales should not set 2045 as a target but much sooner. I want to buy an all-electric vehicle now and the selection is quite poor. In the current form, the proposed standards are not strong enough and would not put California on a path to achieving its goal of being carbon-neutral by 2045. Please help us tell the California Air Resources Board that these standards must be stronger and achieve even higher zero-emission vehicle sales by 2030! [OP-90]

   Agency Response: CARB adopted requirements for 100% ZEVs by 2035, not 2045 as the commenter asserts. See response to Comment A-3 regarding the assessment of alternative more stringent ZEV sales requirements and a summary of how CARB established standards partly based on manufacturer projections of ZEVs and PHEVs leading up to 2026 MY. The commenter also asserts that the current selection of ZEVs is poor. While these requirements apply to 2026 and subsequent MYs, CARB anticipates manufacturers will continue to increase sales of ZEVs and PHEVs to be able to build adequate market demand leading up to 2026 MY requirements. Indeed, by the end of 2021, there were 60 ZEV and PHEV models available for consumers to choose from, including a variety of options at lower price points, in addition to an increasing variety of model sizes. From the review of automaker projections of models in the next few years, as well as public commitments automakers have made about pending ZEV models, staff are confident consumers will have sufficient choices.

7. Comment: CARB received several comments asserting stronger ACC II ZEV requirements would help ensure increased affordability and access for low-income individuals and those in disadvantaged communities, or generally would help meet equity goals. [T1-85, OP-175, T1-1, OP-76 OP-78, T1-61, OP-41, OP-85, OP-90, OP-126, OP-143]

Agency Response: When adopting regulations, CARB must weigh several factors in deciding appropriate stringency, many of which addressed issues raised in these comments supporting a more stringent ZEV standard. For example, in setting the standards, CARB considered the expected emissions from vehicles over their useful lives, and included measures to promote equitable access to clean transportation technology within the context of vehicle emission standards.

In determining the appropriate stringency and requirements, while one alternative may have lower costs, it may not produce adequate emission benefits in line with other goals. The effect of increasing the requirements beyond that which were considered and adopted by CARB would increase costs to consumers, as evidenced by staff's alternatives analysis in both the SRIA and ISOR, even though it would also increase the number of ZEVs delivered for sale into California. However, with those increased requirements would not come commensurate environmental benefits. Therefore, CARB adopted the path it found to "…be more effective at carrying out the purpose for which the regulations are proposed or would be as effective and less burdensome to affected entities[,]" as required under Government Code section 11346.5(a)(13) and as indicated in Resolution 22-12. [5] These comments are also addressed as discussed in agency's response to Comment A-3.

8. Comment: CARB received several comments urging CARB to align with the 2020 Mobile Source Strategy, or asserting that CARB is not aligning or is failing to meet the 2020 Mobile Source Strategy. [OP-85, OP-83, OP-101, OP-136, OP-156, OP-166, OP-172, OP-178]

   Comment: CARB should align the trajectory with the 2020 Mobile Source Strategy and a 75 percent sales requirement in 2030. Alignment with the Mobile Source Strategy would reduce more harmful pollution overall and earlier, save more lives, and yield hundreds of millions more in public health benefits than the proposed rule. [OP-178].

   Comment: We are also concerned that the program's intermediary requirements are insufficiently stringent. As proposed, ACCII's percentage requirement in Model Year 2026 is 26 percent. However, this falls short of the roughly 46 percent ZEV sales share that CARB's 2020 Mobile Source Strategy calls for in that year. CARB has also previously reported that they expect total ZEV sales to reach almost 25 percent in MY2025 under business as usual. Once environmental justice and pooling credits are accounted for, which would inflate the compliance value of the ZEVs sold, it seems that CARB risks launching the ACCII program at a stringency level that requires no additional action from industry. We encourage CARB to reconsider its annual ZEV requirements to implement an even more ambitious rule. [OP-127, B1-10]

   Agency Response: The 2020 Mobile Source Strategy is a top-down planning document that evaluates scenarios to meet federal air quality standards and the state's climate goals; it does not assess the cost or technical feasibility of those scenarios, and it does not require specific regulatory outcomes. The 2020 Mobile Source Strategy

[5] Resolution 22-12, page 16.

informs policy decisions for specific measures in the State Implementation Plan (SIP) required by the federal Clean Air Act, CARB's Climate Change Scoping Plan, and Community Emission Reduction Plans to protect vulnerable communities from disparate pollution impacts. The need to continue reducing pollution from conventional passenger vehicles while simultaneously scaling up requirements for ZEVs on California's roads, including within this regulatory proposal along with other efforts, are important outcomes of the Mobile Source Strategy and integral to these proposed regulations. Feasibility assessments and regulatory stringency requirements are established in separate rulemakings, like the ACC II rulemaking. In this case, the scenario included in the Mobile Source Strategy was not considered as feasible or cost-effective as the final stringency in ACC II adopted by CARB.

Also, see agency response to Comment A-3 which explains the alternatives analysis and approach to determining ACC II ZEV stringency. CARB acknowledges that the ACC II regulations are one tool in amongst many to develop the ZEV market in California. See agency response to FSOR Appendix E Comments C-1, C-3, C-6, C-9, and C-15 for more on other strategies CARB is undertaking in supporting the development of a ZEV market.

9. Comment: We are seeing the effects of climate change now and need to act now working to eliminate fossil fuels immediately with a deadline of 2035. [15-11]

   Comment: Commenter states to stop the procrastination fueled by the fossil fuel companies. [OP-90]

   Comment: Commenter states they don't like spending my family's income/pension on fattening up some sheikdom's riches nor the fat-cat executives at oil companies world-wide. [OP-90]

   Comment: No to big oil. EV and hybrids only. [OP-90]

   Comment: Commenter states we are in a climate emergency, please assist in the abolition of fossil fuels and the fossil fuel infrastructure. [OP-90]

   Comment: Commenter states that it is crucial that our nation minimize the use of fossil fuels as quickly as possible. The changes to our climate that are occurring due to burning of fossil fuels are becoming increasingly apparent and dangerous. Private use of automobiles will be a significant factor in reducing our consumption of fossil fuels. [OP-90]

   Agency Response: CARB did not propose or adopt a phase-out or ban of all internal combustion engines, including those on the road, or oil and gas production and so to the extent the commenters are making or basing their comments on such a phase-out or ban, the comments are beyond the scope of this rulemaking. CARB proposed and adopted emission standards on new vehicles to which the rule applies such that, by model year (MY) 2035, any new vehicle sold within the State must have zero emissions or meet the requirements for a PHEV (anticipated to contain an ICE). See agency response to Comment A-3 which explains the alternatives analysis and approach to determining ACC II ZEV stringency.

In adopting the proposed ACC II regulations, California will have taken one step towards reducing the use of fossil fuel usage in light-duty vehicles, meaning 38% less gasoline usage by 2035. However, these regulations only affect new light-duty vehicles, one of many sectors within California that use petroleum-based fuels. Some new conventional vehicles will still be permitted to be sold in the MYs leading up to 2035, and these vehicles are anticipated to be used for many years, meaning there will still be a need for conventional vehicle supply, support, and service business. And oil and gas produced in California can be exported to other jurisdictions, which is not dependent on or affected by new vehicle sales in California.

10. Comment: [E]xperience has shown that if the ZEV requirement turns out to be infeasible, the board can readily make a correction well in advance of the effective date. But it is all but impossible to accelerate an adopted rule given the lead needed by automakers. Past boards adopted groundbreaking technology-forcing ZEV regulations which on several occasions then needed to be relaxed. That was not a failure, but rather an appropriate exercise in decision-making under uncertainty. Given how much more is known today about the urgent need for aggressive action and the inevitability of ZEV technology, this Board likewise should push the envelope. [OP-99]

    Comment: Because ACC II will govern until 2035—13 years from now—there is a significant danger that the market itself outpaces the regulation. It would be far easier for CARB to start with an aggressive rule and then consider granting exceptions or extensions down the road if necessary, than to lock in a weaker rule now and try to strengthen it later. [OP-180]

    Agency Response: CARB has broad authority to set regulations or make adjustments to existing regulations, as the commenters assert. However, California Health and Safety Code sections 38560, 38562, 43018, and 43018.5 require CARB to set regulations to achieve the maximum technologically feasible and cost-effective reductions in motor vehicle emissions. For reasons stated in agency's response to Comment A-3, CARB has found the ACC II regulations to be the maximum technologically feasible and cost-effective based on the record currently before it. Should conditions change down the road, CARB could adjust accordingly as supported by the record before it at that time; this is true regardless of whether the market outpaces or lags behind the regulation.

11. Comment: Commenter states that the proposal does not reflect realworld delivery and in its current form would accomplish only minor increases in ZEV penetration in MY 2026. Given the acceleration of public health and welfare impacts associated with criteria emissions and climate change, it is incumbent upon CARB to recognize the appropriate level of ZEV technology that can be delivered at the start of ACC II and it should inform the implementation of a more stringent standard. [OP-78]

    Comment: Given California's leadership in the transportation industry and the commitment that the state has displayed in addressing air quality concerns in emissions-burdened communities, now is the time to set sights higher. Delaying action will not only drastically increase the costs associated with transitioning to a zero-carbon economy, but it will also increase costs borne by vulnerable populations, further exacerbating the burdens they face due to the changing environment.

California should now do their part to convey this immediacy, as the cost of inaction for consumers will far outweigh the costs of action. Moving forward, the Zero-Emission Vehicle (ZEV) program under ACC II should ensure rapid and sustained ZEV deployment and commercialization to help consumers have access to vehicle choices that reduce costs and enable the state to meet its public health and climate goals. [OP-108]

Comment: [T]he market itself may achieve CARB's targets on its own, in which case ACC II will not drive meaningful improvements… Given the ambitious scale of automakers' EV plans described above, CARB must not again underestimate the potential of the ZEV market to grow rapidly in the coming years. Instead, it must hold automakers to clear targets, rather than trust their bold but unenforceable promises. [OP-180]

Comment: As the automotive industry transitions to ZEVs, we urge you to view the ACC II regulation not only as a backstop to expected industry activities, but rather a tool to proactively guide and accelerate the ZEV market in ways that align with the State's priorities. [OP-154]

Agency Response: CARB assessed these comments and did not agree that the standards should be more stringent, considering manufacturers' capabilities and other required factors. See response to Comment A-3 for response to the alternatives analysis and approach to determining ACC II ZEV stringency.

12. Comment: ARB should set standards to push and reward and reflect growth of the market leaders, rather than to design its standards to accommodate laggards. Staff should also not presume that automakers can only stay with traditional product cadence (design cycles and turnover rates) and product refresh rates. The rapid growth by EV-only manufacturers, changes to design and manufacturing processes, increased competitive pressures, and global regulatory requirements are resulting in fundamental shifts. [OP-99]

    Agency Response: CARB disagrees that the purpose of the ACC II ZEV regulation is either to reward ZEV market leaders or to accommodate their slower competitors. California Health and Safety Code Sections 38560, 38562, 43018, and 43018.5 require CARB to set regulations to achieve the maximum technologically feasible and cost-effective reductions in motor vehicle emissions. While manufacturers' current ZEV production may be relevant to the burden that regulatory compliance places on them, the ZEV regulation is not intended or designed to reward, accommodate, or punish any manufacturers. See response to Comment A-3 which explains how CARB approached the ACC II regulations.

    In developing the ACC II ZEV regulation, staff used the best available information and good engineering judgment to determine the ultimate stringency of the rule, which included an assumption of vehicle redesign every 5 to 7 years, in line with typical industry practice.[6] Even if this is a conservative assumption, or a more untraditional

[6] See pg. 41 of the ACC II ISOR.

assumption could have been made as this commenter suggests, CARB found the stringency ultimately adopted in the ACC II ZEV regulation to be technological feasible and cost-effective.

13. Comment: The Staff Proposal for ZEV sales requirements in the ISOR aligns with CARB's "Slow Phase" scenario. We are calling on CARB to increase the ZEV annual requirements to be more in line with the "ASAP" scenario. According to the ZEV market share scenarios…the currently proposed 2030 requirement does not even meet Staff's Slow Phase scenario. The Slow Phase results in an over 75% market share by 2030, and based on ongoing automaker commitments, we believe that California is headed on a track that falls between the Slow Phase and ASAP scenarios. We think it is reasonable to increase the MY 2030 ZEV regulatory requirement. [OP-179]
Comment: In its analysis related to model turnover scenarios, CARB finds the proposed stringency to be less than the "Slow Phase" model turnover scenario through 2030. That analysis does not appear to consider the significant flexibilities built into the proposed regulation, which allow actual ZEV sales in 2026-2030 to be 20+% less than required ZEV compliance values during those years, suggesting actual ZEV sales could lag a slow industry transition to ZEVs even more than modeled. [OP-154]

    Comment: Higher sales targets leading up to 2035 are not only necessary, they are exceedingly feasible. Figure 6 on page 41 of the ACC II Initial Statement of Reasons (ISOR) shows that higher sales targets are achievable, particularly in 2030. CARB staff explored two key scenarios: an "ASAP scenario" where Original Equipment Manufacturers (OEMs) convert 100-percent of sales of model redesigns after 2026 to ZEVs and a "Slow Phase scenario" where large OEMs convert their models slowly over the next decade based on market share of ZEV models. In the ASAP scenario (which is reasonable in a technology-forcing rule given recent ramp-ups in other countries and OEMs ZEV announcements), staff found that the state would achieve 90% sales by 2030. Even in the Slow Phase scenario, the state would achieve close to 80% sales by 2030. This Slow Phase scenario essentially represents business as usual with a small push from a regulator towards ZEV redesigns. It is clear from CARB's own modeling of these scenarios that CARB *can* do more. It is clear from CARB's own modeling in the Mobile Source Strategy that it *must* do more. [OP-85]

    Comment: In its discussion of feasibility, staff outlines several "model turnover" scenarios which assess how rapidly manufacturers can introduce new ZEV models into the fleet. As shown in Figure 8 of the ISOR, shown below, the "slow phase" scenario closely mirrors the proposed ZEV requirement through MY 2028, after which the current ZEV requirement begins to fall short. Given the urgency of the climate crisis, the ramp rate should not be slower than what staff has concluded to be feasible. [OP-99]

    Agency Response: CARB considered these comments and believe the commenters misinterpreted the purpose of its model turnover scenarios in relation to establishing stringency for the ACC II ZEV regulation. As stated on page 40 of the ISOR, staff analyzed manufacturer model turn over "to understand the upper bound for ZEV deployment," not to determine wholly the technology feasibility or cost-effectiveness

of the regulation, and did not assess cost impacts or environmental benefits of each model turn over scenario analyzed. The conclusion of this analysis was used to help inform the ramp rate of the ACC II ZEV requirements. Stated on page 40 of the ISOR, "Staff's analysis of model turnover shows a feasible pathway for manufacturers to introduce new ZEVs at the pace necessary to meet the stringency targets while remaining on a conventional redesign schedule and not having to prematurely terminate or redesign an existing model." Also, see response to Comment A-3 for response to the alternatives analysis and approach to determining ACC II ZEV stringency. Additionally, these commenters draw conclusions based on the names of the scenarios: Slow and ASAP. Names assigned scenarios were meant to distinctly identify scenarios in this one analysis rather than to value the trajectories themselves as unequivocally slow or fast. As noted on page 41 of the ISOR, the "Slow Phase" scenario assumes gasoline and ZEV variants of the model continue to be sold after the earliest redesign post-2025 but the percentage by which the market share of the ZEV variant increases each year depends on the relative share of sales of that model within the OEM's portfolio, with the best sellers allowed 10 years to fully convert to the ZEV variant while smaller volume models assumed only 3 years to fully convert. Also on page 41, the "ASAP" scenario assumes 100-percent of sales of that model would be converted to a ZEV in the earliest redesign year beginning in 2026, with the announced models pulled forward to 2022 to begin production.

14. Comment: The disparity in market share between trucks and passenger vehicles is forecasted to continue to grow. CARB must counteract this trend by requiring electrification on a faster timeline. [OP-180]

    Agency Response: CARB considered these comments and did not agree that the ACC II regulations should or will affect market trends in vehicle segments so long as the emission standards are met. CARB proposed and adopted emission standards on new vehicles to which the rule applies such that, by 2035 MY, any new vehicle sold within the State must have zero emissions or meet the requirements for a PHEV (anticipated to contain an ICE). As explained starting on page 13 of the ISOR and in ISOR Appendix G, a key finding of staff's technology review and feasibility analysis was that ZEV technology developments have "enabled manufacturers to accelerate plans to bring to market more long-range ZEVs in more market segments and highly capable PHEVs." The ACC II regulations are not expected to impose limits on the range of models offered by manufacturers.

Opposition – Weaken ZEV Stringency

15. Comment: While I think the goal of ACC II is worthy, mandating something like this without making sure that everything needed for it is in place, or already on the way is folly - and that is what ACC II currently is folly. To pick a number out of thin air – probably based on ramping up to another date picked out of thin air (governors 2035 zero ICE goal) just doesn't make sense. I am against this arbitrary goal of 35% and think you should get the infrastructure ready before making such a goal, and provide a meaningful way for all to participate prior to any future goals like this. [OP-4]

Comment: Commenter, expressed in two separate board hearing testimonies, has grave concerns regarding the CARB's proposed Advanced Clean Cars II Rule. The 2035 goal to ban the sale of all gas vehicles is not only arbitrary, but it's not even based on any market feasibility study to fully consider the effects of the ban. [T2-30, T1-94].

Comment: Banning the internal combustion engine would cause significant financial harm to the working men and women of the Building Trades by banning the sale of internal combustion engine (ICE) light-duty vehicles beginning in 2035. [OP-53].

Comment: The regulation is too much, too soon and will negatively affect the most underserved communities in California. [T2-3, T2-4]

Comment: I urge you to restore common sense to California's leadership. We need petroleum products. They are affordable and clean burning nowadays. Climate change is a given. Earth is used to a warmer climate than we have today. Over the past ~500 million years, 75% of the time there was no ice at the poles. Both the Arctic and Antarctic regions had what we know today as tropical climate. Drill baby drill! [OP-158]

Comment: I urge you to abandon California's foolish transition to 100% electric vehicle sales. Historically we've led the nation on setting strong auto emissions standards — but carbon dioxide is not a pollutant. It is necessary for life on earth to exist. Without it, all plant life would die. Attempting to reach 100% zero-emission vehicle sales by 2030 or even 2035 is a fool's errand. California must lead the way by abandoning the foolish drive to eliminate carbon dioxide. [OP-158]

Comment: I urge you to REMOVE California's SELF DESTRUCTION on clean cars by accelerating the state's transition to 100% electric vehicles and requiring cleaner new gas-powered ones. Climate pollution from gas-powered cars and trucks makes up nearly 30% of total emissions in California. These vehicles are a massive driver of the climate emergency NARRATIVE, devasting our state with deadlier, more damaging wildfires, heat waves, and drought.? GIVE CONCERNED CITIZENS WHO WANT TO PAY MORE TO THE EARTH GREEN OPTIONS AT THE PUMP. Historically we've HAVE BEEN A FAILURE FOR the nation on setting strong auto emissions standards — but the current clean cars proposal falls short of the action we need. THERE IS NO WAY TO REACH 100% zero-emission vehicle sales until 2035, it will be too late for California to meet its goal of carbon neutrality by 2045, since many new vehicles last 20 years or longer. Moving that target to 2030 will give our state a better chance of meeting its climate goals and remaining a global leader on clean cars. THE LAWS OF PHYSICS ARE HOLDING US BACK AND WILL NOT CHANGE. This transition is a tremendous opportunity to create family-supporting, high-road jobs for Californians. We urge you to seize this moment and adopt nation-leading clean car standards that slash THE climate ECONOMY DESTROYING equity, and CRUSHING good jobs. BY HAVING FUEL DISTRIBUTORS ADD A "GREEN FUEL PUMPS" and passing the costs onto customers it will give them opportunity to do the right thing and virtue signal the importance of how expensive it is to save the earth. [OP-158]

Comment: Commenter respectfully requests that the Board not approve ACC II and instead continue to allow for a market-driven response to meet California's air quality standards. [T2-46].

Comment: I strongly object to your plan to eliminate gas powered vehicles. [B2-10]

Comment: You guys want to stop selling gas car in california and have only Electric car… I think you guys are jump two steps forward only to be pushed back by 3 steps backwards. I believe we can get to move of hybread of cars. Not all the way electric cars. The Governor is out of dreaming of the perfect world and it does not exist. I think we can get to all electric cars but not by 2035 maybe by 2060 [B2-8]

Comment: Please do not ban the sale of gasoline powered automobiles. This is a move that consumers should make, not a regulator. [B2-1].

Comment: …mandating electric cars by 3035 just highlights how out of touch with reality the state govenment is! PLEASE apply some common sense to the literally unobtainable goal of all electric cars by 2035. [OP-62]

Comment: The proposed policy to drastically cut and end the sale of gas powered vehicles is not the way to do that. It is too much change too fast. [T1-25].

Comment: Commenter may be interested in purchasing an EV in the future, but is "very much against banning new gas cars by 2035 or later." [OP-21]

Comment: …express strong opposition to the ACC II regulations. Banning all forms of internal combustion engines, regardless of how clean an engine may be, and eliminating all future technological advancements that may be developed is a disservice to both Californians and the technology sector. [OP-117].

Agency Response: CARB received many comments opposing or expressing concerns about CARB's ACC II ZEV stringency. See agency response to Comment A-3 for how CARB approached setting stringency that was maximum feasible and had the greatest cost-to-benefit ratio. As discussed in agency response to comment A-5 and A-9, CARB did not propose or adopt a phase-out or ban of all internal combustion engines. In addition, the adopted ACC II regulation is based on extensive analyses of feasibility. See, e.g., ISOR, App. G., ACC II ZEV Technology Assessment. It also considers impacts to disadvantaged communities. See also responses to comments in FSOR Appendix A, Legal Authority and Obligations, Equity and Disparate Impacts discussing comments on disparate impacts of the ACC II regulations.

As to public participation, CARB held five public workshops and listening sessions from September 2020 through October 2021, in addition to dozens of meetings with stakeholder groups and individual stakeholders. These included assessment and discussion of regulatory concepts, alternatives, data and analysis, and regulatory language. CARB's process for developing the regulations exceeded the requirements for public participation. The comment does not provide any further elaboration on any deficiencies in the public process, and so no further response is necessary.

16. Comment: The proposed mandate requires EV sales to triple in three model years and most of the states following California must see a seven-fold increase over the same

time period. These assumptions strike as unrealistic and potentially disruptive to the domestic auto industry. These standards are based on 2021 data where the average EV price was about $60,000, which would mean these vehicles are likely being bought by affluent single-family homeowners with a modern electric panel just a few feet from their garage where they will charge their EV. Achieving 30, 50, or 70 percent of the new car market will require reaching buyers of more moderate means…Consumer demand, not government mandates nor industry goals, will determine the growth of EV sales in the United States. Therefore, we have significant reservations about CARB's proposal and encourage CARB to withdraw this proposal. [OP-93]

Comment: While consumer interest in ZEV technologies is growing, we are concerned about the 2026MY starting requirement of 35% and the pace of increase year-over-year thereafter. [OP-150].

Comment: Our focus is not on the longer distance 2035 goal, but it's the approach of starting in 2026 at 35 percent when we're not understanding only about an eight percent. [T2-29]

Comment: While Honda is very much committed to an electric future, it must be noted that the ACC2 regulations as proposed will be exceedingly challenging to meet. It should also be noted that these regulations disproportionately affect manufacturers with a larger share of national sales in CA and the §177 states. As we have collectively experienced, markets are built methodically, one customer at a time. Yet the stringency of these regulations – particularly in the early years of the program – are extremely ambitious. While we are cautiously encouraged by California's recent EV adoption rates, the market share of EVs in the Section 177 (§177) states remains deeply troubling. Not only are adoption rates in these states below the market share found in California, but they are also grossly below imminent upcoming regulatory requirements that automakers will face in as little as three years. [OP-57].

Comment: Meeting the requirements in California requires tripling EV sales in just three model years. In most of the states following California, EV sales must increase five-to seven-fold in that same period. [15-24]

Comment: CARB's ZEV targets will be extremely challenging. Automakers could have significant difficulties meeting targets given elements outside of the industry's control. These include, but are not limited to, significantly higher material costs, stress supply chain and sourcing, inconsistent consumer incentives, and inadequate charging infrastructure. [T2-10]

Comment: We have concerns about the extremely challenging staff proposal and the tripling of the vehicle volumes in three years. [T1-37].

Comment: The ACC II ZEV sales curve is aggressive, and cooperative partnerships between vehicle manufactures and Government will be required to achieve success. [OP-94]

Agency Response: CARB considered these comments objecting to the stringency of the ZEV sales requirements and adopted the level of stringency it determined was appropriate considering the evidence before the agency and requirements for the

proposal. See response to Comment A-3 for how the stringency levels for the ACC II ZEV regulation were determined to be appropriate and California's statewide commitment to reducing vehicle emissions. Additionally, the adopted ZEV assurance measures were included on the principle of ensuring broad market acceptance this commenter mentions as critical to achieving high market penetrations of vehicles that met a zero-emission standard. CARB has engaged extensively with vehicle manufacturers and other government agencies to develop the ACC II regulations. Some manufacturers expressly commented on this and as a whole do not oppose the regulations. Several states are planning to adopt the regulations in their states. The above comments at the August 25, 2022, public hearing about "significantly higher material costs, stress supply chain and sourcing, inconsistent consumer incentives, and inadequate charging infrastructure" are responded to where they are made with more detail in FSOR Appendix A, Summary of Comments to the Overall Advanced Clean Cars II Regulations and Agency Responses. Also see FSOR Appendix A, responses to Comments E-10 and E-31 for how CARB has assessed the high price concerns as they relate to future affordability of vehicles and potential negative effects on the ZEV market.

17. Comment: Commenter states that CARB should "evaluate the feasibility of achieving CARB's anticipated near-term ZEV sales targets given current low adoption rates and consumer concerns." [OP-161-85, incorporated by reference into comment OP-97]

    Comment: Commenter expresses general concerns about the feasibility that the market will accept only zero emission vehicle, especially in a state like Massachusetts who will likely adopt California's ACC II rule. [OP-114]

    Agency Response: CARB considered these comments on concerns regarding low adoption rates of ZEVs and did not amend the stringency of the ACC II ZEV regulation. In its rulemaking, staff analyzed the feasibility of the regulations, including current and projected ZEV sales and manufacturing, as well as consumer response and attitude toward ZEVs. See agency response to Comment A-3 for how it determined feasibility and cost-effectiveness of the ACC II ZEV regulation.

