NATIONAL COALITION FOR ADVANCED TRANSPORTATION

May 31, 2018

Ms. Sarah Carter
California Air Resources Board
9480 Telstar Avenue, Suite 4
El Monte, CA 91731

Re: Request for Public Input on Potential Alternatives to a Potential Clarification of the "Deemed to Comply" Provision for the LEV III Greenhouse Gas Emission Regulations for Model Years Affected by Pending Rulemakings

Dear Ms. Carter:

The California Air Resources Board's (CARB) existing greenhouse gas (GHG) emission standards for light-duty vehicles provide that manufacturers complying with the U.S. Environmental Protection Agency's (EPA) GHG standards for model years (MY) 2017-2025 will be deemed to comply with California's corresponding GHG standards. EPA in April 2018 issued a Mid-Term Evaluation Notice concluding that the federal standards for MY 2022-2025 are no longer "appropriate" under the Clean Air Act, because they "are based on outdated information" and "may be too stringent," and therefore should be revised. CARB disagrees with this determination and is considering clarifying that the "deemed to comply" provision applies only to the *current* federal standards for MY 2022-2025 – and not to any less stringent, revised standards that EPA promulgates. On May 7, CARB requested comment on potential alternatives to such a clarification or amendment to the "deemed to comply" provision.

As members of the ***National Coalition for Advanced Transportation (NCAT)***, we strongly support EPA's and CARB's existing MY 2022-2025 standards and have expressed our opposition to EPA's April 2018 Mid-Term Evaluation Notice and the underlying determination, which NCAT has challenged in court. NCAT supports CARB's view, stated in its May 7 Notice, that the existing "deemed to comply" provision applies only to the current EPA standards and would support action by CARB to provide additional clarity on that point should CARB determine that is necessary. Nevertheless, in the interest of providing CARB with additional potential options should EPA decide to weaken the federal standards, we write to request that CARB explore a possible alternative approach to address the "deemed to comply" matter. This potential approach would allow a manufacturer to be deemed to comply with CARB's current GHG standards if it chooses to undertake a defined set of actions that would require robust and sustained investment in electric and other advanced technology vehicles and would preserve the

overall environmental performance of CARB's standards. We discuss below elements of such a potential Voluntary Opt-In approach.

Such an approach could be implemented in a manner consistent with the public statements of several major auto manufacturers that they do not want current standards rolled back, that they are investing and will continue to invest materially in electric and other advanced vehicle technologies, and that they support the preservation of a harmonized national system of federal and state standards. Further, while further deliberation and analysis are needed, NCAT believes it may be possible to design and implement such an approach in a manner that would maintain the overall environmental, public health and other benefits of CARB's standards; provide additional flexibility for manufacturers; and enhance regulatory certainty while providing stable signals to investors and other stakeholders.

Relatedly, we are attaching two recent letters submitted by NCAT to EPA and the U.S. Department of Transportation (USDOT). The first, dated April 9, 2018, addresses EPA's Mid-Term Evaluation Notice. The second, dated May 2, 2018, requests inclusion of an Advanced Technology Compliance Flexibility Option in the forthcoming notice of proposed rulemaking for GHG and corporate average fuel economy standards for MY 2022-2025. We refer to the May 2 letter below and request that both letters be included in CARB's administrative record.

1. Background on NCAT and Benefits of Advanced Technology Vehicles

NCAT is a coalition of companies that support electric vehicle and other advanced transportation technologies and related infrastructure, including business leaders engaged in energy supply, transmission and distribution; vehicle and component design and manufacturing; and charging infrastructure, battery and other energy-storage technology design, production and implementation. In our view, electric vehicles and other advanced technology vehicles and supporting infrastructure can and must play a critical role in supporting U.S. global competitiveness, economic growth, energy security, and cost-effective protection of public health and environmental quality. In order to remain a leader in the global automotive market, the U.S. must continue to support policies encouraging adoption of electric and other advanced technology vehicles and related infrastructure to serve the needs of American consumers.

