

State of California
AIR RESOURCES BOARD

FINAL STATEMENT OF REASONS

**AMENDMENTS TO THE LOW-EMISSION VEHICLE III GREENHOUSE
GAS EMISSION REGULATION**

November 2018

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State of California
AIR RESOURCES BOARD

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

PUBLIC HEARING TO CONSIDER PROPOSED AMENDMENTS TO THE LOW-
EMISSION VEHICLE III GREENHOUSE GAS EMISSION REGULATION

Public Hearing Date: September 28, 2018
Agenda Item No.: 18-7-5

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I. GENERAL

- A.** The Staff Report: Initial Statement of Reasons for Rulemaking (staff report or ISOR), entitled "Public Hearing to Consider Proposed Amendments to the Low-Emission Vehicle III Greenhouse Gas Emission Regulation", released August 7, 2018, is incorporated by reference herein. The staff report contained a description of the rationale for the proposed amendments. On August 7, 2018, all references relied upon and identified in the staff report were made available to the public.

On September 28, 2018, the Air Resources Board (CARB or Board) conducted a public hearing to consider the proposed amendments to the Low-Emission Vehicle III (LEV III) greenhouse emission requirements for light-duty vehicles. At this hearing, the Board received oral and additional written comments. At the conclusion of the hearing, the Board approved Resolution 18-35, in which it directed the Executive Officer to make the proposed amendments to the regulation and incorporated light-duty test procedures (LDTP). The staff report and Resolution No. 18-35 are incorporated by reference, under California Government Code section 11346.9, subdivision (d).

B. MANDATES AND FISCAL IMPACTS TO LOCAL GOVERNMENTS AND SCHOOL DISTRICTS

The Board has determined that this regulatory action will not result in a mandate to any local agency or school district the costs of which are reimbursable by the state pursuant to Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code.

C. CONSIDERATION OF ALTERNATIVES

The Board has not identified any reasonable alternatives that would lessen any adverse impact on small businesses because the LEV III greenhouse gas emission regulations do not apply specifically to small businesses.

For the reasons set forth in the Staff Report, in staff's comments and responses at the hearing, and in this FSOR, the Board determined that no alternative considered by the agency would be more effective in carrying out the purpose for which the regulatory action was proposed, or would be as effective and less burdensome to affected private persons, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law than the action taken by the Board. No alternative would more clearly or effectively affirm that the existing regulatory text accepts compliance with the existing federal passenger car and light truck greenhouse gas emissions standards. The change preserves the environmental and public health benefits of those existing standards of reducing greenhouse gas, criteria, and toxic emissions, without causing a greater burden or costs on affected persons as compared to any of the alternatives considered. Any alternative would impose greater costs on affected persons and businesses, or decrease the environmental and public health benefits of the existing standards.

Due to the uncertainty as to which actions U.S. EPA might take to weaken the currently adopted U.S. EPA standards for the 2021 through 2025 model years, CARB developed a sensitivity analysis in conjunction with the economic analysis of the proposed amendments and the two alternatives to examine the potential range of economic impacts that might occur if U.S. EPA relaxes its standards. These environmental and cost impacts were evaluated before the U.S. EPA and NHTSA issued their Notice of Proposed Rulemaking (NPRM). The sensitivity case in CARB’s staff analysis assumed a national program that flat-lined at the current 2021 model year requirements, but the NPRM went further and flat-lined at the 2020 model year requirements, adding one additional model year to the relaxation of the standards.

The impacts in CARB’s staff analysis were not updated, however, given the relatively small difference in the two scenarios, that the California Environmental Quality Act (CEQA) analysis from the original California rulemaking would continue to cover ongoing implementation of California’s more protective program, and that the flat-lined scenario was a sensitivity case in the SRIA-equivalent document and not one of the main alternatives. Both of the flat-lined federal scenarios would result in increased emissions equal to approximately half of California’s LEV III greenhouse gas emission regulation program benefits. Similarly, the fiscal and economic impacts would begin earlier but would not change significantly.

II. NON-SUBSTANTIAL MODIFICATIONS MADE TO THE ORIGINAL PROPOSAL

Subsequent to the 45-day public comment period mentioned above, staff identified the following additional non-substantive changes to the regulation and LDTPs:

1. Section 1961.3, subsections (a)(1)(A)1, (a)(1)(A)2, and (a)(1)(B)1 and LDTP sections E.2.5.1.1.1, E.2.5.1.1.2, and 2.5.1.2.1: The first column of each of the tables in these sections contains the same typographical error. This error has been corrected as follows:

<i>Model Year</i>
2017
2018
2019
2020
2021
2022
2023
2025 <u>2024</u>
2025 and subsequent

The above described modifications constitute non-substantial changes to the regulatory text because they correct a duplicative number in a chronological list of

years that is readily apparent. They do not materially alter the requirements or conditions of the proposed rulemaking action.

2. Section 1961.3, subsection (f)(25), and LDTP section B.2. were edited to remove the “§” symbols that are made redundant by the word “sections” preceding them. The edited sentence (with corrections shown in double strikethrough below, but removed in the final regulation order and amended LDTPs) reads:

For model years 2021 through 2025, the “2017 through 2025 MY National Greenhouse Gas Program” means the national program that applies to new 2021 through 2025 model year passenger cars, light-duty-trucks, and medium-duty passenger vehicles as adopted by the U.S. Environmental Protection Agency as codified in 40 CFR Part 86, Subpart S, as last amended on October 25, 2016 that incorporates CFR sections ~~§86.1818-12 (October 25, 2016), §86.1865-12 (October 25, 2016), §86.1866-12 (October 25, 2016), §86.1867-12 (October 25, 2016), §86.1868-12 (October 25, 2016), §86.1869-12 (October 25, 2016), §86.1870-12 (October 25, 2016), and §86.1871-12 (October 25, 2016).~~

3. LDTP section E.2.5.1.3.4 omitted the word “available” in the additional text. This omission is apparent when compared to the comparable language in Section 1961.3, subsection (c) that includes this word. The text in LDTP section E.2.5.1.3.4 (with correction shown in double underline below, but shown in single underline in the amended LDTPs) is amended to read:

The optional compliance approach provided by this section E.2.5.1.3.4 shall not be available for 2021 through 2025 model year passenger cars, light-duty trucks, and medium-duty passenger vehicles if the “2017 through 2025 MY National Greenhouse Gas Program” is altered via a final rule published in the *Federal Register* subsequent to October 25, 2016.

This change corrects a grammatical error. It does not materially alter the requirements or conditions of the proposed rulemaking action.

4. Brackets and a comma after the word “change” in LDTP section J.15 were erroneously deleted, thereby making the formatting inconsistent with amended section J.16 and with un-amended sections J.1 through J.14 and J.17 through J.20. The word “and” was added prior to the second half of the sentence in brackets, and a comma was deleted at the end of the sentence prior to the period. These changes correct grammatical errors. The text in LDTP section J.15 (with corrections shown in double underline and double strikethrough below, but shown in single underline in the amended LDTPs) is amended to read:

15. ~~§86.1865-12 How to comply with the fleet average CO₂ standards. October 15, 2012. [No change,~~ except that this section shall only apply to vehicles

certifying under the 2012 through 2016 MY National greenhouse gas program, and the 2017 through 2025 MY National greenhouse gas program₅.]

5. In LDTP section J.16, the word “and” was added prior to the second half of the sentence in brackets, and a comma was deleted at the end of the sentence prior to the period. These changes correct grammatical errors. The text in LDTP section J.16 (with correction shown in double underline below, but shown in single underline in the amended LDTPs) is amended to read:

16. §86.1866-12 CO₂ fleet average credit programs. October 15, 2012. [No change, except that ~~for the 2012 through 2016 model years~~ this section shall only apply to vehicles certifying under the 2012 through 2016 MY National greenhouse gas program, and the 2017 through 2025 MY National greenhouse gas program₅.]

III. DOCUMENTS INCORPORATED BY REFERENCE

Neither the proposed amendments to the regulation nor the proposed amendments to incorporated test procedures adopted by the Executive Officer incorporate by reference any new documents.

IV. SUMMARY OF COMMENTS AND AGENCY RESPONSE

The Board received 36 sets of written comments and 17 oral comments in connection with the September 28, 2018 hearing. Set forth below are either the full text or a summary of each objection or recommendation specifically directed at the proposed regulation or to the procedures followed by CARB in proposing or adopting the regulation, together with an agency response. The comments have been grouped by topic whenever possible.

A. COMMENTS PRESENTED PRIOR TO OR AT THE HEARING

1. General Comments

- 1) Comment: EDF appreciates the California Air Resources Board (CARB)'s efforts to ensure clarity in regulated entities' options for compliance with the LEV III greenhouse gas (GHG) standards. However, EDF respectfully takes the position that this action is not necessary. Both the record for and goals of California's LEV III GHG standards make abundantly clear that this compliance flexibility was not intended to operate in any scenario in which the fundamental aims of the program would be significantly undermined. If CARB does proceed with this amendment, we respectfully urge that CARB make any such changes contingent on a weakening of the federal Clean Car Standards that becomes final and fully implemented. (Alice Henderson and Peter Zalzal, Environmental Defense Fund (EDF))

Agency Response: Staff agrees that “Both the record for and goals of California’s LEV III GHG standards make abundantly clear that this compliance flexibility was not intended to operate in any scenario in which the fundamental aims of the program would be significantly undermined.” However, a number of stakeholders interpret the current “deemed to comply” regulatory language to continue to allow this compliance option regardless of whatever changes are made to the U.S. EPA greenhouse gas emission standards. The proposed amendments are, therefore, appropriate to eliminate any uncertainty regarding the current LEV III regulatory language.

CARB disagrees with the commenter’s suggestion that CARB make the elimination of the “deemed to comply” option “contingent on a weakening of the federal Clean Car Standards that becomes final and fully implemented.” As discussed in the Staff Report, Initial Statement of Reasons at p. 2-4, it is necessary to propose this amendment now, in light of the fact that U.S. EPA and NHTSA jointly issued a Notice of Proposed Rulemaking (83 Fed. Reg. 16,007 (April 13, 2018) to flatline the federal greenhouse gas emission standards at 2020 model year standards, and that also proposes to preempt California’s ability to adopt and implement its separate motor vehicle greenhouse gas emission regulation and ZEV program.

The federal proposal, standing alone, introduces significant uncertainty to CARB, regulated entities, and the public regarding the fate of the current unified program that constitutes a credible threat that could: substantially slow progress towards the emission reductions needed to address the serious threat posed by climate change to California, the nation, and the world; waste billions of gallons of gasoline; and cost consumers significant amounts of money to purchase excess amounts of fuel.

Furthermore, twelve other states and the District of Columbia have exercised their authority, pursuant to section 177 of the federal Clean Air Act to adopt CARB’s standards as their own, and vehicle sales in California and those states are projected to comprise approximately a third of the domestic auto fleet.

Due to the capital-intensive nature of the automotive industry, production decisions for the affected model years need to be made in the near future, and those decisions will significantly influence whether California can maintain needed progress to meet the critical statewide air pollution and greenhouse gas emission reduction goals necessary to protect public health and welfare. California state law requires that greenhouse gas

emissions are reduced by at least 40 percent below 1990 levels by 2030¹, and directs CARB to develop "alternative regulations" for mobile sources if existing programs fall short of their projected greenhouse gas emission benefits.² Accordingly, if expected reductions from the current program do not materialize, or are prevented from occurring, the required emission reductions may need to be achieved from other sectors, including potentially from transportation fuel sectors (e.g. petroleum extraction and refining industries) by appropriate regulatory means.

Moreover, CARB is aware that states using CARB standards also need time to make appropriate regulatory decisions, potentially including whether to follow CARB's program or follow potentially less rigorous federal standards. All of these decisions must be considered this year, given the production cycle of the auto industry, and to respond appropriately to the federal processes that have been set in motion on the same timeline.

- 2) Comment: For the reasons set forth below, it is evident that California's "deemed to comply" provision can only refer to the federal standards as currently written, and not to any amended standards that may diminish the stringency of the emissions reductions. Nonetheless, to the extent California proposes to formally clarify this fact, we are supportive of a clarification that would ensure that, in the event that the federal standards are substantially weakened as has been proposed, our industries will continue to have the regulatory certainty needed to make investments in GHG-reducing advanced transportation technology.
- First, California's "deemed to comply" provision explicitly refers to federal regulations having already been adopted, not federal regulations that may be adopted in the future. Specifically, in its present form, section 1961.3 provides that "a manufacturer may elect to demonstrate compliance with this section 1961.3 by demonstrating compliance with the 2017 through 2025 MY National Greenhouse Gas program ... " Cal. Code Regs. tit. 13, §1961.3(c). This compliance option can only apply, as the definitions section of the same regulation reinforces, to the 2017 through 2025 MY National Greenhouse Gas Program "as adopted by the EPA and codified in 40 CFR Part 86, Subpart S." Id., §1961.3(£)(25) (emphasis added). The reference to the 2017 through 2025 MY National GHG program "as adopted" makes clear that the California ARB intended that program to be the only sufficient compliance

¹ Senate Bill 32 (Chapter 249, Statutes 2016, Pavley) requires that the state reach 40 percent emission reductions below 1990 levels by 2030. Executive Order S-3-05 sets a goal of 80 percent emission reductions below 1990 levels by 2050.

² Health & Safety Code § 38590.

alternative. California's standards, therefore, do not contemplate that the new standards proposed by the EPA and NHTSA in the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks 83 Fed. Reg. 42,986 (Aug. 24, 2018) ("Proposed Rule") could serve as such an alternative compliance pathway.