    Lastly, CARB does not set standards for other states and did not assess feasibility of other states adoption of the ACC II regulations. The Clean Air Act allows other states to adopt California vehicle emission standards, including the ZEV regulation. CARB does not have authority over states that adopt California's regulations. While it is expected that some states will consider the ACC II regulations as adopted, CARB considered aspects of the regulations that would support such actions to the extent feasible within the scope of its authority.

18. Comment: There are very real challenges in meeting consumer demand for affordability, ease of charging, while at the same time overcoming existing global supply chain disruptions and limited access to critical minerals. And all of these challenges are amplified for smaller manufacturers like Subaru. Our path to achieving an all-electric future is different than larger manufacturers. Our small size globally in terms of capital resources and having only five production lines across two

manufacturing plants worldwide requires deliberate approach -- a more deliberate approach to achieving transformative change. [B1-20, T1-6]

Agency Response: CARB recognizes the effort and investment required to meet the ACC II ZEV requirements. This was acknowledged beginning on page 40 of the ACC II ISOR, that it is understood manufacturers are at different places in terms of technology and market development. As such, CARB also adopted various flexibilities in recognition of these differences, aiding in compliance, and still keeping manufacturers on a path to 100% ZEV and PHEV sales by 2035. Also, see agency response to Comment A-3 for CARB's approach to setting stringency for the ACC II ZEV regulation.

19. Comment: The proposed sales percentage requirements are incredibly challenging, especially for smaller OEMs. [T1-8, T1-14]

    Agency Response: CARB recognizes that small-volume manufacturers have different capacities to meet the ZEV requirements and have different environmental and public health impacts than manufacturers with greater sales volumes and adopted regulations reflecting that variation. As discussed in ISOR Appendix F-5, small volume manufacturers typically only certify one or two unique models in a MY. In total, they represent less than 2% of total new vehicle sales in California and therefore have a limited impact on California's emissions inventory. Accordingly, ACC II included several provisions to account for the special circumstances of small-volume manufacturers. In particular, the final regulations delay small-volume manufacturers' obligation to comply with the 100% annual ZEV requirement until 2035, avoiding undue burdens and providing flexibility to those manufacturers in the near-term while ensuring they wind up in the same place as the larger manufacturers in terms of emissions. Allowing small-volume manufacturers to earn, bank, and trade ZEV and PHEV values in the meantime incentivizes earlier action to meet the 2035 requirement and can help support the intermediate and large volume manufacturers. The requirement to submit a compliance plan by December 31, 2032, ensures these manufacturers are planning ahead with a sufficient amount of time to shift their production to comply with the 2035 requirement.

B. Flexibilities

Overall ACC II ZEV Regulation Structure

1. Comment: CARB received several comments expressing disappointment or frustration with the number of flexibilities in the ACC II regulations, siting this could delay the deployment of ZEVs. [T1-26, T1-52, T1-46, T2-36, T1-70, T1-71, T1-77, OP-51]

   Comment: As proposed, the ACC II standards seek to take some substantial steps forward in electrification starting in Model Year (MY) 2026. CARB's top line of the proposal is anchored in requiring 35% ZEV sales in MY 2026, however, the extensive compliance flexibilities offered in the proposal will significantly reduce this stringency, and per Tesla modeling, could result in real world, MY 2026 ZEV deployment of an estimated 16%. See Figure 1. While the top line takeaway of the ACCII proposal

suggests a 35% MY 2026 starting point escalating to 100% by 2035, due to compliance flexibilities including the use of historical credit banks (-5%), plug-in hybrid (PHEV) permissibility (-7%), Environmental Justice (-2%) and Early Compliance credit options (-5%), if all compliance flexibilities are utilized which most should be as elaborated upon more below, the actual implied stringency in MY 2026 is 16% in real world sales versus the 35% stringency standard, a far less ambitious outcome than Tesla believes should be intended to realize the emissions reductions sought….The final regulations should be amended to assure that CARB's ambitious goal are realized in actual vehicle deployment and not just annual credit compliance reports…. Indeed, the Governor and California Energy Commission recently trumpeted that California ZEV sales has already hit 16% with more than 82% of those ZEV sales being BEVs. By direct comparison, our analysis shows that the MY 2026 real world draft ACC II regulation stringency, still several years away, starts at the same 16%. This falls short of other proposals across the world. For example, the U.K. will achieve 22% BEV sales in 2024 and the E.U. will achieve it in 2025. [OP-78]

Comment: When all those flexibilities are taken into account, ACC II model year 2026 requirements are not much more stringent than the 17 percent ZEVs that will result from the federal standards in that year, and California can do so much more. [T1-2]

Comment: Altogether, CARB's analyses indicate the proposal is a conservative regulation that could be strengthened to deliver additional economic, emissions, and equity benefits. While this proposed regulation does strengthen ZEV value requirements in 2026-2028 compared to previously workshopped scenarios, it adds additional flexibilities that mean ZEV sales in those years could be theoretically lower than in earlier proposals, and it actually reduces stringency in 2029-2030 by 1-2 percentage points compared to earlier proposals. [OP-154]

Comment: We are therefore concerned with the changes to the phaseout of the carryover credits from what was previously proposed, as this may reduce the near-term electric vehicle sales. [T2-48]

Comment: Given the OEMs' expectations of high ZEV sales prior to the regulation, existing flexibilities to use ACC I and ACC II credits, and new credit generating opportunities through early action, there is a significant risk in California that the actual level of ZEV sales will fall short of the expected sales level in the ISOR. Absent a stronger rule, the combined flexibilities could undermine air quality benefits in California while also delaying the mass production and increased competition among OEMs needed to accelerate more mainstream ZEVs for low and moderate-income drivers. [OP-166]

Agency Response: CARB has assessed these comments that assert the ACC II ZEV regulation includes too numerous or generous flexibilities that will result in fewer ZEVs, such that the overall emission reduction goals will not be attained. CARB disagrees with these commenters' assessments. CARB determined, based on the record before it, that these flexibilities, with appropriate limits, play an important role in the success of the ACC II regulations and informed the feasibility and cost-effective assessments of the annual ZEV requirements. See also response to Comment A-3 for CARB's approach to setting stringency for the ACC II ZEV regulation, and its approach for

developing flexibilities for manufacturers to be able to comply with such standards. See the response to Comment E-1 regarding the inclusion of PHEVs and the response to comment D-21 regarding the inclusion of EJ values, both of which CARB considered appropriate and necessary to achieve 100% zero-emission standard by 2035 and encourage manufacturers to engage directly in low income and disadvantaged communities. Additionally, a commenter asserts early compliance values also reduce stringency, but that is inaccurate, as those values are only earned because of overcompliance prior to the start of the program and result in benefits earlier (in other words, the ZEV reaches the road, just earlier). Lastly, converted ZEV and PHEV values (referred to as historical credits) have been considered by the Board and included as a flexibility, with limitations, only in the event a manufacturer fails to meet its annual ZEV requirement (see response to Comment B-12). And all of these flexibilities, except for the capped inclusion of PHEVs, expire after the first three to six MYs of the program.

2. Comment: [W]hile Tesla supports some compliance flexibilities, as described below CARB should reorient some of the proposal's flexibilities to ensure greater real world ZEV deliveries. To mitigate the substantial erosions in actual ZEV deliveries that will occur under the current proposal, Tesla suggest that CARB institute an overall limit on total annual flexibility utilization to 20% for each compliance model year. As Tesla's modeling in Figure 2 shows, instituting such an annual limit on credit utilization could dramatically increase actual deployment of ZEVs each model year and provide greater alignment with the Governor's executive order. [OP-78]

   Comment: Commenter requests that all flexibilities be capped at 20 percent usage for compliance years [T1-43].

   Agency Response: CARB considered these comments and did not agree an additional over allowance for all flexibilities to be appropriate for the ACC II ZEV regulation. CARB acknowledges that further restrictions on the annual usage of flexibilities that can be used to meet a manufacturer's ZEV obligation in lieu of newly produced for sale ZEVs could provide greater certainty on the minimum number of ZEVs being produced each year but does not agree that this would be reasonably likely to increase benefits or be more effective at reducing emissions. As further explained in the agency's response to Comment A-3, CARB adopted maximum feasible standards necessary to achieve emission reductions which ramp up more quickly in the first years as compared to the last 4 years. Achieving certainty on the number of vehicles delivered pursuant to a zero-emission standard would also mean that there is an increased risk that typical year-to-year fluctuations would routinely put manufacturers in and out of compliance jeopardy in a manner that undermines the stability and long-term planning needed to successfully transition the entire light-duty fleet. There are many factors that influence overall sales and success of individual models that are outside the manufacturer's control not to mention unexpected interruptions from suppliers, raw materials, labor, manufacturing facilities affected by natural disasters, etc. that can lead to significantly different sales volumes of any particular ZEV or non-ZEV in a MY. Further restrictions may unnecessarily increase the year-over-year compliance risks such that manufacturers are forced to routinely implement much more costly short-term actions to counteract these interruptions, which lead to

increased vehicle prices to consumers and could hinder the transition of the new vehicle fleet to predominantly ZEVs. Lastly, the regulations now count vehicles in terms of one value per vehicle, and in 2032 and subsequent MYs, only averaging, banking and trading as compliance flexibilities are retained in ACC II ZEV, reducing potential uncertainty around the number of vehicles delivered for sale pursuant to the ACC II regulations.

3. Comment: [1962.4](h)(2) Incur and carryforward deficit. We recommend clarifying this language and perhaps including an example, such as "For example, the manufacturer must make up a deficit earned in 2026 model year no later than the 2029 model year." [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34]

   Agency Response: CARB concurred with this comment and added language by the Notice of Public Availability of Modified Text and Availability of Additional Documents and Information Proposed Advanced Clean Cars II Regulations, July 12, 2022, as amended by Errata and Comment Period Extension, July 13, 2022, (collectively, First 15-Day Notice) to section 1962.4(h)(2) to provide an example to improve readability.

4. Comment: …we support CARB's move to make one electric vehicle get one ZEV credit. [OP-98]

   Comment: Commenter supports CARB's efforts to both simplify the vehicle accounting and to ensure that over compliance prior to MY 2026 does not threaten ZEV deployment goals of the ACC II program. As the largest generator of ZEV credits under ACC I, Tesla supports CARB's efforts to address the backsliding that could occur given the excess credit banks that will have built up at the end of MY 2025. [OP-78]

   Comment: Based on the growing number of plug-in ZEV options, including multiple battery electric pickup truck and SUV models, it is likely ZEV standards can be achieved with plug-in vehicle technologies alone. Hydrogen fuel cell electric vehicles may also play a role in light duty ZEV market, but for the sake of public health and welfare, standards should not be weakened or slowed because some automakers have chosen to comply with current standards using fuel cell electric vehicles. In addition, the three automakers that currently or have recently sold or leased hydrogen fuel cell vehicles in California (Toyota, Hyundai, and Honda) also have plug-in EV production plans, showing their ability to pursue models using different ZEV technologies at the same time. We support the proposed ACCII ZEV regulations that value hydrogen fuel cell electric and battery electric vehicles equally. [OP-172]

   Agency Response: CARB appreciates the support for its approach to awarding vehicle values (at a value of one) and value life limitations that have been included into the ACC II ZEV regulation. CARB notes, however, that the use of PHEVs for compliance is capped to ensure most vehicles are ZEVs.

5. Comment: Rivian also supports the introduction of expiration dates for both historical and newly generated credits, limiting the life of an excess vehicle value to up to five years in the future or three years in the past. We agree that expiry dates help ensure

that averaging, banking, and trading provisions only enable a smoothing of year-to-year ZEV fluctuations, rather than permitting OEMs to stockpile credits several years ahead of their obligation. Rivian suggests CARB extend this reasoning into the later years of the program and set all credits to expire by the 100% ZEV date, preventing an OEM from carrying deficits after 2035 MY or from using banked credits to sell ICEs post-2035 MY. By capping the use of credits after the 100% ZEV date, CARB can protect the spirit of the regulation and help achieve the governor's climate targets. [OP-127, B1-10].

Agency Response: The comment is not clear what is intended by the reference to three years in the past. CARB assumes this is a reference to the provision that allows a vehicle value to be applied up to three previous MYs to resolve a deficit. CARB appreciates support for its treatment of converted and banked values. It is true that there could be limited banks of values in 2035 MY to help manufacturers fulfill shortfalls. However, the ability for manufacturers to over-comply and bank those values leading up to the 2035 MY will become more difficult. And no values will be banked after the 2035 MY, since the requirement is for manufacturers to meet a 100% ZEV standard. Therefore CARB is allowing manufacturers to fulfill shortfalls with values in 2035 MY and beyond, and the impact to overall volumes is expected to be limited.

Early Compliance Vehicle Values

6. Comment: Commenter strongly supports early compliance credits for automakers and asks that the rule allow automakers to use the credits for three model years after entering the program; this would make it easier for other states to join the program in 2026 or 2027 [OP-86].

   Comment: However, it is important to note that not all current Section 177 states will be able to adopt the regulation this year, and therefore some states will miss the first compliance year for ACC II– likely having to start the regulation in MY2027 or later. The flexibilities in the regulation are applicable to all states, including California, but one provision is more relevant to these "delayed" Section 177 states– the Early Compliance Credit mechanism. This flexibility allows states that may need to start adoption in later model years to still utilize credit flexibility mechanisms in the 2 previous model years prior to joining the program. In addition, the flexibilities available to all states, including California, are structured such that they can help states with lower current ZEV sales achieve the aggressive ACC II standards. [OP-99]

   Comment: Commenter supports the modifications to the early-compliance credit flexibility that will provide important flexibility for Section 177 states that may adopt the program after model year 2026 [15-20].

   Comment: (e)(3)(A) Early compliance values, qualifying vehicles We want to clarify our understanding of this section. When a state adopts this regulation, 13 CCR 1962.4, early compliance values (ECVs) will be available in that state for the two model years prior to implementation of this regulation in that state. These ECVs would be generated for all ZEVs and PHEVs more than 7 percent if the state sold less than 7 percent ZEVs and PHEVs on average in the 2020-2022 model years calculated per 13

CCR 1962.4(e)(3)(A)2. For example, if a state that adopts these regulations next year (2024 model year), for implementation in 2027 model year, a manufacturer could earn ECVs for qualifying vehicles produced in 2025 and 2026 model year. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34]

Comment: BMW NA requests clarification that when a state adopts this regulation, 13 CCR 1962.4, that early compliance values (ECV) described in 1962.4(e)(3)(A) are available for two model years prior to implementation of this regulation. Furthermore, these ECVs would be generated for all ZEVs and PHEVs exceeding 7% ZEVs and PHEVs on average from 2020-2022. For example, if a state adopted these regulations in 2024, with implementation to begin in 2027 model year, the ECVs would be generated for eligible vehicles in 2025 and 2026. This would ensure there is no confusion whether the years ECVs are eligible to be generated are based on the year this regulation is adopted versus implemented. [OP-133]

Agency Response: CARB appreciates these supportive comments. To clarify per the comment's requests, the ACC II ZEV regulation refers to the time in which vehicle values are allowed to be used for the two MYs prior to the commencement of the Annual ZEV Requirements of this section, based on the first year of implementation of the program. Additionally, CARB does not set standards for other states. The Clean Air Act allows other states to adopt California vehicle emission standards including the ZEV regulation. CARB does not have authority over states which adopt California's regulations. While it is expected that some states will consider the ACC II regulations as adopted, CARB considered aspects of the regulations that would support such actions to the extent feasible within the scope of its authority.

7. Comment: Early compliance credits should not erode overall stringency….the [early action values] incentive does impact the near-term stringency of the ACC II program as manufacturers will be incentivized to produce more than 20% ZEVs in MY 2024 and MY 2025, but likely will dampen MY 2026 and 2027 production. Many manufacturers will not be compelled to significantly expand MY 2026 and 2027 production as the accumulated early action credits will fill the gap between the more than 20% production level in 2024 and 2025 and the need to meet only a 35% target in 2026. The gap between over 20% and 35% will be easily filled using the accumulated early action credits and other credit flexibilities, and likely, not more actual ZEVs. [OP-78]

   Comment: We support added values for early compliance, but the proposal seems unattainable for many in the industry. In our previous comments, Lucid Motors suggested CARB support early action ZEV deployments before Model Year 2026 through design of the ACC II program. Accordingly, we are grateful for CARB staff's consideration of this item and intrigued by the proposal for early compliance values in the draft rule. We believe this can be a powerful tool and important part of the regulation to accelerate ZEV sales and emissions outcomes. Nevada, for example, recently adopted standards with early action as a key attribute of the regulation. However, rather than simply being used as a concession to automakers, it should result in the continued raising of the bar by adjusting the stringency accordingly. [OP-154]

Agency Response: CARB assessed these comments and does not agree that ZEV stringency should be adjusted due to the inclusion of early compliance. See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers.

The primary purpose of early compliance values is to incentivize manufacturers to deliver on projections[7] prior to the start of the new regulation requirements, and a potential way to bring up sales in the worse-case scenario if setbacks, such as supply chain disruptions, continue. Additionally, early compliance values could produce emission reductions earlier for the light-duty sector. Overall, early compliance values would be earned in overcompliance with ACC I ZEV regulation requirements (above 20% ZEV sales of the totally number of vehicles delivered for sale on average in California over the 2020 through 2022 MY) and represent emission reductions before the start of the ACC II ZEV regulation. It is speculative whether or not this flexibility will have the effect of dampening stringency in the years that manufacturers can make use of the flexibility. Other scenarios are also plausible, in that manufacturers could create high market demand by pulling forward products early into 2024 and 2025 MY, which would drive volumes higher in the 2026 through 2028 MYs. Additionally, this flexibility is balanced with a cap, meaning a manufacturer could only meet up to 15% of its 2026, 2027, and 2028 MY requirement with early compliance values. Early compliance vehicle values reward progress above current market shares, and thus is calibrated to award value depending on sales averages in states with greater or lesser current market development – thereby rewarding progress in states still coming up to speed, or accelerated progress in more developed markets, while not diluting overall regulatory requirements.

8. Comment: CARB can cure this erosion of stringency [by the early compliance values] by raising, as Tesla suggests, the annual model year ZEV percentage requirements, and by not incentivizing further MY 2024-2025 PHEV deployment by making only BEVs eligible for the early action crediting. [OP-78]

   Agency Response: CARB assessed this commenter's suggestion to only allow BEVs to generate early compliance values and did not change its proposal. CARB also disagrees with the premise of this comment that flexibilities erode overall stringency. As further addressed in response to Comment E-1, CARB has adopted the ACC II ZEV regulation with a path to meet a minimum portion of their annual requirement with PHEVs. Changing the early compliance values to be earned by BEVs would not be in line with its views of PHEVs in building the California's market of new-light-duty vehicles pursuant to a zero-emission standard.

   See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers.

9. Comment: Hyundai proposes to allow the earning of early compliance vehicle values to begin three years prior to implementation and extend the use of the values from 2028 through 2030. Allowing manufacturers to earn early compliance vehicle values

[7] ISOR, p. 39 (Figure 4).

three years prior to implementation will further serve to encourage rapid adoption of these low- and zero- emission vehicles on an even more compressed timeline, and would also reward early investors and adopters of such technologies. Additionally, extending the use of these values through 2030 would provide added incentive for early compliance and is consistent with the general trend of an established 2030 sunset date for other flexibilities. [OP-124]

Comment: Commenter recommends CARB consider allowing ECVVs to remain valid for five model years or until model year 2030 (whichever comes first) [15-18].

Agency Response: While CARB appreciates these comments, CARB ultimately approved early compliance values being allowed to be earned two years prior to the start of the ACC II ZEV regulation and limited their use through the 2028 MY. Including 2023 MY would be affecting a model year already in production at the time of the rule's adoption. Since the first year of the regulation in California will be the 2026 MY, counting the 2023 MY likely would not be incentivizing manufacturers for increased action, but rather rewarding manufacturers for plans currently in production. Additionally, the limitation on the use of the early compliance values balances incentivizing manufacturers to ramp up vehicle volumes with the need to guarantee increasing new ZEV and PHEV volumes in the early years of the ACC II ZEV regulation.

10. Comment: To achieve our common goal to transition to zero-emission all-electric vehicles, we recommend that CARB adopt the maximum possible flexibilities to allow the industry, consumers, and the State to collectively achieve that goal. The regulatory stringency proposed in this rule is ambitious and unprecedented, so we encourage CARB to allow overcompliance in early years, without restricting the use of those credits in future years. Overcompliance in earlier years serves all stakeholder goals in accelerating the transition to zero emission mobility, while also allowing the auto industry to navigate uncertainty and local/state non-homogeneity in the ZEV market uptake, as well as the variability of complementary support like charging infrastructure, incentives, and consumer awareness campaigns. There should be little concern about "too much" early ZEV compliance undermining future goals when California's regulatory path is as ambitious as what CARB has proposed with an ultimate all-ZEV end point by 2035. [OP-98]

    We recommend that the use of Early Action ZEV credits for 2022-2025 not be discounted or constrained from use for model year 2026 and later years. Under the proposed CARB staff provisions, only credits for EV shares above 7% in non-California states for 2024-2025 are counted toward 2026 and later (and only above 20% in California), and these Early Action credits are only allowed to make up 15% of the 2026 and later requirements. These provisions disincentivize the early deployment of ZEVs before 2026; removing the Early Action constraints will increase EV deployment earlier than CARB's proposal. [OP-98].

    Agency Response: As with all flexibilities offered within the ACC II regulations, allowances (referred to as discounts or constraints in the comment) were used as part of the overall structure to ensure the ultimate requirement of 100% is feasible in light of the relevant factors that must be considered, such as costs, benefits, the time required for compliance, the distribution of impacts, and others. All flexibilities

included in the ACC II ZEV regulation were added with appropriate limitations that weigh the need for manufacturers to be able to manage year-to-year fluctuations in vehicle volumes and supply with the certainty California needs to meet its air quality and climate reduction obligations.

See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers.

11. Comment: We anticipate that manufacturers will have the option to choose between earning ACCI credits and ACCII ECVVs in several states, and accordingly find it appropriate that ECVVs can be earned by vehicles following the requirements under Section 1962.2 rather than those proposed for Section 1962.4. Given their analog to converted vehicle values, CARB should consider allowing ECVVs to remain valid for five model years or until Model Year 2030 (whichever comes first). We also note that converted ACCI values could have greater value than ECVVs. For example, a Model Year 2025 ZEV earning 4 credits under ACCI would convert those credits at a value of 1.9 and with a credit expiration of 2030, while the early sale of an ACCII ZEV would only earn 1 ECVV with expiration in 2028.If CARB's goal is to equalize ECVVs and converted values, the Board will need to consider additional actions. [15-18].

    Agency Response: CARB disagrees with this commenter's assertion that converted ZEV and PHEV values (called converted ACC I values in this comment) could have greater value than early compliance values (referred to as ECVV in this comment). Early compliance values have value beyond just the actual numerical value retained. Early compliance values can be used like other new vehicle values, meaning manufacturers are allowed to use them without having a shortfall, which in turn allows them to bank vehicle values generated in that MY, with a life of five years. This is more valuable to manufacturers who are already producing high volumes of ZEVs in the early years of ACC II ZEV regulation requirements and gives manufacturers the ability to bank new values. See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers.

    Additionally, CARB does not set standards for other states. The Clean Air Act allows other states to adopt California vehicle emission standards including the ZEV regulation. CARB does not have authority over states which adopt California's regulations. While it is expected that some states will consider the ACC II regulations as adopted, CARB considered aspects of the regulations that would support such actions to the extent feasible within the scope of its authority.

Converted ZEV and PHEV Values

12. Comment: CARB received comments in opposition to the use of credits earned in overcompliance with ACC I ZEV regulation. [T1-24, T1-78, T1-22, OP-61, OP-101, T2-36].

    Agency Response: CARB considered the comments it received in opposition to allowing ACC I ZEV credits to be used toward ACC II ZEV regulatory compliance. While CARB adopted ACC II ZEV regulation with the flexibility for manufacturers to

utilize credits earned in overcompliance with the ACC I ZEV regulation, it is important to note the accompanying provisions that limit the use of this type of value. The provisions are as follows: (1) pre-2026 banked credits will be converted by a factor of 2.1 to align with the effective one value per vehicle structure under ACC II; (2) these values are capped at 15% of the annual requirement (or cumulatively); (3) these converted values expire after the 2030 MY; and (4) only manufacturers that have a shortfall in a given model year can make use of these credits. (For example, Tesla, who sells 100% ZEVs will not be able to use these converted values because they will always be in compliance or overcompliance with the ZEV requirement). As noted on page 45 of the ISOR, allowing for some use of converted ZEV and PHEV values in the 2026 through 2030 MYs would continue to help manufacturers manage year-to-year fluctuations in annual vehicle volumes and still allow for full compliance. Limiting the usage and the life of banking within the program would help ensure manufacturers make progress toward future requirements rather than accumulate large compliance banks to stave off increasing deployment of ZEVs.

See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers.

13. Comment: Commenter is supportive of the flexibility to convert ACC1 ZEV credits at the end of the 2025 model year and for those credits to be available as allowances in ACC2 for model year 2026 and later [OP-96].

    Agency Response: CARB appreciates support for provisions that were adopted as part of ACC II to allow manufacturers to fulfill shortfalls through the 2030 MY with converted ZEV and PHEV values.

14. Comment: Commenter supports historical ZEV credit flexibility and recommends CARB consider allowing the use of these credits for 5 years after the program starts, rather than model years 2026-2030, stating this would allow ACCII to be adopted by more states that cannot complete a rulemaking before 2027 [OP-86].

    Agency Response: CARB considered this commenter's suggestion to float the timeframe for use of converted ZEV and PHEV values, similar to the approach taken for early compliance values. While CARB appreciates the commenter's suggestion, CARB ultimately adopted a moving timeframe in the case of early compliance values, which are intended to drive volumes prior to the start of the regulations. ZEV and PHEV credits under ACC I rewarded manufacturers for their ACC I ZEV overcompliance, but are of less value in ACC II (and only being usable, once converted, through 2030 MY in cases where the manufacturer has a shortfall (see responses to Comments B-1 and B-12)) to ensure the portion of ZEVs in the new vehicle fleet actually grows commensurate with the established targets. ACC II early compliance values also are only earned when manufacturers achieve greater market penetration—but with vehicles satisfying the more stringent requirements of ACC II. Thus, floating the ACC II early compliance values, and not the ACC I converted values, incentivizes earlier compliance with, and earlier emissions reductions from, ACC II.