NCAT accordingly supports government initiatives that provide regulatory, financial and other support for these technologies and related infrastructure, to compete in the marketplace—including but not limited to federal and state vehicle standards. Importantly, we recognize the critical role that California and other States play in adopting and implementing vehicle standards that support advanced technologies, and we support an approach that provides regulatory certainty and stable, long-term signals to guide investment by relevant stakeholders.

2. Potential Voluntary Opt-In Program

CARB has indicated that it may amend or otherwise clarify the "deemed to comply" provision to make clear that manufacturers must either comply directly with the CARB standards themselves, or may demonstrate compliance by meeting the *current* EPA standards. If EPA weakens its current MY 2022-2025 standards, this approach would make manufacturers subject to two different sets of standards – one applicable in California and the states that have adopted

California's standards under Section 177 of the Clean Air Act, and one in the remainder of the country. Protracted litigation challenging both federal and state standards may result, leading to continued uncertainty for manufacturers and investors.

Recognizing the challenges created by EPA's current stance, and without reflecting on the potential clarification that the May 7 Notice states CARB is considering, CARB may wish also to explore an alternative approach: a Voluntary Opt-In Program whereby individual manufacturers could be "deemed to comply" with the current CARB standards if they meet certain requirements *on a national basis*. No manufacturer would be required to pursue this option, and we recognize that this potential approach likely would not eliminate regulatory uncertainty or the possibility of litigation. However, if adopted, this approach could result in additional actions beyond California and the Section 177 states; offer participating manufacturers the opportunity to meet both federal and state standards with a single vehicle fleet; and potentially reduce some of the risks associated with litigation or future regulatory changes.

The design of such a Voluntary Opt-In Program could be guided by the following general principles:

- Consistent with the statements of several major auto manufacturers, the program should maintain the overall framework and performance of the existing standards while providing additional near-term compliance flexibilities.

- The program should maintain and, to the extent possible, enhance incentives for electric and other advanced technology vehicles, as a means of promoting technology and infrastructure investment necessary to support continued emission reductions in the years to come, including beyond MY 2025.

- The program should preserve, to the greatest extent feasible, the environmental and other benefits of the existing CARB standards (and those of the other states that have adopted CARB's standards under Section 177 of the Clean Air Act).

- In assessing the overall performance of the program, CARB would examine the integrated, cumulative impacts of any compliance flexibility mechanisms incorporated. In doing so, however, CARB should consider how near-term incentives for advanced vehicle technologies may enable greater emission reductions in later years.

Possible elements of a Voluntary Opt-In Program could include the following:

- Manufacturers would achieve the GHG targets in the existing CARB standards, in tandem with some appropriate combination of one or more of the additional compliance flexibilities outlined below.

- Continue to attribute zero GHG emissions to electric vehicles (EVs), plug-in hybrid electric vehicles (PHEVs) when operating on electricity, and hydrogen fuel cell vehicles (FCVs).

- Extend and restructure existing credit multipliers for EVs and PHEVs, and possibly FCVs and compressed natural gas vehicles (CNGVs). For example, as detailed in NCAT's May 2 letter to EPA and USDOT, credit multipliers could be restructured to provide greater credit for:

    - vehicles with greater all-electric range;

    - vehicles used in fleet or ride-sharing, ride-hailing, or other on-demand applications that have substantially higher vehicle miles traveled, and where use of zero- or low-emission vehicles accordingly can be shown to achieve greater reductions in system-wide emissions; and/or

    - EVs, PHEVs, or FCV sales that go above and beyond what is already required for compliance with the California and other states' zero emission vehicle ("ZEV") mandates, providing greater support for advanced technology deployment in ZEV states and beyond.

- Reform the current off-cycle credit recognition process while strengthening the integrity of the program. As detailed in NCAT's May 2 letter to EPA and USDOT, properly crafted reforms could provide manufacturers with greater incentives to pursue development and deployment of cost-effective off-cycle emission-reducing technologies, while at the same time strengthening mechanisms to ensure the integrity of the off-cycle program and these credits (*e.g.*, through ex-post evaluation of emissions benefits and correction of any over- or underestimation of credits).

