pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

October 26, 2018

Mr. Andrew R. Wheeler
Acting Administrator
U.S. Environmental Protection Agency
Air and Radiation Docket
1200 Pennsylvania Ave, N.W.
Washington, DC 20460

Ms. Heidi King
Deputy Administrator
National Highway Traffic Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

Attn: Docket Nos. EPA-HQ-OAR-2018-0283; NHTSA-2018-0067; NHTSA-2017-0069

RE: Comments on the Proposed Rulemaking: The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks. 83 FR 42986 (August 24, 2018), including the Draft Environmental Impact Statement Accompanying the Proposed Rulemaking

Dear Acting Administrator Wheeler and Deputy Administrator King:

The Pennsylvania Department of Environmental Protection (PADEP or Department) submits the following comments in response to the notice of proposed rulemaking entitled *The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* published jointly by the U.S. Environmental Protection Agency (EPA) and National Highway Safety Administration (NHTSA) (hereinafter the agencies) on August 24, 2018 (83 FR 42986) (Proposed Rule).

As part of its comments on the Proposed Rule, PADEP incorporates by reference the contemporaneously filed comment letter, including attachments, submitted jointly by the Attorneys General of California, New York, Pennsylvania and numerous other states, along with the California Air Resources Board (CARB) and others, to EPA and NHTSA on the Proposed Rule, for Docket Nos. EPA-HQ-OAR-2018-0283 and NHTSA-2018-0067.

In this letter, PADEP also comments on the draft Environmental Impact Statement prepared by NHTSA that accompanies the Proposed Rule, found at www.nhtsa.gov/corporate-average-fuel-economy/safe. PADEP submits comments on the draft EIS by incorporating by reference the contemporaneously filed comment letter, including attachments, submitted jointly by the Attorneys General of California, New York, Pennsylvania and numerous other states, along with CARB and others, to NHTSA for Docket No. NHTSA-2017-0069.

Introduction and Background

I. Pennsylvania's Clean Vehicles Program

Pennsylvania has concerns with the joint Proposed Rule in part because it threatens the California vehicle emissions standards, which Pennsylvania has adopted and incorporated by reference. Pennsylvania's adoption of California emissions standards helps ensure that Pennsylvania citizens drive the cleanest and safest new cars and trucks available and continue to receive maximum public health and welfare benefits from doing so, and that regulatory certainty exists for the auto industry to advance emissions control and propulsion technologies that offer even cleaner and more fuel-efficient vehicles in the future.

In 1998, PADEP amended its Title 25, Chapters 121 and 126 regulations for the purpose of reducing air pollution from new passenger cars and light-duty trucks offered for sale in the Commonwealth. (28 Pa.B. 5973, December 5, 1998). The regulations allowed manufacturers an option to comply with the National Low Emissions Vehicle (NLEV) standards or the Pennsylvania Clean Vehicles Program through model year 2004 or 2006. In the Clean Vehicles Program, Pennsylvania adopted the California LEV program standards in preference over the less protective federal Tier II emissions standards. The Department's adoption and incorporation of California's LEV standards into the Pennsylvania Clean Vehicles Program was done under Section 177 of the Clean Air Act (CAA) (42 U.S.C. § 7507), which permits states to adopt new motor vehicle standards if "such standards are identical to the California standards for which a waiver has been granted." Such waivers from federal preemption are issued by EPA for California standards in accordance with Section 209 of the CAA (42 U.S.C. § 7543). Pennsylvania updated its regulations on December 9, 2006 (36 Pa.B. 7424, corrected 37 Pa.B. 209, Jan. 12, 2007, eff. Dec. 9, 2006). (25 Pa. Code §§ 126.401-126.451). Under section 126.401 of the Pennsylvania Clean Vehicles Program (25 Pa. Code § 126.401), updates of the CARB LEV program are automatically adopted and incorporated by reference into Pennsylvania's program.