15. Comment: Commenter states that CARB caps the annual use of historic credits to 15% of the annual requirement and retires these credits after MY 2030, but this cap

combines both historic BEVs and PHEVs credits. Thus, the cap does not address this newly created incentive toward near term PHEVs credit banking. Given the goal of ACC II is to accelerate emissions-free technologies and real-world studies demonstrate that current technology is far more polluting than realized, CARB could more fulsomely incent this by capping BEV and PHEV historic credit use separately with a cap of 10% for BEVs and 5% for PHEVs. [OP-78]

Agency Response: The 15% allowance for 2026 through 2030 MY balances a need to reward past efforts with the need to emphasize growing ZEV and PHEV sales. The commenter is correct that lower caps or individual lower and different caps could theoretically lead to more ZEVs on the road for some manufacturers in the early years of the regulation. However, this outcome is ultimately speculative. Such flexibilities offer manufacturers options to help manage year-to-year fluctuations in annual vehicle volumes and still allow for full compliance with the ZEV regulation. The benefits of a reasonably flexible regulation outweigh the benefits of a more rigid structure.

See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers.

16. Comment: CARB received several comments asking to remove the limitation that converted ZEV and PHEV values can only be used to fulfill a manufacturer's ACC II ZEV annual shortfall. [15-33, OP-124]

    Comment: Under the proposed regulation, converted credits that were based on credits earned prior to 2026 are limited to usage to fulfill 15% of the OEM's ZEV requirement. In addition, these credits can only be used to shore up a credit shortfall. BMW NA recommends allowing use of these credits to fulfill 15% of an OEM's ZEV requirement and remove the limitation that it can only be used to fulfill a shortfall. These credits represent vehicles sold above and beyond the requirement and in an earlier year. Actions to exceed the requirement should be recognized as such rather than be penalized. This flexibility will help to mitigate short-term market fluctuations in consumer demand as we build market momentum. [OP-133]

    Comment: To continue momentum in the acceleration of EVs, Ford urges ARB to allow usage of converted vehicle values in the calculation of ZEV Requirement Performance. Ford recognizes the concern of carrying large credit banks into the new program, and we are aligned with the 15% cap on converted value usage, and 5-year lifetime/expiration. However, manufacturers' ability to use the converted credits in 2026-2030Mys will ensure continued delivery of Evs to California for the remainder of the ACC-I program (2023- 2025MY). Manufacturers have earned these credits in good-faith, and their usage in ZEV performance is needed to support the significant increases in EV deployment to meet the 100% objective in 2035MY. [OP-94]

    Comment: Eliminate shortfall requirement: We recommend eliminating the requirement that converted or "historical" ZEV values can only be used if there is a shortfall. By allowing manufacturers to use converted credits to meet 15 percent of their requirement in a state, any credits beyond the Annual ZEV Requirement could then be pooled. This change would make the pooling provision, which sunsets after 2030, a useful tool. Otherwise, as proposed, a manufacturer with converted credits

must over-achieve the minimum compliance requirement to generate any pool credits. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34]

Agency Response: The ability for manufacturers to use converted ZEV and PHEV values (referred to as historic credits by this commenter) exists as noted in this comment. However, the limitations are necessary to the successful implementation of the ACC II ZEV regulation. As stated on page 44 of the ISOR, the industry as a whole, in 2021, was already above what the Midterm Review projected would be necessary for the 2025 MY. Even in the unlikely event that the industry were to flat line at current levels, most manufacturers would be in a position of carrying over significant credits into a future program. And if sales increases continue as projected by the manufacturer survey responses, there will literally be millions of excess ZEV credits and over 100,000 PHEV credits under the existing standards after the 2025 MY. Therefore, the regulation includes the following limitations: (1) pre-2026 banked credits will be converted by a factor of 2.1 to align with the effective one value per vehicle structure under ACC II; (2) these values are capped at 15% of the annual requirement (or cumulatively); (3) these converted values expire after the 2030 MY; and (4) only manufacturers that have a shortfall in a given MY can make use of these credits.

CARB considered one comment's assertion that allowing converted ZEV and PHEV values to be used to meet a manufacturer's performance, rather than just a shortfall would allow more use of the pooling provision. This is not in line with the purpose of the pooling provision, which is to wholly result in the same number of vehicles delivered for sale across all states that choose to adopt the ACC II ZEV regulation, recognizing the year-to-year differences that need to be managed between states. See response to Comment B-33 for more on why CARB adopted the pooling provisions in the ACC II ZEV regulation.

See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers.

17. Comment: Historical Banked Credits: We recommend that CARB increases the maximum usage of historical ZEV credits be allowed for up to 25% (instead of the proposed 15%), restricting the applicability only to pure ZEVs. The recommended change to the CARB proposal would promote greater EV deployment over 2023-2025, leading up to model year 2026. [OP-98]

    Agency Response: The 15% allowance for 2026 through 2030 MY balances a need to reward past efforts with the need to emphasize growing ZEV and PHEV sales. Additionally, PHEVs are already limited by multiple allowances: 15% of 20% of the manufacturer's overall obligation in 2026 through 2030. This is already much more limited compared to the allowance for converted ZEV values, and appropriately rewards manufacturers who have over complied with ACC I ZEV regulations with PHEVs. See agency response to Comment E-1 for its reasons for allowing manufacturers a limited option to comply with the ACC II ZEV requirement with PHEVs.

18. Comment: Unfortunately, under proposed §1962.4(g)(2), CARB's proposed conversion rate of banked credits carried into the ACC 2 compliance period significantly tips the balance to favor PHEV deliveries over BEV deliveries through MY 2025. BEV credits that accumulate under ACC I at a rate up to four credits per vehicle are converted to actual vehicle sales by dividing by four. In contrast, PHEV credits that accumulate on a one for one basis are converted by dividing by only 1.1. This results in ACC II increasing the relative credit value of PHEVs compared to ZEVs. For example, if a manufacturer sold both a 1000 BEVs and PHEVs in ACC 1 the manufacturer would accumulate approximately 4000 credits for the BEVs and 1000 credits for the PHEV. Under the proposal, these credits will be converted to 1000 BEV credits and 909. PHEV credits. This conversion rate incentivizes manufacturers to focus deliveries on PHEVs because the PHEV qualifications are less stringent now under ACC I, PHEVs are comparatively cheaper to manufacturer than BEVs, and the conversion rate in MY 2026 outweighs the value of PHEVs compared to BEVs. Moreover, the PHEVs that generate credits prior to MY 2025 will be more polluting as the increased PHEV performance requirements do not start until MY 2026. CARB should address the skewed incentive by amending the PHEV conversion rate, maintain the relative credit status quo in ACC I, and, as with ZEV, utilize a PHEV conversion denominator of 4. [OP-78]

    Comment: Commenter supports the proposal to add flexibility to converted vehicle values through optional cumulative allowance pathway, but considering this new flexibility and the substantial existing credit balance in California, the commenter also suggests increasing the discount factor. Since many of the vehicles delivered prior to model year 2026 will not meet the assurance measures proposed under this rulemaking, yet will earn up to 4 credits per vehicle, the commenter advocates for a greater discount factor closer to 4 [15-18].

    Agency Response: CARB agreed with these commenters that incorrect conversion factors were being used to adjust pre-2026 MY ZEV and PHEV credits and therefore modified the conversion factor for ACC I PHEV and ZEV credits, as presented in the First 15-day Notice. As explained in Attachment H-1, page 9, a factor of 2.1 is now being used in recognition of comments received regarding the separate factors that had the unintended consequence of making PHEV credits more valuable than the harder-to-earn and more expensive ZEV credits. The new conversion factor is applied equally to both ZEV and PHEV 2025 MY credit bank balances as the original awarding of those credits already accounted for the differences in the technologies. A factor of 2.1 was used based on the average credit amount earned for 2018 through 2021 PHEVs and ZEVs by manufacturers under the ACC I ZEV regulation.

19. Comment: Tesla supports the 15-day proposal for §1962.4(g)(2) that amends the conversion equation for banked BEV and PHEV credits carried over from the ACC I program. Altering the denominator to be 2.1 for both ZEV and PHEV credits recognizes that the previous proposal would have detrimentally increased the relative credit value of PHEVs compared to ZEVs. This change will properly eliminate any incentive for manufacturers to focus on near term delivery of PHEVs, at the expense of BEV deployment, with the less stringent requirements now present under ACC I. [15-8].

Agency Response: CARB appreciates the support for changes to the conversion factor for ACC I ZEV and PHEV credits presented in the First 15-Day Notice.

20. Comment: However, Volkswagen proposes that staff consider an alternative calculation that could optionally be selected by a manufacturer in lieu of 1962.4(g)(2)(A). This alternative approach is based on the development of a "blended" average ZEV and TZEV credit value that would be used in the denominator for both ZEV and PHEV conversion. Volkswagen considered the development of a single, blended average credit value that could account for the historic mixture of minimum ZEV and maximum TZEV obligations and average credit values for ZEVs and TZEVs that were delivered by manufacturers who featured both powertrain technologies (full-line manufacturers). Using the data shown in the table below (sourced from CARB's publically available ZEV data), Volkswagen has projected that a single average credit value can be determined to be 2.4. Volkswagen proposes an alternative, optional approach be added to 1962.4 as (g)(2)(B) which would allow manufacturers to convert the ZEV and PHEV ACC1 credit values by a single denominator value of 2.4. The resulting ZEV and PHEV allowances for ACC2 would continue to be subject to the same restrictions as the current converted credits, meaning that these credits would continue to only be eligible for use in filling in deficits and that PHEV converted credits would count against the overall 20% limit on the use of ACC2 PHEV allowances. This alternative approach would provide manufacturers with additional flexibility in determining the total ACC1 credit conversions and planning for ACC2 compliance. [OP-96].

    Agency Response: CARB considered this commenter's suggestion to add an additional conversion factor that manufacturers could use to convert ACC I ZEV and PHEV bank balances. While CARB appreciates the thought put into this proposal, the final regulations ultimately used a single conversion factor, and included no other optional factors, that is in line with the one suggested by this commenter to provide more certainty for compliance planning. It is unclear how an optional conversion factor not significantly different than the 2.1 factor for full-line manufacturers would benefit the delivery of vehicles pursuant to a zero-emission standard.

21. Comment: Commenter is concerned with the 15-day revision that allows ACC credits to be carried over to ACC2 at a multiplier of 2.1 as opposed to the original 45-day proposal to eliminate the use of a multiplier on carry-over credits. As a result, commenter opposes the proposed 15-day changes, which would implement a common 2.1 conversion factor for both ZEV and PHEV values [15-14].

    Agency Response: Staff's original proposal for the conversion rate for ACC I credits, which was never a multiplier, but rather a divisor to pre-2026 MY ACC I ZEV and PHEV credit banks, which will have the ultimate result of reducing credit banks, rather than increasing them.

22. Comment: Commenter requests additional flexibilities regarding pre-2026 model year credits including an allowance for banking and trading pre-2026 model year credits in the years where the manufacturer over complied with a 4-year life. [OP-124]

Agency Response: This comment lacks sufficient information to fully respond. Converted ZEV and PHEV values are not prohibited from being traded, and are allowed to be used toward meeting a manufacturer's ZEV requirement shortfall through 2030 MY.

23. Comment: CARB should not establish a cumulative cap for historic credits. Similarly, CARB should also not entertain any loosening of the annual cap under this provision. Creation of a cumulative historical credit cap over five years to be used in any amount during a single model year prior to 2031 would severely dampen near-term delivery of ZEVs. A cumulative cap further extends the lifetime of historic credits generated in past years and would reward manufacturers that have not adequately moved to deploy technologies in CA to meet the ACC I performance standards. [OP-78]

    Comment: Commenter opposes the 15-day change and supports annual historic credit limits staying in place [T1-43, T1-53,15-25, 15-20].

    Agency Response: CARB considered these comments and did not agree that the cumulative allowance for converted ZEV and PHEV values threatened the ultimate number of vehicles delivered for sale pursuant to a zero-emission standard. CARB did not modify the annual 15% allowance for converted ZEV and PHEV values. However, CARB did adopt the ACC II ZEV regulation with an optional cumulative allowance for converted ZEV and PHEV values. Overall, the cumulative cap will not result in fewer overall vehicles than an annual cap but provide manufacturers appropriate flexibility in early years. This was necessary to reduce burden on regulated entities and improve likely compliance. However, in line with other stakeholder suggestions and Board direction, (1) the annual cap option remained as proposed, (2) the requirement for manufacturers to declare which type of historical cap would be utilized over the 5-year period, (3) the cumulative cap in total is 5% less annually than the annual cap if EJ values are not encumbered, and (4) the cumulative cap only equal (in total) to the annual cap if EJ values are encumbered for 3 MTs. Lastly, the increasing number of years to which 5% is added itself is additive and reflects the additional usage of EJ credits. See agency response to Comment D-6 for how CARB developed the linkage between the use of cumulative converted ZEV and PHEV allowance with EJ vehicle value accumulation.

    See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers.

24. Comment: Commenter expresses support for the proposal's flexibility, such as the use of converted credits averaged over a five-year window, rather than a per year cap, will remain vitally important. It's also critical that regulated parties be permitted to use flexibilities in a way that makes sense for their unique products and individual compliance strategies. [T1-11]

    Comment: The high degree of uncertainty for industry to meet such requirements underscores the critical importance of programmatic flexibilities in the ACC2 program. One such flexibility would be to permit an average-based "allowance" for automakers' use of converted credits between model years 2026 and 2030, such that there is not an annual 15 percent cap for use of those credits. Honda strongly supports such an

approach, which would provide critical flexibility without any programmatic erosion. Such a provision is vitally important to mapping a path to success in building a robust and achievable regulation. [OP-57]

Comment: Compliance flexibilities such as Early Compliance Values and Converted Credits are capped to a certain percentage of the ZEV requirement for a model year. Currently, this cap is applied on a Model Year basis. However, due to the market volatility and external factors outside of manufacturer control, a manufacturer may exceed the cap or not fully utilize the cap over the lifespan of the flexibility. To mitigate these factors, BMW NA supports making flexibility caps cumulative over the life of the flexibility rather than a discrete cap each model year. This change would maintain the overall benefits of the program while mitigating planning uncertainties for the industry. [OP-133]

Comment: Allow averaged (or cumulative) converted credit cap: Many CARB regulations place a multi-year average cap on the use of a regulatory provision. For example, if the average cap is 15 percent, then a manufacturer could use 10 percent in year one and 20 percent in year two such that the average is 15 percent. We recommend using an average cap for converted credits that are currently capped at 15 percent each year. This would allow a manufacturer to use less converted credits one year (10%) and more the next (20%). ACC II should allow this flexibility over the entire period of converted credit usage (2026-2030MY). This has no impact on the total number of ZEVs produced and delivered for sale in the 2026-30 time-period but provides manufacturers considerable flexibility. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34]

Comment: Commenter expresses support for including an optional allowance for manufacturers to use a cumulative cap for 2026-2030 model years [OP-124].

Agency Response: CARB appreciates support for the addition of the cumulative cap for converted ZEV and PHEV values that was included in the First 15-Day Notice. See agency response to Comment D-6 for how CARB developed the linkage between the use of cumulative converted ZEV and PHEV allowance with EJ vehicle value accumulation.

Additionally, one comment suggests allowing cumulative allowances for all ACC II compliance flexibilities. CARB considered this comment and chose to only add this option for converted ZEV and PHEV values, as these are fundamentally different values. ZEV and PHEV credits under ACC I rewarded manufacturers for their ACC I ZEV overcompliance, but are of less value in ACC II (and only being usable, once converted, through 2030 MY in cases where the manufacturer has a shortfall (see response to Comments B-1 and B-12)) to ensure the portion of ZEVs in the new vehicle fleet actually grows commensurate with the established targets. As CARB noted in the first 15-Day Notice, the cumulative cap option on converted ZEV and PHEV values was responsive to manufacturers' comments regarding a need for additional flexibility with those values between 2026 and 2030 MY. CARB determined this reasonable, so long as real ZEVs are introduced into the market. The cumulative cap option on converted ZEV and PHEV values thus allows manufacturers to use the same total number of converted values with more flexibility on when those values may be applied during the

2026 through 2030 MYs; this change was not expected to lead to any fewer 2026 through 2030 MY ZEVs and PHEVs and would incentivize earlier ZEV and PHEV introductions. The same is not necessarily true of cumulative caps for all ACC II compliance flexibilities, and if all ACC II compliance flexibilities were cumulative, the goal of ensuring actual ZEVs and PHEVs on the road displacing conventional vehicles would be jeopardized.

25. Comment: Honda shares the agency's view that all customers should have access to clean mobility. And given the current market challenges, tying flexibility access to the use of environmental justice credits, or for that matter, any programmatic element would be inappropriate at this juncture. [T1-11].

    Agency Response: CARB understands the concerns of this commenter but did move forward in its adoption of the ACC II ZEV regulation, which include some linkage to converted ZEV and PHEV values with utilization of EJ values. However, a default option still remains for those manufacturers who need to take advantage of a lesser cumulative cap if they are unable to participate in EJ values. This balances an appropriate incentive for manufacturers to participate in EJ value accumulation with manufacturers' need for flexibility in compliance. See agency response to Comments D-6 for how CARB developed the linkage between the use of cumulative converted ZEV and PHEV allowance with EJ vehicle value accumulation.

26. Comment: Additionally, the credit lifetime extension will also lessen the immediate value of earned credits in the trading market as underperforming manufacturers now may have greater opportunity as to when to utilize those compliance credits. Under a cumulative historical credit cap, the immediate need for credit market transaction will diminish, meaning less revenue and opportunity for over-performing manufacturers that seeks to utilize credit revenue sales to invest in increased manufacturing of advanced technology vehicles. In other words, a cumulative historical credit cap would reward inaction by underperformers while undermining the potential for those performing as the regulation intended. Contrary to the ACC II goals, a cumulative historical credit cap will diminish the level of investment going back into advanced manufacturing, and only serves to reward those manufacturers that delay deploying advanced technologies. [OP-78]

    Agency Response: CARB assessed this commenter's concern about the effect of revenues for individual manufacturers participating in the ACC I credit market. Regulating ACC I ZEV credit revenues earned by individual manufacturers are not CARB's goal, such information is not provided to CARB, and thus these revenues were not considered during this rulemaking. As to the effect on the overall production of vehicles pursuant to CARB's zero-emission standard, CARB does not agree that the existence of a cumulative converted credit allowance (referred to as a "historical credit cap" in this comment) will have the effect of dampening the total number of ZEVs in the years that manufacturers can make use of the flexibility. It is equally likely that allowing manufacturers to use converted ZEV and PHEV values under a cumulative allowance could cause an increase in the monetary value of such values, or increase overall ZEV production to take advantage of such a flexibility. Even with the ACC I ZEV

structure and flexibilities allowed, actual volumes (above 16%[8]) are well beyond the current requirement. Therefore, the prospect of a dampening in the total number of vehicles pursuant to a zero-emission standard is not supported by the evidence

See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers. See agency response to Comments D-6 for how CARB developed the linkage between the use of cumulative converted ZEV and PHEV allowance with EJ vehicle value accumulation.

Pooling

27. Comment: Commenter supports pooling credits but believes it may be difficult with the proposed stringency for automakers to use this option [OP-86].

    Comment: While proposed as a helpful flexibility, the pooling provision, will have little impact on compliance and product flexibility. The pooling provision requires OEMs to over comply in one state to have the option of using overcompliance credit for assisting another state. For traditional OEMs, achieving compliance even in one state will be challenging and thus the value of pooling could be limited to luxury EV OEMs. [OP-150]

    Agency Response: CARB appreciates the support for the pooling provision and recognizes it is dependent on over-compliance with the new stringency ZEV regulation. Pooling, as adopted in the ACC II ZEV regulation, allows manufacturers to manage year to year fluctuations in annual vehicle volumes, especially across different states, in the early years of ACC II and still allow for full compliance, while maintaining the overall stringency of the regulation. Thus, this flexibility helps reduce compliance burdens, ZEV market development, and ultimately improve access. As with many flexibilities, not every manufacturer may take advantage of the values that are offered, nor are they required to do so. Additionally, CARB does not set standards for other states. The Clean Air Act allows other states to adopt California vehicle emission standards including the ZEV regulation. CARB does not have authority over states which adopt California's regulations. While it is expected that some states will consider the ACC II regulations as adopted, CARB considered aspects of the regulations that would support such actions to the extent feasible within the scope of its authority.

    See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers.

28. Comment: Commenter states support for Section 177 state pooling allowed MY 2026-2030. Tesla also supports CARB's proposal to allow time-limited state pooling to ease ACC II adoption concerns in Section 177 states. Tesla concurs that pooling – unlike

[8] CEC 2022a. California Energy Commission Zero-Emission Vehicle and Infrastructure Statistics. Data. *https://www.energy.ca.gov/zevstats* Accessed March 1, 2022/.

proportional crediting schemes – can maintain stringency by ensuring that credits only accumulate when actual ZEVs are delivered. [OP-78]

Agency Response: CARB appreciates the support for the pooling provision, which was adopted as part of the ACC II ZEV regulation. At stated on ISOR, p. 45, the concept of pooling is to allow manufacturers to move excess ZEV and PHEV values earned in one state for use in another state where there is a shortfall relative to the requirement. Allowing manufacturers to use pooled ZEV and PHEV values would help them manage year-to-year fluctuations in annual vehicle volumes especially across different states and still allow for full compliance.

Additionally, CARB does not set standards for other states. The Clean Air Act allows other states to adopt California vehicle emission standards including the ZEV regulation. CARB does not have authority over states which adopt California's regulations. While it is expected that some states will consider the ACC II regulations as adopted, CARB considered aspects of the regulations that would support such actions to the extent feasible within the scope of its authority.

See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers.

29. Comment: Any existing proportional credits created in a state adopting ACC I, thereby duplicating or double counting vehicles delivered in California as they were delivered in other states at the same time, should not be eligible for any pooling in ACC II. [OP-78]

    Agency Response: CARB concurs with this commenter and adopted ACC II ZEV regulation in which converted ZEV and PHEV values are prohibited from being pooled.

30. Comment: Tesla further believes that the program could accelerate further Section 177 ZEV deployment by lowering the pooling cap levels by 5% each year from the proposed levels and ending after MY 2029. [OP-78]

    Agency Response: CARB considered this comment and disagrees that further limiting pooling will reduce compliance in other states that choose to adopt CARB's ZEV regulations. Pooling results in the same number of overall vehicles over the adopting states, as it is dependent on overcompliance in one state to fulfill a shortfall in a different state and provides the industry with flexibility to meet the ACC II regulations at lower overall costs by adjusting their product distribution in response to market demand. It is speculative where those vehicles will be delivered for sale and where volumes will ultimately be affected.

    See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers.

    Additionally, CARB does not set standards for other states. The Clean Air Act allows other states to adopt California vehicle emission standards including the ZEV regulation. CARB does not have authority over states which adopt California's regulations. While it is expected that some states will consider the ACC II regulations as adopted, CARB considered aspects of the regulations that would support such

actions to the extent feasible within the scope of its authority, including by providing an option that reduces costs for compliance in California while preserving the overall benefits of the standards when they reach the greatest stringency.

31. Comment: We recommend doubling the maximum usage allowances for pooling for 2026-2030 (i.e., 50%/40%/30%/20%/10% instead of 25%/20%/15%/10%/5%). [OP-98].

    Comment: The current proposal for state pooling caps is too restrictive and can negatively affect the sales of electric vehicles across all states and impact cross-state consumer buying behavior. By increasing pooling flexibility, we see an opportunity to better match sales to customer demand to ensure maximum possible ZEV sales, also in California. [OP-133]

    Comment: Increase the pooling cap to 30 percent in 2026 model year while maintaining the 5 percent annual phase out to expire in 2031 model year. [OP-124]

    Agency Response: CARB considered these comments to increase the allowance for pooled ZEV and PHEV values, and chose not to change allowances. Overall, the ACC II ZEV regulation pooling cap levels balances the needs of manufacturers to have flexibility in dealing with year-to-year fluctuations in delivery for ZEVs and PHEVs with the need to build ZEV markets with actual delivery of vehicles. ZEVs and PHEVs on the road help to drive infrastructure investments and incentive funding in developing markets. Additionally, the phase down of the percentages ensures manufacturers do not end up with too large of a gap in any state between actual sales volumes of ZEVs and PHEVs and the 2031 MY ZEV requirements.

    See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers.

32. Comment: Rivian is concerned that the limited pooling provisions will enable manufacturers to prioritize certain regions for EV deployment, potentially leading to more concentrated tailpipe emissions in other regions relative to a non-pooling case. Commenter questions if the limited pooling allowance may cause unintended environmental justice consequences and wonders if more stringent caps or an altogether elimination of the annual pooling allotment may be warranted to minimize regional inequities in both EV access and air pollution [OP-127, B1-10].

    Agency Response: It is unclear how the pooling provision specifically would have EJ implications in California. Moreover, the pooling provision operates at the state level, not at the regional level as this comment seems to assert. Without additional information elucidating the commenter's theory, CARB is unable to address the commenter's concern. However, further information about the pooling provision is located at pages 45-46 of the ISOR.

33. Comment: The time for pooling has passed, and we encourage CARB to eliminate pooling as a compliance mechanism in ACC II. Pooling may have made some sense in the early market and beginning of ACC I. But as ACC II looks to put California and Section 177 states on an accelerated path to 100% ZEV sales over about a decade, it is time to support actual ZEV deployments in all states. Pooling is the antithesis of one

credit per car and creates a self-fulfilling prophecy by which Section 177 states will lag in adoption specifically because manufacturers have opted to exceed their requirements in California as the path of least resistance. Further, as noted above, the proposed regulation sets sales requirements at or below BAU levels, suggesting automakers are already well-positioned to deliver the required number of vehicles in any given state. California should avoid a policy that will place it in direct conflict with the goals of the multitude of other states seeking to join this effort. [OP-154]

Agency Response: CARB considered this comment and disagrees the pooling provision will lead to fewer ZEVs over the life of the regulations and across the set of states that choose to adopt California's regulations.