- Second, California's regulations clearly state that the "deemed to comply" option is only available for 2017 through 2025 MY National GHG standards. However, EPA and NHTSA are now proposing entirely different standards for the MY 2021 through 2026. If EPA and NHTSA should adopt such entirely different standards for MY 2021 through 2026, then the 2017 through 2025 MY National GHG Program, as referenced by California's regulations, is no longer recognizable. On a purely facial reading of the regulation, then, section 1961.3(c) could not possibly refer to the EPA standards as amended by the Proposed Rule where such standards make such a fundamental change to the program structure itself.
- Finally, even if the language of the statute were somehow deficient, several documents show that EPA, NHTSA, California ARB, and automakers only ever understood "deemed to comply" to contemplate standards that reflected the stringency of the current standards. For example, in the commitment letter to Secretary of Transportation Ray LaHood and EPA Administrator Lisa Jackson dated July 28, 2011 ("Commitment Letter"), California ARB Chair Mary Nichols stated that California ARB's action to promulgate its "deemed to comply" regulation, would be contingent on "EPA propos[ing] federal GHG standards and NHTSA propos[ing] CAFE standards for MYs 2017 and beyond *substantially as described in the July 2011 Notice of Intent, and the agencies adopt[ing] standards substantially as proposed.*" Commitment Letter, at 2 (emphasis added). The July 2011 Notice of Intent, of course, contemplated that EPA and NHTSA would "propose standards that would be projected to achieve, on an average industry fleet wide basis... 54.5 mpg..." 76 Fed. Reg. 48759 (Aug. 9, 2011). California ARB reiterated this contingency in its resolution adopting the "deemed to comply" option. See, e.g., California ARB Resolution 12-11 (Jan. 26, 2012) at 20 (resolving that adoption of the "deemed to comply" provision was contingent upon whether "the Executive Officer determines that U.S. EPA has adopted a final rule that at a minimum preserves the greenhouse reduction benefits set forth in U.S. EPA's December 1, 2011 Notice of Proposed Rulemaking for 2017 through 2025 model year passenger vehicles."). Thus, it was clear to all parties and stakeholders that California's "deemed to comply" provision referred to the federal standards that were

eventually adopted in 2012. Indeed, California ARB formally resolved that the "deemed to comply" optional compliance mechanism was only available where the federal rules reflected those first set forth by EPA in 2011. Any contrary interpretation of California ARB's deemed to comply provision would betray this mutual understanding and clear intention of California ARB, EPA, and NHTSA.

Furthermore, while California ARB acknowledged that a mid-term evaluation would indeed occur, such an acknowledgment was only made with the proviso that the ARB would be a full partner with EPA and NHTSA in reviewing the standards. See Commitment Letter at 3 (making California's commitment contingent upon, inter alia, the expectation that "California will fully participate in the mid-term evaluation"); California ARB Resolution 12-11 at 20. We agree that this was not what happened when EPA reconsidered the mid-term evaluation earlier this year, nor when EPA and NHTSA published the Proposed Rule.

Thus, the existing regulation makes clear that the "deemed to comply" provision cannot refer to any standards that are weaker than the current federal standards. Nonetheless, again we welcome California ARB's action to clarify that, if the EPA and NHTSA should finalize a rule that substantially weakens EPA's existing GHG standards, compliance with those weaker standards would no longer be available as an option for complying with California's standards. (Michael Bradley, M.J. Bradley & Associated; and Jake C. Levine, Kevin Poloncarz, and Gary S. Guzy, Covington and Burling LLP)

Agency Response: Staff agrees with the comment.

- 3) Comment: We strongly oppose any effort to curtail California's authority to adopt more stringent GHG emission standards, or to rescind the waiver granted to California in 2013 for its existing GHG emission standards. The principles of cooperative federalism that are embodied throughout federal environmental legislation are reflected in §§ 209(b) and 177 of the Clean Air Act, where Congress explicitly preserved California's authority to adopt more stringent motor vehicle emission standards, and granted other states the right to adopt and enforce the California standards, in lieu of federal standards. By including §§ 209(b) and 177 in the Clean Air Act, Congress clearly authorized two sets of motor vehicle emissions standards in our nation and recognized the important role that states play in protecting public health and welfare. These statutory provisions have served our states and nation well for decades and must remain in place. Given the urgent need for action to combat climate change at all levels of government, maintaining this authority, not just for NOx and other criteria pollutants, but also for GHG emissions, is critically important. (Kathy

Kinsey, Senior Policy Advisor, Northeast States for Coordinated Air Use Management (NESCAUM))

Agency Response: CARB appreciates NESCAUM's opposition to any effort to curtail California's authority to adopt more stringent greenhouse gas emission standards or to rescind the waiver granted to California in 2013 for our existing greenhouse gas emission standards.

- 4) Comment: CARB's proposal is not linked to lead time requirements in section 177 of the Clean Air Act. The "deemed to comply" provision is a compliance flexibility mechanism intended to grant equivalence in California and the section 177 states with equally stringent federal standards. This provision implicitly is predicated on the foundation that both California and the federal government maintain the agreed upon standards.

Furthermore, the underlying greenhouse gas standards in the California rule were previously adopted and all lead time requirements have been met. Amending a compliance flexibility provision, which would only be triggered by future federal action, is not the same as adopting new standards subject to the lead time requirement in section 177 of the Clean Air Act because there is no new regulatory requirement being imposed by California for which automobile manufacturers were not already provided the required advanced notice. (Robert J. Klee, Commissioner, Connecticut Department of Energy & Environmental Protection)

Agency Response: CARB agrees with this comment. Section 177 of the Federal Clean Air Act (CAA) (42 U.S.C. § 7507) states:

Notwithstanding section 209(a), any State which has adopted plan provisions approved under this part may adopt and enforce for any model year standards relating to the control of emissions from new motor vehicles or new motor vehicle engines and take such other actions as are referred to in section 209(a) respecting such vehicles if –

(1) Such standards are identical to the California standards for which a waiver has been granted for such model year, and

(2) California and such State adopt such standards at least two years before commencement of such model year (as determined by regulations of the Administrator). Nothing in this section or in title II of this Act shall be construed as authorizing any such State to prohibit or limit, directly or indirectly, the manufacture or sale of a new motor vehicle or motor vehicle engine that is certified in California as meeting California standards, or to take any action of any kind to create, or have the effect of creating, a motor vehicle or

motor vehicle engine different than a motor vehicle or motor vehicle engine certified in California under California standards (a “third vehicle”) or otherwise create such a third vehicle.

The commenter correctly notes that CARB’s proposal is not subject to the lead time requirements in section 177, because the “deemed to comply” provision provides a compliance option for California’s existing emission standards. As discussed below in Comment #61, and in the Agency Response to Comments # 64, when U.S. EPA granted California the waiver for its Advanced Clean Cars regulation, which encompassed California’s LEV III program, U.S. EPA expressly affirmed that its granting of the waiver was not contingent on the “deemed to comply” option being part of the LEV III greenhouse gas emission regulation, and specifically determined that the opponents of California’s waiver failed to “[meet] their burden of showing that compliance with California’s GHG standards is infeasible, even without the deemed to comply provision, based on the current and future availability of the described technologies in the lead-time provided and considering the cost of compliance.” 78 Fed. Reg. 2,112, 2,138 (January 9, 2013). CARB therefore agrees that automobile manufacturers have been provided adequate lead time to comply with the existing California standards since they were adopted in 2012.

- 5) Comment: CARB's proposal is not in any way linked to federal fuel economy rules. For the same reason specified above - namely that CARB's proposal will only limit a compliance flexibility mechanism within a duly adopted and federally approved regulation in the event of certain future federal actions - CARB's proposal has no bearing on existing numeric fuel economy standards. (Robert J. Klee, Commissioner, Connecticut Department of Energy & Environmental Protection)

Agency Response: Staff agrees with the comment.

2. Comments Opposing the Amendments

- 6) Comment: We recommend that the Board defer this issue and instead direct Staff to continue working with their federal counterparts, automakers, and other stakeholders to develop consensus regulatory changes meeting CARB’s statutory mandates to protect public health, welfare, and the environment, while considering the national implications of any decision—including what a split program would mean for various stakeholders and for overall GHG emissions. (Steve Douglas, Senior Director, Energy & Environment, Alliance of Automobile Manufacturers)

Comment: Global Automakers understands that these proposed amendments stem from CARB’s concerns about potential changes to the federal programs for light-duty GHG emissions and Corporate Average

Fuel Economy (CAFE) currently being considered by the EPA and National Highway Traffic Safety Administration (NHTSA). Global Automakers maintains, however, that the best outcome for all stakeholders is one that results in a unified national program between EPA, NHTSA and California. Such an outcome – a unified national program – would obviate the need for California’s proposed amendments.... Therefore, we believe that CARB’s proposed amendments is premature at this time. Should CARB finalize these amendments before the federal rulemaking process is complete, it could lock the state into a position that would make further negotiation with the federal Administration impossible.

Instead of taking the anticipated action, Global Automakers encourages CARB to work with EPA and NHTSA on revised CAFE and GHG standards that are strong and achievable, provide meaningful year-over-year environmental improvements, and encourage investment in the next-generation of fuel-saving technologies. (Julia Rege, Director of Environment & Energy, Global Automakers)

Comment: We believe that adoption of these amendments is premature and unhelpful while negotiations are underway. Honda recommends that the Air Resources Board pursue a national agreement and delay taking action on these amendments for a few months. A Board member recently told me, "we can easily change the regulations if a deal is reached," yet this claim belies the political nature of this action. If this is a course easily reversed, then it is just as easily postponed for a few months. We are a country driven more by symbolism than by substance, and action today is further evidence of this. (Robert Bienenfeld, Assistant Vice President, American Honda Motor Co., Inc.)

Comment: In the letter submitted for today's proceeding, we took the position that a delay made sense in terms of the approval of the "deemed to compliance". The key point for that was really to keep this very much at the top of everyone's list, and to dedicate the necessary staff resources and to tremendous[ly] focus on this in 2018 to facilitate the CARB automaker negotiations that certainly need to -- need to apply.

[We] [v]ery much heard the comments of the Section 177 states that were well put here as to how this fits in the legal framework. So our position, this is really a tactical issue when the Board does this, and so that would not be the focus of our comments. It's really about facilitating compliance, flexibility, negotiation. (Graham Noyes, Noyes Law Corporation for Pearson Fuels, CARB hearing tr., 74:6-19, Sept. 28, 2018.)

Agency Response: No change was made in response to these comments. The Board approved the proposed amendments at its

September 28, 2018 public hearing, at which it found that the proposed amendments are necessary to preserve the environmental benefits and welfare protections in California of the current greenhouse gas emission standards. CARB directed the Executive Officer in CARB Resolution No. 18-35, September 28, 2018:³

BE IT FURTHER RESOLVED that if there is a possibility that a unified National Program can be maintained that reduces light-duty vehicle greenhouse gas emissions sufficient to address California's compelling and extraordinary conditions, the Executive Officer should pursue the means to do so, including by proposing modifications to the proposed amendments.

The Executive Officer remains willing to communicate with stakeholders and the Federal administration to evaluate any reasonable proposals that are supported by the evidence before the agency that could allow the continuation of a National Program that will meet California's climate change emission reduction needs. Since the amendments will not eliminate the "deemed to comply" option prior to model year 2021, there is sufficient time to readopt the "deemed to comply" option if an agreement can be reached within a reasonable timeframe for a federal program that is warranted by the evidence that meets California's needs to reduce greenhouse gas emissions.

However, it is important to acknowledge that the current Federal administration has not collaborated with California to enable continuation of a National Program. While the Midterm Evaluation process that informed the January 13, 2017 U.S. EPA Final Determination⁴ was a joint three-agency endeavor between U.S. EPA, NHTSA, and CARB, the current Federal administration has not invited CARB to collaborate or even participate in substantive discussions with federal efforts to revise the Final Determination and to develop the federal SAFE NPRM to roll back the existing standards,⁵ although CARB remains open to such discussions.

- 7) Comment: Global Automakers opposes CARB's purported "clarification" or any other move that would effectively revoke its "deemed to comply" provision for any model year through 2025. Doing so would violate the State's earlier commitments to support the "One National Program" for motor vehicle fuel economy and GHG regulations. Moreover, the

³ Available at: <https://www.arb.ca.gov/regact/2018/leviii2018/finalres18-35.pdf>. All subsequent Resolutions cited are from CARB, unless otherwise stated.

⁴ U.S. EPA. *Final Determination on the Appropriateness of the Model Year 2022-2025 Light-duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation* (January 2017, EPA-420-R-17-001). available at: <https://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OAR-2015-0827-6270&attachmentNumber=1&contentType=pdf>.

⁵ 83 Fed.Reg. 42,986 (August 24, 2018).

proposed “clarification” is contradicted by the language in California’s regulations, which does not limit the “deemed to comply” provision to the EPA regulations promulgated in 2012, but rather includes any amended EPA regulations that are published in the Code of Federal Regulations. (Julia Rege, Director of Environment & Energy, Global Automakers)

Comment: In other words, at the time the ARB committed to adopt the “deemed to comply” provision for MY 2017 through 2025 motor vehicles, all stakeholders involved understood that compliance with the federal standards – even if those standards were later amended – would be deemed compliance with the California GHG requirements. They anticipated that EPA and the ARB might revise the standards based on the Mid-Term Evaluation, and the automakers and the ARB reserved their rights regarding the outcome of that review. Importantly, EPA memorialized in the preamble to its 2011 proposed rule its understanding that the ARB would submit its regulations to EPA for a waiver that “will include such a mid-term evaluation” and “will deem compliance with EPA greenhouse gas emission standards, even if amended after 2012, as compliant with California’s.” Proposed Rule, 76 Fed. Reg. 74,854, 74,987 (Dec. 1, 2011) (emphasis added). In short, California’s commitment in July 2011 to adopt a “deemed to comply” provision for MY 2017 through 2025 motor vehicles contradicts the ARB’s current position that “its regulatory text clearly refers to the current federal standards” adopted by EPA in 2012. Put differently, the ARB’s proposed amendments to the “deemed to comply” option are not a mere “clarification” of the regulatory text. (Chris Nevers, Vice President, Energy and Environment, Alliance of Automobile Manufacturers)

Agency Response: No change was made in response to these comments. The record is clear that CARB’s agreement to include the “deemed to comply” option as part of the LEV III greenhouse gas emission regulation was not unconditional, as the commenter suggests. Indeed, the notion that CARB willingly agreed to continue “deemed to comply,” regardless of whether the federal standards produced emissions benefits or whether the federal government honored its side of the agreement, is not credible. Rather, CARB’s inclusion of the “deemed to comply” option was conditioned, at a minimum, on the degree of benefits produced by the federal standards and on the federal agencies’ complying with their side of the agreement and with the law.