II. Objectives of the Joint Proposed Rule

In this joint Proposed Rule, the agencies generally propose to amend currently existing Federal Corporate Average Fuel Economy (CAFE) and tailpipe carbon dioxide (CO_2) emissions standards for passenger cars and light trucks and establish new standards for MY 2021 through 2026. Specifically, the agencies propose the following actions:

1. NHTSA proposes new CAFE standards for MYs 2022 through 2026 and amending MY 2021 standards because, in their view, the standards are no longer the maximum feasible standards. The agencies seek to retain the MY 2020 standards, without change through MY 2026. The agencies state that this proposal will result in a decrease in fuel efficiency and an increase in national fuel consumption by approximately half a million barrels per day (two to three percent of total daily consumption). 83 Fed. Reg. 42,986.
2. The agencies propose to amend the CO_2 standards for MYs 2021 through 2025 because "they are no longer appropriate and reasonable" and propose to establish new standards for MY 2026. These new standards, as proposed, would freeze CO_2 standards at MY 2021 levels, thereby eliminating additional greenhouse gas (GHG) emission reduction benefits that would be realized by the adoption of the current "augural" standards. This

proposal would also eliminate equivalent CO_2 emission reduction offsets currently in place for automakers to control oxides of nitrogen (NOx), methane emissions and leaks of air conditioning refrigerants that are known GHGs. 83 Fed. Reg. 42,986 and 42,988.

3. The agencies propose to establish and maintain one national set of standards set by the federal government. The agencies seek to accomplish this objective by EPA proposing to revoke a previously issued waiver of federal preemption for the State of California. The agencies state that the current regulatory framework of harmonization of CARB vehicle emissions standards with federal standards (the method used to develop the current and "augural" vehicle CO_2 and fuel economy standards) is now a "fundamental and unnecessary complication." 83 Fed. Reg. 42,999.

PADEP Comments on the Proposed Rule

PADEP opposes the agencies' revision of the passenger car and light truck emissions augural standards as the preferred alternative in the joint Proposed Rule. Similarly, Pennsylvania does not support the adoption of any of the seven additional alternatives upon which the agencies seek comment. Preliminary reviews of the joint Proposed Rule by California, Pennsylvania, and other states indicate that the agencies' "new" analysis is technically flawed. Throughout the Proposed Rule the agencies appear to make unrealistic, self-reinforcing assumptions about many of the factors influencing vehicle cost, price, consumer preferences, environmental benefit, and safety that generate results to support a predetermined outcome.

PADEP supports the no-action alternative in the Proposed Rule, which maintains the existing and augural CAFE and GHG standards for MYs 2021-2025 and setting MY 2026 to MY 2025 standards and is based on EPA's previous analysis in the 2012 final rule[1] and January 12, 2017, Mid-Term Evaluation.[2]

Pennsylvania also opposes the agencies' proposal to revoke the waiver of federal preemption that EPA previously issued to California in 2013, which allows California to set and for other states to adopt CARB vehicle emissions standards (78 Fed. Reg. 2,145, January 9, 2013). The agencies' rationale for this reversal in the Proposed Rule is not consistent with the criteria for a waiver denial specified in Section 209(b) of the CAA (42 U.S.C. § 7543(b)).

Consistent with Section 177 of the CAA (42 U.S.C. § 7507), Pennsylvania adopted and incorporated by reference California' s LEV regulations, as explained above, except for the California ZEV and emissions control warranty systems statement provisions. The Pennsylvania Clean Vehicles Program automatically adopts and incorporates revisions to the California regulations. Hence, the Pennsylvania program has incorporated the 2015 CARB LEV III requirements.[3] PADEP has long commented in support of the harmonization efforts between

[1] *2017 and Later Model Year Light-Duty Vehicles Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards*, 77 Fed. Reg. 62, 623 (October 15, 2012).

[2] US EPA, *Final Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emission Standards Under the Midterm Evaluation, Document No. EPA-420-R-17-001,* Jan 2017, available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/midterm-evaluation-light-duty-vehicle-greenhouse-gas#previoussteps.

[3] Pennsylvania's ability to adopt and enforce the CARB LEV III standards was enabled by EPA's issuance of a January 9, 2013 waiver of federal preemption to California for their standards. It is this January 2013 waiver that EPA is now proposing to revoke.

federal and California requirements as long as that harmonization did not result in reduced emissions benefits for Pennsylvania citizens. PADEP believes that the agencies' proposal to revoke California's waiver is not consistent with the criteria for waiver denial in the CAA itself, infringes upon states' rights under the CAA cooperative federalism model, and would jeopardize Pennsylvania citizens' ability to recognize current and future benefits associated with cleaner and more fuel-efficient cars available under the CARB standards.