As explained in pages 45 and 46 in the ISOR and in the purpose and rationale for section 1962.4 (see ISOR Appendix F-5, p. 40), Section 177 states are in varying places of ZEV market development. In these years of expansion, ZEVs sold anywhere in a state that has adopted these proposed regulations benefit overall market development, reduce ZEV costs, and increase infrastructure build-out – to the benefit of Californians and residents of any state that chooses to adopt these standards. Over time, however, more focused benefits in particular states become more important. To this end, the ACC II ZEV regulation include a pooling flexibility to manufacturers in the 2026 through 2030 MYs allowing all manufacturers to transfer or "pool" excess ZEVs and PHEVs earned in California or individual Section 177 States to meet a shortfall in any given MY (or a deficit carried forward from a previous MY) elsewhere (e.g., in California or other Section 177 States). "Pooling" facilitates meeting overall stringency of the ZEV regulation while allowing for minor state-to-state variability in vehicles sales in the early years of the program. Limiting the MYs and the total amount a manufacturer can use this flexibility with a "cap" helps ensure manufacturers make progress in each state toward the 100% ZEV requirement in the 2035 MY. In other words, the limitations on pooling ensure manufacturers cannot lag in other states that choose to adopt the ACC II regulations, as the commenter is concerned about. Lastly, CARB notes that if the manufacturers were currently positioned to meet their annual ZEV requirements in any state, as commenter alleges, then the pooling provision (and commenters concerns therein) would be superfluous. For these reasons, CARB adopted the ACC II ZEV regulation with this provision included.

See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers.

Note CARB does not set standards for other states. The Clean Air Act allows other states to adopt California vehicle emission standards including the ZEV regulation. CARB does not have authority over states which adopt California's regulations. While it is expected that some states will consider the ACC II regulations as adopted, CARB

considered aspects of the regulations that would support such actions to the extent feasible within the scope of its authority.

34. Comment: Commenter supports the pooled vehicle flexibility and recommends to eliminate the shortfall requirement. [OP-124]

    Agency Response: CARB appreciates the support for the pooling flexibility in the adopted ACC II ZEV regulation. As adopted, the limitation on only allowing manufacturers to meet their 2026 through 2030 MY shortfalls with pooling credits is in line with the overall goal to ensure actual vehicles rather than banked values are being used toward compliance with the ZEV regulation each year. Therefore, as with the majority of flexibilities afforded the manufacturers, the ACC II ZEV regulation includes an additional limitation that prohibits manufacturers of complying with banked or pooled values in years where they do not have a shortfall.

35. Comment: Commenter supports the pooled vehicle flexibility and to extend pooled credits allowance to future model year compliance (e.g., excess 2026 model year credits can be pooled and carried forward to offset 2027 model year shortfall). [OP-124]

    Agency Response: CARB appreciates the support for the pooling flexibility in the adopted ACC II ZEV regulation. The intent of the pooling provision is to manage year-to-year fluctuations rather than create banks of values to build up compliance margins for individual manufacturers. Therefore, CARB adopted the ACC II ZEV regulation with a pooling flexibility that only allows manufacturers to pool values up to the number of values needed to meet a shortfall in that year. This is in line with the pooling provisions included in the ACC I ZEV regulation.

36. Comment: Commenter states "CARB's credit pooling concept requires further discussion." [OP-161-79, incorporated by reference into comment OP-97]

    Agency Response: This is commenter's summary of previous, pre-rulemaking comments. CARB has further evaluated and adopted a pooling provision. See, e.g., Section III.C.2 of the ISOR, response to comment OP-121-4 in the Response to Comments on the Draft Environmental Analysis, and Resolution 22-12. CARB has also enabled extensive discussion of its proposals, well beyond the minimum requirements of the public comment periods and hearings held. See, e.g., FSOR Appendix A, Summary of Comments to the Overall Advanced Clean Cars II Regulations and Agency Responses, Comment C-38.

Proportional FCEV Values

37. Comment: CARB received several comments that are summarized as expressing concern with proportional credits for fuel cell electric vehicles, or with the continuation of "the travel provision", citing concerns on the effect of overall deployment of ZEVs. [15-18,15-19, 15-20, T1-22, B1-8].

Comment: We believe that just as one battery-electric vehicle (BEV) counts a one (1) ZEV in staff's proposal, one FCEV should count as one (1) ZEV. Battery electric vehicles make up the overwhelming majority of ZEVs on the road today and that is not expected to change as BEVs continue to get cheaper and more popular while FCEVs have remained costly and relatively unpopular. While FCEV have zero tailpipe emissions, the well-to-tank renewable content of the hydrogen fueling these vehicles varies and can have a significant impact on how climate friendly they are. We know that California's electric grid (aka the "fuel" for BEVs) is on a trajectory to achieve 100% renewable energy by 2045, but we have no such guarantee for hydrogen. Because of this uncertainty regarding hydrogen and the fact that there is no added benefit of having more FCEVs on the road as opposed to BEVs, CARB should treat all ZEVs the same under this rule. [OP-85]

Comment: Commenter requests CARB reconsider the value of enabling proportional credits for FCEVs and establish a technology-neutral approach for ZEV crediting mechanisms. [15-19]

Agency Response: CARB considered the concerns of these commenters about proportional FCEV values. While CARB did adopt the ACC II ZEV regulation with proportional values for FCEVs included in recognition that FCEVs are an important part of compliance for California and that the sufficient infrastructure is needed to support FCEV deployment, it did so with limitations included to ensure CARB's goals are met. These include allowing (1) proportional values for FCEVs to only be available through the 2030 MY (2) up to 10% of a manufacturer's annual requirement to be met with these proportional values, and (3) the total value of the additional value earned to be based on the state with the highest number of actual FCEVs delivered – which is expected to be California, limiting the potential for this provision to affect the potential emission benefits in the state. These limitations help to balance the need of additional incentives for FCEV technology, which need more time to develop and more hydrogen infrastructure to be rolled out, with the needs of CARB to guarantee continued advancement toward 100% ZEV sales by the 2035 MY.

See also agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers.

38. Comment: Commenter recommends future FCEV sales be considered as additive to future overall ZEV sales and their inclusion should not be used as a reason to delay more ambitious ZEV sales targets [B1-3].

    Agency Response: It is unclear without more information to fully assess this commenter's suggestion. The ACC II ZEV regulation is technology neutral, in that it sets a ZEV emission standard that manufacturers can meet with various technologies. FCEV technology and its stage of development did not affect the overall stringency of the ZEV regulation adopted by CARB.

39. Comment: Along with other fuel cell manufacturers, Toyota submitted a letter on March 14, 2022, to Chair Randolph and Executive Officer Corey raising a significant concern about the proposed discontinuation of the so-called "travel provision" in the ZEV regulation. This provision provides a critical incentive for automakers, like us, who

agree with CARB that FCEVs are essential for meeting California's climate and air quality goals. The so-called "travel provision" allows automakers to receive credits for FCEVs placed in California to count toward compliance in other states that do not yet have the hydrogen infrastructure in place that is necessary before FCEVs can be sold in those states. In addition, we have been working directly with several of the states who have adopted the ZEV Program to remove barriers to fuel cell sales (such as the continued prohibition of FCEVs in certain tunnels and bridges in the Northeast) and to lay the groundwork for light duty hydrogen infrastructure in those and other states. Although we expect continued progress in these efforts, the fact remains that the vast majority of these states have not yet made the investments and policy changes necessary to prepare for the hydrogen fuel cell market. FCEVs are an integral technology pathway in the ZEV regulation, but one we are challenged to sell given this situation. Therefore, we urge CARB to maintain the travel provision, but with the following limitations to address S177 state concerns:
• Sunset travel after 2030,
• Cap travel credit usage to 10% of an OEM requirement in a S177 state, and
• Phase-out travel as infrastructure in S177 states catches up to the California baseline of hydrogen readiness.

We believe this proposal will have a limited impact on mandated ZEV volumes. For example, using AB 8 projections as a proxy, we estimate that extending the Travel Provision would result in less than a 1.5% impact in 2026MY on total ZEV requirements in the S177states. Considering the current CARB staff proposal calls for an 8% per annum increase, we believe our proposal would have a marginal impact in the S177 states, but an outsized impact in helping continue to grow the FCEV market in California and continuing the development of the technology that will be essential to expansion of FCEV across the United States. [OP-150]

Comment: Our most pressing request involves fuel cell vehicles and the provision that allows fuel cell vehicles placed in California to count towards ZEV targets in other states that yet do not have hydrogen infrastructure in place. Working with Honda and Hyundai and listening to the concerns of the Section 177 states and staff, we've worked on an approach reflected in the staff's 15-day change today, that while limited, will still allow critical incentives to pursue fuel cell vehicles as a compliance option in California. We believe this – staff has a balanced proposal on this critical matter. We support it and thank them for helping us develop a pathway with your sister states to. [T1-37]

Comment: Commenter supports allowing fuel cell automakers to continue receiving compliance credits in other states through 2030 where there is sufficient hydrogen refueling infrastructure in place [OP-46].

Comment: Our coalition strongly supports the proposal put forward by fuel cell automakers to continue to allow FCEVs placed in California to count toward compliance in other ZEV states until those states have sufficient infrastructure in place. We are persuaded that this proposal – with its sunsetting in 2030, its cap on compliance usage. And its phaseout once infrastructure is in place in each state – is a well-bounded approach that will have only a limited impact on other ZEV volumes in

those states. At the same time, we believe this provision is a critical factor for automakers to continue to explore and accelerate the FCEV market in California. [OP-46]

Comment: Commenter supports the travel provision through 2030 model year to encourage manufacturers to build FCEVs and give flexibility, capping an automaker's annual requirement to 10 percent and proportionately phased out as Section 177 states' hydrogen refueling infrastructure is built out [B1-29]

Comment: To gain support for extending the FCEV travel provision, we further propose that the travel provision sunset after 2030 model year, be capped to 10% of an OEM's annual requirement, and be phased-out proportionally as infrastructure in Clean Air Act Section 177 ("S177") states catches up to the California baseline of hydrogen readiness. During the course of our discussions with the S177 states, inclusion of the travel sunset, cap, and phase-out were greeted positively and abated their concerns with the travel provision. For these reasons, we strongly request that CARB include the FCEV travel provision through 2030 in the final ACC II. [OP-124]

Comment: Commenter urges CARB to maintain the FCEV travel provision, but with the following limitations to address Section 177 state concerns: sunset travel after 2030; cap travel credit usage to 10 percent of an automaker's requirement in a Section 177 state; and phase-out travel as infrastructure in Section 177 states catches up to the California baseline of hydrogen readiness [OP-150].

Comment: Honda believes it is both appropriate and important for the ACC2 regulation to include a reasonably bounded travel provision applicable to hydrogen FCEVs. Excluding this policy lever would unnecessarily undermine FCEV technology, which we believe has a key role to play in a fully zero emission mobility future. A reasonably bounded travel provision can provide critical support for the technology as hydrogen fueling infrastructure outside California begins to grow. [OP-57]

Agency Response: CARB appreciates the support for the proportional FCEV values (referred to in many comments as the travel provision), which were added in the First 15-Day Notice. These values do sunset after 2030 MY and are limited in their use.

C. Section 177 States

1. Comment: CARB received several comments in support of Section 177 state adoption of the ACC II regulations, or support for mechanisms that have been included that support Section 177 state adoption of ACC II. [OP-18, OP-70, B1-3, OP-125, OP-172, OP-175, OP-86, OP-109, OP-138, T2-18, T2-26, T2-20, T2-40]

   Comment: CARB received comments requesting CARB to set the stringency of its ZEV sales requirements at a level sufficient to ensure other states will also see a high volume of vehicles delivered for sale pursuant to a zero-emission standard. [OP-90, OP-180]

   Comment: CARB should maintain a strong focus on achieving 100% ZEV sales targets in the regulation and continue to liaise with "Section 177" state governments and

other relevant jurisdictions to support the widest possible ACC II adoption beyond California. [OP-106]

Comment: The proposed ACC II ZEV regulation includes the right mix of ZEV compliance flexibilities to address varying market conditions across the Section 177 states and the differing needs of automakers. Despite their collective success, the Section 177 states are not homogenous with respect to ZEV sales, charging infrastructure development, consumer demand, and other factors. Likewise, automakers are not all similarly situated and may experience fluctuations from year to year. Thus, offering a variety of flexibilities provides numerous pathways for complying with increasingly stringent ZEV sales requirements and is important to building support needed for Section 177 state adoption of ACC II. [OP-109]

Agency Response: CARB does not set standards for other states. The Clean Air Act allows other states to adopt California vehicle emission standards including the ZEV regulation. CARB does not have authority over states which adopt California's regulations. While it is expected that some states will consider the ACC II regulations as adopted, CARB considered aspects of the regulations that would support such actions to the extent feasible within the scope of its authority.

2. Comment: CARB received several comments indicating the ACC II ZEV stringency will be very challenging to meet in the Section 177 states [15-33, T1-13, B1-20, T1-6, T1-9, B1-2, T1-23].

   Comment: The ACC II ZEV sales curve is aggressive, and cooperative partnerships between vehicle manufactures and Government will be required to achieve success. Ford is committed to providing exciting, capable EV products that meet the challenge, and we applaud California's leadership in adopting required supportive policies such as purchase incentives (including the benchmark CVRP and CFR programs, along with numerous local/municipal programs), ambitious charging infrastructure installation activity, and non-monetary incentives such as HOV lane privileges. We maintain that other US States adopting California ZEV rules can also expect ZEV sales success, but only if they institute similar supportive policies. [OP-94]

   Comment: To put it plainly: with respect to EV adoption, California, Western ZEV states and Eastern ZEV states are uniquely different markets. Given this, challenges meeting aggressively escalating ZEV requirements in the §177 states present very real concerns about future ZEV credit market liquidity. According to a credit market analysis conducted by Honda, traditional automakers will – in just three years – need to increase electric vehicle sales between five- and twenty-times current levels (depending on the §177 state), simply to meet the 2026 requirements (see Figure 2). This is a profound expectation to place on regulated parties and, ultimately, on new vehicle buyers in those states. [OP-57]

   Comment: Especially in the case of the Section 177 states that adopt the California ZEV regulation, these flexibilities are crucial. In many of the ZEV-adopting states, EV market uptake has been lower than the U.S. average EV uptake, and state government support has been limited and unreliable, as compared to California's enthusiastic and holistic ZEV support from both state and local government agencies, electric power

utilities, and other stakeholders. Without expanded use of the flexibility provisions, as recommended above, there will be fewer ZEVs deployed in the ZEV-adopting states outside California before 2026, and it will be extremely challenging for the industry as a whole to successfully comply in several ZEV states starting in 2026, the first year of this new regulation. [OP-98].

Comment: The regulations being brought to this Board today, particularly in the program's early years, are extremely challenging. This is especially true in the Section 177 states, where adoption rates remain well below those found in California, even with committed actions by states to help foster EV markets. From a program viability standpoint, there's reasonable cause for concern. According to a market analysis we conducted, traditional automakers will in just three years, need to increase electric vehicle sales between 5 and 20 times current levels, depending on the state, simply to meet the 2026 requirements. This is a profound expectation placed on regulated parties, and ultimately on new vehicle buyers in those states. [T1-11]

Agency Response: CARB appreciates commenters' concerns with the stringency of the ACC II ZEV regulation and its potential implementation in other states that choose to adopt it. See agency's response to Comments C-1 and A-3 for more information on how ACC II ZEV stringency, including flexibilities, were established for California.

Staff worked alongside Section 177 State staff and management throughout the ACC II rulemaking. While CARB only has jurisdiction over rules adopted in California, it recognized that the Clean Air Act allows other states to adopt CARB's standards. CARB developed the ACC II regulations with consideration and knowledge of ZEV market development in California and the Section 177 States. All flexibilities adopted, such as early compliance values, pooling, proportional FCEV values, and converted ZEV and PHEV values will provide manufacturers with flexibilities in California and any state that chooses to follow the ACC II regulations.

D. Equity and Environmental Justice Values

1. Comment: CARB received several comments in support of the environmental justice values in the ACC II ZEV regulation. [OP-86, OP-172 OP-127, B1-10]

   Comment: CARB received comments in support of equity goals, pointing to used ZEVs and fuel cost savings as strategies for uptake and an equitable transition for electric vehicles. [T1-61, OP-150]

   Comment: Section 1962.4(e)(2) – Tesla Supports the Amendments to the Environmental Justice Credit Generation Program. Tesla shares the goals and benefits, if realized, of the Community and Used EV proposals found at §1962.4 (e)(2)…Tesla supports the amendments made in the 15-day proposal. More specifically, providing additional credit value provided to sales of vehicles to financial assistance program participants found at §1962(e)(2)(B) is a positive amendment that will encourage greater manufacturer participation. [15-8].

Comment: Commenter supports allowing manufacturers to earn environmental justice vehicle values for vehicles placed community car-share programs prior to the start of ACCII [15-20].

Comment: Commenter supports the additional vehicle values that can increase access of off-lease vehicles to participants in financial assistance programs as part of the voluntary environmental justice credits [15-20].

Comment: Lucid Motors supports addition of low-MSRP ZEVs in the Environmental Justice Values category. We have advocated for CARB to include support for low-MSRP ZEVs in ACC II and thank CARB staff for considering our recommendations and taking this initial step. [OP-154].

Agency Response: CARB appreciates support for its inclusion of the EJ vehicle values in the ACC II ZEV regulation.

2. Comment: (e)(2)(A)1.b. EJ Value Clean Mobility Program. This paragraph provides up to 0.4 EJ Values for a PHEV placed in a Community-Based Clean Mobility program (CBCMP). However, this credit is only available if the PHEV has seating for 6 passengers. Some CBCMP may see value in limiting participation to vehicles that seat 6 passengers. However, we do not believe the ZEV regulations should dictate the requirements in the CBCMP. Thus, we recommend deleting this provision to provide the greatest flexibility. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34]

   Agency Response: CARB concurs with this commenter's suggestion, and through the First 15-Day Notice, updated subsection 1962.4(e)(2)(A)1.b. to remove the explicit 6-seat passenger capacity requirement from the regulatory provision, recognizing that vehicles that qualify under this vehicle value type must meet technical minimum requirements set by guidelines for those programs regardless.

3. Comment: (e)(2)(A) ZEVs and PHEVs provided for use in community-based clean mobility programs. We appreciate this specific Environmental Justice (EJ) flexibility was extended to allow participation in 2024 and 2025Mys. We understand that 2024 and 2025MY ZEVs and PHEVs participating in this program are not required to meet the requirements in these regulations 1962.4 (e.g., 1962.4(d) or 1962.4(e)(1)). Instead, the 2024 and 2025MY ZEVs and PHEVs will meet the provisions of current ZEV regulations in 1962.2. Nonetheless, these are EJ values that could be banked and counted toward 2026MY requirements and toward the MY2026-2028 minimum EJ cumulative allowance threshold calculations for use of the expanded cumulative Converted ZEV values in ACC II. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34]

   Agency Response: CARB agrees that the interpretation in the comment is correct in that 2024 or 2025 MY vehicles do not have to meet the newly adopted provisions for 2026 MY and newer ZEVs or PHEVs in order to be eligible to earn EJ vehicle values from placement in a community-based clean mobility program. Similarly, eligible ZEVs and PHEVs under these early EJ value provisions must be certified to section 1962.2 (ACC I ZEV) and section 1961.2 (ACC I LEV) and are not subject to new technical

minimum requirements under section 1962.4. No change was made in response to this comment.

4. Comment: Therefore, we feel [the commenter's] … proposal to strengthen stringency and add Exceptional Efficiency Values is necessary to support the development of low-MSRP ZEVs. It will also advance equity outcomes from the regulation by enabling more residents of varied income levels to get into ZEVs more quickly, while also more rapidly growing the market for low-cost, long-range, used ZEVs. [OP-154]

   Agency Response: CARB considered both of these suggestions. See agency response to Comment F-8 in FSOR Appendix A for staff's response on the creation of "Exceptional Efficiency Values" suggested by this commenter. See response to Comment A-3 above for CARB's approach to setting stringency for the ACC II ZEV regulation, and its approach for developing flexibilities for manufacturers to be able to comply with such standards. The goal of the ACC II ZEV regulation is not to promote the accumulation of any particular value, but to set a zero-emission standard for manufacturers while balancing multiple requirements and objectives such as equity, environmental protection, cost-effectiveness, and feasibility.

5. Comment: Additionally, it is important to note that the benefits of reduced GHG emissions in new vehicles also make their way to the used car market, which accounts for over 70 percent of vehicle sales annually, and an even higher share among mid- to lower-income families. CARB's decision on ZEV sales stringency will also guide the market for low-income and disadvantaged communities, as the market decisions made by the smaller group of individuals who have the means to purchase a new car will establish the options that will be available to the remainder of the population on the secondary market. Lower income consumers in the secondary market are trapped by market choices of wealthier drivers, so these standards are key to expanding clean options in the used market. For these reasons, CARB should also ensure that the equity credits solicited through ACC II not only support programs like community carsharing and ridesharing, but also support individual ownership through programs like Clean Cars 4 All. [OP-108]

   Agency Response: CARB concurs with this commenter, and for that reason, adopted EJ vehicle values as part of the ACC II ZEV regulation. Section 1962.4 (d)(2)(B) includes EJ vehicle values for vehicles in California sold at the end of lease to participating dealerships in CARB's financial assistance programs that support personal vehicle ownership, which include Clean Cars 4 All (CC4A) and Clean Vehicle Assistance Program. Additionally, see agency response to Comment A-7 which addressed increased stringency in relation in increasing access to ZEVs.

6. Comment: CARB received comments requesting environmental justice vehicle values should be made mandatory for manufacturers, or expressing disappointment in the environmental justice values being proposed as voluntary. [T1-5, T1-62, T1-61, T1-35, OP-26, OP-35, OP-36, OP-43,OP-51, OP-55, OP-98, OP-166, OP-171, B1-15, B1-30, B1-32, B1-33, B1-40, B1-41 OP-85, T1-27, T1-29, T1-31, T1-32, T1-38, T1-51, T1-70, T1-74, T1-80, T1-84, OP-18, OP-102, OP-108, OP-111, OP-132, OP-180, OP-181, OP-

108, OP-10, OP-11, OP-12, OP-14, OP-15, OP-58, OP-67, OP-177, OP-128, 15-34, OP-158, OP-160, OP-108; T2-47]

Comment: CARB received comments recommending ACC II mandate automakers to participate in the environmental justice values or, if environmental justice values remain voluntary, induce participation by requiring manufacturers to sell more ZEVs. [OP-55, OP-166, T1-15, T1-26, OP-172]

Comment: If taken advantage of by OEMs, each of these equity proposals has merit insofar as they would likely result in increased ZEV deployment in Disadvantaged Communities. Unfortunately, all of the proposals have two major flaws…if OEMs do take advantage of these [equity] options, they would receive extra Values which count against the overall stringency of the rule resulting in few ZEVs on the road and increased GHG and criteria pollution. [OP-85]

Comment: [A]ny increase in the new or used vehicle EJ credit value, however, should occur only in lockstep with an increase in the overall ZEV program stringency to account for the overall increase in emissions allowed by this credit generation flexibility. [OP-78]

Comment: We urge ARB to craft equity provisions to ensure that there is no trade-off between ZEV access in Disadvantaged Communities and overall ZEV sales. We believe this would strengthen both the equity components and the environmental integrity of the rule, ensuring the intended air quality and climate benefits are achieved. [OP-142]

Agency Response: CARB acknowledges commenters' preference for mandatory EJ values but chose to adopt a more flexible regulatory structure. The ACC II ZEV regulation prioritizes equity and incentivizes manufacturer participation in EJ values while recognizing variation among manufacturer product portfolios. Additionally, to mandate equity measures in ACC II as requested, CARB would have needed to demonstrate that a number of legal requirements were met, including that the specific measures were feasible for regulated entities, cost-effective, and reasonably likely and reasonably necessary to accomplish specific statutory goals or directives. CARB could not make all of the required demonstrations based on the record before it.

Commenters also urged CARB to encourage manufacturers to accumulate and use EJ values by increasing ACC II ZEV annual stringency. The ACC II ZEV stringency was increased throughout the workshop and stakeholder process due to new data and stakeholder feedback, and the stringency adopted was that which CARB determined to be the maximum feasible. See agency response to Comment A-3, which discusses the approach for developing the ACC II ZEV stringency and appropriate flexibilities for manufacturers. A further increase, as suggested by many of the commenters, could have the overall effect of making such values essentially mandatory and would not have been appropriate.

While CARB did not propose mandatory EJ measures, the Board, in the first Board Hearing, directed staff to consider additional changes to staff's initial proposal. These changes were designed to encourage manufacturers' generation of EJ values, so as to promote more direct action in disadvantaged communities and support ZEV adoption among lower-income drivers. Added through the First 15-Day Notice, CARB linked

manufacturers' ability to use the full cumulative converted ZEV and PHEV value allowance to their use of EJ values. To obtain eligibility, manufacturers must acquire EJ values equal to 0.5% of their annual obligation. Likely the only values that could be obtained would be from low-MSRP ZEVs and PHEVs or for discounts provided to community-based clean mobility programs. For example, a manufacturer would have to price at least 5% of their overall ZEVs and PHEVs below the MSRP caps, in 2026, 2027 and 2028 MYs in order to qualify for the full cumulative allowance. This would indicate a significant investment on the part of the manufacturers and sufficient for allowing use of the cumulative allowance.

Additionally, staff included enhancements to the EJ values by allowing early generation of certain values (based on discounts provided to community-based clean mobility programs starting as early as MY 2024) and included an additional value for manufacturers to place off-lease ZEVs and PHEVs with participants in CARB's low-income financial assistance programs. With these changes, the likelihood of manufacturer participation in the accumulation of EJ values is increased. Lastly, Resolution 22-12 includes direction to staff to "work directly with manufacturers, public interest organizations, community-based organizations, EJ groups and equity groups, and other interested entities and persons to promote participation by manufacturers, including through agreements, if appropriate, in the ACC II Regulations' equity provisions, including by increasing the number of new and used ZEVs made available to CC4A [Clean Cars 4 All] and the Financing Assistance for Lower-Income Consumers Project, no later than July 1, 2025."

7. Comment: CARB has statutory mandates to consider environmental justice in its regulations, and courts have afforded wide discretion to the agency to make regulatory decisions. Now is not the time for CARB to shy away from deploying this authority to ensure the greatest degree of pollution reductions possible, including specific attempts to reduce vehicle pollution in disadvantaged communities.

   To begin, CARB's authority for adopting motor vehicle standards is broad. CARB is directed to ensure that "[t]he standards, rules, and regulations adopted pursuant to this section shall, to the extent consistent with the responsibilities imposed under this division, be consistent with the state goal of providing a decent home and suitable living environment for every Californian."