The condition concerning the emissions benefits was expressed repeatedly during the consideration and adoption of the “deemed to comply” provision.⁶ The other condition—that the federal government

⁶ See, e.g., <https://www.arb.ca.gov/regact/2012/leviitd12/res12-35.pdf> at 5 (noting condition “that U.S. EPA adopt[] a final rule that at a minimum preserves the greenhouse reduction benefits set forth in U.S. EPA’s December 1, 2011 [NPRM]”); 7 (finding the “deemed to comply” amendments “necessary to effectuate a carefully balanced compromise

would honor its part of the agreement and comply with the law—is self-evident from the nature of the agreement and was also expressed. As the commenter acknowledges, CARB expressly “reserve[d] all rights to contest final actions taken ... by U.S. EPA or NHTSA as part of or in response to the mid-term evaluation.”⁷ It would make no sense for CARB to reserve its rights to challenge federal agency actions at the same time that, according to the commenter, CARB bound its own program *unconditionally* to those actions.

As discussed in the ISOR and SRIA Equivalent documents released at the start of this rulemaking, the proposal to rollback, and even flatline, the federal standards does not comport with the conditions under which CARB agreed to include “deemed to comply.” And these comments—which advance a different understanding of “deemed to comply” than CARB has—underscore the need for the clarification action CARB is taking here.

- 8) Comment: If the “deemed to comply” (DTC) provision is removed, either in this rulemaking or in a future one, CARB will need to modify the CA GHG regulations to deal with various issues, including the necessary lead time, associated with transitioning from one National Program (ONP) to two separate compliance programs—subject to federal approval. (Steve Douglas, Senior Director, Energy & Environment, Alliance of Automobile Manufacturers)

Agency Response: No change was made in response to this comment. There is no lead time issue with this action because CARB is not changing its standards, and, as CARB and EPA concluded in 2012 and 2013, respectively, the lead time for the standards (which are not changing) was adequate. To the extent the commenter believes lead time is necessary due to the federal agencies’ decision to change *their* standards, that is an issue to raise with those agencies, not with CARB. Further, the Agency Responses to Comments # 4, 61, and 64 are hereby incorporated by reference into this response. As noted in those responses, when U.S. EPA granted California the waiver for its Advanced Clean Cars regulation in 2013, which encompassed California’s LEV III program, U.S. EPA expressly affirmed that its granting of the waiver was not contingent on the “deemed to comply” option being part of the LEV III greenhouse gas emission regulation, and U.S. EPA specifically determined that the opponents of California’s waiver failed to “[meet] their burden of showing

... that will preserve California’s ability to regulate greenhouse gases while retaining equivalent or greater emissions reductions”); Pages 7-8, available at: <https://www.arb.ca.gov/regact/2012/leviiighg2012/res12-21.pdf> (“It is appropriate to accept compliance with the 2017 through 2025 model year National Program as compliance with California’s greenhouse gas emission standards in the 2017 through 2025 model years ... provided that the greenhouse gas reductions set forth in U.S. EPA’s December 1, 2011 Notice of Proposed Rulemaking for 2017 through 2025 model year passenger vehicles are maintained, except that California shall maintain its own reporting requirements”).

⁷ Id., p. 5.

that compliance with California's GHG standards is infeasible, even without the deemed to comply provision, based on the current and future availability of the described technologies in the lead-time provided and considering the cost of compliance." 78 Fed. Reg. 2,112, 2,138 (January 9, 2013).

To the extent this comment suggests CARB will need to request and receive a federal waiver for this proposal, see Agency Response to Comment #64, which is hereby incorporated by reference herein.

- 9) Comment: Differences between the CARB and U.S. EPA regulations and compliance programs include the following. (Steve Douglas, Senior Director, Energy & Environment, Alliance of Automobile Manufacturers)

Comment: The California regulations are not identical to the federal regulations. They are "nearly identical" but in fact differ in many fundamental ways that shift the burden of compliance, even if the targeted GHG reductions match the federal targets. Therefore, these amendments on their own are insufficient to provide automakers with clear and implementable regulations, and additional regulatory amendments and guidance are needed, including, but not limited to the following. (Julia Rege, Director of Environment & Energy, Global Automakers)

Agency Response: CARB disagrees that the California greenhouse gas regulations are not "clear and implementable." Further, as noted above, CARB's standards are not changing and have been part of the California Code of Regulations since 2012. Any argument that these standards are not clear could have been, and should have been, raised during that rulemaking and has no bearing on this one. Comments on specific differences between the California and U.S. EPA regulations are addressed below.

- 10) Comment: The California GHG regulations provide no direction to automakers transitioning back to California's regulations regarding how to transfer credits from the national bank to a California bank. (Steve Douglas, Senior Director, Energy & Environment, Alliance of Automobile Manufacturers)

Comment: There is no clarification on what to do with credits (or debits) earned under the EPA program for MY 2017 and beyond, which will be necessary to consider in implementation of a California program. (Julia Rege, Director of Environment & Energy, Global Automakers)

Agency Response: Credits and debits cannot be transferred from the National Program to the California program. However, a manufacturer that wants to earn credits for compliance with future LEV III greenhouse

gas emission standards can choose not to utilize the “deemed to comply” option prior to when those credits may be needed. This would allow a manufacturer to earn and bank LEV III greenhouse gas credits for use in future model years.

- 11) Comment: Flexibilities and incentives in the California GHG regulations are far more constrained than those in the U.S. EPA regulations, leading to a discontinuity between the current U.S. EPA and California GHG regulations. For example:

Zero-Emission Vehicles (ZEVs) and Transitional Zero-Emission Vehicles (TZEVs): While EPA GHG regulations assign 0 g/mi to miles driven on electricity or hydrogen, CA GHG regulations assign a non-zero value based on formulae. Likewise, while the EPA GHG regulations provide a multiplier of 1.5 for each battery electric vehicle (BEV) or Fuel Cell Electric Vehicle (FCEV) and 1.3 for each plug-in hybrid electric vehicle (PHEV) in MY 2021, CARB provides no multiplier. Given the stringency of California’s ZEV regulations, the combination of assigning non-zero upstream emissions and providing no multipliers for these vehicles significantly increases the stringency of the CA GHG regulations over that of the federal regulations. (Steve Douglas, Senior Director, Energy & Environment, Alliance of Automobile Manufacturers)

Comment: While we understand that CARB has separate regulations to mandate electrification of the fleet, nonetheless, some of the provisions in the federal regulations related to electrification are important and necessary in helping automakers expand battery, fuel cell and hybrid electric options in the fleet. CARB’s current sales of plug-in hybrid, battery and fuel cell electric vehicles (collectively “EVs”) may suggest to the agency that no additional action is needed in these areas, but CARB’s EV market is unique compared to anywhere else in the U.S.

To the extent other states follow California’s regulations, additional efforts are needed to help expand and support electrification in these markets, and therefore, CARB needs to consider important regulatory mechanisms that can assist in expanding electric offerings, smoothing compliance challenges across diverse markets, and ultimately encouraging more investment in electrification. For instance:

- First and foremost, CARB needs to continue requirements for zero grams per mile upstream.
- In addition, Global Automakers has consistently advocated for the extension of advanced technology multipliers.
- Another important aspect of electrification is the use of hybrid technology. While hybrid vehicles have been considered a success in the California market, there are still additional benefits to hybridization that should be recognized and encouraged. For

instance, in many regions, hybrids continue to lay the foundation for customer transition into EVs. CARB should therefore consider ways to support hybrid technologies.

(Julia Rege, Director of Environment & Energy, Global Automakers)

Agency Response: As an initial matter, CARB notes that these comments are primarily directed to specific provisions of CARB's existing LEV III greenhouse gas emission regulation and ZEV regulation which will not be changing under this proposal, and are accordingly not directly responsive to the proposed rulemaking action. However, to the extent the comments are directed to proposals that the commenters suggest would expand and support sales of ZEVs in states that have, or may elect to adopt CARB's ZEV regulation pursuant to section 177 of the Clean Air Act, CARB responds as follows:

Because CARB has a separate Zero-Emission Vehicle (ZEV) Regulation, CARB's greenhouse gas emission regulation does not include flexibilities to incentivize ZEV compliance, namely upstream emissions compliance values of zero and ZEV vehicle multipliers. These were addressed in the original LEV III rulemaking. Additionally, although the federal program includes ZEV multipliers, such multipliers are phasing out by the 2021 model year resulting in declining influence on automaker compliance. Moreover, California does not have control over whether other qualifying states elect to adopt California's standards as provided for under Section 177 of the Clean Air Act.⁸

Multiplier Incentives: As discussed in the Final Statement of Reasons for the "Public Hearing to Consider the "LEV III" Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards and Test Procedures and to the On-Board Diagnostic System Requirements for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, and to the Evaporative Emission Requirements for Heavy-Duty Vehicles," (June 2012 FSOR) (page 55):⁹

The multiplier incentives are not included in California's LEV III GHG regulation, as they go against ARB's principles for establishing technology-neutral performance standards, they inappropriately give additional artificial credit for vehicles that are already mandated by the ZEV regulation, and they erode the program's intended GHG emission reductions.

Upstream Emissions: CARB's decision to include upstream emissions in the treatment of battery electric, plug-in hybrid electric, and fuel cell

⁸ 42 U.S.C. § 7507.

⁹ Available at: <https://www.arb.ca.gov/regact/2012/leviiighg2012/levfsor.pdf>.

electric vehicles was also discussed in the June 2012 FSOR (pages 49-50):

Staff is not proposing any change. In relation to ARB's proposal to include upstream emissions for plug-in electric and fuel cell vehicles, ARB staff stated its justification for not exempting the known emissions of these technologies in the regulatory accounting (See ISOR, pages 134-138). Staff has received differing comments from many stakeholders about the importance of including the relative upstream emission impacts from advanced vehicles, and many of the comments were highly supportive.

Based on staff's own analysis, lifecycle research in the scientific literature, and consideration of stakeholders' comments, staff is proposing to include the upstream emission accounting as proposed. The regulatory accounting of these vehicles' emissions is based on the general principles that all vehicle technologies are evaluated on a technology-neutral basis, that known emission impacts from particular vehicle technologies are not exempted, and that the regulatory framework is durable enough to accommodate evolving vehicle power sources over the long-term. In addition, the specific regulatory requirement for these vehicle types through the ZEV program obviates the need for additional special regulatory incentives. Nonetheless, staff notes that in the planned future rulemaking to deem the federal GHG standard compliance as sufficient for California compliance, the manufacturers would ultimately receive the same regulatory treatment in the federal and California regulations.

CARB addressed the loss of greenhouse gas emission benefits from the California fleet due to the adoption of the "deemed to comply" provision in the Staff Report: Initial Statement of Reasons for Rulemaking for the "Proposed Amendments to New Passenger Motor Vehicle Greenhouse Gas Emission Standards for Model Years 2017-2025 to Permit Compliance Based on Federal Greenhouse Gas Emission Standards and Additional Minor Revisions to the LEV III and ZEV Regulations," (September 2012 ISOR) (pages 11-12):¹⁰

The national greenhouse gas program for the 2017 through 2025 model years is marginally less stringent than California's program due to differences between the two programs in their treatment of advanced technology vehicles and the application and calculation of credits for improved air conditioning systems, off-cycle technologies and hybridization of full-size trucks.... Nonetheless, while implementation of a compliance option that allows

¹⁰ Available at: <https://www.arb.ca.gov/regact/2012/leviiidtc12/dtcisor.pdf>.

manufacturers to certify to the 2017 through 2025 model year national greenhouse gas program instead of the California program would result in a slight decrease in accumulated CO₂ reductions in California, greater CO₂ reductions would be achieved nationwide, as was the case when California adopted the federal program option for the 2012 through 2016 model years.

While CARB was willing to set aside the principles articulated in the original LEV III rulemaking in order to achieve greater CO₂ reductions from a National Program, these principles have not changed. Consequently, absent a National Program that benefits California, we are holding firm to the principle articulated in the original rulemaking.

Resolution 12-11¹¹ also expressed the Board's concerns that the federal treatment of upstream emissions would result in lost emission benefits.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to continue collaborating with EPA and NHTSA as their standards are finalized and in the mid-term review to minimize potential lost benefits from federal treatment of upstream emissions of electricity and hydrogen fueled vehicles;

Hybrid Technology: Moreover, survey data does not support the contention that hybrid electric vehicles (i.e., non-plug-in vehicles) are a necessary foundational or “gateway” technology to zero-emission vehicles and therefore staff do not intend to propose regulatory mechanisms to specifically encourage this technology. A survey of California Clean Vehicle Rebate Project recipients who bought or leased a plug-in hybrid, battery, or fuel cell electric vehicle between June 2017 and January 2018 showed that of other vehicles considered while shopping for their rebated vehicle, only 16 percent overall were gasoline vehicles.¹² These consumers wanted an advanced technology vehicle and considered any kind of technology in lieu of conventional gasoline-only technology.

- 12) Comment: Off-Cycle Credits: Flexibilities and incentives in the California GHG regulations are far more constrained than those in the U.S. EPA regulations, leading to a discontinuity between the current U.S. EPA and California GHG regulations.

¹¹ Available at: <https://www.arb.ca.gov/regact/2012/cfo2012/res12-11.pdf>.

¹² Survey was conducted between 8/1/17-3/13/18 by the Center for Sustainable Energy, which administers the Clean Vehicle Rebate Project, for plug-in hybrid electric vehicles, battery electric vehicles, and fuel cell electric vehicle purchases and leases between 6/1/17-1/31/18. Sheldon and Dua. “Gasoline savings from clean vehicle adoption” Energy Policy. (120) p. 418-424. <https://doi.org/10.1016/j.enpol.2018.05.057>. Available at: <https://www.sciencedirect.com/science/article/pii/S0301421518303719?via%3DIihub>, accessed on November 2, 2018.

The CA and EPA GHG regulations have vastly different treatments of off-cycle technologies that provide demonstrable GHG emission reductions (e.g., active aerodynamics, high efficiency exterior lighting, engine start-stop, etc.). For example, in the pre-approved credit list:

- The credit values differ between CA and EPA regulations;
- CA GHG regulations require a minimum percentage of production to receive the credit; and
- CA GHG regulations omit alternative method process (probably due to a drafting error).