I. The Proposed Rule Would Increase Air Pollution from Motor Vehicles in Pennsylvania

Motor vehicles remain a significant source of pollution in Pennsylvania. According to the 2017 Pennsylvania Greenhouse Gas Inventory, in 2014 the transportation sector accounted for approximately 25 percent of GHG emissions.[4] Highway vehicles also account for 35 percent of oxides of nitrogen (NOx), 6 percent of fine particulate matter ($PM_{2.5}$), and 9 percent of volatile organic compound (VOC) pollution in Pennsylvania.[5] Pennsylvania has made great strides in reducing emissions from power plants and other stationary sources by implementing robust reasonably available control technology. Also, increasing use of natural gas has reduced emissions from stationary sources in Pennsylvania. As a result, current vehicular emissions would account for higher percentages of total emissions in Pennsylvania than in 2014. Additionally, Pennsylvania continues to face challenges in meeting and maintaining federal national ambient air quality standards (NAAQS) for ozone and $PM_{2.5}$. Thus, reducing emissions from motor vehicles will continue to be an important aspect of Pennsylvania's State Implementation Plan (SIP) strategy to attain and maintain the NAAQS for criteria pollutants. Since the California emission control standards for motor vehicles have historically been more stringent than the federal standards, Pennsylvania has adopted the standards to maximize potential emission reductions while still enabling Pennsylvania citizens to purchase clean and affordable vehicles.

Although overall air quality has improved over the years, ozone concentrations remain high in the Philadelphia area. This five-county area is designated as a nonattainment area for the 2015 ozone NAAQS. Additionally, the heavily trafficked 1-95 Corridor runs through Pennsylvania and correlates with several ozone nonattainment areas throughout the Northeast United States. Increased ozone formation is particularly problematic because it is directly related to the higher ambient air temperatures occurring from the effects of GHG emissions on the climate. Pennsylvania has also included GHG reductions from the vehicle program in its Climate Action Plan required under the Pennsylvania Climate Change Act, 71 P.S. §§ 1361.1 - 1361.8.

Besides effects in areas that are currently in nonattainment of a NAAQS, populated areas that were formerly in nonattainment of a NAAQS and subsequently attain must maintain attainment for 20 years. Removing currently realized emissions reductions and forgoing future achievable emissions reductions may make it more difficult for areas to attain and maintain the NAAQS. PADEP relies on emission reductions from mobile sources as part of its SIP planning to attain

[4] Pennsylvania Greenhouse Gas Inventory – PA DEP, 2017, available at http://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/Advisory%20Committees/CCAC/2018/4-24-18/PA%202017%20GHG%20Inventory.pdf.

[5] US EPA, Air Emission Inventories, 2014 National Emissions Inventory (NEI) Data, available at: https://www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data.

and maintain the NAAQS. By flatlining emissions standards at the MY 2020 level, the agencies' Proposed Rule increases vehicle emissions. Therefore, the Proposed Rule would interfere with Pennsylvania's SIP planning requirements.

CARB's current GHG regulations reduce GHG emissions not only from motor vehicles sold in California, but also motor vehicles sold in Section 177 states and any other states in which automakers sell CARB-compliant vehicles. The agencies state, "Parts of California have a real air pollution problem, but CO_2 is not part of that local problem." 83 Fed. Reg. 42,999. This statement is categorically false for both California and Pennsylvania. This reduction in GHG emissions diminishes the potential for ozone formation by limiting the increase in atmospheric temperature. In addition, reduced fuel consumption resulting from CARB's GHG standards decreases the activity of, and emissions from, refineries, pipelines, and other fuel distribution networks operating in Pennsylvania, which also contribute to ozone formation.

Given Pennsylvania's need for emissions control from sources in our highly populated nonattainment areas and Pennsylvania's recognition that reducing GHG emissions from motor vehicles is a key element of any plan to reduce Pennsylvania's, and the nation's, global GHG contribution, the Department is troubled by the EPA's apparent reversal of its duty to protect human health and welfare in favor of arbitrary, spurious, and unsupported technical and legal interpretations by both agencies.

II. The Agencies Provided Inadequate Time for Appropriate and Complete Review of this Proposed Rule

The 60-day comment period provided by the agencies for this Proposed Rule is inadequate for the Commonwealth and other states (especially California and the other Section 177 states) to fully evaluate the proposed changes and how they may manifest in their jurisdictions.