   Thus, as long as CARB can demonstrate how equity requirements address pollution needs or attainment strategies, and are feasible and cost-effective, it has clear authority to adopt equity requirements into its regulations. Moreover, the broad directive to provide every Californian with a suitable living environment is an invitation to focus on environmental equity as a stand-alone objective.

   CARB's authorizing regulations also direct the agency to take into account the effects of its policies in low-income and minority communities. In the sub-section authorizing CARB to set greenhouse gas standards for motor vehicles, CARB is directed to consider "[t]he ability of the state to maintain and attract businesses in communities with the most significant exposure to air contaminants, localized air contaminants, or both, including, but not limited to, communities with minority populations or low-income populations, or both." The Board must also report to the Governor and the

Legislature on the "impact of the regulations on communities in the state with the most significant exposure to air contaminants or toxic air contaminants, or both, including, but not limited to, communities with minority populations or low-income populations, or both." These general commitments to prioritize the needs of low-income communities are reinforced by the mandate that at least 50% of the funds appropriated for the Carl Moyer Air Quality Standards Attainment Program, programs for the purchase of reduced-emissions school buses, and diesel mitigation programs be spent to ameliorate communities that suffer the most from air pollution. The 2014 Charge Ahead California Initiative, aimed at increasing ZEV access for disadvantaged communities, directed the state to "establish programs that further increase access to and direct benefits for disadvantaged, low-income, and moderate-income communities," such as financing mechanisms, car-sharing programs, and charging infrastructure.

Equity objectives were codified into CARB's regulations as recently as 2016. AB 197 requires "the state board, when adopting rules and regulations to achieve greenhouse gas emissions reductions beyond the statewide greenhouse gas emissions limit and to protect the state's most impacted and disadvantaged communities, to follow specified requirements," including the consideration of the social costs of the emissions of greenhouse gases. Moreover, CARB has been given wide discretion by courts to implement its regulations. For example, in a 2017 challenge to CARB's auction system for emissions trading under the state's cap-and-trade program, a California appellate court upheld CARB's program, finding that the authorizing statute afforded CARB "great flexibility." The court reasoned that "the Legislature's desire for a massive, historic, and immediate change in behavior regarding GHG emissions" led it to pass a flexible bill, and "that the Board, as the agency with expertise in air quality matters, was better equipped to study the problem and design a program to effectuate those goals." Courts have deferred to CARB's expertise to design complicated regulatory programs to achieve emissions reductions.

The justification for equity requirements would be particularly strong for ACC II because the greatest emissions gains would likely be seen in low-income communities. A 2020 study focused on older vehicles found that those vehicles produce more NOx and other pollutants, and that these vehicles are disproportionately located in low-wealth communities through California.116 Moreover, it concluded that Asian American, African American, and Latino communities live in areas with above average NOx and PM2.5.117 It also stands to reason that the drivers of these vehicles have higher-than-average Vehicle Miles Traveled (VMT) rates, since many lower-income drivers use their cars for long commutes. Therefore, programs that accelerate the retirement of these older vehicles and replace them with ZEVs will show immediate air quality benefits in these regions. While CARB should dedicate more resources to building out this linkage, there is enough data to justify a strong focus on equity requirements in this rulemaking. [OP-180]

Agency Response: CARB agrees with the commenter that it has broad statutory mandates and authority to consider and address environmental injustice and inequity, including through the ACC II regulations; that various CARB mobile source incentive programs (though outside the scope of this rulemaking) target benefits to low-income

and disadvantaged communities; and that CARB, like other State agencies, receives judicial deference. CARB further agrees that the ACC II regulations' emission reductions will significantly benefit low-income and disproportionately burdened communities, which is consistent with the text of Assembly Bill 197 (Garcia, Stats. 2016, Chap. 250) that the commenter quotes. However, CARB reasonably selected a more flexible regulatory structure that prioritizes equity and incentivizes manufacturer participation in EJmeasures while recognizing variation among manufacturer product portfolios. CARB also agrees with the commenter that, in the context of the ACC II regulations, mandating equity measures would require CARB to "demonstrate how equity requirements address pollution needs or attainment strategies, and are feasible and cost-effective[.]"CARB ultimately concluded it could not, based on the record before it, make all of the required demonstrations.

Regarding CARB's consideration of ACC II's potential impact on "[t]he ability of the state to maintain and attract businesses in communities with the most significant exposure to air contaminants, localized air contaminants, or both, including, but not limited to, communities with minority populations or low-income populations, or both[,]" see the response to FSOR Appendix A, comment C-24.

8. Comment: CARB received comments recommending that the use of converted ZEV and PHEV values, sometimes referred to by commenters as ACC I credits or values or pre-2026 credits or values, be predicated on participation in the generation and use of ACC II EJ values, even if the commenters' ultimate preference would be for mandatory environmental justice values. [T1-15, T1-24, T1-26, T1-49, OP-172, OP-85, B1-7, T1-46, B1-32, T1-35, OP-108, OP-180]

   Comment: Short of a mandatory equity provision, the next best strategy for mitigating both equity and stringency concerns would be to condition the use of other credits on OEM participation in the equity programs. As a result, OEM participation in the equity credit would be both encouraged through additional credit and through disincentives for non-participation. This approach will mitigate possible trade-offs between ZEV access and air quality and climate benefits. [OP-166]

   Comment: In particular, the equity provisions in the proposed rule are voluntary and may never be utilized by most carmakers, thereby failing to guarantee emissions reductions in communities historically overburdened with transportation pollution. We urge ARB to adopt equity provisions that follow the framework recommended by environmental justice communities and allied stakeholders including EDF. For example, the final rule could include a provision that the use of certain credits only be available to manufacturers that voluntarily utilize the equity program credits. [OP-142]

   Comment: Increased participation in or expansion of these equity-centered programs – as driven by the provisions in the ZEV program – could increase overall public health benefits. The inclusion of equity provisions that can expand the supply of zero-emission vehicles to car-share programs, Clean Cars 4 All (CC4A), and the Clean Vehicle Assistance Program (CVAP) can deliver additional public health benefits to communities that experience disproportionate emissions. We urge the Board to adopt

equity crediting provisions in ways to maximize the potential for these additional public health benefits. [OP-99]

Agency Response: The Board shared the directional concerns of these commenters and, in the first Board Hearing, directed staff to issue additional changes to staff's initial proposal. These changes were designed to encourage manufacturers' generation of EJ values, so as to promote more direct action in disadvantaged communities and support ZEV adoption among lower income drivers. Added through the First 15-Day Notice, CARB linked manufacturers' ability to use the full cumulative converted ZEV and PHEV value allowance to their use of EJ values. A manufacturer's access to cumulative converted ZEV and PHEV values increases from 10% to 15% per year for a period determined by the number of years that the manufacturer's use of EJ values meets the threshold. Additionally, staff included enhancements to the EJ values by allowing early generation of certain values (based on discounts provided to community-based clean mobility programs starting as early as 2024 MY) and included an additional value for manufacturers to place off-lease ZEVs and PHEVs with participants in CARB's low-income financial assistance programs. With these changes, the likelihood of manufacturer participation in the accumulation of EJ values is increased.

Lastly, Resolution 22-12 includes direction to staff to "work directly with manufacturers, public interest organizations, community-based organizations, EJ groups and equity groups, and other interested entities and persons to promote participation by manufacturers, including through agreements, if appropriate, in the ACC II Regulations' equity provisions, including by increasing the number of new and used ZEVs made available to Clean Cars 4 All and the Financing Assistance for Lower-Income Consumers Project, no later than July 1, 2025."

Additionally, see response to Comment D-6 for why CARB did not pursue mandatory EJ vehicle values.

9. Comment: Our proposal to condition historical ZEV credits on OEMs' participation in equity programs was accepted only in a limited form, as manufacturers can now achieve the entire incentive provided in the rule with an equity credit level of 0.5% of sales, as opposed to the 5% of sales maximum allowable level. Given that staff has said that manufacturers have great hesitation regarding the equity provisions, it is unlikely that any participating manufacturers will go beyond the 0.5% minimum needed–which is just one-tenth of the level allowed under the regulation and fully incentivized in our coalition recommendation. [15-25, 15-20]

   Agency Response: The ultimate form of the EJ values is a result of many stakeholder meetings, public workshops, and Board direction, and this process is summarized in the Agency response to FSOR Appendix A, Comment A-32. As adopted, the EJ values included in the ACC II ZEV regulation are optional for the reasons stated in response to Comment D-6. However, at the direction of the Board in response to stakeholder comments, staff included a linkage to converted ZEV and PHEV values and utilization of EJ values, as explained in the response to Comment D-8. It is speculative the response of the industry to any of the flexibilities.

10. Comment: Commenter requests the Board direct staff to revise the equity section of the proposal and be sure it is weighted in favor of equity and substantive provisions that ensure frontline communities are benefitting with the rest of Californians, and that staff should proactively reach out and work with community-based organizations to get input from people who live in these communities [T1-85].

    Agency Response: CARB considered this commenter's request to revisit the ACC II ZEV proposal and to work with community-based organizations. As stated on page 150 of the ISOR, a core EJ goal of the ACC II rule development was to increase community engagement to ensure that the ACC II regulations and programs targeted at low-income and disadvantaged communities are aligned with community needs. Through this increased engagement, staff sought to better understand the impacts of passenger cars in California's communities, while simultaneously broadening the conversation beyond established CARB partners to include voices that have been historically marginalized, such as California's underserved communities, rural communities, and tribal communities. As of February 2022, leading up to the release of the ISOR, staff had conducted 36 meetings with the public, EJ advocates, and community-based organizations.

    Based on engagement with community members, EJ advocates, and community-based organizations, staff received feedback on ways in which automakers could best help increase access to ZEVs. First and foremost, staff heard that automakers should increase production of ZEVs and that automakers should produce ZEVs with more range. Under the ACC II ZEV regulation, automakers will need to increase production of ZEVs and PHEVs to ultimately reach 100% of new vehicles sales by 2035. Staff also included new minimum requirements, called ZEV assurance measures, for ZEVs to count toward new ACC II ZEV requirements, which help address concerns regarding vehicle range, durability, and serviceability. Staff also heard that ZEV affordability is a concern. This concern has also been reiterated by EJ advocates who also would like to see increases of ZEV ownership of new and/or used ZEVs by community members and an increase in ZEV mobility access to meet day-to-day transportation needs.

    The Board further directed staff to issue additional changes to staff's initial proposal to encourage manufacturers' generation of EJ values, so as to promote more direct action in disadvantaged communities and support ZEV adoption among lower-income drivers. Added through the First 15-Day Notice, CARB linked the usage of EJ values to usage of the full cumulative converted ZEV and PHEV value allowance. Additionally, CARB included enhancements to the EJ values by allowing early generation of discounts provided to community-based clean mobility programs and included an additional value for manufacturers to place off-lease ZEVs and PHEVs with participants in CARB's low-income financial assistance programs.

    Additionally, Resolution 22-12 also directs staff to:

    > [M]onitor and report deployment of ZEVs in low-income and disadvantaged communities and the extent to which the environmental justice values are resulting in the intended benefits, with the expectation that CARB will revisit the environmental justice measures if they are not utilized or effectively providing the intended benefits. Staff's assessment shall include, but is not

limited to: environmental justice vehicle values earned by each manufacturer, by model year, and value type; and geographic distribution of new and used ZEVs and PHEVs by registration; and

[W]ork directly with manufacturers, public interest organizations, community-based organizations, environmental justice groups and equity groups, and other interested entities and persons to promote participation by manufacturers, including through agreements, if appropriate, in the ACC II Regulations' equity provisions, including by increasing the number of new and used ZEVs made available to Clean Cars 4 All and the Financing Assistance for Lower-Income Consumers Project, no later than July 1, 2025.

11. Comment: Commenter states the proposal is inadequate in addressing equity. Commenter says his organization provided equity principles for this rulemaking more than a year ago, yet none of those appear in the proposal. [T1-62]

    Comment: [W]e're disappointed at the fact that this rule does not do enough to adequately center and prioritize the needs and priorities of low-income and disadvantaged communities. Over the past year, we provided significant feedback and recommendations on what could have been done to improve equity and the environmental justice provisions, as well as ensure participation certainty from the automakers. These recommendations for the most part are not reflected in this final rule. This rule had an opportunity to be transformative, but unfortunately it only does the bare minimum. This is clear, because at the end of the day, the equity components within this rule, which are basically the EJ provisions, they're limited, voluntarily, and do not provide any certainty that automakers will participate. [T2-47]

    Agency Response: CARB considered these comments and does not agree that stakeholder feedback was not incorporated into the ACC II regulation. In developing the 45-day proposal, CARB considered all feedback from the workshops, including the pre-rulemaking comments referenced by these commenters. CARB then considered all comments on the 45-day and 15-day proposals, including this comment referencing the commenters' pre-rulemaking comments. See Agency response for FSOR Appendix A, Comment A-32 for how CARB considered equity and EJ.

    The California Clean Car Principles as provided by the commenter and a coalition of other stakeholders helped guide staff consideration of measures within ACC II, including potential equity measures. These principles included: setting ambitious future standards to achieve widespread ZEV deployment and to meet federal air quality standards and California's climate goals; ensuring a just transition for impacted workers and communities by prioritizing workforce policies integrated into incentive, procurement, and regulatory programs; prioritizing clean, equitable mobility options and access to ZEVs for lower-income communities of color in ACC and other complementary programs; and setting future standards to help keep the American auto industry globally competitive. These principles set the foundation for routine dialogue that developed with the commenters and the equity stakeholder coalition group that included over 20 virtual meetings to help operationalize and best address equity within the ACC II regulatory setting of passenger vehicles. In addition to

working with the commenters, CARB also engaged with other community members, EJ advocates, and community-based organizations to receive feedback on ways in which automakers could best help increase access to ZEVs.

Related to the principles described, the ACC II ZEV regulation includes several provisions to ensure that increased ZEV deployment meets the goals of the regulations to reduce and eliminate emissions and in a manner that promotes equitable access to clean transportation to the extent feasible. As adopted, the ZEV regulation is aggressive and will result more than 50% fewer GHG emission by 2040, and nearly 40% fewer oxides of nitrogen (NOx) emissions by 2040 for light-duty vehicles. It will also result in over 12 million ZEVs and PHEVs on the road in California by 2035. In addition to driving the sales of ZEVs, ACC II also includes requirements called ZEV assurance measures, including minimum warranty and durability standards, among other requirements. By establishing minimum requirements for the performance of ZEVs, the ZEV assurance measures help support access to reliable ZEVs for those who may not be buying new vehicles, but for whom reliable and durable mobility options are especially important. ACC II is also expected to increase participation of small independent repair shops in the transition to ZEV technologies since these repair shops will now be guaranteed access to repair information for ZEVs. ACC II also includes regulatory incentives for automakers that take action to help improve EJ outcomes as described in section III.C.5 of the ISOR. These actions include providing ZEVs and PHEVs at a discount to community clean mobility programs; retaining used ZEVs after leases in participants of California's programs low-income vehicle purchasing and finance assistance programs (such as CC4A); and offering lower-priced new ZEVs to the market. These optional provisions will help increase affordable access to ZEVs, particularly in EJ communities in California.

In addition to the ACC II regulations, statewide actions can include significant increases in funding for targeted incentives and infrastructure development, as well as more directed equity actions from private industry. Further, it is important that as CARB and State actors consider ways to protect public health, the lens for transportation equity extends beyond cars to embrace policies and tools that reduce the need for personal vehicles, such as walkable communities, active transportation, and public transit as well. Thus, while manufacturer regulations, such as ACC II, can do much to ensure personal vehicles, new and used, are widely usable, durable, and available, other tools are also important to advance EJ in California. This is consistent with the principles provided by the commenter, in which they acknowledge in multiple areas that not everyone should own cars and drive everywhere, and that complementary policies and working with other State agencies are part of the solution, not solely the ACC II regulations.

Despite work to incorporate the principles as provided by the commenter, as well as the recommendations and feedback from all stakeholders through a robust public process and enhanced community engagement during the rulemaking, CARB is aware that more must be done to ensure EJ communities benefit equitably from the transition to 100% ZEV sales and is committed to continuing efforts to ensure a just transition occurs, including by working with other State and local agencies. To this end, Resolution 22-12 directs staff "to monitor and report deployment of ZEVs in low-

income and disadvantaged communities and the extent to which the EJ values are resulting in the intended benefits, with the expectation that CARB will revisit the EJ measures if they are not utilized or effectively providing the intended benefits. Staff's assessment shall include, but is not limited to: EJ vehicle values earned by each manufacturer, by model year, and value type; and geographic distribution of new and used ZEVs and PHEVs by registration." Resolution 22-12 also directs to staff to "work directly with manufacturers, public interest organizations, community-based organizations, EJ groups and equity groups, and other interested entities and persons to promote participation by manufacturers, including through agreements, if appropriate, in the ACC II Regulations' equity provisions, including by increasing the number of new and used ZEVs made available to CC4A and the Financing Assistance for Lower-Income Consumers Project, no later than July 1, 2025."

12. Comment: Commenter strongly supports equity concepts in the proposal, particularly the off-lease ZEV and low MSRP items, but believes the proposed equity credit amount are too low to serve as a motivator to make significant changes to the established market processes. Commenter urges CARB to consider increasing the equity credits from 0.1 to closer to a full credit in recognition of the challenge of directing lease returns to a new market or building a ZEV with an MSRP of less than $20,000 [T1-86].

    Comment: The proposed 0.10 credit per used EV may not be sufficient to encourage manufacturer participation. The same can be said for the .10 credit "kicker" for vehicles below the MSRP. [OP-78]

    Comment: Low MSRP: To encourage manufacturers to bring more affordable Evs sooner and effectively kickstart the affordable EV market, we recommend providing additional EJ Values during the first few years of the program. [Suggested amounts:] 2024-26 MY: 0.3, 2027 MY: 0.2, and 2028 MY: 0.1 [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34]

    Agency Response: CARB considered commenters' requests to increase value amounts for EJ vehicle values. As explained in ISOR Appendix F-5, p 17, the additional EJ vehicle values were determined based on an assumed penalty of $20,000 per vehicle, which is the expected penalty under Health and Safety Code section 43211, subdivision (b), for a failure to deliver for sale a required ZEV. Extrapolating from this assumed penalty amount, each 0.1 vehicle value amounts to an estimated $2,000 incentive. The low MSRP provision aims to increase affordable access to ZEVs and PHEVs by providing an incentive for manufacturers to offer lower priced vehicles in the earlier years of the proposed ACC II program when battery prices are still high. Incremental vehicle costs of ZEVs and PHEVs are anticipated to remain above the cost of conventional vehicle technology in the near term and through the first few years of the ACC II program (see ISOR Appendix F-5, p 21). The low MSRP EJ value of 0.1 ($2,000) should therefore roughly offset the incremental cost or even the incremental price of a BEV. In 2026, a minimum compliance BEV (with 200 miles range) will cost less than $1,000 more than a conventional vehicle in all vehicle categories outside of the pickup, and by 2028 most 200-mile BEV vehicle categories already have negative

incremental cost.[9] Even for a 300-mile BEV, CARB estimates an incremental cost of approximately $1,000 to $1,700 by 2028 for all vehicles outside of the pickups as described in ISOR Appendix G Section VIII.

In response to comments that the vehicle value for directing lease returns was too low, staff added an additional 0.15 value to those vehicles sold to a financial assistance program participant. The additional value is intended to incentivize manufacturers to, in turn, incentivize dealers to direct off-lease ZEVs and PHEVs toward those most in need of the vehicles. A value of 0.15 was chosen as it had previously been publicly workshopped and because it corresponds to the greater benefit to low-income individuals that the action is providing. It is a reasonable value that is not too high to discourage manufacturers from additional action, nor so low that it would fail to incentivize action, based on discussions with stakeholders and as received in feedback during previous workshops. This and other modifications were released to the public on First 15-Day Notice.

13. Comment: Increase the credit values for new or used vehicles of the corresponding model year (e.g., 0.3 for 2022-2024, 0.2 for 2025-2029, 0.1 for 2030). The credit values may not be sufficient to incentivize significant ZEV deployment of new or used vehicles for these programs, considering the low vehicle price thresholds. [OP-98].

    Agency Response: CARB agrees with the commenter on the importance of promoting manufacturer participation in the EJ values but selected methods other than the specific changes the commenter requests. Each flexibility included in the ACC II ZEV regulation was added with appropriate limitations that balance the value benefit provided to manufacturers with the certainty about emission reductions that California needs to meet its air quality and climate reduction obligations. See response to Comment D-12 for more information on how vehicle values for this category were set.

    At its June 9, 2022, hearing, the Board directed staff to issue additional changes to staff's initial proposal to encourage manufacturers' generation of EJ values, so as to promote more direct action in disadvantages communities and support ZEV adoption among lower-income drivers. In light of stakeholder feedback such as this comment, staff chose to meet the Board's direction in part by enhancing EJ values. This included an additional value for used ZEVs and PHEVs that are not only placed at dealers who participate in CARB's financial assistance programs, but that are placed with financial assistance program participants. This additional value was meant as an additional incentive for manufacturers to engage in the placement of vehicles in low-income households and disadvantaged communities.

    Also, included in its First 15-Day Notice and in the final ZEV Regulation, staff linked manufacturers' ability to use the full cumulative converted ZEV and PHEV value allowance to their use of EJ values, discussed further in response to Comments D-8.

[9] See California Air Resources Board. 2022. ZEV Cost Modeling Workbook. March. Accessed March 28, 2022. https://ww2.arb.ca.gov/sites/default/files/2022-03/zev_cost_modeling_workbook_update_march2022_0.xlsx.

14. Comment: Commenter asks the Board to strengthen equity provisions in the proposal to include increased subsidies to purchase ZEVs and cleaner vehicles for working class people living near ports [OP-44].

    Agency Response: Many residential areas near ports are classified as disadvantaged communities. Overall, the EJ vehicle values are designed to encourage manufacturers to participate in on-going work occurring in disadvantaged communities, such as the Clean Mobility Options and CC4A programs. Funding is outside the scope of this rulemaking that proposed emission standards for new vehicles. However, CARB remains committed to working through regulations and programs outside of the ZEV regulation to provide consumers with incentives to purchase and use ZEVs.

15. Comment: Automakers should be allowed to use the environmental justice credits for a longer period. [OP-86]

    Comment: Extend the use of EJ values: Extend EJ value use through 2034MY. This will ensure the EJ programs can see maximum utilization through the end of implementation. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34]

    Agency Response: Each flexibility included in the ACC II ZEV regulation was added with appropriate limitations that balance the value benefit provided to manufacturers with the certainty about emission reductions that California needs to meet its air quality and climate reduction obligations. CARB determined that EJ values would be allowed to count toward a manufacturer's requirement longer than any other flexibility offered, through the 2031 MY, which is appropriate given the importance of this mechanism for frontline communities. However, CARB declined to extend the use of these values further because this could impact manufacturers' progress toward meeting the 2035 100% ZEV requirement, which is the ultimate goal of the ACC II ZEV regulation.

16. Comment: Allow Early Implementation: Allow implementation starting in 2023MY for off-lease vehicles since these vehicles will start coming off-lease in 2025 or 2026 calendar year. For all other EJ programs allow implementation beginning in 2024MY. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34]

    Comment: To ensure the greatest possible use of these credits for accelerated deployment of EVs in applicable programs, we have two recommendations: We recommend… expanding the eligibility to include 2022-2025 vehicles to accelerate earlier ZEV deployment for such programs. [OP-98]

    Agency Response: CARB did not make changes to allow for early implementation of the off-lease ZEV and PHEV EJ values requested by these commenters for the following reasons. In working with implementers of the CC4A programs, common complaints from participants were the quality of ZEVs available to participants in that program. This was a key inspiration for the development of the ZEV assurance measures, which CARB adopted as part of the ACC II rulemaking. CARB decided to limit the EJ values awarded for ZEVs manufactured prior to when ZEV assurance

measures take effect, meaning prior to 2026 MY, in order to limit the EJ values available for vehicles that might not fully meet CC4A participant needs. By contrast, CARB did determine that it would be appropriate to allow manufacturers to earn early EJ values for 2024 and 2025MY vehicles placed at a discount into community-based clean mobility programs, as vehicles used by such programs are chosen by implementers and based on the needs of the community. Additionally, staff did not include the 2022 and 2023 MYs for any EJ values because these MYs are currently in production, so the opportunity to generate early EJ values was unlikely to change any preexisting manufacturer decisions and would simply reward manufacturers vehicle in production at the time of this rule's adoption.

17. Comment: Extend Implementation: Extend all the EJ programs through 2031MY (Community Car share, Low MSRP, Off-lease, and the new section on Innovative Programs). [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34]

    Agency Response: This commenter is asking for an extension of the time period for which manufacturers can accumulate new EJ values for all categories through 2031 MY. Ultimately, CARB only allows the accumulation of these values through 2031 MY for discounts provided to community-based mobility programs and off-lease vehicles being delivered to participating dealers, and did not extend the timeline for low MSRP vehicles. The reason CARB did not extend the timeline for the accumulation for low MSRP vehicles was because these values were intended to incentivize manufacturers in the first years of the regulation when battery prices were expected to remain high, and vehicles were not expected to reach parity with their gasoline counterpart.

18. Comment: Warranty Provision: We recommend the ACC II regulations provide an additional EJ values for EVs placed in the Qualifying Community-based Clean Mobility Programs that include an extended traction battery warranty for 10 years or 150,000 miles at 70 percent through 2030 model year and 75 percent for 2031 model year. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34]

    Agency Response: CARB did not adopt a path for manufacturers to earn EJ values for extended warranties for qualifying community-based clean mobility programs. Such a provision would not clearly benefit vehicles owned by community programs, as most of these programs require only four years of service, and not expected to remain with the program during the period of time which the commenter is suggesting to extend the warranty. CARB instead adopted new battery warranty requirements for all vehicles, which would also benefit community programs in 2026 MY and beyond. As a result, CARB chose not to give additional values for extended warranties for these programs.

19. Comment: Commenter supports the proposal and would like assurance use of environmental justice credits are tracked while equity provisions are well-coordinated with existing equity-focused CARB programs and consider strengthening the regulations' EJ provisions if it does not reasonably accelerate equitable ZEV access in DACs. [OP-106].

Comment: Commenter recommends that CARB work closely with environmental justice organizations to monitor the use of environmental justice values and transparently report how environmental justice credits are supporting clean mobility programs [15-19].