The California regulation also requires additional data or descriptions to get off-cycle credit if the manufacturer cannot get more than 2% fuel economy improvement by the 5-cycle methodology. (Steve Douglas, Senior Director, Energy & Environment, Alliance of Automobile Manufacturers)

Comment: Off-Cycle Technology: These regulatory mechanisms are important tools that encourage additional manufacturer investment in GHG-reducing technologies and allow for a smart, efficient and cost-effective approach to compliance that can be best tailored to each model's specific needs. Global Automakers wholeheartedly supports inclusion of these regulatory provisions.

CARB's proposed action, however, creates challenges that are outside the scope of the federal program, for instance:

- The CARB regulations has a 10% technology rate minimum requirement for off-cycle technology. This requirement is not included in the EPA program and puts increasing stress on manufacturers to change and update product plans if they hope to earn regulatory credits for inclusion of this technology. CARB's provision, as it stands, discourages real GHG emission benefits from technologies applied in limited application. Global Automakers recommends that CARB eliminate this 10% technology requirement in order to promote technology investment and real world GHG benefits and to ensure this overly prescriptive and restrictive provision does not result in a more stringent scenario that would have otherwise been required under a unified national program.
- Some off-cycle technology credit values, again which represent real GHG benefits from additional technology added to the vehicle, are slightly different from that under EPA program. These differences are problematic, because again, they can result in different and altered product plans, and therefore, would create implementation challenges that would not otherwise exist today under a unified program. Global Automakers recommends that CARB align the

values of off-cycle technology credit values consistent with those in the federal program.

- Global Automakers has been working with the federal agencies for some time on expanding and adding to the off-cycle technology tables, to provide consistent off-cycle technology credit values, encourage more investment in these technologies, and improve upon the ability to earn credits for technologies with known and approved credit values. CARB should also be working on regulatory amendments to expand its table as well.

(Julia Rege, Director of Environment & Energy, Global Automakers)

Agency Response: Staff believes that 10 percent is an appropriate minimum technology penetration threshold for off-cycle credits. This minimum rate provides meaningful benefits and encourages the commercial development, and therefore cost reductions, of off-cycle technologies with the potential for widespread application in a manufacturer's fleet. Furthermore, as greenhouse gas emission standards continue to become more stringent each year, automakers will apply effective off-cycle technologies to increasing percentages of their vehicle fleet in order to meet the standards. Therefore, meeting the 10 percent threshold should not be burdensome for automakers.

Regarding differences between the LEV III and U.S. EPA off-cycle credit values in the current regulations, it should be noted that both of these regulations allow automakers to apply for credits that are greater than the default values in the credit tables. Therefore, differences between the LEV III and U.S. EPA default off-cycle credit values should not be problematic.

If U.S. EPA expands and updates its off-cycle technology tables, CARB staff will explore whether any changes to the LEV III regulation might be appropriate.

- 13) Comment: Air Conditioning Credits: Flexibilities and incentives in the California GHG regulations are far more constrained than those in the U.S. EPA regulations, leading to a discontinuity between the current U.S. EPA and California GHG regulations.

- To receive credits for more efficient air conditioning systems, manufacturers must provide test results so demonstrating. However, there is a wide disparity between the federal testing currently required and what would be required by CA GHG regulations.
- California requires additional data or description to get air conditioning direct emission reduction credit.

- There is a different selection method between the California and the Federal AC17 test vehicle selection requirements. Additional AC17 tests will be required for California compliance.

(Steve Douglas, Senior Director, Energy & Environment, Alliance of Automobile Manufacturers)

Comment: Air Conditioning GHG Emission Reductions: These regulatory mechanisms are important tools that encourage additional manufacturer investment in GHG-reducing technologies and allow for a smart, efficient and cost-effective approach to compliance that can be best tailored to each model's specific needs. Global Automakers wholeheartedly supports inclusion of these regulatory provisions.

CARB's proposed action, however, creates challenges that are outside the scope of the federal program, for instance:

- CARB requires AC17 test for air conditioning credits, whereas the EPA program uses a technology credit through MY 2019 and then use of AC17 testing from MY 2020 on. It is unclear if this difference will have an impact on the program, particularly if CARB's regulatory amendments begin with MY 2022, but nonetheless, more attention is needed to this difference. Just as importantly, Global Automakers has previously requested efforts to streamline the AC17 that would reduce testing burden with no impact on the actual test results. CARB should work with automakers to identify and update the AC17 test.

(Julia Rege, Director of Environment & Energy, Global Automakers)

Agency Response: For 2020 and later model years, there are few differences between the California and U.S. EPA test vehicle selection requirements. However, manufacturers are not required to conduct the AC17 test procedure on every vehicle, but instead need only test one vehicle amongst all those that share a common air conditioning system. Based on discussions with automobile manufacturers prior to the adoption of LEV III, it was staff's understanding that most vehicles on a single platform use the same air conditioning system. Staff has not received any information from automakers subsequent to that time that indicates this practice has changed. Given that most automobile manufacturers have a limited number of platform lines, even if separate vehicles needed to be tested to meet California and U.S. EPA requirements, staff does not anticipate that automakers will incur an undue test burden due to the minor differences that exist between the requirements. However, staff welcomes dialogue with automakers to evaluate whether any changes to the AC17 test are needed.

In terms of California requiring manufacturers to submit additional information pertaining to air conditioning refrigerant leakage beyond the

U.S. EPA requirements, staff believes that the additional information is necessary for manufacturers to adequately demonstrate credit eligibility and calculation, and for staff to effectively certify credit submissions.

- 14) Comment: U.S. EPA allows the use of E0 certification gasoline through model year (MY) 2019. Discussions are ongoing with U.S. EPA to allow use of E0 certification gasoline beyond the 2019 MY and to allow manufacturers to carryover test data using E0. CARB required E10 certification gasoline. (Steve Douglas, Senior Director, Energy & Environment, Alliance of Automobile Manufacturers)

Comment: With ongoing EPA efforts to address open issues related to EPA's change in certification test fuel to "E10", this may result in further divergence with CARB's test fuels and further complicate testing and compliance planning. (Julia Rege, Director of Environment & Energy, Global Automakers)

Agency Response: As the commenters noted, U.S. EPA currently only allows the use of E0 certification gasoline through model year 2019. If U.S. EPA allows use of E0 certification gasoline beyond model year 2019, CARB will consider whether additional amendments to its regulations are similarly appropriate beginning with MY 2021. Furthermore, testing by U.S. EPA indicates that "The overall results across the test fleet showed a reduction in CO₂ of 1.78% for the FTP (city cycle) and 1.02% for the HFET (highway cycle) tests for Tier 3 (E10) compared to Tier 2 (E0) test fuel."¹³ Compliance with the LEV III greenhouse gas emission standards is based on vehicle testing over the FTP and HFET test cycles, and would therefore result in lower CO₂ emission results compared to testing conducted using E0 certification gasoline.

- 15) Comment: Certification and in-use carbon dioxide (CO₂) standards: U.S. EPA compliance is based on highest sales subconfiguration of each model type. CARB requires compliance based on both model type and footprint. (Steve Douglas, Senior Director, Energy & Environment, Alliance of Automobile Manufacturers)

Agency Response: The additional certification data provides CARB with a more complete understanding of the vehicle fleet. This additional testing is reasonable and not overly burdensome. However, staff will evaluate the necessity of making additional regulatory changes to LEV III and the appropriateness of the timing of potential changes as additional information becomes available.

¹³ U.S. EPA. *Tier 3 Certification Fuel Impacts Test Program*. (January 2018, EPA-420-R-18-004). Available at: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100TLC7.pdf>.

- 16) Comment: Durability demonstration: U.S. EPA's test procedures provide for either a multiplicative deterioration factor (DF) of 1 or an additive DF of 0 to determine full useful life emissions. California's test procedures eliminate this provision after 2016 MY. (Steve Douglas, Senior Director, Energy & Environment, Alliance of Automobile Manufacturers)

Agency Response: Application of a multiplicative DF of 1 or an additive DF of 0 to an emissions value does not change that emissions value. Consequently, staff is not proposing any changes.

- 17) Comment: The Federal full useful life (FUL) is 10 years/120,000 mi for light-duty vehicles and light light-duty trucks, and 11 years/120,000 miles for heavy light-duty trucks and medium-duty passenger vehicles. The California FUL is 15 years/150,000 miles for passenger car, light-duty vehicles, and medium-duty vehicles. (Steve Douglas, Senior Director, Energy & Environment, Alliance of Automobile Manufacturers)

Agency Response: LEV III extended full useful life durability from 120,000 miles to 150,000 miles to ensure more robust performance of emission control systems and, consequently, lower in-use emissions as vehicles age.

- 18) Comment: Full-Size Pickup High-Efficiency Credit Calculation: The California definition is more severe than the Federal definition: in the California regulation, air conditioning direct and high efficiency credit value is not considered when judging full-size pickup credit. (Steve Douglas, Senior Director, Energy & Environment, Alliance of Automobile Manufacturers)

Agency Response: LEV III provides separate credits for (1) reduction of air conditioning direct emissions, (2) improving air conditioning system efficiency, and (3) (for full-size pickup trucks) implementation of hybrid technologies or exhaust emission performance. While differences between the LEV III and U.S. EPA regulations do exist, compliance with the LEV III requirements are feasible. It should also be noted that U.S. EPA is proposing in the NPRM to eliminate air conditioning refrigerants and leakage credits (i.e. air conditioning direct credits) beginning with model year 2021.

- 19) Comment: While correcting the above, we recommend that CARB streamline its regulations to reduce the testing and reporting burden on automakers attempting to comply with both California and U.S. EPA GHG regulations if CARB is permitted by U.S. EPA to have a separate testing and reporting program. (Steve Douglas, Senior Director, Energy & Environment, Alliance of Automobile Manufacturers)

Comment: The California regulations are not identical to the federal regulations. They are “nearly identical” but in fact differ in many fundamental ways that shift the burden of compliance, even if the targeted GHG reductions match the federal targets. Therefore, these amendments on their own are insufficient to provide automakers with clear and implementable regulations, and additional regulatory amendments and guidance are needed, including, but not limited to the following. (Julia Rege, Director of Environment & Energy, Global Automakers):

Significant differences in test procedures and reporting have always existed between California and EPA testing. While these differences should have been solved by ONP, the reality is that CARB has always maintained separate testing and reporting requirements, often based on slightly different criteria than EPA. A separation from ONP will increase these differences, potentially requiring duplication in testing, generation of new data, and additional resources to be expended to prove out compliance with a California program, with no actual emission benefit, beyond what may already be occurring today.

- For instance, CARB has nuances in its vehicle definitions for weight class and vehicle types (i.e. passenger car, light-duty truck, and medium-duty vehicles). There are also many open questions about what test vehicles will meet CARB’s criteria if CARB implements its own regulations, and these questions are critical to the ability to plan, implement and comply with California’s regulations.
- In combination, this means a significant additional test burden on manufacturers with little to no real emissions benefits and increased burden, and cost, of compliance under differing criteria. In fact, these differences represent significant regulatory changes if CARB implements separate regulations and can result in changes and alterations in compliance plans for a separate California regulatory program.

Agency Response: Staff agrees that, “CARB has always maintained separate testing and reporting requirements, often based on slightly different criteria than EPA.” These separate testing and reporting requirements have been developed and maintained based on staff’s assessment of what information is needed to ensure that California’s emission standards are achieving the expected benefits. However, staff will continue to evaluate the necessity of making additional regulatory changes to LEV III and the appropriateness of the timing of potential changes as additional information becomes available.

- 20) Comment: Under California regulations, small volume manufacturers (SVMs) are those with total U.S. sales of fewer than 5,000 units for the three most recent consecutive model years, and they may seek from CARB an alternative fleet-average requirement. The unique situations

facing SVMs under the GHG program are, we believe, well understood by CARB.

There are similar provisions in the federal standards, and many SVMs seeking to invoke the “deemed to comply” provision have petitions pending with EPA and NHTSA for alternative standards. In petitioning for alternative standards, SVMs must navigate separate administrative processes at NHTSA and EPA. We are now faced with the prospect of a third process in the state of California, due to the pending “deemed to comply” rulemaking. Having three separate government agencies undertaking essentially the same regulatory task, with overlapping administrative waste, potentially conflicting results, and negligible resulting benefits, would be an irrational outcome with negligibly small number of vehicles involved. By contrast, the staff resource and administrative burdens associated with the SVM process are disproportionately large. We encourage CARB to find a better solution for addressing this issue.

In the event that CARB were to revoke the “deemed to comply” provision, then the pending petitions concerning any time frames after MY 2020 before EPA could not be used to show compliance with the California standards. According to CARB regulations, eligible SVMs seeking an alternative standard must submit a completed application no later than 36 months prior to the start of the first model year to which the alternative standards would apply. That could create a situation where an SVM would be unable to rely on compliance with the federal standards and would be too late to apply for an alternative standard from CARB. Any decision to revoke the “deemed to comply” provision would need to be accompanied by a mechanism to transition SVMs that have not already applied to CARB for alternative standards.

Global Automakers urges CARB to streamline their processes for the future, to enable a single GHG standards application by SVMs, culminating in the issuance of harmonized standards (i.e., standards of equivalent stringency, enabling manufacturers to meet both agencies’ requirements with a single compliance plan). Alternatively, Global Automakers recommends that CARB maintain “deemed to comply” indefinitely for the SVMs, regardless of any other amendments to the deemed-to-comply provision. (Julia Rege, Director of Environment & Energy, Global Automakers)

Agency Response: Staff does not believe that there is any conflict between the California and U.S. EPA process for a small volume manufacturer to petition for an alternative standard. Staff believes that the procedure for evaluating whether or not a manufacturer meets the “nationwide sales of fewer than 5,000 vehicles per year” criteria is

sufficiently detailed to minimize the risk of CARB and U.S. EPA reaching conflicting conclusions. A SVM will be able to avoid a delay in receiving CARB approval for use of an alternative standard by simultaneously submitting its request to U.S. EPA and CARB. Any request submitted will have to be for an alternative to the California greenhouse gas emission standards, not for an alternative to the U.S. EPA greenhouse gas emission standards.