- The program could include additional emission performance, technology deployment, or sales criteria for one or more years beyond MY 2025.

3. Potential Mechanisms for Implementing a Voluntary Opt-In Program

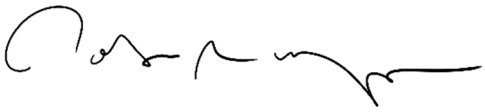
There may be more than one way in which CARB could implement a Voluntary Opt-In Program of the type outlined above. One model would be for CARB to undertake a rulemaking proceeding through which it adopts the criteria for participation in the Program and establish that participation would be deemed compliance with the current standards. Alternatively, CARB could consider adoption of a policy whereby it would exercise discretion not to enforce otherwise applicable state standards against manufacturers that meet the criteria for participation in the Program. CARB should consider these and other potential frameworks for implementing the overall concept discussed here.

In suggesting that CARB explore the potential alternative approach outlined above, NCAT is not expressing any negative view with regard to the approach CARB's May 7 Notice indicates it is considering. Nor at this stage are we endorsing any particular alternative approach, policy design or package. Moreover, as stated above, NCAT continues to support the current federal and CARB standards and to oppose EPA's April 2018 Mid-Term Evaluation Notice and underlying determination. In evaluating any potential approach going forward, it will be important, among other considerations, for CARB to assess how it would affect the overall

performance, benefits, and costs of California's program and of the U.S. program. Further, any such approach would of course have to be crafted consistent with the requirements of federal and state law. Nevertheless, we encourage CARB to explore the potential approach outlined above, which may provide an alternative avenue to preserve the benefits of CARB's existing regulatory program while both addressing automaker requests for additional compliance flexibility and reducing the potential for significant uncertainty and conflict.

Thank you for your consideration.

Sincerely,



Robert A. Wyman
Devin O'Connor
Latham & Watkins LLP
Counsel to NCAT
555 11th Street, NW
Washington, DC 20004-1304

National Coalition for Advanced Transportation (https://www.lwncat.com)

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PECO
PEPCO
Portland General Electric
Sacramento Municipal Utility District
Tesla, Inc.
Workhorse

NCAT
NATIONAL COALITION FOR
ADVANCED TRANSPORTATION

April 9, 2018

The Honorable Scott Pruitt
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Mail Code: 1101A
Washington, D.C. 20460

The Honorable Elaine L. Chao
Secretary
U.S. Department of Transportation
1200 New Jersey Ave, S.E.
Washington, D.C. 20590

Re: EPA Mid-Term Evaluation and Upcoming Joint Rulemaking

Dear Administrator Pruitt and Secretary Chao:

As members of the ***National Coalition for Advanced Transportation (NCAT)***, we write in response to the U.S. Environmental Protection Agency's April 2, 2018 Notice regarding the Mid-Term Evaluation of its Model-Year (MY) 2022-2025 greenhouse gas emission standards for light-duty vehicles (MTE Notice) and the upcoming joint rulemaking described in the notice.

The United States is undergoing an unprecedented transformation of its economy, including the simultaneous reshaping of both the transportation and energy sectors. No country is better positioned to lead the world in creating and building the transportation system of the future. We are confident that we will succeed beyond any past measure if we do not falter in our commitment to deliver to consumers anywhere in the world the highest-performance, smartest and cleanest vehicles and, consistent with this Administration's goals, the modern infrastructure needed to support them. While the MTE Notice identifies a range of uncertainties associated with this pivotal period of technology transition, we firmly believe that weakening fuel economy or greenhouse gas standards in reaction to short-term uncertainties would be self-defeating and wholly inconsistent with our shared goals of strengthening U.S. competitiveness, growing jobs and protecting our current technological superiority.

NCAT stands ready to work with you and the Administration to find a path forward that addresses any short-term challenges while preserving, and indeed accelerating, the transportation and energy transformation that consumers eagerly seek and that will help secure America's technology leadership for decades. We ask that you engage with NCAT, its members, and other stakeholders in a robust dialogue regarding how to ensure that these standards continue to reward innovation and preserve and strengthen stable growth of advanced vehicle technologies.