Comment: Commenter suggests that all environmental justice provisions include components that will have clear metrics for success (raising awareness of ZEVs and adoption/purchasing of ZEVs), proven feasibility/impact and defined timeframes [15-33].

Agency Response: CARB concurred with these comments, and in Resolution 22-12 directed staff to "monitor and make publicly available on an annual basis vehicle manufacturers' compliance with the ACC II ZEV Regulation and deployment of ZEVs, including the generation and use of EJ values, as required and consistent with section 1962.4, subdivision (k), title 13, California Code of Regulations." Additionally, Resolution 22-12 also directs staff "to monitor and report deployment of ZEVs in low-income and disadvantaged communities and the extent to which the EJ values are resulting in the intended benefits, with the expectation that CARB will revisit the EJ measures if they are not utilized or effectively providing the intended benefits. Staff's assessment shall include, but is not limited to: EJ vehicle values earned by each manufacturer, by model year, and value type; and geographic distribution of new and used ZEVs and PHEVs by registration." This directive is included in the Resolution rather than the regulation for the reasons discussed in the response to comment H-9.

20. Comment: At the June hearing many Board members and the Chair expressed a desire for the rule to deliver equity without reducing stringency, so that the rule could deliver zero emission cars for more working Californians who bear the brunt of car pollution. We are disappointed that despite this feedback, the proposed 15-day changes to the equity provisions do not go far enough and do not guarantee direct benefits to California's most disadvantaged communities. Some of the other proposed 15 day changes may reduce the stringency of the regulation. The final proposed regulation does not achieve the equity benchmarks or fully reach the individuals and communities the Board directed staff to reach. At this point, any substantive changes to the equity programs within the ACC II rule would result in additional administrative delays of the overall program. That is not in the interest of any of the organizations within our coalition, nor the people of California. [15-25, 15-20]

    Comment: The proposed 15-day changes modified the ACC II rule to allow manufacturers to gain access to an additional suite of ACC I credits by achieving 0.5% sales under the equity program, on top of the existing ACC I credit allowance for all manufacturers. While CR appreciates CARB staff's attempt to increase accessibility without diminishing stringency of the rule, as was directed by the Chair during the June Board Hearing, we are concerned that the 15-day changes to the equity provision of the rule, in particular allowing manufacturers to use equity participation to unlock cumulative access to ACC II credits, are too complex to easily ensure that automakers are held accountable to their role in increasing access to ZEVs in underserved communities. Furthermore, this change may result in fewer vehicles being placed in equity programs than would have under our previously recommended

alternative, which would limit access to any and all ACC I credits unless manufacturers participate fully in the equity component of the rule.6 We understand that amending and strengthening the equity programs within the ACC II rule could result in additional administrative delays to the implementation of the overall program, which is by no means the intent of CR. Thus, we ask CARB to also consider alternative strategies, outside of the ACC II rule, to strengthen California's commitment to equity in the transportation sector, with the intention to continue to work with stakeholders and consumer advocates on future rulemakings to achieve ZEV accessibility and awareness in all communities. [15-21]

Comment: Commenter states CARB has missed an opportunity to show its commitment to equity as the rule fails to properly incentivize automakers to participate in the equity programs and ensure that all households in California will have meaningful access to affordable zero-emission vehicles. [T2-36].

Comment: We are also disappointed that the 15-day changes fail to include stronger equity provisions that adequately address the significant and disproportionate impact that vehicle pollution has on communities of color and low-income communities. EDF and numerous other health, community, equity and environmental organizations provided extensive recommendations to ARB staff and Board members on how the ACC II program could be strengthened to better meet the serious needs of frontline communities, including ways to ensure that any equity provisions be utilized by manufacturers. While a few of these recommendations were incorporated, the 15- day changes fall short of any meaningful provisions to ensure that zero-emitting cars make their way into the communities that need them most.

We recognize that advocating a stronger equity program within the ACC II program at this time would further delay finalization of the regulation. Therefore, we ask that you adopt the revised regulation, including the 15-day changes, at your August hearing. [15-31]

Comment: We appreciate the attempt to address some of these concerns through the added resolution as a list to address the shortcomings identified. We must do more outside of this regulation to ensure low-income households don't get left behind. We must develop and implement strategies and accountability measures to ensure our low-income and disadvantaged communities benefit from this type of rule and its transition to a zero-emission future. With that said, we cannot delay this work and we ask you all to approve the regulation as well as the resolution with the recommended edits provided by the California Clean Cars Coalition, which include timely reporting on the EJ credits. We're committed to work closely with all to ensure equitable implementation of this rule and deliver on the State's commitment to prioritize and provide direct and meaningful benefits to those who continue to bear the brunt of air pollution and who are last to benefit from this transition. We Challenge CARB and its staff to think broader than just what you think is possible to what it is actually needed to deliver for our front-line communities. [T2-47]

Agency Response: CARB appreciates the commenters' support for Board adoption of its 15-day changes and final rules. CARB disagrees with these commenters' assessment that the ACC II regulations inadequately consider and benefit low-income

and disadvantaged communities or that staff's 15-day changes failed to meet CARB's June 9, 2022 direction. See also agency responses in FSOR Appendix A, Responses to Comments on Equity and Disparate Impacts, and Comment D-10 above in this section on how CARB considered equity in the ACC II regulations and worked with stakeholders.

In adopting Resolution 22-12 and, in so doing, the ACC II regulations, CARB found "the proposed ACC II Regulations are consistent with CARB's environmental justice policies and do not disproportionately impact people of any race, culture, or income."

To the extent that these comments call for actions subsequent to the rulemaking, they are outside the scope of the rulemaking. Nonetheless, Resolution 22-12 also directs staff to "monitor and make publicly available on an annual basis vehicle manufacturers' compliance with the ACC II ZEV Regulation and deployment of ZEVs, including the generation and use of environmental justice values, as required and consistent with section 1962.4, subdivision (k), title 13, California Code of Regulations." Additionally, Resolution 22-12 also directs staff "to monitor and report deployment of ZEVs in low-income and disadvantaged communities and the extent to which the environmental justice values are resulting in the intended benefits, with the expectation that CARB will revisit the environmental justice measures if they are not utilized or effectively providing the intended benefits. Staff's assessment shall include, but is not limited to: environmental justice vehicle values earned by each manufacturer, by model year, and value type; and geographic distribution of new and used ZEVs and PHEVs by registration." See also agency responses in FSOR Appendix E, Summary of Comments Out of Scope and Agency Response, Part C, Complementary ZEV Policies, as well as Chapter 3 of CARB's Fiscal Year 2022-23 Draft Funding Plan for Clean Transportation Incentives[10] for more information on CARB's continuing and expanding efforts to support ZEVs in frontline and underserved communities.

21. Comment: CARB has proposed, the implementation of the EJ flexibilities would lower the stringency of the ACC II program by between 2 and 3% annually from MY 2026 to 2031. Given the broad definition of credit generation activities that qualify as a "Community-based clean mobility program," many manufacturers will maximize implementation these activities that are cheaper than delivery of actual BEVs. Accordingly, Tesla's modeling also finds that utilization of this flexibility will reduce real world BEV deployment by between 2 to 3% each year through MY 2031. [OP-78]

    Comment: [A]s to the draft proposal, Tesla shares the goals and benefits, if realized, of the Community and Used EV proposals found at §1962.4 (e)(2). Tesla encourages CARB to implement these Environmental Justice (EJ) proposals without impacting the overall stringency of the program… reducing the proposed stringency of the overall program lessens the mitigation of the very air pollution impacts in the communities that CARB seeks to address. In this regard, CARB should prevent such backsliding and raise the overall model year ZEV requirement commensurate with the amount of

[10] *July 21, 2022 Public Workshop on the Fiscal Year 2022-23 Draft Funding Plan for Clean Transportation Incentives*. The Board will discuss this plan at its November 17, 2022, public meeting.

stringency reduction created by the implementation of the EJ credit flexibility programs. [OP-78]

Agency Response: CARB agrees with commenters that the optional use of EJ values could result in fewer vehicles delivered pursuant to a zero-emission standard. See agency response to Comment D-6 as to CARB's decision to not make these values mandatory. However, CARB decided to include the EJ value option in order to increase access to ZEVs and the other benefits of clean mobility in lower-income and disadvantaged communities. CARB adopted the ACC II ZEV regulation understanding the potential trade off with this kind of flexibility embedded into the program. See agency response to FSOR Appendix A, Comment A-32 for how CARB considered flexibilities in developing the ACC II regulation. Additionally, it is not a forgone conclusion that the existence of any flexibilities will result in fewer vehicles delivered for sale. Manufacturers may choose not to reduce stringency, and instead bank values for future use or current year pooling. Lastly, see agency response to Comment A-3 which describes how staff assessed more stringent alternatives in adopting the ACC II ZEV stringency.

22. Comment: Design of the program may exacerbate vehicle ownership inequities. Under the proposed Community-based Clean Mobility Programs, CARB attempts to increase EV accessibility through a crediting incentive to manufacturers that, inter alia, provide vehicles 25% below MSRP. It is unclear whether structuring the incentive this way will be equitable and deliver both greater numbers and desirable vehicles to the targeted communities. First, requiring a manufacturer provide a MSRP discount does not mean an actual discounted sale will happen at the dealership. Second, the program will likely lead to many OEMs providing compliance EVs that possess the lowest qualifying range being delivered to eligible communities as the most "cost-effective" way for manufacturers to capture the allowable credits. This may only serve to exacerbate the divide as to who is able to obtain new Evs with the attributes that most consumers desire. [OP-78]

    Agency Response: CARB disagrees with these comments that assert EJ values may exacerbate vehicle ownership inequities. The EJ values offered for vehicle discounts are designed to support on-going, funded community-based clean mobility programs that have been through an application and vetting process. The discount is provided directly to community-based clean mobility program operators to increase zero-emission mobility in disadvantaged, low-income, and tribal communities. The community programs choose vehicles that serve their communities best, and then will receive the discount (often through vehicle procurement by a mobility program operator); manufacturers will not be the party deciding on the appropriate vehicles for communities. Further, the relevant EJ values are only available for placement of ZEVs with community-based clean mobility programs, not based on sale to consumers. However, CARB agrees with the commenter on the difficulty of predicting whether and which manufacturers will take advantage of each type of EJ values.

23. Comment: Commenter states that indeed, §1962.4(e)(2)(c) adds a .10 "kicker" for EVs delivered below an even lower MSRP. CARB should seek to assess whether, as structured, a quality and performance gap will be created for those who purchase a

vehicle through the Clean Mobility Programs. As noted above, as currently structured, with CVAP focusing on AGI and not MSRP, it ensures that there is access to BEVs of all qualities to low-income households and does not create a reward for delivering EVs of lesser capability. [OP-78]

Agency Response: The commenter conflates two of the EJ vehicle values. To help address the ZEV adoption disparity, CARB is aiming to increase affordable access to ZEVs and PHEVs by providing an incentive for manufacturers to offer lower priced vehicles (i.e., lower MSRP). A 2026 through 2028 model-year ZEV or PHEV delivered for sale with an MSRP less than or equal to $20,275 for passenger cars and less than or equal to $26,670 for light-duty trucks can earn an additional 0.10 vehicle value as specified in section 1962.4(e)(2)(c). Eligible vehicles must be 2026 through 2028 MYs. It is important that low-MSRP vehicles can only generate EJ values beginning with 2026 MY because starting in that year ZEVs and PHEVs will need to meet a suite of ZEV assurance requirements and technical requirements, which means greater certainty that these ZEVs and PHEVs will meet drivers' needs and that these are not less-capable than other ZEVs.

While the low-MSRP vehicles could be procured by a clean mobility program, there is a separate provision that seeks to support ongoing, funded community-based clean mobility programs that have been through an application and vetting process. In this provision, EJ values are given to manufacturers for ZEVs and PHEVs provided at a 25% or greater discount to a qualifying community clean mobility program. The discount is provided directly to community-based clean mobility program operators to increase zero-emission mobility in disadvantaged, low-income, and tribal communities. The community programs choose vehicles that serve their communities best, and then will receive the discount (often through vehicle procurement by a mobility program operator); manufacturers will not be the party deciding on the appropriate vehicles for communities. Further, the relevant EJ values are only available for placement of ZEVs with community-based clean mobility programs, not based on sale to consumers. CARB therefore disagrees that the 0.10 vehicle value for low MSRP vehicles will result in a quality or performance gap or lesser capable ZEVs for clean mobility programs.

24. Comment: Used EV Program Should Expand Eligibility. As proposed at §1962.4(e)(2)(B), used EV eligibility is limited to formerly leased vehicles from MY 2026-2031. Tesla sees no reason why the program should be cabined to only used vehicles that were leased versus other manners of prior ownership. So long as an OEM retains ownership prior to resale to a qualifying applicant, form of prior ownership should not preclude eligibility and this limitation will unnecessarily limit the pool of eligible used Evs available. [OP-78]

    Agency Response: Vehicles enter the used market in various ways, including vehicles coming off a lease (i.e., returned to the leasing company when the lease term ends). As described in Section III.C.5.b of the ISOR, about 1 in 4 new vehicles are leased and not purchased nationwide. However, Clean Vehicle Rebate Project statistics (of subsidies for drivers to purchase or lease ZEVs) show 70% of BEVs have been leased. This is consistent with other findings that vehicle leasing tends to be higher for newer technologies. While the percent of leased ZEVs may decrease over time, there is

potentially a very large volume of newly off-lease ZEVs, which can provide great value in the used vehicle market especially when directed to lower income consumers. Leased vehicles were a focus of this provision because leasing companies often are a financing arm of the vehicle manufacturer, so manufacturers can control where the formerly leased vehicles end up through their off-lease auctioning process. Most manufacturers do not retain ownership of a vehicle that was formerly owned by an individual consumer, and this provision is targeted to incentivize manufacturer-specific action.

25. Comment: Rather than focus eligibility on the original MSRP of the vehicle, Tesla also recommends CARB consider relying on purchaser criteria adopted by air districts under Clean Cars 4 All. [OP-78]

    Agency Response: The commenter suggests that the ACC II ZEV regulation provide EJ values to manufacturers that sell to purchasers who meet criteria developed for CC4A, not based on purchasers' actual participation in CC4A. CC4A eligibility is based on household income relative to household size, along with residential location and current vehicle ownership. CARB declined to adopt the commenter's suggestion because it would be untenable for manufacturers to target sales, and for CARB to verify sales, based on the income level and household size of individual purchasers. Additionally, it was not evident that manufacturers would be able to target vehicle sales to CC4A-eligible purchasers, meaning that EJ values awarded on this basis might not change manufacturers' behavior but, instead, might coincidentally reward manufacturers whose customers happened to be eligible for CC4A. By contrast, the final ACC II rules include optional EJ values for vehicles that are sold at the end of a lease to dealerships that participate in financial assistance programs like CC4A and additional values for vehicles that are then sold to a financial program participant. CARB determined that this approach best balanced the promotion of access to zero-emission mobility options for low-income Californians with workability for manufacturers and CARB in rule implementation. CARB did include an MSRP cap for eligibility for the financing assistance EJ values, as CC4A implementers conveyed their perspective that vehicles from luxury manufacturers are not appropriate to incorporate into the CC4A program.

E. Plug-in Hybrid Electric Vehicles

1. Comment: CARB received several comments expressing concerns about PHEVs, asking for fewer PHEVs than proposed in ACC II or for the flexibility to be reduced or phased out. [T1-39, B1-13, T1-43, T2-50, OP-90]

   Comment: Tesla respectfully asks CARB to reconsider the role PHEVs by lowering the annual percentage of PHEVs in proposed § 1962.4 (e) to 15% per year with a complete phaseout of PHEV compliance credit generation after model year 2032 [15-8].

   Comment: In the interest of maximum feasible stringency, emissions reductions, and environmental integrity, Rivian opposes the inclusion of PHEVs in the program. Given the numerous manufacturer commitments to introduce all-electric vehicles in the coming years, we believe that incentives to sell vehicles producing any tailpipe

emissions unnecessarily weaken the mandate and slow the state's progress toward carbon neutrality. PHEV inclusion in the ACC program made sense in the past to transition OEMs and consumers away from internal combustion engine technology, but Rivian believes there is no longer a need for such a "bridge." Moreover, PHEVs exhibit significant variability in their environmental performance. Research from Europe suggests that PHEVs deliver poorer environmental benefits in real-world usage than certified under test procedures, with troubling implications for the projected benefits of regulatory programs that encourage the development and sale of these vehicles. Rivian requests that CARB reconsider PHEV crediting in this next phase of the ACC program. [OP-127, B1-10]

Comment: CARB should substantially reduce the PHEV allowance flexibility – Proposed §1962.4(e)(1) This proposal overly incentivizes continued investment in a polluting technology, prolongs emissions, and will result in a disproportionate number of new PHEVs in the state's overall vehicle fleet, potentially displacing what otherwise would be greater, cleaner BEV adoption…Allowing PHEV crediting at the proposed high rate will result in a disproportionate number of new PHEVs in the state's overall vehicle fleet that will displace what otherwise would be cleaner BEVs that perform far better on emission reductions and certified electric range. Tesla's modeling indicates that generation of PHEV credits under this flexibility will increasingly reduce real world ZEV deployment by 7% in MY 2026 and rising to a full 20% by 2035…. In addition to creating a 20% total annual flexibility utilization limit, Tesla suggests sunsetting the PHEV flexibility after MY 2030 given the emissions implications, as explained further below, of PHEV technologies. In combination, these flexibility changes would result in real-world implied actual 100% emissions-free ZEV sales by 2035. Without these changes, the continuation of the PHEV contribution in perpetuity may result in a 20% shortfall from reaching full emissions-free ZEV sales…In addition to overvaluing PHEVs in the conversion of ACC I's historical credits, the ACC II proposal further incentivizes PHEV technology in several other ways. CARB over credits PHEVs relative to ZEVs, provides a MY 2026-2028 relaxation of the qualifying technology standards for PHEVs, and allows a huge 20% of the annual compliance requirements to be met with this still polluting technology in perpetuity. If CARB seeks a zero emission, fully electrified light-duty sector, it should significantly lower the role of PHEV in the final regulation, allowing diminishing PHEV percentages over time and phasing them out after 2030. [OP-78]

Agency Response: CARB adopted the ACC II ZEV regulation which allowed PHEVs as a compliance option throughout the entire regulation period and set an allowance (referred to as the PHEV flexibility or allowance flexibility) of 20% annually (meaning manufacturers could meet no more than 20% of their annual ZEV obligation with values from PHEVs).

As discussed starting on page 56 of the ISOR, PHEVs will still play a role in developing the ZEV market, especially when the goal is 100% ZEVs by 2035. Studies show model

diversity and availability are key to driving consumer interest.[11,12] PHEVs may also remain a critical choice for low-income drivers as well. According to data from the CC4A program, participants swapped out older vehicles for a PHEV at four times the rate that they did for a BEV.

CARB concurs that GHG reduction targets and ambient air quality standards require balancing of risks and emissions from gasoline usage in PHEVs with the need to keep these as an available option. However, the benefits of the inclusion of PHEVs go beyond maximum emission reductions and were included also to address potential consumer hesitation to vehicles that meet zero-emission standards.

It is unclear ultimately how manufacturers will comply with the ACC II ZEV regulation. Stated on page 56 of the ISOR, PHEV share of the market has declined in recent years, and manufacturers' projections, summarized on page 39, indicate PHEVs will play a very small role in the future. As with all aspects, this flexibility and others will be monitored over time to ensure the ACC II regulations deliver the intended benefits.

2. Comment: CARB received support for CARB's inclusion of PHEV technologies in the ACC II regulations [OP-134, 15-21, 15-27, OP-51, 15b-4[13], B2-4, T2-25, OP-90].

   Comment: I feel we should allow vehicles that have gas and electric to power them. It keeps from these problems [grid instability] that California does not have an answer for. [OP-30]

   Comment: Fully electric may not meet the needs of all Californians and until we have a fully developed H2 fueling infrastructure in place, PHEV's may be able to help bridge that gap, but a clean cars regulation will need to specify how they fit into the picture. [OP-48]

   Comment: In this proposed rule, CARB identifies Plug-In Hybrid Vehicles (PHEV) as a necessary tool to help consumers overcome the hesitancy associated with purchasing new zero-emission vehicles, while still helping the state reduce emissions necessary to meet its goals. CR [Consumer Reports] agrees with the need to ensure that PHEVs have a role in the energy transition… [OP-108]

   Agency Response: CARB appreciates support for its inclusion of PHEVs that meet minimum technical requirements in the ACC II ZEV regulation.

3. Comment: Commenter states that in the May workshop, it was proposed that there would be separate tracking of PHEV credits and limit credit usage to only the portion allowed to be met by PHEVs which is 20%/year, but in the proposed rule, this is somewhat ambiguous. Could you please clarify CARB's position on this? [B1-9].

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[11]Morning 2021b. Lisa Martine Jenkins, "*The Coming Electric Vehicle Wave: In 2022, Consumers Get Options*", Morning Consult, Published December 22, 2021.

[12] Consumer Reports 2020.

[13] This comment was submitted during the second 15-day notice, the scope of which was solely additional documents relied upon being added to the record. As such, this comment is beyond the scope of the comment period and no response is required. Nevertheless, it is responded to here.

Agency Response: To provide clarity per this commenter's request, section 1962.4 (j) requires separate reporting of ZEV and PHEV information, as well as reporting procedures for determining compliance and appropriate calculation of values and allowances.

4. Comment: 1962.4 (e)(1)(A)8, Full-Credit PHEV Minimum Certification Range. This specifies the minimum all electric range as 73 miles. We believe this is a typo and should be 70 miles. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-98, OP-150, OP-95, T2-34]

   Agency Response: CARB concurs with this commenter's assessment and corrected 73 miles to 70 miles in section 1962.4 (e)(1)(A)8. through its First 15-Day Notice.

5. Comment: A PHEV is only cleaner if the hybrid part of the car is being used. The car becomes dirtier than a traditional ICE when the hybrid part of the car is being used. Some consumers may choose to not use the hybrid part of their vehicle at all, especially if they live somewhere without an established EV infrastructure or have trouble charging such as a mobility challenged person that does not have access to charging at their apartment or house. [OP-117]

   Agency Response: This commenter asserts that PHEVs emit more when operating using its engine than a gasoline vehicle. This is incorrect, as PHEVs and gasoline vehicles delivered for sale in California are subject to the same LEV standards, section 1961.2 and 1961.4 (ACC II LEV). Additionally, PHEVs certified to section 1962.4 (ACC II ZEV) will be required to achieve SULEV 30 or lower emission levels.

6. Comment: Even with these performance requirements, using PHEVs can result in global warming and smog-forming pollution. There is no assurance that PHEVs will be plugged-in and even if charged frequently, some driving will inevitability use the combustion engine. Therefore, it is important that the ACCII regulations include a cap on the fraction of ZEV credit compliance that can come from PHEVs. [OP-172].

   Agency Response: CARB appreciates the vigilant approached urged in this comment, and adopted the ACC II ZEV regulation to allow manufacturers to fulfill no more than 20% of their annual compliance through delivery of PHEVs.

7. Comment: We support staff's proposal for minimum performance requirements for PHEVs for both range and power. [OP-150]

   Comment: Agree with CARB's proposal to cut emissions from PHEVs [T1-59].

   Comment: UCS supports the stronger plug-in hybrid (PHEV) ZEVs specified in the ACCII regulations. To minimize emissions, it is important to ensure that PHEVs have all-electric operation available when the battery has sufficient charge, even when the vehicle is in a high-power demand situation. The requirement for 40 mile range on the US06 drive cycle will help ensure that PHEVs have an electric powertrain with enough capability to handle common driving situations like highway driving. It is also important that PHEVs have adequate electric range to allow most daily driving without gasoline combustion. The proposed ACCII regulation requires the equivalent of 50-mile real-

world all-electric range to earn a ZEV credit, which would be sufficient range to allow a majority of PHEV driving to be combustion-free. [OP-172].

Comment: CR agrees with the need to ensure that PHEVs have a role in the energy transition, and urges CARB to consider real-world standards for both PHEV and low-range ZEVs. [OP-108].

Comment: While we have previously advocated that staff require stronger PHEVs than the current Advanced Clean Cars II (ACC II) proposal (e.g., greater all electric range and more stringent cold start and aggressive driving emission tests), we support staff's proposal for PHEVs in the 45-day notice version of the regulation… we oppose proposals to remove PHEVs from ACC II or to make PHEV requirements in ACC II less stringent. [OP-107, OP-90]

Comment: MECA commends CARB on its proposed changes to PHEV minimum requirements. In particular, we support CARB's provision of the transitional credit allowance in 2026-2028 with all-electric range requirement of >30 miles. [B1-1]

Agency Response: CARB appreciates support for its new technical minimum standards for PHEVs, including new testing and range requirements.

8. Comment: Please don't change the PHEV provisions in the staff proposal. No one knows how to reach 100 percent sales of battery, fuel cell, and plug-in hybrid EVs. So it is wise -- very wise for CARB to hedge its bet on the future by including PHEVs with tough requirements and restrictions in the proposed ACC II. PHEVs will be needed by many types of consumers, including low-income drivers, people who residents often, change jobs often, or work two jobs, drivers in rural and cold weather regions, drivers that toe campers, boats and trailers, and other market segments. [T1-4].

   Agency Response: CARB concurred with this commenter, and adopted PHEVs, with appropriate technical standards and allowances in the ACC II ZEV regulation as presented in the ISOR.

9. Comment: CARB can take emissions reductions further by also requiring PHEVs require PHEVs to be flex-fueled vehicles, or FFVs…. Why not add the option to use no gasoline by requiring PHEVs to be flex fuel advancing CARB's goals. First, E85 cuts both CO2 and NOx in addition to reducing PM and avoiding toxic aromatics to support environmental justice outcomes. Today, California consumers save 40 percent with E85, more than $2 per gallon, a significant benefit. Finally, adding flex fuel technology to a vehicle does not tangibly alter the cost, offering an affordable choice with GHG savings on par with BEVs. [T1-59].