21) Comment: We believe the amendments will have unintended consequences:

- As proposed, it will remove the optional compliance program even if CA and the federal government reach agreement in the coming months.
- Also, if no agreement is reached, the amendment will activate California's long-dormant GHG regulation that is unworkable as currently written. Global has submitted testimony as to the details of these problems, which are substantial.

(Robert Bienenfeld, Assistant Vice President, American Honda Motor Co., Inc.)

Agency Response: Staff is aware that the proposal will remove the optional compliance program “even if CA and the federal government reach agreement in the coming months.” Therefore the commenter is incorrect in the claim that this is an unintended consequence of the proposal. Staff is unable to respond to the comment that California’s LEV III greenhouse gas emission regulation is “unworkable as currently written,” since the commenter did not provide any explanation for this conclusion.

22) Comment: In the unlikely event that a deal cannot be reached with the federal government, we recommend that this Board direct staff to study and propose:

- a voluntary program that, if followed by OEMs, would, in effect, maintain a national market and achieve lower overall greenhouse gas emissions than could be achieved by California and Section 177 states alone, and
- propose changes to the current GHG rule so that it could be successfully implemented.

(Robert Bienenfeld, Assistant Vice President, American Honda Motor Co., Inc.)

Agency Response: The nature of a voluntary program is that participants are allowed but not required to participate in it. CARB does not need to adopt a voluntary program to enable an automaker to reduce greenhouse gas emissions from its new vehicle fleet. Manufacturers may choose to do this now. Given the urgent need for California’s greenhouse gas reduction

requirements, voluntary programs do not provide sufficient certainty we will achieve the reductions needed to decelerate catastrophic climate change.

- 23) Comment: I think rolling back the proposed standards is a good idea. My background is with automobiles. I know you have to burn a certain amount of fuel to power a vehicle, especially the big sport utility vehicles that people buy today. I want clean air and higher fuel mileage too, but the only way I feel we can do that in the next few years is hybrids or all electric. This technology is very expensive and this just forces vehicle prices higher and puts them (cars) out of reach of the average family. This forces people to drive older vehicles that pollute more and are less safe. You are going to force a showdown between your state and the federal government and automakers. Then we, the consumers will be the big losers. (Charlie Mallory)

Agency Response: Staff does not agree that the only way that the current greenhouse gas standards can be met in the next few years is with hybrids or all electric vehicles.

As mentioned in the ISOR, as part of the midterm evaluation of the appropriateness of the 2022 through 2025 model year greenhouse gas standards, CARB, U.S. EPA, and NHTSA conducted an extensive joint multi-year study that updated the technical and cost data used in the original 2012 analysis. The results of this joint agency study¹⁴ concluded:

A wider range of technologies exist for manufacturers to use to meet the 2022 through 2025 National Program model year standards at costs that are similar to or lower than those projected in the 2012 Final Rule;

The auto industry can meet the standards primarily with advanced gasoline vehicle technologies and a small amount of hybridization and electrification[.];

To date, the sales data do not support the conclusion that fuel economy and emissions standards have diminished sales. To the contrary, the automobile manufacturers have had steadily increasing sales since 2009.¹⁵

¹⁴ U.S. EPA, NHTSA, CARB. *Draft Technical Assessment Report: Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for Model Years 2022-2025* (July 2016). available at: <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100XEO.PDF?Dockkey=P100XEO.PDF>

¹⁵ See U.S. Department of Commerce, Bureau of Economic Analysis, Table 7.2.5S. Auto and Truck Unit Sales, Production, Inventories, Expenditures, and Price, available at: <https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=2#reqid=19&step=3&isuri=1&1921=underlying&1903=2055>, accessed November 2, 2018.

3. Comments in Support of the Amendments

- 24) Comment: We strongly support CARB's proposal to clarify that, at least with respect to mobile air conditioner refrigerant leakage credits (MAC refrigerant credits), the "deemed to comply" provision applies to today's federal standards. Continuing the availability of MAC refrigerant credits will help ensure a continued transition to low-global-warming potential (GWP) refrigerant alternatives that will yield significant greenhouse reductions—reductions that are necessary to meet California's greenhouse gas goals and its Short-Lived Climate Pollutant (SLCP) reduction target in particular. (Sanjeev Rastogi, Vice President & General Manager, Fluorine Products, Honeywell Performance Materials & Technologies)

Agency Response: CARB recognizes the value of maintaining mobile air conditioning refrigerant credits as part of the LEV III regulations. These credit opportunities, although optional, are highly cost-effective and expected to be widely utilized by automakers for compliance with the fleet average standards.

- 25) Comment: Unlike other automakers, we do not believe the proposed amendments are premature. Tesla strongly supports CARB's efforts to maintain the stability and stringency of the LEV III greenhouse gas emission standards, the continued regulatory stability for auto manufacturers embodied in the current federal and state light-duty greenhouse gas vehicle standards, and the "deemed to comply" regulation is important.

Allowing for the "deemed to comply" regulation to encompass new regulations that diminish this level of needed public health protection would be wrong and result in CARB running afoul of statutory requirements. (Joseph Mendelson and Sanjay Ranchod, Tesla, Inc.)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 26) Comment: ChargePoint strongly supports CARB's intent to provide a pathway to ensure that sound and justified policies that reduce greenhouse gas emissions from the transportation sector remain in place. It is vital that CARB take all available action to preserve California's authority to enforce fuel efficiency standards that promote adoption of electric transportation, including those provided through the State's Clean Air Act Preemption Waiver. ChargePoint supports the intent of the proposed amendment to California's LEV III emissions regulations, as they ensure that any change to Federal fuel efficiency standards would not take effect in California. In addressing the "deemed to comply" provision under

existing policy established in 2012, CARB takes an important step in solidifying standards that protect and enhance current trends in industry toward electrification.

ChargePoint believes that CARB should take all available action to ensure the California's Waiver remains intact and keeping solid standards for industry in place will maintain the U.S. automotive sector's growth and innovation in electrification. Doing so will support that State's ability to meet the goal of deploying 250,000 charging stations by 2025, and reaching 5 million ZEVs on the road by 2030. (Anthony Harrison, Director of Public Policy, ChargePoint, Inc.)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal. We note, as a correction, California's LEV III program regulates greenhouse gas emissions and not vehicle efficiency.

- 27) Comment: We'd like to express our general support for the measure, while also urging CARB to continue to work towards -- working towards a harmonized approach nationally and leaving some flexibility for further negotiations to do that. We do not want to see a reduction in fuel economy -- federal fuel economy standards, and we vigorously oppose any action to undermine California's waiver. When we look at the ARB's proposal, we have no choice but to agree that the federal administration withdrew its previous determination without due process and coordination.

So we stand with you on this measure, and we also ask that you continue to seek ways to make refinements to the federal standard that can keep within the same stringency that is so important to California. (Ryan Schuchard, Calstart)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal. As discussed above, CARB directed its Executive Officer to consider pursuing opportunities to continue a unified national program.

- 28) Comment: Our industry relies heavily on the regulatory certainty. We need it to make sound business decisions on our long-term R&D investments. However, the regulatory process, since the jointly developed TAR was completed, has been less than certain to put it mildly. We do not support the administration's preferred alternative in the NPRM. Flat-lining the standards and disrupting rational regulatory processes will cost jobs and chill investment in our industry. The proposal alone is already encouraging some companies to defer new job-creating investments or to actively consider shifting their investments to all -- to other countries that are more serious altogether.

AESI supports California's efforts and those in the Section 177 states to address their and this nation's serious environmental and public health challenges, whether that occurs through amending the "deemed to comply" provision today or by other means in the near future. It is our strong hope that California, NHTSA, and EPA will produce a constructive path forward very soon, (Chris Miller, Executive Director, Advanced Engines Systems Institute (AESI))

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 29) Comment: The Pennsylvania Department of Environmental Protection (PA DEP) strongly supports CARB's proposal to amend the "deemed to comply" provision only to apply to the currently adopted federal GHG regulations (incorporated in the Code of Federal Regulations and last amended on October 25, 2016).

PA DEP supports the review by CARB in this proposed rulemaking of the technology analysis conducted for its 2012 rulemaking establishing GHG emission standards for light-duty vehicles for model years 2017 through 2025.

PA DEP supports CARB's rejection of Alternatives 1 and, as presented in CARB's "Staff Report: Initial Statement of Reasons" for the proposed rulemaking. (Patrick McDonnell, Secretary, PA DEP)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 30) Comment: The New Jersey Department of Environment Protection ("NJDEP") supports the Air Resources Board's proposal to amend its Low-Emission Vehicle ("LEV") regulations to preserve stringent greenhouse gas ("GHG") emissions for light-duty vehicles for model years 2021 to 2025 (the "Proposal"). I write to urge the Board to vote in favor of the Proposal at its September 27, 2018 meeting. (Deborah A. Mans, Deputy Commissioner, New Jersey Department of Environmental Protection)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 31) Comment: The City of New York strongly supports CARB's proposed amendments, which ensure that appropriate and necessary regulations remains in place and effective in the face of EPA's current efforts to roll back existing passenger vehicle and light truck greenhouse gas emission limitations and fuel efficiency standards.... through amending its vehicle

emission regulations, CARB is acting in a manner that is consistent with the cooperative federalism structure of the Clean Air Act and ensures the effectiveness of Clean Air Act regulations moving forward. Sections 177 and 209 of the Clean Air Act give California the ability to adopt its [sic] own, more stringent emission control standards for motor vehicles and gives states the authority to adopt those standards. The current rulemaking takes an important and necessary step towards preserving that authority which serves as an essential part of New York City's plans to protect public health and the environment. (Susan E. Amron, Chief, Environmental Law Division, and Robert L. Martin, Environmental Law Division, City of New York)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 32) Comment: New York strongly supports CARB's proposed revisions to the deem to comply provision, as well as California's right to continue its own emissions reduction programs under Section 209 of the CAA. New York will stand with California and utilize all available options to protect our citizens and the environment should EPA and NHTSA decide to ignore established science and disregard their mission to protect human health and the environment by rolling back existing standards.

We also support continued dialog with industry and the federal regulators to explore whether a meaningful harmonized standard can be implemented.

The authority for California to adopt these regulatory programs is clear in section 209 of the Clean Air Act, and by extension, the authority for the Section 177 states is also clear. That authority is a critical component of New York's effort to address not only greenhouse gases, but also criteria pollutants and their precursors.

And when the time comes, New York will be prepared to sue the federal government for its illegal, irresponsible, and immoral regulatory action, which is nothing more than a thinly veiled giveaway to the fossil fuel industry.

(Steven E. Flint, PE, Director, Division of Air Resources, and Jared Snyder, New York State Department of Environmental Conservation)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 33) Comment: Connecticut fully supports CARB's proposal to amend the LEV III Greenhouse-Gas Emission Regulation and we will continue to support

efforts to blunt EPA's misguided efforts to revise corresponding federal standards and protect California's waiver under CAA section 209. (Robert J. Klee, Commissioner, Connecticut Department of Energy & Environmental Protection)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 34) Comment: NESCAUM supports California's proposed amendments to the LEV III greenhouse gas regulation to clarify that the "deemed to comply" option, which accepts compliance with the federal standards as sufficient to demonstrate compliance with California's standards for model years 2017 through 2025, is only available so long as the currently adopted federal standards are in effect. This clarification is consistent with the original intent and the very premise of the deemed to comply provision - that the federal standards would provide overall greenhouse gas reductions that are equivalent to reductions required by the California standards. We also note that absent any changes to the existing federal standards in place through model year 2025, California's proposed amendments preserve the option of providing a single harmonized standard for automakers. (Kathy Kinsey, Senior Policy Advisor, NESCAUM)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 35) Comment: In light of the federal rollback, the District plans to adopt California's vehicle emission requirements as part of achieving the District's stated reduction targets. As such, DOEE fully supports CARB's efforts to only accept compliance with the federal standards that achieve effectively equivalent GHG emission reductions to California's LEV III program. (Tommy Wells, Director of the District of Columbia's Department of Energy and Environment (DOEE))

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 36) Comment: The amendments to the "deemed to comply" provisions of the California regulations that are under consideration by the Board today make necessary changes to the regulations that are consistent with the original intent and the very basis for accepting compliance with federal standards as a demonstration of compliance with California standards - that the federal emission standards would provide equivalent emission reductions.

Now it appears that may no longer be the case. California has New Jersey's strong support for the amendments under consideration by the Board today. (Deborah Mans, Deputy Commissioner, New Jersey's Department of Environmental Protection.)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 37) Comment: We support the proposed revisions to the "deemed to comply" provisions that would apply to only the current federal greenhouse gas standards in the event the federal standards are weekend as proposed.... We are prepared to join California and the other Section 177 states to protect the integrity of the greenhouse gas standards, and the LEV program, as well as our state authority under the federal Clean Air Act. (Christine Kirby, Assistant Commissioner, Massachusetts Department of Environmental Protection, Bureau of Air and Waste)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 38) Comment: It is imperative to ensure that innovations in clean car technology continue. We strongly support the proposed revisions to the "deemed to comply" regulatory provisions that are under consideration by the Board today, and will follow shortly with our own corresponding rule changes to ensure that Oregon will continue to require greenhouse gas standards as agreed to and determined to be achievable by EPA under the previous administration. (Leah Feldon, Deputy Director, Oregon Department of Environmental Quality)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 39) Comment: As many of you will recall, shortly after Vermont adopted California's greenhouse gas standards, the automobile industry filed a lawsuit alleging that the regulations were preempted by the Energy Policy Conservation Act. Almost two years later, the U.S. district court in Vermont upheld Vermont's regulations and rejected all of the automobile industry's preemption claims. The court's well-reasoned opinion helped to clear the way for a favorable decision in a similar case in California, upholding EPA's decision to grant a waiver for the California standards.

As far as Vermont is concerned, the science and economics of reducing greenhouse gas emissions from automobiles are as irrefutable as a right under Section 177 of the Clean Air Act to adopt and enforce California's greenhouse gas emission standards in lieu of federal standards.