NCAT is a coalition of companies that supports electric vehicle (EV) and other advanced transportation technologies and related infrastructure, including business leaders engaged in energy supply, transmission and distribution; vehicle and component design and manufacturing; and charging infrastructure production and implementation, among other activities. Our members support government initiatives, including federal and state vehicle standards, that provide regulatory, financial, infrastructure and other support for emerging EV and other clean vehicle technologies to compete in the marketplace. NCAT also recognizes the critical role that California and other states play in adopting and implementing vehicle standards that support advanced technologies. Such state leadership has historically ensured that the United States remained on the cutting edge of technology development, and we see no reason to reconsider that approach at this key juncture. If stakeholders work together, we firmly believe that state and federal interests can remain aligned to ensure ongoing regulatory certainty and stable, long-term signals to guide investment.

NCAT's members are concerned by, and strongly disagree with, many of the statements in EPA's MTE Notice regarding the availability, affordability, consumer acceptance and benefits of EV technologies. EV and related technologies and infrastructure provide major economic and energy security benefits, and U.S. leadership in this space is critical to our economic health, global competitiveness and environmental quality. As detailed in our October 5, 2017 comments to EPA on its reconsideration of the January 2017 Mid-Term Evaluation final determination, there have been substantial advances in EV technologies and corresponding decreases in costs since 2012. Sales of these vehicles are increasing significantly, demonstrating growing consumer demand. U.S. and other manufacturers are scaling up investments and rapidly expanding their EV offerings across a range of vehicle types and price points. Range, performance, options and affordability are all improving rapidly, making EVs increasingly attractive to consumers. The simultaneous rapid development of autonomous vehicle technologies and on-demand transportation, both of which work synergistically with EV technologies, signal the beginning of a major transformation in our transportation system. In recognition of these trends, governments across the world are announcing policies to transition away from conventional vehicles and towards EVs, creating a race among manufacturers to capture the expanding global market for these vehicles.

To win that race, the United States must establish and maintain leadership through robust, long-term fuel economy and greenhouse gas standards at the federal level. When the current standards were adopted in 2012, it was clear that this Mid-Term Evaluation would find us where we are now – in the early stages of a transition from predominant reliance on efficiency improvements in conventional vehicles to increasingly greater reliance on EVs. While it may be tempting to look to short-term signals, the federal greenhouse gas emissions and fuel economy programs are intended to take the longer view. When we do take that longer view, all signs clearly support our readiness to make this transition. Failure to recognize, embrace and support these trends presents serious risks that the United States will lose its role as a global leader in these technologies of the future.

NCAT respectfully requests that you work closely with our members and other stakeholders in the period leading up to issuance of a proposed rule for the MY 2022-25 standards. These issues are too important and the stakes are too high to rely exclusively on the notice-and-comment rulemaking process to reach outcomes that meet our shared objectives. A more iterative,

interactive and inclusive dialogue is needed. We stand ready to work with you and others to identify solutions that can address any near-term challenges while preserving the benefits of the current standards and strengthening long-term growth of EVs and other advanced technologies.

Thank you for your consideration.

Sincerely,

Robert A. Wyman
Devin O'Connor
Latham & Watkins LLP
Counsel to NCAT
555 11th Street, NW
Washington, DC 20004-1304

National Coalition for Advanced Transportation (https://www.lwncat.com)

Ampaire
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Exelon
Los Angeles Department of Water & Power
Pacific Gas and Electric Company
PECO
PEPCO
Portland General Electric
Sacramento Municipal Utility District
Tesla
Workhorse

NATIONAL COALITION FOR ADVANCED TRANSPORTATION

May 2, 2018

The Honorable Elaine L. Chao
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

The Honorable Scott Pruitt
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

The Honorable Heidi King
Deputy Administrator
National Highway Traffic Safety Administration
1200 New Jersey Avenue, SE
Washington, DC 20590

The Honorable William Wehrum
Assistant Administrator, Air and Radiation
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Advanced Technologies Compliance Flexibility Option for Model Year 2022-2025 Vehicles Standards Proposal

Dear Secretary Chao, Administrator Pruitt, Assistant Administrator Wehrum, and Deputy Administrator King:

As members of the ***National Coalition for Advanced Transportation (NCAT)***, we write to request that you seek comment on the policy option described in the attachment to this letter in the forthcoming notice of proposed rulemaking for the Model Year (MY) 2022-2025 light-duty vehicle greenhouse gas (GHG) and corporate average fuel economy (CAFE) standards.