As stated in the Proposed Rule, the agencies consider the joint action as entirely *de novo* and as such present an "entirely new analysis" in support of their proposed action. 83 Fed. Reg. 42,987. Given the agencies' introduction of new analyses with purportedly new information resulting in a major change in the National Model framework, which the federal government, California and the states previously completed and approved as appropriate, a 60-day timeframe to review and comment is entirely inadequate. The agencies' refusal to provide additional time for states to provide meaningful analysis and comments raises the question as to whether the agencies' actions are motivated by factors other than the protection of public health, public welfare and public safety. A rulemaking on the scope of what is proposed by the agencies, in any reasonable sense, would demand no less than 120 days for states to evaluate the "new analysis" and determine not only what impact those changes might have on their citizens, but to provide significant, meaningful comment to the federal government true to the premise of the "cooperative federalism" framework that provides the basis of the CAA.

III. The Proposed Rule Is Based on EPA's Flawed Revised Mid-Term Evaluation

The agencies' reliance on EPA's fundamentally flawed April 13, 2018 "Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light-Duty Vehicles" (83 Fed. Reg. 16,077-16,087) (Revised Mid-Term Evaluation) as a basis for this proposed rulemaking is

contrary to the Administrative Procedures Act (APA). In the Revised Mid-Term Evaluation, EPA withdrew its January 2017 Mid-Term Evaluation of the GHG emission standards for MY 2022-2025 light-duty vehicles[6] and determined that the standards should be revised. PADEP believes that EPA's Revised Mid-Term Evaluation violated several important requirements in the 2012 final rule, which set the GHG emission standards and established the mid-term evaluation process.[7] PADEP also believes that EPA's Revised Mid-Term Evaluation failed to provide the "reasoned explanation" required under the APA "in light of the [agency's] change in position and significant reliance interests involved." *Encino Motorcars, LLC v. Navarro*, 136 S.Ct. 2117, 2126 (2016).

EPA failed – and continues to fail - to provide a reasoned explanation of how the facts in its July 2016 Draft Technical Assessment Report (TAR)[8] or January 2017 Mid-Term Evaluation justify its reversal of position. The proposal's reliance on EPA's Revised Mid-Term Evaluation either ignores or abandons the existing administrative record (including the TAR) and simply starts anew, contrary to a fundamental principle of administrative law. *N. Carolina Grower's Ass'n, Inc. v. United Farm Workers*, 702 F.3d 755, 772 (4th Cir. 2012) ("the pivot from one administration's priorities to those of the next [must] be accomplished with at least some fidelity to law and legal process"). Finally, EPA's Revised Mid-Term Evaluation failed to provide a rational demonstration that the existing standards are not "appropriate" when considering the entire administrative record. For these reasons and others, PADEP is currently a party in *State of California, et al. v. U.S. Environmental Protection Agency, et al.* (D.C. Cir. 18-1114), which challenges EPA's Revised Mid-Term Evaluation. The agencies' joint Proposed Rule, which uses the flawed Revised Mid-Term Evaluation as a basis, should be withdrawn.

IV. The Agencies' Proposed Rule Unreasonably Relies on Unsupported, Incomplete and/or Inaccurate Assumptions and Modeling

In Pennsylvania's view, a *de novo* Proposed Rule that diminishes air quality and fuel efficiency benefits from standards previously determined by both agencies as appropriate and protective, would certainly demand the same level of comprehensive analysis and review by stakeholders and the public. Throughout the "new analysis," the agencies make assumptions about the future costs of fuel, consumer preferences of fuel efficiency in relation to attributes of available vehicles, technological choices by automakers to comply with the current and augural standards, and other market forces that, in the agencies' view, support their conclusions. The analysis, however, does not fully consider, and in some cases, ignores the effects of other factors that were considered in the 2012 final rule and the January 2017 Mid-Term Evaluation. In fact, Pennsylvania is troubled that the agencies have not simultaneously reopened the Technical Assessment to allow NHTSA, EPA, CARB and the states to thoroughly review the new information supporting the new analysis.

[6] See footnote 2, above.
[7] See footnote 1, above.
[8] US EPA, *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://www.epa.gov/regulations-emissions-vehicles-and-engines/midterm-evaluation-light-duty-vehicle-greenhouse-gas#final.