Vermont strongly supports the proposed amendments to California's light-duty greenhouse gas regulations to clarify the "deemed to comply" option. It will not be available if [weak] or federal standards for model years 2021 to 2025 are adopted. This proposal embodies the fundamental understanding behind the "deemed to comply" provision, which is that the federal program would provide greenhouse gas emission reductions that are substantially equivalent to the California program. Having it any other way would defeat the very purpose of the California program, and the decision by Vermont and other Section 177 states to exercise their right to adopt and enforce California's standards in lieu of the federal standards, by subjecting them to less protective federal standards. (Heidi Hales, Director, Vermont Air Quality and Climate Division)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 40) Comment: We strongly support the amendments under consideration by the Board today that clarify and preserve the original intent of the "deemed to comply" provisions. California's affirmative action on these standards will help keep American position[ed] to lead the world in efficient vehicle technology. (Stu Clark, Manager of the Air Quality Program for the State of Washington)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 41) Comment: We agree with CARB's proposed conclusion that the "deemed to comply" provision was intended to apply only to the extent federal GHG emission standards remained substantially equivalent to California standards. In light of its long-standing congressionally-recognized authority to be an innovator and a leader, it makes no sense to have in place a regulation that defeats that authority of California. While the amendment is not required, we support CARB's decision to finalize the proposed amendment in order to eliminate any possible confusion that may exist over the nature of the provision. (Irene Gutierrez, Staff Attorney, Natural Resources Defense Council)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 42) Comment: The proposed amendments to clarify the "deemed to comply" language are consistent with the intent of the originally adopted language. Therefore, while we believe the language and intent is already clear, we support ARB's proposed action. (Don Anair, Research and Deputy Director - Clean Vehicles Program, Union of Concerned Scientists)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 43) Comment: In an earlier stage of this proceeding, Policy Integrity submitted comments explaining that economic evidence supports maintaining vehicle emissions standards at the level of California's existing standards, and we reiterate those comments here. Policy Integrity released a report earlier this year detailing studies showing that the greenhouse gas emission standards for model years 2022 through 2025 are still feasible. Substantial research on emissions standards conducted by independent third parties and EPA itself shows that "the standards should be maintained. (Denise A. Grab, Institute for Policy Integrity, New York University School of Law)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 44) Comment: We support California's work to maintain the current stringency of the federal fuel economy and GHG emission standards, support its waiver authority under the Clean Air Act, and support Section 177 States' abilities to implement California's standards. The existing federal standards are in line with the settled expectations of the parties that negotiated them (the Environmental Protection Agency ("EPA"), the National Highway Transportation Safety Administration ("NHTSA"), the California ARB, and the automakers), as well as with the regulatory proceedings that produced California ARB's original "deemed to comply" provision, Cal. Code Regs. tit. 13, § 1961.3 (Section 1961.3), along with the Section 177 States' adoption of the same. (Michael Bradley, M.J. Bradley & Associated; and Jake C. Levine, Kevin Poloncarz, and Gary S. Guzy, Covington and Burling LLP)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 45) Comment: The American Lung Association supports this amendment to clarify that compliance with current health protective federal rules will meet California carbon emission requirements. There is really no rational basis to think that CARB intended anything other than to allow [sic] and accept compliance with the existing stringent federal standards, as opposed to less protective proposed rules. If this clarification is needed to provide rational guidance as the federal government considers this senseless proposal to rollback health protective standards, we support CARB moving forward today and encourage all the 177 states to take action as quickly as possible. (Will Barrett, American Lung Association, CARB hearing tr., 79:6-19, Sept. 28, 2018.)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 46) Comment: We fully support the proposal before you today, because it would continue the current standards, which are based on science, and fact, and technological feasibility. They continue to be more than feasible as determined by the National Academy of Sciences Report. And they've been delivering benefits for our health, for our climate, and for consumers.

I don't have any negotiating advice for you this morning. I'm just here to offer our strong support as you go forward, and to let you know that the breathers of California are with you. (Bill Magavern, Coalition for Clean Air)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 47) Comment: I add my breath and support to this measure before the Board. California must lead for the U.S. and for the world to help gasoline-fueled vehicles, all vehicles, as well as all -- as well as associated gasoline production go the way of the buggy and its horse. (Brian Kolodji, Black Swan)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 48) Comment: Thank you for very much for your ongoing and past efforts on this rule in negotiating with really extreme patience with the federal government on this. I know a number of folks have expressed a desire for certainty and flexibility, and one national standard. The good news is we have all three. I thank you for the clarification to the existing rule to maintain what is a thoroughly negotiated and highly achievable very reasonable standard. I urge you to adopt the clarification today. (Dave Weiskopf, Nextgen Policy)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 49) Comment: I would like to formally register my support for the proposed changes that will ensure California continues to uphold high standards for emissions. It is critical that we continue to advance fuel economy and clean air efforts in order to decrease the effects of fossil fuel emissions on our climate. (Matthew Glotzbach)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 50) Comment: I fully support the Air Resources Board's amendment to ensure that any federal rollback of vehicle emission standards does not apply to California vehicles. California's emission standards have resulted in cleaner air statewide and continue to reduce greenhouse gas emissions affecting climate change. There is no benefit to rolling back emissions targets. (Mark Wilson)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 51) Comment: I'm writing in support of your proposed amendments to the Low-Emission Vehicle III Greenhouse Gas Emission Regulation. We must, at all costs, protect our own stringent standards against attack by Trump's EPA, which is bent on supercharging global warming and destroying our planet. (Tom Benthin, Indivisible)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 52) Comment: Climate change is accelerating due to greenhouse gas emissions. Massive fires in our state are being triggered by climate change. California needs to be the leader in reducing greenhouse gasses and fighting climate change. We as a State need to fight back against the current Washington administration's war on science and their Medieval [sic] and ignorant claims that climate change does not exist and it is a Chinese hoax.

We need to continue to promote and protect California's ability to set emissions that are lower than federal standards. We escalating climate change and relentless fires, which produce significant carbon pollution, it is imperative to lower fuel emissions from vehicles. The combination of continued fires and an increase in air pollution from lower car emission standards would be a fatal combination for millions of Californians. (Holly Hutter)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 53) Comment: I'm writing in support of your proposed amendments to the Low-Emission Vehicle III Greenhouse Gas Emission Regulation. We must, at all costs, protect our own stringent standards against attack by Trump's EPA. California has always been a leader in energy efficiency, environment protection among many other things, please continue California's tradition and protect California Emissions Standards. Thank you! (Khoen Meisinger)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 54) Comment: I'm writing in support of your proposed amendments to the Low-Emission Vehicle III Greenhouse Gas Emission Regulation. We must, at all costs, protect our own stringent standards against attack by Trump's EPA. Thank you! (Donna Hendrickson, Indivisible Sonoma County)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 55) Comment: I'm writing in support of your proposed amendments to the Low-Emission Vehicle III Greenhouse Gas Emission Regulation. We must, at all costs, protect our own stringent standards against attack by Trump's EPA. (Kibby MacKinnon, Indivisible Sonoma County)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 56) Comment: I strongly urge CARB to support LEVIII. Climate change is our number one issue and clean air is critical to the health of our citizens. We need all the help on reducing pollution and greenhouse gas emission that we can muster. (Jane Bender)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 57) Comment: I am a member of Indivisible Sonoma County. I live in Sebastopol at 95472 zip code. I support the proposed amendments to the Low-Emission Vehicle III Greenhouse Gas Emission Regulation. We must, at all costs, protect our own stringent standards against the attack by Trump's EPA. (Nancy LoDolce)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 58) Comment: Automakers and its advocates such as the Alliance of Automobile Manufacturers want one national set of rules for both emissions and greenhouse gases. Without a national regulatory framework, the California-led states, which together account for about one-third of the U.S. new vehicle market, could create a separate market, raising complexity and costs for the industry. I'm writing in support of your proposed amendments to the Low-Emission Vehicle III Greenhouse Gas Emission Regulation. We must, at all costs, protect our own stringent standards against attack by Trump's EPA. (Lisa Bennett)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 59) Comment: I support your proposed amendments to the Low-Emission Vehicle III Greenhouse Gas Emission Regulation. Car companies and their lobbyists such as the Alliance of Automobile Manufacturers are pushing for a single national set of rules for both emissions and greenhouse gases. If they are successful, it will be vital for California and other states who share our concerns (and which represent about one-third of the market for new cars in the U.S.), to create a separate market, raising complexity and costs for the industry unless they voluntarily meet the higher California-complying standards. California must maintain its stringent standards against efforts by Trump's EPA to weaken the requirements. (Jeffrey Lopic)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 60) Comment: San Diego Airport Parking in general is supportive. (Lisa McGhee, San Diego Airport Parking)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

4. Comments Concerning the LEV III Greenhouse Gas Emission Regulation Waiver

- 61) Comment: CARB's proposal should have no effect on California's current waiver under section 209 of the Clean Air Act. EPA had previously granted California a waiver for its greenhouse gas emissions standards beginning with the 2009 model year. When it granted California a waiver for its LEV III program, it did not premise the decision on the "deemed to comply" provision. The proposed revision to the "deemed to comply" provision will have no effect on the current waiver. (Robert J. Klee, Commissioner, Connecticut Department of Energy & Environmental Protection)

Agency Response: Staff agrees with the comment.

- 62) Comment: For over 42 years, MECA has supported every waiver request made by California, including this one in 2012, because California's authority has been critical in driving innovation in our industry. For over 50 years, California has played a leadership role in advancing vehicle standards and air quality policy that created a market for clean vehicle technologies, first in California, then in the U.S., and eventually around the world. This is a successful model where California acts as a laboratory for new technology and policy that allows manufacturers to gain experience

that benefit the rest of the nation. Therefore, MECA supports California's waiver, and the state's role as co-regulator of mobile source emissions. (Rasto Brezny, Executive Director, Manufacturers of Emission Controls Association (MECA))

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 63) Comment: We do not support a revocation of the existing Clean Cars Program waiver. (Chris Miller, Executive Director, Advanced Engines Systems Institute)

Agency Response: We appreciate this comment, for which no response is needed, because it supports the staff proposal.

- 64) Comment: The proposed change to the DTC provision would limit automakers' options for complying with the California GHG regulations for vehicles sold in California and S177 States and would impact the costs and stringency of manufacturers' overall GHG obligations. Such a revision would constitute a substantial change to the current CARB regulations for which EPA issued a waiver of federal preemption on December 30, 2012. The DTC provision was relied upon by CARB to establish the grounds for a waiver of its Advanced Clean Cars Program based upon both the Clean Air Act Section 209 waiver requirements that the California standards be as protective, in the aggregate, as applicable federal standards and that the California standards and test procedures are consistent with Clean Air Act Section 202. Accordingly, the proposed change would require the issuance of a new waiver under Section 209 of the Clean Air Act. (Steve Douglas, Senior Director, Energy & Environment, Alliance of Automobile Manufacturers)

Comment: CARB would also have to seek a waiver for its proposed amendments. (Julia Rege, Director of Environment & Energy, Global Automakers)

Agency Response: CARB disagrees with the commenters' assertion that the potential elimination of this compliance option would necessitate a new waiver, and notes that CARB is not changing "the State standards" for which it received a waiver.¹⁶ Further, in granting CARB's waiver request, U.S. EPA affirmed that the granting of the waiver was not contingent on the "deemed to comply" option being part of the LEV III greenhouse gas regulation. CARB does not agree that it would need a new waiver under these circumstances.

¹⁶ 42 U.S.C. § 7543(b)(1).

5. Comments Requesting the Continuation of the National Program

- 65) Comment: We are committed to reducing greenhouse gas ("GHG") emission and other air pollutants to advance federal, state, and regional programs and goals, including those required under the Clean Air Act. As some of us previously commented, we support a consistent national program that meaningfully reduces GHG emissions and provides a long-term investment signal for clean energy technologies and infrastructure. Based on our companies' experience, we know we can continue to make investments in clean energy and advanced transportation and mobility solutions, while creating new jobs; expanding economic opportunities; improving electric system efficiencies, reliability, and quality of service for communities and consumers; and enhancing the livability of our cities. (Michael Bradley, M.J. Bradley & Associated; and Jake C. Levine, Kevin Poloncarz, and Gary S. Guzy, Covington and Burling LLP)

Agency Response: CARB supports the continuation of a National Program that meets California's climate change goals. The Board granted the commenters' request by directing the Executive Officer in Resolution No. 18-35:¹⁷

BE IT FURTHER RESOLVED that if there is a possibility that a unified National Program can be maintained that reduces light-duty vehicle greenhouse gas emissions sufficient to address California's compelling and extraordinary conditions, the Executive Officer should pursue the means to do so, including by proposing modifications to the proposed amendments.

- 66) Comment: Global Automakers would like the Board to direct staff to participate fully and in good faith in negotiations with the Administration on fuel economy and GHG emissions standards that would maintain "One National Program," continuing the progress the auto industry has made on improving fuel economy and GHG emissions performance; providing environmental benefits for the nation as a whole; and ensuring that automakers have the flexibility to produce a wide range of vehicles that meet the diverse needs of customers. (Julia Rege, Director of Environment & Energy, Global Automakers)
- 67) Comment: We urge California to work with the federal government to achieve national standards that:
- i. preserve a coast-to-coast, efficient national market for automobiles and
 - ii. achieve greater greenhouse gas reductions than could be possible through the efforts of California and the 177 states alone, and
 - iii. preserve California's right to regulate.

¹⁷ Available at: <https://www.arb.ca.gov/regact/2018/leviii2018/finalres18-35.pdf>

These are important outcomes from negotiated national standards.
(Robert Bienenfeld, Assistant Vice President, American Honda Motor Co., Inc.)

68) Comment: We believe that the best hope for a successful long-lasting vehicle GHG reduction program is founded on a negotiated set of standards between California, NHTSA, and EPA, with increasing year-over-year stringency that allows California and Section 177 states to achieve their air quality and climate goals, and the federal agencies to meet their statutory requirements. A negotiated program further eliminates the uncertainty caused by protracted litigation. (Rasto Brezny, Executive Director, Manufacturers of Emission Controls Association)

69) Comment: We strongly prefer one national program, and have set that out as one of the core principles of a new and broad coalition of automotive supplier groups known as the automotive -- or excuse me, the Advanced Technology Leadership Group. (Chris Miller, Executive Director, Advanced Engines Systems Institute)

Agency Response to Comments # 66-69: CARB directed the Executive Officer in CARB Resolution No. 18-35 to continue pursuing opportunities to maintain a unified national program. The Executive Officer remains willing to speak with stakeholders and the Federal administration to evaluate any reasonable proposals supported by the evidence before the agency that could allow the continuation of a National Program that will meet California's climate change emission reduction needs. To date, the federal agencies have not been willing to discuss the substance or basis for the federal proposal to roll back the existing standards.