This option, which we refer to as the "Advanced Technologies Compliance Flexibility Option," would maintain the targets in the current MY 2022-2025 GHG standards, but would provide manufacturers with additional compliance flexibilities. CAFE standards would be calibrated accordingly to maintain comparably robust targets and incorporate similar flexibilities. The flexibilities in question, as described in detail in the attachment, would include some combination of the following elements:

1. continuing to attribute zero GHG emissions to electric vehicles (EVs), plug-in hybrid electric vehicles (PHEVs) when operating on electricity, and hydrogen fuel cell vehicles (FCVs);

2. extending and potentially restructuring credit multipliers for EVs, PHEVs, FCVs and compressed natural gas vehicles (CNGVs); and

3. reforming the current off-cycle credit recognition process while strengthening the integrity of the program.

This package of reforms would provide more near-term flexibility in complying with the current GHG targets (and CAFE targets) and lower compliance costs. At the same time, it would provide appropriate incentives to further advance and deploy technologies needed to reduce GHG emissions and increase fuel economy. By providing enhanced support for the continued development and deployment of advanced vehicle technologies during the MY 2022-2025 period, this approach will also strengthen the domestic manufacturing base and promote the infrastructure investment necessary to support continued emission reductions and increased fuel efficiency in the years to come.

As set forth in NCAT's April 9 letter to you regarding EPA's Mid-Term Evaluation Notice, electric vehicles and other advanced technology vehicles and supporting infrastructure can and must play a critical role in supporting U.S. global competitiveness, economic growth, energy security, and cost-effective protection of public health and environmental quality. In order to remain a leader in the global automotive market, the U.S. must continue to support policies encouraging adoption of electric and other advanced technology vehicles and related infrastructure to serve the needs of American consumers.

We believe the approach outlined above and in the attachment to this letter could provide a basis for maintaining the overall stringency of national standards while addressing automakers' requests for additional compliance flexibility in the near term. This approach, if properly designed and implemented, could maintain the energy, public health, environmental and economic benefits of the standards, support the desire of virtually all stakeholders to maintain a harmonized national program including both federal and state vehicle standards, and recognize the critical role that California and other states continue to play in reducing vehicle emissions and protecting public health.

In requesting that the agencies take comment on this suite of mechanisms in its forthcoming rulemaking proposal, NCAT is not at this stage endorsing any particular policy design or package. Moreover, NCAT continues to support the current standards and has previously noted its concerns regarding the Mid-Term Evaluation and underlying determination. In evaluating any proposed approach going forward, it will be important, among other considerations, to assess how the design of any given compliance flexibility mechanism, as well as the integration of multiple such mechanisms, would affect the overall performance, benefits, and costs of the program as a whole. We believe, however, that it is critically important that the agencies request comment and actively engage stakeholders on this approach, which could ultimately provide the basis for a win-win outcome for all concerned.

Thank you for your consideration.

Sincerely,

Robert A. Wyman
Devin O'Connor
Latham & Watkins LLP
Counsel to NCAT
555 11th Street, NW
Washington, DC 20004-1304

National Coalition for Advanced Transportation (https://www.lwncat.com)

Ampaire
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PECO
PEPCO
Portland General Electric
Sacramento Municipal Utility District
Tesla, Inc.
Workhorse