   Comment: In multiple instances, CARB staff have stated that despite the projected increase in zero emission vehicles (ZEVs) sales by 2050, plug-in hybrid electric vehicles (PHEVs) will still play an important role in helping the state decarbonize transportation. Even with the proposed 20 percent cap on the number of PHEVs allowed to fulfill obligations, CARB still projects an increase in PHEV sales through 2035. Additionally, CARB states that the continued sales of PHEVs will ensure increased consumer choice and model diversity, especially among lower income buyers where PHEVs have been preferred over battery electric vehicles (BEVs) in CARB's Clean Cars 4 All program. In

our experience, policies that prescribe technology-specific goals are less successful than technology-neutral, target-based policies. As a result, we disagree with the proposed cap on PHEVs, as we would prefer a target-based approach. NCGA agrees with CARB's proposals to help decrease the emissions coming from PHEVs, including the creation of a US06 standard for hybrids to help reduce cold start emissions. However, CARB has the opportunity to go one step further on its proposals to decrease emissions by requiring that all PHEVs MY 2026 and later be a flex fuel vehicle (FFV). Under the proposed ACC II regulation, PHEVs sold in 2026 and beyond will still use gasoline. By requiring that PHEVs be FFVs, CARB would add the option to use no gasoline. [B1-11]

Agency Response: The ACC II regulations set emission standards for manufacturers, and do not mandate one technology. PHEVs that are engineered to run on biofuels and that meet all requirements set by the ACC II ZEV or LEV regulations (as well as other relevant existing regulations) would be allowed to count toward manufacturers compliance in the ACC II regulations.

A regulation that relied on compliance from flex fuels or biofuels would require verification that drivers are using biofuels as compared to gasoline to ensure emissions are reduced as expected. This would need a complex data collection process between vehicle owners and the automakers, followed by reporting to CARB, and measures to ensure vehicle owners elected to use biofuels or to remedy the effects on emissions when they did not. Automakers would not likely have sufficient assurance drivers would choose biofuels at the pump in order to plan for their annual compliance with the vehicle regulations, creating risks of large unplanned credit deficits or non-compliance. Additionally, developing this type of regulation provision on PHEVs would implicate the California LEV GHG regulation to add flex-fuel requirements on all conventional vehicles, changes to which are beyond the scope of the ACC II rulemaking. Future rulemakings could consider changes to the LEV GHG requirements.

High blend ethanol in gasoline, such as E85, requires additional infrastructure for fuel distribution to drivers. CARB is aware of a limited number of E85 retail distribution outlets in California but is not aware (nor is there evidence in the record before CARB) of adequate private or public investments planned to expand the network necessary to influence the pace of biofuel usage. State public infrastructure investments are focused primarily on EVSE and hydrogen infrastructure, as noted in the ISOR, Section III.A.6.1.

10. Comment: Commenter recommends technical requirements that don't risk the affordability of PHEVs [T1-12, B1-5].

    Agency Response: CARB considered comments on minimum technical requirement and their effect on vehicle affordability and disagrees that the minimum technical requirement for PHEVs jeopardizes affordability. PHEVs are an important part of the future fleet, particularly in segments more difficult to get to zero emissions, and PHEV technology shares many common non-battery components with BEVs, like on-board chargers, and other components with both BEVs and FCEVs, like electric motors and inverters. Where possible, staff aligned cost curves of similar components between BEVs, PHEVs, and FCEVs to generate what staff believes is a fair comparison of costs

between those technologies. However, PHEVs still require the use of a conventional vehicle that can emit criteria pollutants and GHGs should the conventional vehicle turn on and cannot remove that cost like FCEVs and BEVs can when generating incremental costs to conventional vehicles. When looking at the total cost of ownership over ten years, PHEVs did not show a net cost savings for the owner over that period. This is partly because the PHEV is still using some gasoline at a higher cost per mile than electricity, but also because PHEVs are not projected to have lower maintenance and service costs compared to a conventional vehicle (whereas BEVs are projected to have a 40% reduction in maintenance and service costs).

CARB has met its legislative directives to develop maximum feasible regulations and cost effectiveness that ensure that the light-duty fleet achieves the necessary reductions to meet California air quality and GHG reduction goals.

11. Comment: Commenter recommends increasing the 20 percent PHEV compliance cap. [T1-19]

    Comment: CARB should allow more flexibility for PHEVs to contribute greater than 20% of a manufacturer's ZEV compliance in the early years of ACC II implementation to provide additional affordable ZEV consumer vehicle choices and as a buffer while charging infrastructure and critical battery material supply chains develop. [B1-1]

    Comment: One suggestion would be to allow PHEVs to count towards 85% of a clean vehicle standard quota (or some other percentage), thereby making it easier for manufacturers to meet the policy, and also making it easier for everyday people to transition to electric. [OP-48]

    Comment: Raising ZEV performance requirements for light-duty PHEVs' 20 percent sales cap until at least 2030 to further maximize CO2 reductions and providing more consumers with assurance and a wider variety of affordable ZEV vehicle choices, while charging infrastructure and critical battery mineral supply chains develop. [T1-20]

    Agency Response: CARB agrees that PHEVs have a role in the ACC II regulations. See agency response to Comment E-1 for CARB's inclusion of PHEVs in the ACC II ZEV regulation. However, as stated on page 57 of the ISOR, GHG reduction targets and ambient air quality standards require CARB to balance the risks and emissions from gasoline usage in PHEVs with the need to keep PHEVs as an available option to truly achieve 100% of new car sales, expecting some buyers will remain hesitant with ZEVs. Therefore, CARB adopted a PHEV allowance of 20% annually which balances the need to provide flexibility for manufacturers, more technology choices for consumers, and the need to achieve deep emission reductions in the light-duty sector.

12. Comment: We ask you to extend the interim 30-mile range requirement for Class 2A trucks to additional years through 2030 MY. The carbon reduction potential for larger PHEV trucks is significant as the potential market demand among construction contracts, utility vehicles, emergency fleets, and consumers who need to tow a boat. [T1-37]

    Comment: Class 2a vehicles, such as large SUVs and pickups, represent a segment of the market that will be challenging to electrify given unique needs for higher payload

and towing long distances. PHEV technology can provide this capability and can serve as a bridge for consumers to a fully electrified product. We agree with AAI's comments that the 26-28MY PHEV partial ZEV credit allowance should be extended for Class 2a PHEVs by two model years through 30MY. This will allow further innovation and development time to improve battery technology (increase energy density) and focus on a more cost-effective implementation (reduce battery cost). This extension would also serve to increase consumer confidence with electrification while still providing environmental improvements [OP-95].

Comment: We urge the Board to consider extending the interim 30-mile range provision two extra years (through to 2030MY) for Class 2a (6,000-8,500lb GVWR) Light-Duty Trucks. Class 2a trucks are larger vehicles requiring bigger batteries and electrical systems, and generally also have longer life cycles. This additional two years of flexibility will allow Toyota and other manufacturers to reach an important, and perhaps harder to reach, market segment with compelling product that still provides the towing and cargo capacity that these drivers demand. [OP-150]

Comment: We recommend CARB extend the Partial Credit PHEV provisions currently in the proposed regulations for two years (until 2030 model year) for Class 2a vehicles only. These vehicles would provide substantial environmental and economic benefits. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-98, OP-150, OP-95, T2-34]

Agency Response: CARB considered these commenter's request to extend the partial values for PHEV trucks that do meet minimum technology thresholds through 2030 MY and did not amend its proposal. CARB did not agree that the extension of partial values for PHEVs for trucks between 6,000 and 8,500 pounds gross vehicle weight rating (GVWR) was not in line with the broader objectives of this rulemaking, which include cost-effective emission reductions and achieving 100% ZEVs by 2035 MY. Originally, this option to earn partial values for PHEVs that did not meet the 50 miles zero-emission range threshold was born out of such vehicles that are currently or on the cusp of being certified recognizing most manufacturers follow a 5-year design life. Phasing out partial value PHEVs in the adopted timeframe balances the needs to the industry to allow sufficient time for already planned vehicle models to come to market for a sufficient amount of time with the California's important need to maximize emission reductions and transition the market to ZEVs. There is nothing inherently different about a truck's design life that would merit a longer phase-out of partial value PHEVs, nor would such an extension meaning benefit the ACC II ZEV regulation or building of a market of vehicles pursuant to a zero-emission standard. If manufacturers were still to pursue such PHEVs, those could be use to comply with LEV GHG (section 1961.3) and LEV Criteria (section 1961.4).

13. Comment: In comparison to the ACC I ZEV program, CARB proposes to over-credit deployed PHEVs in ACC II. Under ACC I, a PHEV could earn up to 1.1 credits while a BEV could earn up to 4 credits. Under the ACC II proposed § 1962.4(e)(1), eligible PHEVs can earn one credit, however, BEV credit generation has been discounted from 4 credits to 1 credit. In short, CARB failed to keep the same weight of credit generation ratio. Using the existing ACC I crediting ratio, if the average BEV earns 1

credit, then the average PHEV should earn a maximum of 0.3 credits per vehicle in ACC II. As a result, CARB has tipped the scales decidedly in favor of PHEVs... Tesla urges CARB to reduce the level of credit generation that unfairly rewards polluting PHEV technology. Tesla urges CARB to adjust the PHEV credit generation downward consistent with the ratio between BEV and PHEVs under ACC I. Further, Tesla believes the annual cap on the use of PHEV credits should be set at a maximum of 15% annually and eliminated beginning in MY 2031. [OP-78]

Agency Response: The comment asserts that the one-for-one valuing system adopted in the ACC II ZEV regulation does not reflect past ZEV crediting ratios. The commenter is correct in their assertion that ZEVs and PHEVs that meet all technical minimums each receive one value. However, PHEVs are also devalued by the inclusion of a 20% allowance, which is the maximum allowed percentage of a manufacturer's annual obligation that can be met with values from PHEVs. See agency response to Comment E-1 for an explanation as to why CARB included PHEVs in the ACC II ZEV regulation.

14. Comment: Under the ACC II proposed § 1962.4(e)(1)(B), eligible PHEVs with a reduced range stringency are still able to earn one credit for each PHEV delivered through MY 2026 – 2028. In doing so, CARB's proposal rewards vehicles with diminished emission reduction benefit with the approximate equivalent credit value of a ZEV that must meet far greater technical standards. Rather than serve as an incentive, this will further delay manufacturers from deploying large numbers of BEVs in California. [OP-78]

    Agency Response: The comment asserts the inclusion of partial valued PHEV with more than 30 miles all-electric range but less than 50 miles all-electric range will delay manufacturers from producing BEVs. The purpose of the ACC II ZEV regulation is to set emissions standards and not dictate one technology pathway. The partial value PHEV option was included (per page 59 in the ISOR) in recognition of manufacturers who have invested in PHEVs that are currently being certified or are on the cusp of being certified that fall just out of meeting the minimum technical requirements (50 miles range and capable of 40 miles all-electric range on US 06 test range). Most vehicles follow a 5-year design life, therefore vehicles that have just now been introduced or are soon to be introduced will likely be produced through the first few years of the proposed requirements for 2026 and later MYs. This allowance strikes a balance to ensure that manufacturers can see through current investments in PHEVs while setting a clear path for PHEVs for 2029 and subsequent MYs for manufacturers to plan future investments. See agency response to Comment E-1 for an explanation as to why CARB included PHEVs in the ACC II ZEV regulation.

15. Comment: CARB further proposes in § 1962.4(e)(1)(C) to allow manufacturers to use these early year, limited range PHEVs and, after MY 2028, all qualifying PHEVs toward 20% of their annual compliance. There is little doubt many manufacturers will deploy PHEVs to maximize cheaper credit generation up to the 20% limit throughout the lifetime of the ACC II program. In the E.U, a similar "Super Credit" multiplier exists for vehicles which emit<50g CO2/km, which can be earned from 2020-2022 inclusive. In the first year of the Super Credit eligibility, eight out of ten manufacturers reached the cap. This was achieved by aggressive sales practices (pricing and pre-registrations) to

capture the maximum value of the credits up to the cap, and then halting further sales once the cap was reached. [OP-78]

Agency Response: CARB does not agree with the commenter's assertion that allowing partial value PHEVs for the first three years of the regulation will act in the same way as a multiplier would. Manufacturers receiving values under these provisions give manufacturers less value per vehicle than if the manufacturer would meet the full set of technical standards for PHEVs. (See section 1962.4(e)(1)(A)) Additionally, little evidence exists to support this commenter's assertions that manufacturers will hit the 20% allowance. Page 39 of the ISOR shows results of confidential projections of sales obtained in the 2020 and 2021 alternative fuel vehicle survey show PHEVs projected at less than 5% of the market in for 2022 through 2025 MYs.

16. Comment: …the use of PHEV is non-compliant under proposed §1962.4 which states:

> § 1962.4. Zero-Emission Vehicle Requirements for 2026 and Subsequent Model Year Passenger Cars and Light-Duty Trucks.
>
> (a) (1) Applicability. This section shall apply to manufacturers that produce and deliver for sale passenger cars and light-duty trucks in California in 2026 and subsequent model years . . .
>
> (b) Zero Emission Vehicle Standard. The Executive Officer shall certify as zero emission vehicles (ZEV) under this regulation new 2026 and subsequent model year passenger cars and light-duty trucks that produce zero exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas, excluding emissions from air conditioning systems, under any possible operational modes or conditions.

Indeed, even CARB's presentations have indicated that PHEVs utilize modes and conditions under which such vehicles produce criteria pollutants and greenhouse gas emissions. [15-8]

Agency Response: PHEVs are included under the ZEV regulation as a means of compliance, notwithstanding their exhaust and evaporative emissions. See agency response to Comment E-1 for an explanation as to why CARB included PHEVs in the ACC II ZEV regulation.

17. Comment: …other jurisdictions addressing light-duty vehicle emissions are poised to move swiftly to address all tailpipe emissions – including those from PHEVs. In early June, the European Parliament passed 100% internal combustion engine (ICE) ban by 2035. This proposal makes no exception for PHEVs. At the end of June, the European Commission also agreed to introduce a 100% CO2 emissions reduction target by 2035 for new cars and vans. In comparison, the ACC 2 proposal would allow up to 20% of annual compliance in 2035 to be met via PHEVs. California should amend its proposal so as not to cede its global leadership in fully reducing light duty vehicle GHG emissions. [15-8]

Agency Response: CARB disagrees that the status of ZEV-related requirements in other jurisdictions compels precluding PHEVs from the ACC II regulations. CARB

determined that the ACC II regulations with provisions that include PHEVs constitute the best approach among the reasonable alternatives for reducing emissions from the vehicles subject to the regulations. As discussed above in response to Comment E-1, PHEVs reduce emissions while meeting concerns about ZEV range and meet the needs of drivers that are low-income or may face continuing barriers to accessing ZEV charging or refueling infrastructure. In addition, no other jurisdiction comparable to California's market has adopted mandatory requirements ZEVs by 2035 as CARB has. The European Parliament's proposal has not yet been adopted by the member states as a requirement.[14] And even if it had, the driving patterns, demands, and uses in Europe differ significantly from those in California, which can diminish the value of comparisons.[15]

18. Comment: The ISOR documents are not particularly concise when referring to the three categories of PHEVs – (1) non-§1962.4 PHEVs (2026+), (2) §1962.4(e)(1)(B) Partial-Credit PHEVs (2026-28), and (3) §1962.4(e)(1)(A) Full-Credit PHEVs (2026+). Auto Innovators and our members request confirmation that the following general requirements apply to each:

(1) Non-§1962.4 PHEVS (2026+MY), i.e., Non-Credit Generating PHEVs:
- Must meet HPCS emissions (based upon certified emissions bin)
- New Battery Label
- Service Information

(2) §1962.4(e)(1)(B) Partial-Credit PHEVs (2026-28MY)
- Must meet HPCS emissions based upon certified emissions bin; Exempt if US06 AER ≥ 10mi
- New Battery Label
- Service Information
- Battery Warranty for 8/100 with SOH ≥ 70%
- Certified to ≤ SULEV30 / 15/150 emissions performance warranty
- Standardized data – SOH & Charging rate
· 2 cycle Unadjusted AER ≥ 43mi

(3) §1962.4(e)(1)(A) Full-Credit PHEVs (2026+MY)
· Exempt from HPCS – meets full PHEV US06 requirements
· New Battery Label
· Service Info
· Battery Warranty for 8/100 with SOH ≥ 70%
· Certified to ≤ SULEV30 / 15/150 emissions performance warranty · Standardized data – SOH & Charging rate
· 2 cycle Unadjusted AER ≥ 70mi

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[14] *See Fit for 55: MEPs back objective of zero emissions for cars and vans in 2035 | News | European Parliament (europa.eu).*

[15] See, e.g., The Rebound Effect of Fuel Economy Standards: Comment on the Safer Affordable Fuel-Efficient (SAFE) Vehicles Proposed Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, October 24, 2018, , U.S. EPA Docket ID No. EPA-HQ-OAR-2018-0283-5842 [criticizing consideration of driver and vehicle data from Europe to determine standards in the U.S., where driving patterns, access to public transportation, fuel prices, and other factors significantly differ].

· US06 AER ≥ 40mi
· Charging requirements (convenience cord, on-board charger min specs)

We recommend, to the extent these are correct, CARB include changes to ensure clarity of the requirements to each PHEV category in each of these regulations. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-98, OP-150, OP-95, T2-34]

Agency Response: See response to FSOR Appendix D Comments A-2, B-29, C-5, E-14, H-6, and H-12. Otherwise, this commenter's outline is correct for the different categories for PHEVs, and no changes were made in light of this comment.

F. Medium-Duty ZEVs

1. Comment: (f)(1)(A) Including MDVs in ZEV Requirement Performance and (g)(1), fulfilling a ZEV Requirement Shortfall As noted in our cover letter, electrifying a medium-duty vehicle (MDV) provides substantially more environmental benefit than electrifying a smaller, cleaner, more efficient light-duty vehicle. Historically, manufacturers could use excess MDV ZEVs credits to meet LDV ZEV requirements. However, in the proposed ISOR ZEV regulations this is no longer allowed. We recommend including this allowance in both §1962.4(f)(1)(A), ZEV Requirement Performance, and in section (g)(1) fulfilling a ZEV Requirement Shortfall. This provision is most valuable and will encourage the greatest volume of MDVs if it allows the transfer of MDV ZEV credits but does not require those ZEVs to also meet the LDV ZEV mandated percentage. Thus, the manufacturer would have to meet the MDV ZEV Mandate under Advanced Clean Trucks (ACT), and excess MDV ZEVs beyond those required to meet ACT could be transferred to the LDV ZEV program under §1962.4. If MDVs are instead treated as if they are LDVs and thus generate a ZEV obligation, it eliminates most of the incentives to build excess MDV ZEVs. For example, in this scenario in 2030, each excess MDV ZEV transferred to the LDV would generate a 0.68 ZEV obligation leaving only 0.32 LDV ZEV credits. Of course, there would be no incentive to over-comply with the MDV ACT regulations in 2035 because the LDV ZEV regulation requires 100% ZEV, so there would be no benefit to transferring an MDV ZEV. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34]

   Agency Response: This commenter is asking to align with how the ACC I ZEV regulation allows manufacturer to claim credits for MDV ZEVs, meaning to exempt them from counting against the number of total vehicles that are required annually. In including a path for manufacturers to certify vehicles and earn values in the ACC II ZEV regulation (as opposed to the Advanced Clean Trucks or ACT regulation, per section 1963), staff assessed the current regulatory landscape. With the existence of ACT, manufacturers are required to meet zero-emission standards for medium- and heavy-duty trucks. Staff did not want to create a perverse incentive for manufacturers to not be obligated for those ZEV MDVs they certified to section 1962.4 rather than section 1963. Therefore, CARB adopted the ACC II ZEV regulation with an optional path for medium-duty vehicles, similar to the current ZEV regulation and the proposed ZEV test procedures that apply to medium-duty vehicles, allowing manufacturers to choose to

certify such vehicles under ACC II, provided the vehicles are counted in the production volume used to calculate a manufacturer's requirement and meet other technical requirements in ACC II. This approach still allows manufacturers to earn values for ZEV MDVs, especially for trucks that, if were made with a gasoline engine instead of battery packs, would have been less than 8,500 lb. GVWR.

2. Comment: CARB received comments requesting the inclusion of or in support for the inclusion of a means for manufacturers to optionally certify medium ZEVs to section 1962.4 (ACC II ZEV regulation) and earn values. [15-27, 15-9, OP-142, OP-134, T1-39, 15-17, 15-18, 15-19, OP-127, B1-10, T2-8, T2-25, T2-41].

   Comment: Allow medium-duty vehicle EVs to be used to meet the ACC II Requirements: Currently, both the light-duty vehicle (LDV) ZEV regulations in 13 CCR §1962.2 and the medium duty vehicle (MDV) ZEV regulations in 13 CCR §1963.2 allow the transfer of MDV ZEV credits to meet the LDV requirements. This makes sense conceptually, since electrifying a large MDV provides more environmental benefit on a per-vehicle basis (GHG and criteria). Unfortunately, the proposed regulations in §1962.4 do not allow this. Adding this provision could result in more MDV ZEVs both in California and the states that have adopted Advanced Clean Trucks (ACT) and those states that have not adopted ACT. We recommend revising the ZEV regulations in §1962.4 to allow excess MDV ZEV credits to be used to meet the LDV ZEV requirements. This provision is most valuable and will encourage the greatest volume of MDVs if it allows the transfer of MDV ZEV credits but does not require those ZEVs to also meet the LDV ZEV mandate. Thus, the manufacturer would have to meet the MDV ZEV Mandate under Advanced Clean Trucks (ACT), and any excess credits beyond those required to meet ACT could be transferred to the LDV ZEV program under §1962.4. If instead, MDVs are treated as if they are LDVs, it eliminates most of the incentives to over-comply in the MDV space. For example, in 2035, there would be no incentive to over-comply with the MDV ZEV regulations because the LDV ZEV regulation requires 100% ZEV, so there would be no benefit to transferring a MDV ZEV. [OP-155, incorporated by reference into comments B1-20, OP-120, 15-17, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34]

   Comment: Not all Section 177 states will adopt the ACT regulation in a timely manner. The ability to earn ZEV credits under ACCII with MD ZEVs will be critical in these states for incentivizing the rapid electrification of MDVs. Conventional MD vehicles, including more capable pickups and vans used in both personal and commercial applications, generally pollute more than their light-duty counterparts. Electrification of the medium-duty segment promises particularly pronounced emissions benefits that are worthy of regulatory recognition. From Rivian's perspective, the option to earn credits under either the ACC and ACT programs is important for our business as we work to achieve greater scale and impact. [OP-127, B1-10]

   Agency Response: CARB appreciates the support for its inclusion of the option for manufacturers to certify medium duty vehicles to the ACC II ZEV standard and optionally earn values, which was included in its First 15-Day changes. Additionally, CARB does not set standards for other states. The Clean Air Act allows other states to adopt California vehicle emission standards including the ZEV regulation. CARB does

not have authority over states which adopt California's regulations. While it is expected that some states will consider the ACC II regulations as adopted, CARB considered aspects of the regulations that would support such actions to the extent feasible within the scope of its authority. If other States choose to adopt the ACC II ZEV regulation, this provision would be available in those States.

3. Comment: ZEV credit options under ACCII would incentivize the migration of the light-duty ZEV assurance measures proposed under the regulation to the MDV classes. As written, ZEV assurance measures crafted by staff under ACCII apply only to the passenger cars and light-duty trucks currently proposed as eligible to earn LD ZEV credits under the program. These measures come at a cost to manufacturers. It is conceivable that, absent the prospect of earning LD ZEV credits, some automakers might forgo meeting these assurance measures on MD ZEV products to the detriment of broader ZEV consumer acceptance. Many MDVs look like LD vehicles and play a similar role in the lives of their owners and drivers. MD passenger vehicles even have U.S. EPA fuel economy labels and are federally regulated as LD products for greenhouse gas emissions. Retaining MD ZEVs in the ACC program will incentivize compliance with the ZEV assurance measures in the MD classes and should help meet consumer expectations across both the LD and MD segments. [OP-127, B1-10]

   Agency Response: This commenter is correct that manufacturers who certify MDV ZEVs to the ACC II ZEV regulation would be subject to meet all requirement in section 1962.4 (d), which include the "ZEV assurance measures." CARB appreciates the support for its inclusion of the option for manufacturers to certify medium-duty vehicles to the ACC II ZEV standard and optionally earn values, which was included through its First 15-Day Notice.

4. Comment: Commenter opposes manufacturers getting double-counted ZEV credits for ACCII and ACT [T1-78].

   Agency Response: This commenter misunderstood that CARB considered allowing manufacturers to count MDV ZEVs toward both section 1963 (Advanced Clean Trucks) and toward section 1962.4 (ACC II ZEV). CARB agreed that this would not be acceptable and included provisions that only allow manufacturers to certify to either the ACT or ACC II ZEV regulation. Additionally, manufacturers who choose to certify to section 1962.4 (ACC II ZEV) are required to also count medium-duty ZEVs toward the manufacturer's obligations under only one of the two regulatory programs for a given year, for the reasons specified on page 5 of the First 15-Day Notice and further explained in Notice Appendix F-1.

5. Comment: We recommend that CARB allows manufacturers to classify zero-emission medium-duty vehicles as either light-duty (i.e., toward the ACC2 ZEV regulation) or medium-duty vehicles (i.e., toward the Advanced Clean Truck regulation). It is expected that there will be many electric vehicle models that will straddle the two weight classes due to their multiple battery pack and electric range options. For example, there will be models for which the electric range is below 300 miles that are below the light-duty maximum weight, and otherwise similar models with greater than 400 miles of electric range that are above the light-duty maximum weight due to the

larger, heavier battery pack. Such an allowance, at manufacturers' discretion, would support faster and greater ZEV deployment across a wider spectrum of electric ranges for prospective customers. This added flexibility would remove constraints and promote the greatest possible deployment of shorter- and longer-range electric van and pickups, regardless of year-to-year differences in manufacturer ZEV production and the stringency of the light-duty ZEV and Advanced Clean Truck programs. [OP-98].

Agency Response: CARB is not allowing the reclassification of vehicles from light duty to medium duty weight classes. These weight classes are defined in section 1900, title 13, California Code of Regulations. CARB did adopt the ACC II ZEV regulation, which included provisions to allow manufacturers to certify to either the ACC II ZEV standard (section 1962.4) or ACT (section 1963). To the extent that this commenter intended to request for an optional certification path and option to earn values under section 1962.4, see response to Comment F-1.

6. Comment: Commenter recommends CARB allow renewable natural gas and hydrogen-fueled engines to continue as transitional ZEV technologies available to medium-duty fleets that have access to these fuels [B1-1].

   Agency Response: Manufacturers of medium-duty vehicles are not automatically subject to the ACC II ZEV regulation. Manufacturers have the option to certify, and therefore count their medium-duty vehicles that are certified to the ACC ZEV standard toward their obligation and requirement. One of the known technologies that could comply with the adopted ACC II ZEV standard would be a medium-duty FCEV, as long as the vehicle has more than 200 miles 2-cycle test range, and complies with all ZEV assurance measures.