6. Comments Concerning Potential Flexibilities to the Regulatory Proposal

70) Comment: We urge CARB to work towards a negotiated unified vehicle program that continues to reduce GHGs. In the event that an agreement cannot be reached, we recognize that CARB must take the necessary measures to address the air quality for the citizens of California. In light of this, we ask ARB to consider measures and flexibilities to further advance the pace of innovation, including a supplier-based off-cycle credit program that addresses GHG reductions by all technologically feasible and verifiable means. (Rasto Brezny, Executive Director, Manufacturers of Emission Controls Association)

Agency Response: Staff will continue to evaluate the necessity of making additional regulatory changes to LEV III and the appropriateness of the timing of potential changes as additional information becomes available.

71) Comment: Fuel-flexible vehicles utilizing E85 offer a useful means to reduce greenhouse gas emissions in the light-duty internal combustion fleet as part of a comprehensive strategy to achieve California's greenhouse gas reduction requirements. In order to effectively obtain substantive input from key stakeholders on compliance flexibilities, it is necessary and appropriate for the agency to supplement CARB Release Number 18-42 (August 7, 2018), the Notice of Public Hearing, and the Initial Statement of Reasons with language that explicitly solicits input on specific flexibilities that reduce compliance costs and that provide the necessary greenhouse gas emission reductions. (Graham Noyes, Noyes Law Corporation for Pearson Fuels)

Agency Response: The changes suggested by the commenter are outside the scope of the current rulemaking. California's Administrative Procedures Act does not allow an agency to alter a Notice of Proposed Action (45-day notice) by releasing a "supplement" to the notice. However, in the interest of providing the commenter, stakeholders, and the public with additional information, we respond as follows to the details of this comment.

72) Comment: Specifically, CARB should request comments regarding the integration of the following compliance flexibilities into LEV III either directly or through California's continued participation in a revised unified national program. (Graham Noyes, Noyes Law Corporation for Pearson Fuels):

- Harmonizing the crediting of flex fuel vehicles (FFV) under the LEV III, CAFE, and GHG programs;

Agency Response: California's greenhouse gas emission regulation for model years 2009 through 2016 included credits to manufacturers of FFVs that could demonstrate the usage of low carbon fuels, including E85. Those credits were designed to account for the upstream greenhouse gas benefits provided by the use of low carbon fuels. However, in the interim CARB has adopted the Low Carbon Fuel Standard that requires fuel providers to lower the carbon content of fuels sold in California. This measure is an integral part of California efforts to reduce greenhouse gas emissions. Since the upstream greenhouse gas benefits for low carbon fuels are now assigned to the fuel providers, retaining these credits for FFVs would essentially result in double counting of those benefits. Accordingly, these credits were not retained in the LEV III program.

73) Comment: CARB should request comments regarding the integration of the following compliance flexibilities into LEV III either directly or through California's continued participation in a revised unified national program. (Graham Noyes, Noyes Law Corporation for Pearson Fuels):

- Applying a petroleum-equivalency factor to a midlevel ethanol blend (MLEB) or E85 ethanol certification fuel, based on the gasoline portion of the fuel (e.g., 0.75 for E25; 0.15 for E85);
- Allowing dual-certified vehicles to weigh the E85 certification fuel and gasoline fuel results proportionally based on the ethanol usage rate (F- factor) when calculating fuel economy;
- Calculating an F-factor for FFV crediting purposes for MY 2019 and subsequent years that is based on CARB data for E85 use in California;
- Revising the carbon-related exhaust emissions formulas to reflect that the ethanol portion of the MLEB or E85 fuel generates no net carbon emissions, consistent with 17 CCR §95852.2(a)(6);

Agency Response: Determination of vehicle emissions under the LEV III greenhouse gas emission standards is based on vehicle testing. Therefore, these comments are not applicable to the LEV III regulation.

- 74) Comment: CARB should request comments regarding the integration of the following compliance flexibilities into LEV III either directly or through California’s continued participation in a revised unified national program. (Graham Noyes, Noyes Law Corporation for Pearson Fuels):

- Providing incentive multipliers to encourage the sales of next-generation vehicles including high octane fueled vehicles (HOFVs) that utilize midlevel ethanol blends, and allowing HOFVs to weigh the midlevel ethanol certification fuel results equally with the gasoline fuel results when calculating fuel economy;

Agency Response: Multiplier incentives go against CARB’s principles for establishing technology-neutral performance standards and they erode the program’s intended greenhouse gas emission reductions. The LEV III regulation has not included specific vehicle multipliers (as opposed to the U.S. EPA vehicle regulation ZEV multiplier). Creating FFV compliance flexibilities in California’s regulation would therefore be inconsistent with how we manage other technologies in the program.

- 75) Comment: CARB should request comments regarding the integration of the following compliance flexibilities into LEV III either directly or through California’s continued participation in a revised unified national program. (Graham Noyes, Noyes Law Corporation for Pearson Fuels):

- Considering the effect of octane on fuel efficiency performance.

Agency Response: The California Department of Food and Agriculture’s Division of Measurement Standards regulates octane level for in-use fuels.

Octane is considered a consumer protection issue to prevent knocking and poor vehicle performance. Nonetheless, staff agrees with the commenter that an increase in blend stock octane would allow engine operation at higher compression ratios, thereby providing a CO₂ benefit. However, this is outside the scope of this rulemaking and would require separate regulatory action by the Division of Measurement Standards.

- 76) Comment: California's "Deemed to Comply" amendments should focus on achieving the GHG emissions reductions equivalent to the levels found in existing MY-2017-2025 U.S. EPA light-duty vehicle GHG standards. Accordingly, CARB could achieve this by amending section 1961.3(c) as follows (with suggested revisions to CARB's proposed regulatory amendments shown by underscoring and ~~strike~~through) (Joseph Mendelson, Tesla, Inc.):

The optional compliance approach provided by this section 1961.3 (c) shall not be available for 2021 through 2025 model year passenger cars, light-duty trucks, and medium-duty passenger vehicles if the Executive Officer determines that the projected level of greenhouse gas emission reduction benefits achieved by the national fleet average CO₂ standards in the "2017 through 2025 MY National Greenhouse Gas Program" is altered not preserved via a final rule published in the Federal Register subsequent to October 25, 2016.

Agency Response: See response to Comment #1.

7. Comments Concerning the Economic Analysis

- 77) Comment: Finally, in reviewing the economic analysis performed on alternative scenarios for this rulemaking, we have found several areas where ARB should review and update its methodology for assessing the macroeconomic impacts of vehicle standards. While our comments related to the economic analysis do not affect the staff's assessment of the proposed language modification related to "deemed to comply", they are important for future regulatory assessments. (Don Anair, Research and Deputy Director - Clean Vehicles Program, Union of Concerned Scientists (UCS))

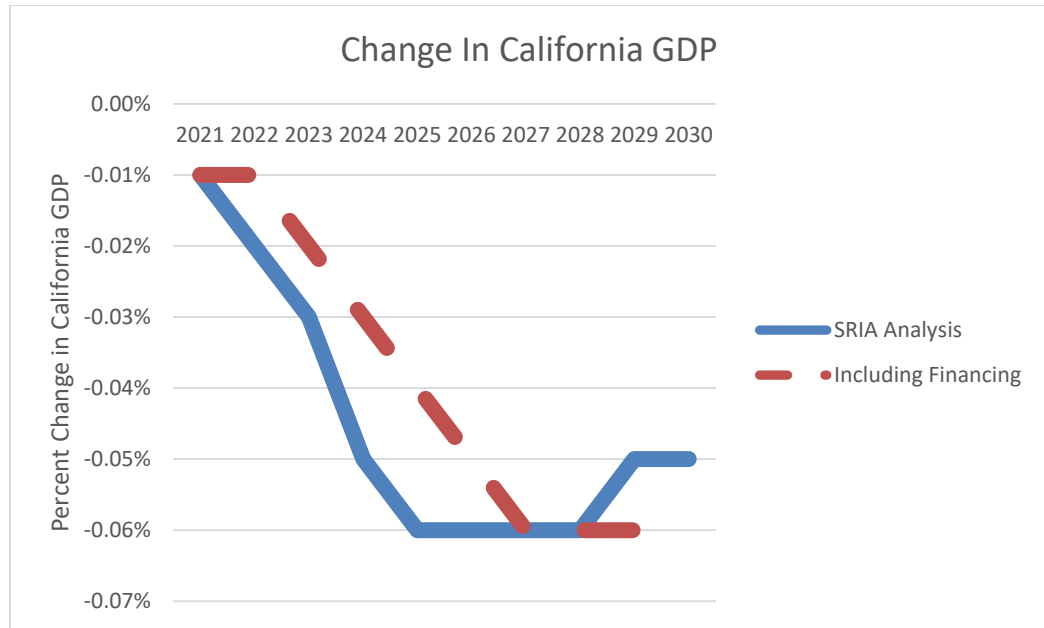
Agency Response: As the commenter pointed out, the proposed amendments have no economic impact compared to a baseline of current conditions. This comment is directed at the analysis of the regulatory alternatives and sensitivity cases and does not impact any findings of economic impacts of the proposed amendments. Although the proposed amendments are not "major," CARB prepared an analysis equivalent to a standardized regulatory impact assessment (SRIA) in the interests of transparency and disclosure of the potential impacts of the proposed

changes to this important public health program. CARB appreciates the comments on its methodology for assessing the macroeconomic impacts of vehicle standards and has presented additional analysis in response to specific comments below.

- 78) Comment: Most vehicle purchases are financed rather than paid for with cash. However, macroeconomic modeling in REMI performed by Carley et. al. and modeling in REMI for this rulemaking do not appear to factor in vehicle financing effects. (Don Anair, Research and Deputy Director - Clean Vehicles Program, UCS)

Agency Response: CARB conducted additional analysis to reflect the prevalence of financing new vehicle purchases. The additional analysis assumes 70 percent of consumers will finance their purchases of new vehicles, while 30 percent will pay up front. Those who finance will do so at an annual interest rate of 5 percent and a loan term of five years. This is consistent with assumptions used in the Synapse Energy Report that was appended to the UCS comment.

When including vehicle financing, the initial impacts to the California economy are lessened in the initial years as the upfront vehicle costs are spread out over a longer time horizon. In later years, the impacts to the California economy are slightly greater due to interest rates resulting in an overall increase in the price of new motor vehicles. The following figure compares impacts to California gross domestic product (GDP) when financing is excluded and included. When vehicle financing is included, impacts to GDP are approximately 24 percent lower in 2025 and 14 percent greater in 2030 than when financing is excluded. Impacts to other economic indicators will follow similar trends as those found in GDP.



- 79) Comment: Similar to the Carley study, REMI modeling by CARB does not appear to incorporate any effect of improved fuel efficiency on vehicle purchase behavior. The REMI modeling assumes a consumer only considers a higher upfront cost of a vehicle and does not put any value on future fuel savings from a more efficient vehicle. Fuel savings from vehicle efficiency can amount to thousands of dollars over the life of a vehicle, yet the modeling assumes consumers give these savings no consideration when making a vehicle purchase decision. (Don Anair, Research and Deputy Director - Clean Vehicles Program, UCS)

Agency Response: The sensitivity analysis in CARB's SRIA-equivalent document considered a scenario where the price of new vehicles increases while fuel economy improves. The CARB SRIA-equivalent analysis modeled this as an increase in the upfront price of new motor vehicles and a decrease in spending on motor vehicle fuel in later years. The Synapse Energy Report that was appended to the UCS comment included an additional consideration for the perceived value of fuel savings upon vehicle purchase by incorporating fuel savings into the upfront purchase price. This method mutes the increase in vehicle purchase price as a proxy for the desirability of fuel economy in new vehicles.

CARB agrees that customers perceive increased fuel efficiency as valuable, would factor that into their purchase decisions, and has presented evidence for the perceived value of fuel efficiency in its

comments on the federal rollback proposal.¹⁸ For example, in a study sponsored by the National Renewable Lab, 62 percent of respondents indicated willingness to pay an upfront cost for fuel cost savings over the life of the vehicle, with a median willingness to pay of \$1,000 for a monthly savings of \$50 on fuel,¹⁹ and in another study commissioned by the Consumers Union, respondents were willing to pay an average of \$690 more per each additional mile per gallon.²⁰ However, the exact magnitude of this impact on vehicle sales is not conclusively quantified. Because there is uncertainty in this response, and the methodology for estimating this response in REMI is not well established, CARB conservatively excluded any consideration of this impact in the SRIA-equivalent document analysis modeling. CARB appreciates the comment on this topic, and acknowledges that this would mitigate the impact of increased vehicle prices on sales.

To estimate the potential impact of this assumption, one strategy is to combine consumers' valuation of fuel savings with the gross incremental vehicle cost to arrive at a net incremental vehicle cost as in the UCS study. For example, assuming a consumer values 3 years of fuel savings, discounted at 7 percent each year, results in a negative net incremental vehicle cost. This means stricter standards are perceived as lowering the ownership cost of the vehicles and thus increasing desirability and purchase behavior. This would induce additional demand for new motor vehicles, resulting in positive, instead of negative, impacts to the economy as a result of more stringent fuel economy. This example analysis shows that the impacts of more stringent fuel economy standards could vary depending on consumer behavior. The CARB modeling is conservative because it did not consider this impact, and the actual impact to the economy in the alternatives and sensitivity analysis could be more positive than modeled.

- 80) Comment: Price elasticity of demand for vehicles used in the REMI modeling performed by Carley et. al. was significantly larger than published estimates in the literature as well as price elasticities used elsewhere in their own study. As a result, the sensitivity of vehicle sales to price changes in the REMI modeling is greater than is supported by the literature. It is unclear what price elasticity is used in the REMI modeling performed by CARB for this rulemaking but should be reviewed to ensure

¹⁸ Analysis in Support of Comments of the California Air Resources Board on the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks. Docket ID: EPA-HQ-OAR-2018-0283-5054; NHTSA-2018-0067-11873; NHTSA-2017-0069-0575.