Advanced Technologies Compliance Flexibility Option

In the forthcoming notice of proposed rulemaking for the MY 2022-2025 light-duty vehicle greenhouse gas (GHG) and corporate average fuel economy (CAFE) standards, the U.S. Environmental Protection Agency (EPA) and National Highway Traffic Safety Administration (NHTSA) should request comment on a policy option that we will refer to as the "Advanced Technologies Compliance Flexibility Option."[1] This option would maintain the stringency of the current MY 2022-2025 GHG standards, but would provide manufacturers with additional compliance flexibilities. CAFE standards would be calibrated accordingly to maintain comparable targets and similar flexibilities, thus achieving equivalent stringency. The flexibilities in question would include some combination of the following elements:

1. continuing to attribute zero GHG emissions to electric vehicles (EVs), plug-in hybrid electric vehicles (PHEVs) when operating on electricity, and hydrogen fuel cell vehicles (FCVs);

2. extending and potentially restructuring credit multipliers for EVs, PHEVs, FCVs and compressed natural gas vehicles (CNGVs); and

3. reforming the current off-cycle credit recognition process while strengthening the integrity of the program.

This package of reforms would provide more near-term flexibility in complying with the current GHG targets (and equivalent CAFE targets) and lower compliance costs. At the same time, it would provide appropriate incentives to further advance and deploy technologies needed to reduce GHG emissions and increase fuel economy. By providing enhanced support for the continued development and deployment of advanced technologies during the MY 2022 to 2025 period, this approach will also strengthen the foundation for continued progress in subsequent years.

Attribution of Emissions to Electric Vehicles

Under the current MY 2017-2025 standards, EPA established a two-phase mechanism for addressing whether and how to attribute upstream emissions to EVs, PHEVs and FCVs for purposes of determining compliance with the GHG standards. For the first phase (MY 2017-2021), EPA set the value at 0 g/mile for EVs, PHEVs (for the electricity usage portion) and FCVs, with no limit on the number of vehicles that could be counted as 0 g/mile for tailpipe emissions accounting purposes.

For the second phase (MY 2022-2025), EPA set a per-company cumulative sales cap on the number of EV/PHEV/FCVs that could be counted as 0 g/mile for tailpipe CO_2 emissions compliance. Manufacturers that sell 300,000 or more EV/PHEV/FCVs combined in MY 2019-

[1] For mechanisms primarily within the purview of EPA, we recommend EPA request comment; for mechanisms affecting both GHG standards and CAFE standards, we recommend the agencies collectively request comment.

2021 can count up to 600,000 EV/PHEV/FCVs combined as 0 g/mile for the MY 2022-2025 standards. Manufacturers that sell fewer than 300,000 EV/PHEV/FCVs combined in MY 2019-2021 can only count up to 200,000 EV/PHEV/FCVs combined as 0 g/mile for the MY 2022-2025 standards. Beginning in MY 2022, the compliance values for EVs, FCVs, and the electric portion of PHEVs above the individual automaker cumulative production caps must be based on net upstream accounting of GHG emissions for fuel production and distribution. EPA adopted a specific methodology to calculate the net upstream GHG emissions compliance value for EVs (and the electric portion of PHEVs), based in part on projected national average GHG emissions for electricity generation.

EPA should request comment on changing the MY 2022-2025 standards to instead treat EVs, PHEVs (for the electricity usage portion), and FCVs as having 0 g/mi emissions for purposes of the GHG program, without any per manufacturer production cap or other limitation. This option should continue to vary the electric proportion of PHEVs' expected usage based on the all-electric range of the relevant vehicle model. EPA should reiterate or incorporate by reference the rationale for treating vehicles as having 0 g/mi emissions that it adopted in prior rulemakings.

Advanced Vehicle Technology Credits

In addition, EPA should request comment on extending and reforming the credit multipliers available for EVs, PHEVs, FCVs, and CNGVs under the existing GHG regulations for MY 2017-2021.

Under the current regulations, each EV/PHEV/FCV/CNGV sold in MY 2017-2021 is counted as more than one vehicle for purposes of determining credits for compliance with the GHG standards. EPA adopted the following multipliers, set forth at 40 C.F.R. § 86.1866–12:

Vehicle Types	Model Year(s)	Multiplier
EVs, FCVs	2017 – 2019	2.0
	2020	1.75
	2021	1.5
PHEVs, dedicated and dual fuel CNG vehicles	2017 – 2019	1.6
	2020	1.45
	2021	1.3

EPA justified this approach as necessary to promote commercialization of these advanced technologies and emphasized that advanced technologies would be necessary to meet future GHG standards as stringency increased.