With regard to specific deficiencies in the joint analysis of the agencies, PADEP believes that the agencies either did not consider, or improperly examined, the effects of the following factors:

a. Rebound effect,
b. Recent announcements by automakers regarding their future fleets,
c. Future impacts, including social costs, of GHG increases,
d. Factors influencing consumer choice and vehicle cost estimates, and
e. Assumptions for the estimation of changes in vehicle safety.

a. The Agencies' Analysis of Air Quality Effects Due to the Rebound Effect is Selective

The agencies are selective on how they represent the potential effects of "rebound" due to increased fuel efficiency. The agencies represent that the proposed decrease in fuel efficiency (with attendant increase in national fuel consumption) will improve safety because of avoidance of both "the increased driving that would otherwise result from higher fuel efficiency" and "the mass reductions in passenger cars that might otherwise be required" to meet the existing standards. 83 Fed. Reg. 42,995 – 42,996. However, the agencies describe rebound effects on air quality as negligible. *Id.* at 42,996. The Department disagrees.

On the issue of air quality effects and fuel consumption, the analysis dismisses the additional emissions from not only the fuel consumption (downstream), but the additional emissions associated with the acquisition, refining, distribution and other life cycle elements of the petroleum fuel (upstream). This concept is particularly important to Pennsylvania as two major petroleum refineries (including the largest refinery on the east coast) are situated in a multi-state ozone nonattainment area and $PM_{2.5}$ maintenance areas.

Furthermore, western Pennsylvania is a large producer of natural gas and natural gas liquids from the Marcellus Shale. As suitable gasoline blending components are fractionated from these liquids, the location and the potential increase in these activities may be significant. The increasing role of natural gas-powered vehicles and, perhaps more significantly, company vehicle fleets in Pennsylvania and nationally, for meeting the current and augural standards has not been fully considered by the agencies.

With the upstream emissions, the new analysis appears to arbitrarily assume that ninety percent of the incremental supply of crude oil needed to meet the increased demand will be imported and that half of all additional refining will be domestic. While this may reflect a national trend, state level and regional effects of this rebound may be significant considering Pennsylvania's regional role in natural gas and petroleum processing and refining. The agencies' new analysis in this Proposed Rule appears to be "diluting" emissions impacts across the nation, and thus reducing potentially significant local, state and regional level air quality impacts.

For example, in addressing downstream emissions of the rebound effect, the agencies state:

> "*The analysis does not estimate evaporative emissions from light-duty vehicles. Other factors which may impact downstream non-GHG emissions, but are not estimated in this analysis, include the potential for decreased criteria pollutant emissions because of increased air conditioner efficiency; reduced refueling emissions because of less*

> *frequent refueling events and reduced annual refueling volumes resulting from the CO_2 standards; and increased hot soak evaporative emissions because of the likely increase in number of trips associated with VMT rebound modeled in this proposal. In all, these additional analyses would likely result in small changes relative to the national inventory.*"

83 Fed. Reg. 43,335.

Pennsylvania disagrees with the agencies' dismissal of these potential changes in downstream emissions. While these emissions when compared to a national emissions inventory may not be relevant in the eyes of the agencies, they are relevant at a regional, state or nonattainment/ maintenance area level where emissions from mobile sources account for significant portions of the regional, state or area-specific inventories.

Moreover, Pennsylvania does not support the agencies' use of modeling with a rebound value of 20 percent. Instead, Pennsylvania believes that the 10 percent rate used for the current existing and augural standards modeling, given that value's sensitivity in the model, would yield a more realistic approximation of the future regarding that effect. This 10 percent value was originally used for the analysis supporting both the current and augural standards. Therefore, PADEP believes that the agencies' new analysis of the rebound effect in this Proposed Rule is inadequate because the agencies used modeling with an unrealistic assumption of the rebound effect.

b. Assumptions for Estimating Changes in Vehicle Safety Omit Input Parameters

The agencies' Proposed Rule fails to consider all relevant model input parameters to estimate changes in vehicle safety. The new analysis in this Proposed Rule, using a revised CAFE model, appears to only use model input assumptions that provide results supporting a pre-determined conclusion. The agencies' use of selective modeling inputs produces an incomplete picture and understanding of what may likely occur. Indeed, by NHTSA's own admission, the revised CAFE model used by the agencies in this Proposed Rule lacks the capability and the resolution to adequately predict the change in traffic fatalities and injuries because the model does not account for necessary input parameters. 83 Fed. Reg 43,136.