¹⁹ Singer, Mark (2017) "Consumer Views: Fuel Economy, Plug-in Electric Vehicle Battery Range, and Willingness to Pay for Vehicle Technology" NREL/PR-5400-68201. available at <https://www.nrel.gov/docs/fy17osti/68201.pdf>.

²⁰ Kormos and Sussman (2018) "Auto buyer's valuation of fuel economy: a randomized stated choice experiment" <https://consumersunion.org/wp-content/uploads/2018/06/FINAL-Kormos-and-Sussman-2018-%E2%80%93-Auto-buyers-valuation-of-fuel-economy.pdf> (last accessed 10/15/18).

it is in line with current estimates in the published literature. (Don Anair, Research and Deputy Director - Clean Vehicles Program, UCS)

Agency Response: REMI assigns commodities one of two price elasticities of demand depending on whether the commodity is determined to be a luxury good or a necessity. In the REMI model, new motor vehicles were determined to be a luxury good and assigned a price elasticity of demand of -1.65. The price elasticities for all commodities in the REMI model are calibrated to keep the savings rate²¹ constant and therefore, changes to the default price elasticity may result in changes to the personal savings rate.

If the price elasticity of demand for new motor vehicles is modified to -1.0, as used in the Synapse Energy Report that was attached to the UCS comment, the model results show lower impacts to California GDP in all years. In 2021, impacts to GDP are about 8 percent smaller than under REMI's default price elasticity, and by 2030 the GDP impacts are about 22 percent lower.

- 81) Comment: Synapse performed economic modeling using the IMPLAN model to reproduce the analysis by Carley et al. with corrections for the three issues identified above. The results show a significant difference in the timing of employment impacts as well as magnitude. The Synapse IMPLAN results do not show the negative near-term employment impact (measured in job-years) as reported in the Carley study. (Don Anair, Research and Deputy Director - Clean Vehicles Program, UCS)

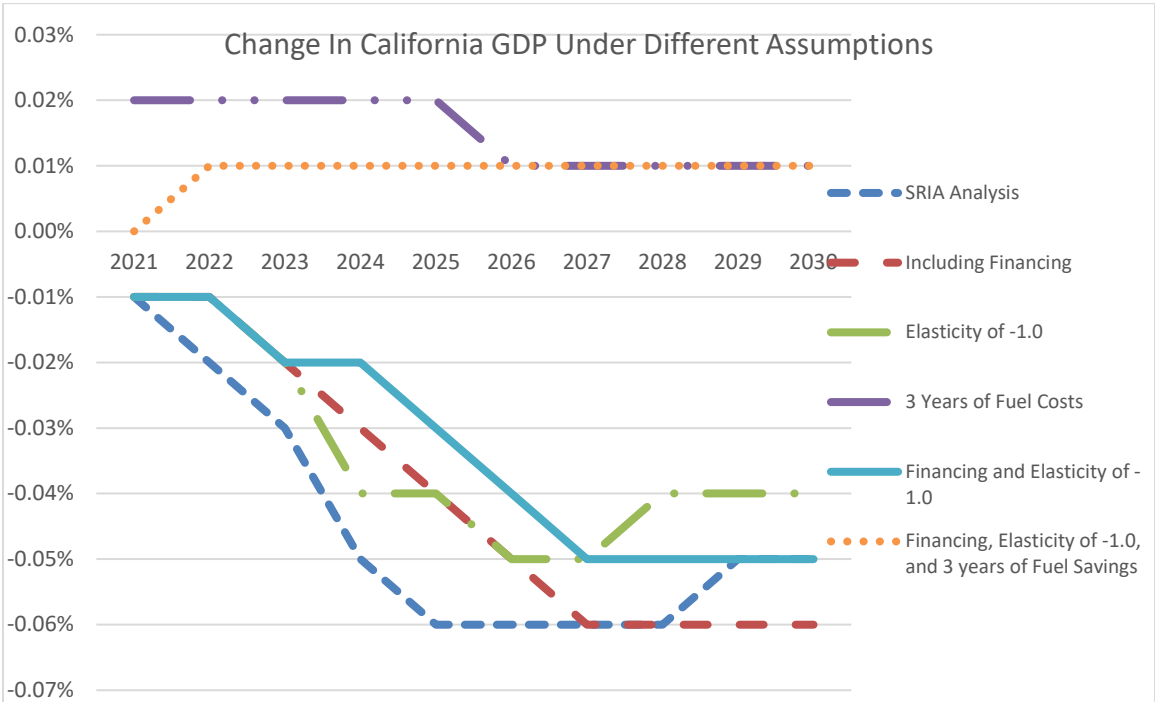
Agency Response: The potential impacts to the macroeconomic modeling analysis have been described in the above responses to comments. REMI modeling of alternatives and the sensitivity analysis are conservative, and there is likely less impact to the economy than modeled. Depending on the assumptions made, there is the potential that fuel economy standards could result in GDP and job growth rather than a reduction in growth as modeled in the SRIA-equivalent analysis.

For example, if the assumptions regarding financing, the price elasticity of demand for new motor vehicles, and consumer valuation of fuel economy that are discussed above are incorporated into the REMI modeling simultaneously, then the model predicts that the proposed amendments would result in GDP and job growth in California of 0.01 percent to 0.02 percent from 2021 to 2030. Under these assumptions, a federal rule that relaxes standards would result in decreases in jobs and in California GDP.

The figure below illustrates the change in California GDP relative to baseline given different combinations of the assumptions that were noted

²¹ Savings rate is defined as personal savings as a percentage of disposable income.

by the UCS comment. If vehicle sales increase because consumers view the value of fuel savings as offsetting the price of new vehicles, then there will be increased growth in GDP. The figure illustrates that the SRIA analysis was conservative. Refinements in the assumptions as pointed out by the UCS comment letter result in smaller impacts to the California economy, and under some assumptions will result in growth in the California economy.



82) Comment: As it stands now, the Notice of Proposed Rulemaking weakening the federal standards is unlikely to be finalized before CARB has finalized these proposed amendments to its Low- Emission Vehicle III Greenhouse Gas Emission Regulation. However, if the federal revisions were to be finalized before CARB adopts these proposed amendments, the agency would need to conduct further analysis to comply with Finance’s recommendations.

In that case, CARB would need to update its sensitivity analysis to model the potential economic effects in California from the nationwide standards freezing in Model Year 2020, rather than Model Year 2021. As the Finance letter notes, “if [CARB’s] sensitivity analysis captures most of the components, only the magnitudes of estimates may change.” That is, CARB’s sensitivity analysis already addresses factors that may affect economic outcomes from California maintaining its stricter standards in the face of federal laxity; if the modeling already addresses the key factors

at play, the results of an updated analysis will likely be similar. (Denise A. Grab, Institute for Policy Integrity, New York University School of Law)

Agency Response: Although the proposed amendments are not “major,” CARB prepared an analysis equivalent to a standardized regulatory impact assessment in the interests of transparency and disclosure of the potential impacts of the proposed changes to this important public health program. See CARB, *Standardized Regulatory Impact Assessment (SRIA) Equivalent Document*, Aug. 7, 2018, p. 7.²² The commenter is correct, if the federal Safer Affordable Fuel-Efficient Vehicles Rule proposal is finalized before these proposed amendments, CARB would be required to update the economic analysis in response to the Department of Finance comments, and would do so.

As the commenter noted, the federal proposal is similar to the sensitivity analyses performed in the SRIA equivalent document. The sensitivity analysis in the SRIA equivalent document assumes the federal greenhouse gas emission standards are frozen at the MY 2021 levels. After MY 2021, it is assumed that manufacturers meet the less stringent federal greenhouse gas emission standards nationwide for MYs 2022 through 2025. The federal proposal holds the stringency of the targets constant at MY 2020 levels through 2026 and also proposes changes to how air conditioning refrigerant leakage, nitrous oxide, and methane emissions are treated in regards to the tailpipe CO₂ standards beginning with MY 2021.

The economic analysis of the impacts of the LEV III proposed amendments under the proposed federal rule would be similar to what has already been analyzed. Due to the earlier flat lining of standards, modeling this scenario would result in slightly larger incremental vehicle costs approximately one year earlier. The trends and magnitudes of the economic impacts would similarly be shifted to an earlier year, but are anticipated to be similar in overall trends and magnitude.

- 83) Comment: In the process of updating its sensitivity analysis, CARB should consider broadening the range of effects accounted for in its analysis. According to Finance regulations, for a major regulation, CARB must account for “all costs or all benefits (direct, indirect and induced) of the proposed major regulation on business enterprises and individuals located in or doing business in California.”

Indirect effects that CARB might consider including in its updated analysis include potential effects that the California program might have on emissions reductions in other states and potential effects on vehicle

²² Available at: <https://www.arb.ca.gov/regact/2018/leviii2018/appd.pdf>.

safety. (Denise A. Grab, Institute for Policy Integrity, New York University School of Law)

Agency Response: As the commenter noted, the requirements for economic impact assessments are limited to individuals and businesses located in or doing business in California. Whether manufacturers choose to sell vehicles that meet California's standards in other states, whether other states adopt California's standards under Section 177 of the Clean Air Act, 42 U.S.C. section 7507, and the resulting economic, emissions, and public health costs and benefits, are speculative and outside the scope of California's authority and obligations.

8. Comments Pertaining to Potential Environmental Issues

- 84) Comment: CARB has requested "comments on potential flexibilities" to the standards. UCS does not have specific proposals related to flexibilities. However, analysis performed by UCS of various current and proposed rule flexibilities demonstrates the potential for a significant loss in emissions benefits from the standards. Should CARB entertain additional flexibilities beyond what is already available to automakers, offsetting provisions must be included to ensure all emissions benefits of the standards are achieved and California stays on course to meeting state mandated 2030 climate targets. (Don Anair, Research and Deputy Director - Clean Vehicles Program, Union of Concerned Scientists (UCS))

Agency Response: The comment does not identify adverse environmental impacts resulting from the proposed project or suggest that the California Environmental Quality Act (CEQA) analysis is in anyway inadequate.

A significant effect on the environment is defined as "a substantial, or potentially substantial, adverse change in the environment." (Pub. Resources Code § 21068.) A proposed project that foregoes potential benefits, but causes no significant increase in emissions above the environmental baseline, is not a CEQA impact because the project does nothing to adversely change the existing environmental conditions.

As part of this rulemaking action, CARB staff is not proposing new or expanded flexibilities, and has not committed to doing so in the future. If in the future CARB proposes to add new or expanded flexibilities, those provisions will be proposed in a subsequent rulemaking document, which will undergo any appropriate CEQA review at that time.

- 85) Comment: While it is true that the proposed amendments do not change the stringency of California's numeric standards, they do in fact alter the "compliance responses of regulated entities," because they (a) require

more stringent compliance than a federal program may require, thereby changing course from what was promised under the ONP agreements, (b) require differences in how compliance is tested and reported to California that differ from the federal program, which represents increased cost, burden, and alterations in product planning – aspects of which were left unaddressed by CARB in previous regulatory amendments since ONP and “deemed to comply” were instead put into place, and (c) will require increased efforts to balance and manage fleets in all Section 177 States, since many of them have significantly different fleet make-ups and consumer preferences compared to the California market. (Julia Rege, Director of Environment & Energy, Global Automakers)

Agency Response: The comment does not appear to be commenting on CARB’s CEQA analysis. Nonetheless, CARB disagrees that the proposed amendments would substantially change the anticipated compliance responses. As explained in the Environmental Analysis section of the Initial Statement of Reasons (ISOR), the 2012 Advanced Clean Cars (ACC) Program Environmental Analysis (ACC EA)²³ analyzed all of the potential environmental impacts from California’s LEV III regulation. (ISOR at 25-26.) The proposed amendments here do not change the underlying LEV III program as analyzed in the ACC EA. Therefore, the potential compliance responses referenced by the commenter result from the existing regulatory program, and do not result from the proposed amendments. Moreover, the differing responses posited by the commenter relate to the economic costs of the amendments, and are not tied to any difference in adverse environmental impacts from those previously fully disclosed and analyzed.

V. PEER REVIEW

Health and Safety Code Section 57004 sets forth requirements for peer review of identified portions of rulemakings proposed by entities within the California Environmental Protection Agency, including CARB. Specifically, the scientific basis or scientific portion of a proposed rule may be subject to this peer review process. Here, CARB determined that the rulemaking at issue does not contain a scientific basis or scientific portion subject to peer review, and thus no peer review as set forth in Section 57004 was or needed to be performed.

²³ Available at: <https://www.arb.ca.gov/regact/2012/leviiiighg2012/levappb.pdf>.

VI. LIST OF ACRONYMS AND ABBREVIATIONS

ACC:	Advanced Clean Cars
ARB:	California Air Resources Board
CAFE:	Corporate Average Fuel Economy
CARB:	California Air Resources Board
CCR:	California Code of Regulations
CEQA:	California Environmental Quality Act
CO ₂ :	Carbon dioxide
DTC:	Deemed to comply
E0:	Fuel that contains 0% ethanol and 100% gasoline
E10:	Fuel that contains a mix of 10% ethanol and 90% gasoline
EPA:	U.S. Environmental Protection Agency
FFV:	Fuel-flexible vehicle
FSOR:	Final Statement of Reasons
FTP:	Federal Test Procedure
GHG:	Greenhouse gas
HFET:	Highway Fuel Economy Test
LDTs:	"California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles" (incorporated by reference in §1961.2, title 13, CCR)
LEV III:	Low-Emission Vehicle III
MY:	Model year
NESCAUM:	Northeast States for Coordinated Air Use Management
NHTSA:	National Highway Traffic Safety Administration
NO _x :	Oxides of nitrogen
NPRM:	Notice of Proposed Rulemaking for "The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks" (83 Fed.Reg. 42,986 (August 24, 2018))
OEM:	Original equipment manufacturer
ONP:	One National Program
R&D:	Research and development
S177 states:	States that have adopted California's LEV III greenhouse gas emission standards pursuant to Section 177 of the federal Clean Air Act (42 U.S.C. § 7507)
SRIA:	Standardized Regulatory Impact Assessment
SVM:	Small volume manufacturer
U.S. EPA:	U.S. Environmental Protection Agency
ZEV:	Zero-emission vehicle