   Additionally, manufacturers of medium-duty vehicles are subject to 1961.4, which do not specify a technology, but only specify a NOx + NMOG fleet average standard and would not prohibit renewable natural gas or hydrogen fueled vehicles.

7. Comment: ACC II Minimum All Electric Range (AER) Requirements: a sensible price point is one of the key customer requirements when shopping for MDVs. As battery packs are one of the most significant costs in manufacturing ZEVs, various battery pack sizes shall be available for purchase allowing customers to actively balance their own range requirements and vehicle costs. The aggressive range, warranty, and durability requirements may jeopardize consumer acceptance as unnecessary vehicle capability must be built in to meet regulatory requirements, thereby rapidly and artificially increasing vehicle costs. Therefore, MBAG requests that CARB retain the current minimum range requirements set forth in ACC (13 CCR §1962.2) for MDVs. [OP-120, 15-17]

   Comment: To ensure market demands are met (e.g., cost conscious, short range vehicles), MBAG proposes that MD-ZEVs be subject to an alternative minimum range than defined for LDVs: > 50 miles UDDS. We believe that this lower range for MDV would more accurately reflect the use-case for these vehicles. CARB's own data gathered from the Advanced Clean Truck Large Entity Report reveals that the vast majority of cargo vans travel less than 100 miles per day. [15-17, B2-6].

Agency Response: CARB considered these comments requesting for lower range thresholds for MDV ZEVs, and ultimately did not agree to modify its thresholds. Manufacturers will have the option to certify to one of two standards: section 1963 (Advanced Clean Trucks) or section 1962.4 (Advanced Clean Vehicles II ZEV Regulation). If manufacturers certify medium duty vehicles to the ACT regulations, they would only be subject to the minimum technical requirements in those regulations, of which a vehicle with less than 50 miles urban dynamometer driving schedule electric range. As stated on page 9 in ISOR Appendix F-5, 200 miles was chosen based on consumer survey responses, meetings with community groups, data from CC4A, and analyzing daily driving patterns to ensure emissions would be effectively displaced. These data show that a majority of the general public would consider purchasing a ZEV if it could drive more than 200 miles on a single charge, and manufacturers are producing more ZEVs with a minimum range substantially higher than the current minimum.

G. ZEV Test Procedures

1. Comment: Commenter applauds CARB's leadership in modernizing its battery-electric vehicle testing procedures to the updated 2021 SAE J1634 [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34].

   Agency Response: CARB appreciates the support of its updates to its testing procedures. SAE's recent release of the 2021 Battery Electric Vehicle Energy Consumption and Range Test Procedure J1634 standard provided an opportunity to update CARB's test procedures that previously required the 2012 version of the standard. The updated SAE test procedure has two new pathways including the Short Multi-Cycle Test (SMCT) and Short Multi-Cycle Test + (SMCT+) that have the potential to shorten testing times. While CARB allows manufacturers to use either method, CARB can choose to test with either method to determine the range of the vehicle. CARB also prohibits manufacturers from utilizing vehicle thermal preconditioning during the vehicle soak time subsequent to charging or prior to being operated on the dynamometer to determine range and energy consumption. Vehicles may utilize thermal conditioning during charging only if such action is the default mode or normal mode of the vehicle.

2. Comment: CARB received comments calling for harmonization of test procedures with the U.S. EPA. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34].

   Agency Response: CARB's updated test procedures apply to for 2026 and subsequent MYs. The U.S. EPA recently announced that it will begin its rulemaking process for post-2026 model year vehicles. To the extent feasible, CARB works with its federal partners to reduce inconsistencies and has harmonized its test procedures with those adopted by U.S. EPA wherever feasible. CARB will continue to coordinate with the U.S. EPA as their rulemaking efforts progress and will determine if modifications to regulations are necessary in the future.

3. Comment: Commenter recommends CARB explicitly adopt the text of the U.S. EPA test groups for ZEVs [OP-98].

   Comment: Rivian agrees that ZEV test groups should be defined as broadly as possible. A broad test group definition will increase the speed of new EVs to market and reduce EV compliance costs. Staff should work with the EPA on limiting test groups to only those vehicle features necessary to meet some other regulatory requirement. Test group should not be a reason in and of itself to drive more testing. Number of electric motors, vehicle class, and even battery configuration might not impact durability. Furthermore, EV range calculations, for the purposes of the EPA Fuel Economy Label, should be updated to allow greater EV range specificity without requiring strict test group limitations that will only increase unnecessary delay to market and costs. CARB should keep the test group definition as broad as possible for EVs, allowing CARB staff to approve multiple motors, vehicle classes, battery configurations, and other vehicle attributes in the same test group. [OP-127, B1-10]

   Agency Response: CARB has attempted to keep its test groups as broad as possible where sensible yet keep the reporting requirements detailed enough to effectively monitor and enforce the ACC II durability and warranty requirements for ZEVs. Given the current state of knowledge, CARB applied good engineering judgment to write test group applicability requirements to identify relevant attributes. CARB is committed to monitoring and tracking the evolution of the technology and may revisit and update requirements as the agency learns more.

   To the extent feasible, CARB works with its federal partners to reduce inconsistencies between federal and California rules. However, the ACC II ZEV durability, warranty, and other requirements necessitate additional reporting information and potentially different ZEV test groups than what the ACC I rule requires. Adopting the U.S. EPA's test group text would not leave appropriate room to account for the ACC II requirements when it comes to grouping ZEVs in test groups. Moreover, 40 CFR § 86.1827-01 (d) states: "Manufacturer's may request the Administrator's approval to combine vehicles into a single test group which would normally not be eligible to be in a single test group." This additional pathway could provide manufacturers with the ability to align with CARB's ZEV Test Group requirements for meeting federal requirements.

   CARB does not have authority over the U.S. EPA Fuel Economy Label, but staff do work with the U.S. EPA whenever feasible. U.S. EPA recently announced a rulemaking effort for post-2026 MY light-duty vehicles which provides an opportunity for further harmonization. In terms of CARB's test group limitations, as section 1962.4(i)(3)(D)(2) indicates, the regulation allows for multiple vehicle models, sub configurations, or other vehicle variants with different range values to be included in the same test group should that be determined to be appropriate using good engineering judgement as long as the information required in section 1962.4(i)(3)(D)(2) is disclosed for the purposes of the durability requirement in subsection (d)(2).

4. Comment: Commenter suggest that CARB's Executive Officer consider customer norms of electric vehicle use existing in the market at the time of vehicle certification as part of CARB's "good engineering judgement to establish a specific limit or

otherwise exclude specific vehicles [during later testing] …that are unrepresentative of the majority of users or represent usage that could not have reasonably been foreseen by the manufacturer when the vehicle was originally manufactured." [15-15]

Agency Response: The commenter suggests that CARB look at how customers use their vehicles when setting exclusionary criteria for testing those vehicles in the future against CARB's requirements. "Excessive" for the purposes of the Durability Test Sample Group is described in section 1962.7(e)(2)(D)2 and it considers how the vehicles are used by customers. This section provides a means to ensure that vehicles used in the durability test sample group have not been subjected to excessive battery use that would lead to unreliable compliance test results. Because levels of excessive use will vary by vehicle type, it is necessary to maintain the ability to determine excessive levels on a case-by-case basis and through the objective application of good engineering judgment. To that end, the Executive Officer must consider the reasonable frequency, distribution, and impact on battery degradation of vehicle-to-grid and DC charging activities, or usage at high battery temperatures, adherence to the manufacturer's recommendations or guidelines for such activities, and any other relevant information. These considerations allow the application of relevant scientific and technological principles of ZEV design and performance to determine appropriate limits and criteria in a given instance when the Executive Officer conducts enforcement testing.

CARB will use good engineering judgment in its determination of excessive use in accordance with section C.9. of the California Test Procedures for 2026 and Subsequent Model Year Zero-Emission Vehicles and Plug-In Hybrid Electric Vehicles, in the Passenger Car, Light-Duty Truck and Medium-Duty Vehicle Classes.

5. Comment: We expect that the next revision of the SAE J1711 to be approved within the coming months…. If SAE J1711 is updated within the timeframe of the ACC II rulemaking, we recommend that CARB incorporate the latest version in a future 15-Day Notice change. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-57, OP-98, OP-150, OP-95, T2-34]

   Agency Response SAE J1711 was not finalized by July 9, 2022, and therefore staff did not recommend changes to the SAE J1711 referenced in the test procedures.

6. Comment: Commenter requests that the requirement to measure direct current (DC) energy during alternating current (AC) recharge be removed from the Zero Emission and Hybrid Electric Vehicle test procedures (2018 through 2025 and 2026+). Commenter recommends removing the text "DC energy required to fully charge…" from F.3.3.d., G.3.1.d (CARB Appendix B-8) and also E.1.2.d (CARB Appendix B-9) [OP-98].

   Agency Response: CARB did not retroactively change current requirements for vehicles that have already been manufactured in the ACC II rulemaking. However, after receiving this comment and feedback from other stakeholders, CARB did remove the requirement from the "California Test Procedures for 2026 and Subsequent Model Year Zero-Emission Vehicles and Plug-in Hybrid Electric Vehicles, in the Passenger Car, Light-Duty Truck and Medium-Duty Vehicle Classes." The summary of those changes,

including the removal of the requirement to measure DC energy during an AC recharge can be found in "Attachment N-1 Summary of 15-Day Changes to the Adoption of new California Test Procedures for 2026 and Subsequent Model Year Zero-Emission Vehicles and Plug-In Hybrid Electric Vehicles, in the Passenger Car, Light-Duty Truck and Medium-Duty Vehicle Classes." This and other modifications were released to the public through the First 15-Day Notice.

H. Other ZEV Regulation Comments

1. Comment: (c)(1)(C) Calculation of Production Volume. As noted below for 13 CCR 1961.4, there appears to be different definitions of the term "total number of passenger cars and light-duty trucks produced and delivered for sale in California" in this regulation 1962.4 and the Exhaust Emissions regulations 1961.4. The Exhaust regulation excludes all ZEVs by phasing them out 2026-2028, but we understand the ZEV regulation will include these in the "total number of passenger cars and light-duty trucks." Additionally, the ZEV regulations specify that "a vehicle is counted in the production of the manufacturer that marketed it in California regardless of whether it is produced by a different manufacturer." The Exhaust regulation is silent on this. This regulation 1962.4 points to the Exhaust regulations for determining "total number of passengers and light-duty trucks," so these two regulations are tied together. We recommend CARB provide a single definition of "total number of passenger cars and light- duty trucks," probably in the Exhaust Emission regulations to clarify the requirements. [15-24]

   Agency Response: Neither regulation cited actually includes the terms described by the commenter as a defined term. Instead, both regulations, where necessary, define calculations to be used in calculating various provisions and within those calculations, they explicitly describe what each term of the calculation requires. The cited language is actually part of that explicit description. Secondly, the two regulations calculate very different things and as such, use different calculations and different terms on purpose. For title 13, CCR section 1961.4, the requirements are transitioning from a fleet average across a manufacturer's entire light-duty vehicle production volume to a fleet average across only the non-ZEVs remaining in the fleet and the calculations are already explicit and clear as to when to include ZEVs or not include ZEVs in that calculation. Title 13, CCR section 1962.4, on the other hand, utilizes the manufacturer's entire light-duty vehicle production volume plus medium-duty ZEVs, if the manufacturer has elected to optionally utilize provisions to subject such vehicles to the requirements of section 1962.4. Considering the different usage and different inclusion or exclusions, it would be inappropriate to try to use a common defined term across both regulations. Further, the regulations use slightly different language (i.e., '…total number…' versus '…production volume…') when explicitly describing what volume to use rather than the exact same phrase to further distinguish that the two are not the same quantity.

   Lastly, while reviewing the issue raised by the commenter, CARB staff did identify that the definition of production volume in 1962.4 was using an outdated name to refer to the one and only annual compliance report required to be submitted by manufacturers

in accordance with 1961.4 and its associated test procedures. Staff have updated the reference to this report from the "NMOG+NOx production report" to the more currently used term in 1962.4 of 'end-of-model-year compliance report" and included the specific test procedure cite for such report. While this change was not necessary as there is only one annual compliance report required to be submitted by manufacturers, the non-substantive regulatory change was made to be more consistent with the updated name of the annual report.

2. Comment: Commenter states that CARB correctly adjusts the enforcement civil penalty. Tesla supports CARB's proposal to ensure the existent penalties are adjusted to provide an appropriate deterrent from non-compliance. As drafted, the proposed §1962.4(m)(3) civil penalty adjustment, when combined with the proposed model year standards, will created a stable regulatory environment under which all auto manufacturers can exercise their business judgment on the level of investment in the technology and innovation needed for their fleets to meet new ZEV standard equivalent. [OP-78]

   Agency Response: CARB appreciates the support for the adopted ACC II ZEV penalty provisions, included in section 1962.4(m), which specify how to apply Health and Safety Code section 43900 to the ACC II ZEV regulation.

3. Comment: SVMs also request a new regulation which would allow Ultra-Small Volume Manufacturers (USVMs) to petition, on a case-by-case basis, for an extension of a compliance deadline for bona fide hardship reasons. USVMs would be defined as SVMs with California sales not exceeding 300 vehicles per MY, based on the average number of vehicles sold by the manufacturer in the previous three consecutive MYs. EPA regulations 40 CFR 86.1811-17(h)(3) and 40 CFR 1068.250 already provide a mechanism for an SVM to request, on the basis of hardship, an extended compliance deadline (note that this mechanism is available to all SVMs, rather than, as we propose here, just to USVMs). Under the EPA rules, to obtain extra lead-time, an SVM must show as follows: (1) that meeting a given standard would cause severe economic hardship, (2) that the burden of compliance costs prevents the SVM from meeting applicable requirements, and (3) that no other allowances are available under the regulations to avoid an impending violation. We strongly believe that CARB's adoption of a similar rule would be fair and just. It would provide a USVM the opportunity to obtain extra lead-time in cases where there were a bona fide exigent need, while at the same time keeping such hardship relief limited to the smallest companies, thereby avoiding a negative environmental impact. [OP-56]

   Agency Response: CARB considered this comment and chose not to make changes in response to this commenter's suggestion to create a new ultra-small volume manufacturer exemption [referred to as "regulation" in this comment] within the ACC II regulations. As explained in the ISOR, page 67, and Appendix F-5, Purpose and Rationale, Subsection 1962.4(c)(2)(A)-(C), Requirements for Small Volume Manufacturers, page 5, CARB adopted exemptions for small volume manufacturers, meaning manufacturers who deliver for sale less than 4,500 light-duty vehicles annually in California, that limit their obligations through Model Year 2034 to submitting a compliance plan by the end of 2032, and to meet the requirement for ZEVs beginning

with the 2035 MY. CARB's approach ensures a path for all manufacturers certifying light-duty vehicles in California to be in compliance with 100% ZEV or PHEV sales beyond the 2035 MY while providing significant flexibility in recognition of the unique situations of each of these manufacturers and their limited product offerings. The record does not establish that these requirements are not feasible in the time provided for manufacturers like those cited in the comment such that the requested relief is necessary.

4. Comment: Please ensure the public understands the rules will only apply to new car sales, especially those in the central valley. [15-7]

   Agency Response: As the commenter suggests, CARB proposed and adopted emission standards on new vehicles to which the rule applies such that, by 2035 MY, any new vehicle sold within the State must have zero emissions or meet the requirements for a PHEV.

5. Comment: (j)(2) ZEV Reporting by VIN Reporting the VIN, model year, executive order number, make, model, test group, and state for every single ZEV and PHEV delivered for sale is overly burdensome and should be phased out as EV sales dramatically increase. By the 2028 model year, 50% of new vehicles will need to be ZEVs or PHEVs and this provision will require reporting all this information on millions of vehicles each year. Such requirements are unnecessary. Accordingly, we recommend eliminating this requirement after the 2028 model year or 2030 model year at the very latest. This will reduce the regulatory complexity and costs for vehicles that have zero emissions. [OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-98, OP-150, OP-95, OP-133, T2-34]

   Comment: BMW NA agrees with Auto Innovators' comments that this VIN reporting requirement is unnecessary and yields no value, especially in the later years. The elimination of this requirement by 2028 model year or the latest by 2030 model year will reduce the regulatory complexity for vehicles that have zero emission. BMW NA recommends eliminating this requirement from the regulation [15-33]

   Agency Response: CARB disagrees with these commenters' assertions that VIN reporting is unnecessary and yields no value. As explained in the ISOR, Appendix F-5, page 55, the ACC II ZEV requirements are a function of the number of vehicles delivered for sale in California. Provisions within this regulation allow manufacturers to transfer vehicle values from other states that have adopted California's regulation. This subsection is necessary to provide CARB the required information needed to verify that manufacturers for a given MY have delivered for sale ZEVs and PHEVs to a ZEV state, and ensure correct accounting and tracking, to determine compliance in California.

6. Comment: (m)(1) Audit of records Along with (j)(2) VIN reporting requirements, this audit requirement can add substantial administrative burden for very little gain. Particularly when the requirements are combined by matching DMV VIN and OEM reported VIN and manufacturers are required to look for reports for just a few vehicles. We do not oppose audits or investigations where a significant discrepancy exists (more than 10 percent), but do not see the value in spending resources to track

down a handful of ZEVs in a sea of millions. [OP-133, OP-155, incorporated by reference into comments B1-20, OP-124, T1-8, T1-9, OP-98, OP-150, OP-95, T2-34]

Comment: With respect to audit of sales records, the proposed audit of records will add additional administrative burden on manufacturers with little benefit. BMW NA is supportive of audits and investigations only when significant sales discrepancies are apparent – more than 10 percent. [15-33]

Agency Response: CARB made no adjustments based on this commenter's suggestion to limit the ability for the agency to perform audits, as it is unnecessary to constrain CARB's ability to audit manufacturers. To ensure the requirements of the proposed regulation are met, and emissions reduced as intended, CARB must be able to inspect and audit records to determine compliance. This regulation provides notice to manufacturers that CARB may conduct audits and inspections of records to determine compliance. This regulation is also reasonably necessary to ensure manufacturers take reasonable measures to ensure the information they submit is accurate and complete.

7. Comment: (i)(1) ZEV Test Groups We recommend deleting "powertrain deterioration" from this section. We would also appreciate some examples of current models and how they should be grouped in a test group (e.g., Tesla Model 3, Chevrolet Bolt EUV vs Bolt EV). Our focus is to limit the number of test groups and the commensurate proliferation of testing and compliance costs. To reduce the cost of ZEVs and improve broad affordability, manufacturers will work with CARB and EPA to explore ways to streamline certification processes and costly lab testing activities for these vehicles. In theory, certifying a vehicle that does not and cannot emit pollution should require minimal effort. [OP-15, B1-20]

   Agency Response: CARB concurred with this commenter that the term "powertrain deterioration" was unclear as to its intent and meaning as a characteristic for ZEVs that needed to be considered when grouping vehicle models together. In response, the term was replaced through the amendments in the First 15-Day Notice with more explicit language of "expected degradation in useable battery energy," which is necessary for clarity.

8. Comment: Additionally, we understand that there may be certain market segments that may find options like a low-range ZEV appealing for their lifestyle, but it is important that CARB consider and establish strict parameters surrounding the receipt of credits for these vehicles. For these limited cases, CARB should ensure that any credit received for a low-range ZEV, with a range above 50 miles but below 150 miles, would qualify only as a PHEV, must meet all ZEV assurance measures, and would not be eligible for proposed equity credits. We fear that including low range ZEVs in the equity credit program may lead to the emergence of sub-par vehicles, and may incentivize automakers to produce products solely for the purpose of compliance, or as a way to achieve their equity requirements. [OP-108]

   Agency Response: CARB concurred with this commenter and adopted the ACC II ZEV regulation with a certification path for vehicles meeting a zero-emission standard with less than 200 miles range. This path allows ZEVs that have a range of less than 200 miles under the testing and labeling requirements to be certified for sale in California.

However, such vehicles may not be counted toward a manufacturer's ZEV requirement as the minimum requirements are designed to increase the likelihood of success for ZEVs, including significant market demand for greater range, to meet the needs for all drivers and to ensure emission reductions are permanent.

9. Comment: …at minimum, we strongly encourage CARB to incorporate cost containment mechanisms. [T1-10, pp 109:1-2].

   Comment: Commenter strongly encourages CARB to incorporate enforcement cost-containment mechanisms just as it has done with the cap-and-trade and Low Carbon Fuel Standard programs. [T2-1]

   Comment: Commenter states "CARB must also modify the ZEV mandate to include cost containment measures to protect California's economy. CARB includes cost containment measures in its other regulations, including its LCFS and GHG Cap-and-Trade programs. These measures should include:

   - Annual CARB reviews and reports to the legislature of ZEV market conditions, barriers to ZEV deployment and cost to consumers, including
     - Manufacturing constraints resulting from limited critical mineral resources (see Comment A.2 in Attachment A and Comment B.13 in Attachment B)
     - Lack of affordability for purchase and use ZEVs (see Comment A.1.2 in Attachment A and Comments B.9 and B.10 in Attachment B)
     - Insufficient charging infrastructure, particularly in rural areas (see Comment A.1.2 in Attachment A)
     - Lower sales rates due to reluctant customer adoption (see Comment B.12 in Attachment B)
     - Cost of electricity (see Comment A.1.2. in Attachment A)
   - Required adjustments to the program based on the review findings." [OP-161-43, incorporated by reference into comment OP-97]

   Comment: Additionally, ARB should add required routine program reviews to the proposed regulations with metrics that would trigger program adjustments if markets don't develop as expected. We suggest that one or more of the following metrics be included in the regulation and trigger program adjustments as warranted. ZEV sales; ZEV vs. ICE vehicle price; Battery metals supply; Electricity system expansion (generation, storage, grid, recharging); Electricity price to consumers, including transparency on the increase in price resulting from BEV power demand and National/State security issues. [OP-97]

   Agency Response: The reasons for any measures in CARB's Low Carbon Fuel Standard (referred to as "LCFS" in these comments) and Cap-and-Trade Regulations are discussed in their respective rulemaking materials. Regarding ACC II, CARB determined that it was most appropriate to include the type of directive the

commenters request (for staff to monitor ZEV market conditions, report to CARB, and propose amendments as warranted) in Resolution 22-12, not in the text of the regulation. This choice allows CARB to amend the scope, frequency, or any other elements of staff's review and Board update through future Resolutions, such as after the Board update required in 2025, rather than necessitating regulatory amendments via rulemaking. These actions will provide CARB with the information it needs to determine if any proposed amendments are appropriate, or if a regulatory provision is not necessary. The Resolution's monitoring and reporting directives to staff focus on ZEV market conditions, ZEV deployment (including in low-income and disadvantaged communities), and regulatory compliance rather than conditions outside the regulations' ambit.

In addition, the reports requested in the comments were specifically directed at the Legislature. Reports to the Legislature are mandated by statute, so that piece of the comment is outside the scope of this rulemaking. Here, the issue remains a matter of CARB's discretion.

Regarding the broader request for cost containment measures emulating those in other programs, the ACC II regulations differ from broader market mechanisms by creating a limited credit market and explicitly disallowing third parties from generating or trading vehicle values within the market. CARB vehicle regulations have never monitored or managed the price of credits traded between regulated parties, and this was not in the scope of the ACCII rulemaking to consider as a change. Moreover, the record before the agency shows the regulations are feasible, cost-effective, and will provide net savings to vehicle purchasers. This regulatory design and record render regulatory cost control measures unnecessary at this time.

The comment requesting "enforcement cost containment" as CARB has included in its Cap-and-Trade and LCFS programs, is unclear, as the comment provides no other context. Enforcement costs for the ACC II regulations are limited by California statute defining maximum penalties for non-compliance with the vehicle regulations.

10. Comment: We recommend that the California Air Resources Board (CARB) follow its own precedent and incorporate a formal mid-term review to evaluate industry progress towards ACC II targets, as persistent shortages of key elements necessary to produce electric vehicles (e.g., lithium) may limit vehicle supply during the ACC II compliance period. Experience during the pandemic shows that vehicle supply constraints reduce affordability and undermine environmental goals by delaying the retirement of the oldest and most polluting vehicles on the road. [OP-54. T1-17]

    Comment: The Massachusetts State Automobile Dealers Association respectfully submits the following comments on the California Air Resources Board's proposed Advanced Clean Cars II (ACC II) regulations to request that CARB follow its previous regulatory precedent and establish at least one mid-term review of its program implementation to assess motor vehicle manufacturer and governmental compliance with meeting ACC II's 2035 goals and to ensure that actual economic benefits, not detriments, are flowing to consumers, who are the lifeblood of our industry…. As CARB commits its resources fully to ACC II, our request is a simple one – create at least one required review period, perhaps at the midway point or one each at the five-

year and the ten-year mark, to assess progress toward the 2035 mandated goals. Please keep in mind that there needs to be a comprehensive and cooperative approach that involves state and local governmental bodies, pertinent private entities who can assist with charging infrastructure commitments, the vehicle manufacturers, and the franchised dealers who carry the actual financial burden of retailing and servicing these vehicles once purchased from their franchisor manufacturers. [OP-114]

Agency Response: CARB assessed this commenter's request to explicitly add a provision to the ZEV regulation requiring a mid-term review. The commenter incorrectly states that this would be in accordance with regulatory precedent. On the contrary, ACC I included a mid-term review in Resolution 12-21.

Regarding ACC II, CARB determined that it was most appropriate to include the type of directive the commenters request (for staff to monitor ZEV market conditions, report to the Board, and propose amendments as warranted) in Resolution 22-12, not in the text of the regulation. This choice allows CARB to amend the scope, frequency, or any other elements of staff's review and Board update through future Resolutions, such as after the Board update required in 2025, rather than necessitating regulatory amendments via rulemaking. These actions will provide the Board with the information it needs to determine if any proposed amendments are appropriate, or if a regulatory provision is not necessary. The Resolution's monitoring and reporting directives to staff focuses on ZEV market conditions, ZEV deployment (including in low-income and disadvantaged communities), and regulatory compliance rather than conditions outside the regulations' ambit.

11. Comment: To address potential side-effects of this policy, we can make exceptions for emergency service vehicles like ambulances. [OP-50]

    Agency Response: Emergency vehicles are "exempt from requirements imposed pursuant to California law and the regulations adopted pursuant thereto for motor vehicle pollution control devices" per California Vehicle Code section 27156.2.