Extension of Credits

Under the Advanced Technologies Compliance Flexibility Option, EPA should request comment on extending and revising these credits. Specifically, the agency should request comment on extending the credits at levels that apply for MY 2020 through MY 2025, instead of phasing

down the credits, as is done under current regulations. Alternatively, the agency should request comment on whether the agency should *increase* the credit multipliers for MY 2020 through 2025 and if so, what levels would be appropriate and the basis for those levels.

Crediting Based on All-Electric Range

In addition, EPA should request comment on whether to restructure the credit multipliers so that the amount of credit awarded varies based on the vehicle type and the all-electric range of the vehicle, with EVs and FCVs receiving greater credit than PHEVs and CNGVs, and with vehicles having a longer all-electric range being awarded more credit than those with shorter range. This approach would help to incentivize development and deployment of longer-range vehicles, providing support for a broader market transition to such low-emitting vehicles.

EPA should request comment on what structure and multipliers would be appropriate under such an approach. For example, under the California zero emission vehicle (ZEV) program, there are two overall categories of vehicles: ZEVs (typically EVs or FCVs) and transitional ZEVs (TZEVs, which are typically plug-in hybrids). ZEVs receive credits through a formula based on the vehicle's all-electric range (AER), with a minimum AER to be eligible and a cap on total credits per vehicle. TVEZs receive credits through a similar formula, but with a lower minimum AER, lower credits awarded per vehicle, and a lower cap on total credits.[2] EPA should request comment on whether a similar approach would be appropriate for credit multipliers in the federal GHG program, and if so what minimum eligibility criteria, credit formula, and caps would be appropriate, or whether some alternative approach would be preferable.

Crediting for On-Demand and Fleet Vehicles

In addition, EPA should request comment on whether credit multipliers for EVs, PHEVs, FCVs and CNGVs should be included based on other factors – in addition to all-electric range – that may support the development of "game-changing" advanced technologies that will reduce emissions over the long-term. For example, EPA should seek comment on whether increased credit should be awarded for such vehicles that are sold for specific uses that could significantly broaden deployment of advanced technologies and/or achieve greater system-wide reductions in emissions through displacing emissions from other vehicles. Such applications could include sales of advanced technology vehicles for use in ride-hailing, ride-sharing or other "on-demand" transportation applications, and/or for use in government or corporate fleets. Vehicles used for such on-demand transportation are likely to be used more than other vehicles and may displace use of other vehicles at the margins; to the extent ride-sharing or on-demand vehicles use low-emission advanced technologies, they may achieve disproportionate reduction in system-wide

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[2] Under the California ZEV regulations, ZEVs must have an all-electric range (AER) on the UDDS Test Cycle of at least 50 miles to get credit. Above that level, vehicles get credit based on a formula (0.01 x UDDS AER + 0.50), up to a maximum of 4 credits per vehicle. TZEVs must have an AER of at least 10 miles to get credit; above that level they receive credit based on a formula (0.01 x UDDS Equivalent AER + 0.30), with a cap of 1.10 credits per vehicle. Because the ZEV program is structured differently from the federal GHG standards, these specific numbers and formulas would not be appropriate for use in the federal program, but are provided to illustrate how such a range-based crediting mechanism can be structured.

emissions. In addition, incentivizing use of advanced technology vehicles for fleets, ride-sharing and on-demand transportation could provide a bridge for broader commercial deployment of such technologies. EPA should request comment both on whether increased credit should be used for such applications, and if so, how they should be designed, including what multipliers would be appropriate, what criteria should determine eligibility, and how compliance with eligibility requirements could be ensured to maintain the integrity of such a mechanism.

Crediting for Vehicles Beyond ZEV Compliance

Finally, EPA should request comment on whether to make eligibility for multipliers, or the level of multiplier applied, contingent on whether a vehicle is counted in meeting the ZEV program requirements in California and other Section 177 states. California's ZEV program requires manufacturers to submit credits demonstrating achievement of a certain level of sales of qualifying vehicles in California and other Section 177 states that have adopted ZEV standards. For purposes of the federal GHG program, it would be possible to provide additional credit – through credit multipliers – to vehicle sales that go above and beyond what is already required for compliance with the California and other states' ZEV mandates. This would have the effect of making the federal program incentive "additional" to that provided by the state program – providing greater and more targeted support for advanced technology deployment, both in the ZEV states and beyond them. EPA should request comment on whether to increase credit multipliers for advanced technology vehicles that are not counted for compliance with ZEV mandates, and if so, what numerical differences in multipliers would be appropriate and why.

Off-Cycle Credits

Several manufacturers have expressed concern with challenges and transaction costs associated with the existing regime for the awarding of off-cycle credits. The agencies should request comment on steps that could be taken to further reform this aspect of the off-cycle credit program, providing manufacturers with greater incentives to pursue development and deployment of cost-effective off-cycle emission-reducing technologies, while at the same time strengthening mechanisms to ensure the integrity of the off-cycle program and these credits.

Specifically, the agencies should request comment on whether there is sufficiently robust data and information to support adding further technologies to the menu of pre-approved technologies for off-cycle credits. The agencies should request comment on which technologies, if any, are appropriate for inclusion on the menu, the data and information supporting such inclusion, and what broader criteria or requirements should be applied to make technologies eligible for inclusion.

In addition, the agencies should request comment on whether EPA should establish a mechanism for reforming approval of credits for a technology for which the agency already has approved off-cycle credits through the existing 5-cycle methodology petition process or the process for manufacturer alternate demonstration of off-cycle benefits. Such reforms could, for example, include a more efficient process to add such technologies to the menu of preapproved technologies, streamlining the procedural steps or demonstration that manufacturers must make to obtain credits for such a technology once approved, or other mechanisms. The agencies

should request comment on all aspects of how best to reform the off-cycle credit process to incentivize such technologies while strengthening program integrity.

In addition, the agencies should request comments on changes to the off-cycle credit provisions that would strengthen and ensure the transparency and integrity of this mechanism. Such changes could include, for example, providing transparent reporting of off-cycle credits approved by vehicle make and model; providing further clarification of principles and data requirements governing EPA's evaluation of off-cycle credit petitions; and establishing transparent mechanisms for ex-post evaluation of emissions and fuel economy benefits of off-cycle credits, and mechanisms to correct any over- or underestimation of credits, to help ensure the long-term integrity of this mechanism and the overall program. The agencies should request comment on how such mechanisms should be structured to strengthen program integrity and ensure that the emission reduction and fuel efficiency benefits that are the basis for off-cycle credits are real and verifiable.

Consistent and Equally Stringent CAFE Standards

Several of the compliance flexibility mechanisms discussed above are primarily relevant to EPA's GHG standards. The potential changes to the off-cycle credit mechanism are applicable to both programs. Attribution of emissions to EVs, PHEVs and FCVs applies only to the GHG standards. With regard to credit multipliers, NHTSA has previously taken the position that it lacks authority to apply multipliers for EVs or other advanced technologies because the Energy Policy and Conservation Act (EPCA) separately specifies how such vehicles are to be counted for purposes of fuel economy.

The agencies should therefore request comment on how CAFE standards should be adapted to be made as consistent as possible with the Advanced Technologies Compliance Flexibilities Option outlined above, with regard to overall stringency and other features. Options could include revisiting NHTSA's prior interpretation of its authority to adopt additional or different credit multipliers for advanced technology vehicles under EPCA, such that application of similar multipliers could be provided in the CAFE program. Alternatively, CAFE targets for MY 2022-2025 could be calibrated to be equally stringent overall, such that they are achievable by the same manufacturer fleets that could meet the GHG standards under the Advanced Technologies Compliance Flexibilities Option described above.