Pennsylvania generally agrees with the agencies' assertion that "increased vehicle use associated with the rebound effect also contributes to increased traffic congestion." 83 Fed. Reg. 43,136. However, to properly account for this effect in a model of highway vehicle safety, this assumption must also include the recognition that an increase in traffic congestion would also lead to lower speeds. Vehicle speed is one of the most crucial elements that contributes to traffic fatalities. Only a slight decrease in speed during an accident causes a measurable decline in the fatality rates of accidents.[9] The extent of the decrease in speeds due to congestion can be determined by using traffic demand modeling analysis. The CAFE model used by the agencies in this Proposed Rule, however, is not able to discern the effects that changes in speed have on safety. As stated in the rulemaking, "…the CAFE model lacks the internal structure to account for other factors related to observed fatal crashes for example, vehicle speed, seat belt use, drug use, or age of involved drivers or passengers." 83 Fed. Reg. 43,136. Therefore, the safety

[9] SWOV Fact sheet, SWOV Institute for Road Safety, Leidschendam, The Netherlands, April 2012, pp. 3-4, available at: https://www.unroadsafetyweek.org/uploads/tekstblok/swov_factsheet.pdf.

analysis in this Proposed Rule is inadequate by the NHTSA's own admission. The agencies consider one parameter, vehicle miles traveled (VMT), but choose not to analyze, or even consider, other relevant and potentially more important variables such as speed, seat belt use, driver age, etc.

The agencies' Proposed Rule does not examine all the beneficial safety aspects that vehicles would achieve by reducing weight. The agencies' proposal acknowledges that reduced vehicle mass can improve safety in some circumstances. As the agencies state, "NHTSA statistical analysis of historical crash data to understand effects of vehicle mass and size on safety indicates reducing mass in light trucks generally improves safety, while reducing mass in passenger cars generally reduces safety." 83 Fed. Reg. 43,106. However, the agencies fail to fully account for safety improvements caused by the augural standards. Also, certainly, NHTSA is aware of differing physics between head-on collisions and side-impact collisions and how the weight of the vehicles involved in different types of collisions can play an important, but differing role, yet the agencies' methodology "focused on frontal crashes because of the availability of existing vehicle and occupant restraint models." 83 Fed. Reg. 43,133. It is inadequate for the agencies' analysis for this Proposed Rule to only focus on frontal crashes while omitting near-frontal collisions, side-impact collisions, rear-end collisions, rollover accidents, impacts with stationary objects and accidents involving pedestrians.

According to EPA's Midterm Evaluation for Model Years 2022-2025 for the augural standards, the weight reductions achievable in light-duty trucks will be almost twice as much as in passenger cars. Pennsylvania believes that the overall effects on safety could be a net positive if all parameters are examined. The CAFE standards have generally improved safety according to a recent study by the National Bureau of Economic Research.[10] PADEP believes, contrary to this Proposed Rule, that increases in vehicle weight should not be examined using only favorable parameters to demonstrate safety improvements. Dispersion of vehicle weights, which is the amount of variation between individual cars involved in an accident, needs to be examined by the agencies. When vehicles involved in a head-on or a near head-on car collision are closer in weight, overall fatalities are reduced. The augural CAFE standards will reduce weight in heavier vehicles more than lighter vehicles and reduce dispersion. Therefore, the agencies omit essential factors when evaluating changes in vehicle safety in the Proposed Rule.

c. <u>The Proposed Rule Does Not Consider Automaker Announcements Regarding Future Fleets</u>

Many automakers worldwide have already made clear their plans to shift propulsion systems from petroleum-based to electric hybrid and full electric systems. General Motors, Volkswagen, BMW, Volvo, Nissan, Renault, and Honda all have announced plans for the introduction of new or re-engineering of existing models to meet both consumer demands and the existing standards. For example, Ford Motor Company recently announced a major multi-billion dollar restructuring that practically eliminates their smaller passenger vehicle offerings and focuses on light trucks and crossover vehicles. These actions by the automobile industry belie the agencies' conclusion

[10] Antonio Bento et al., *The Effect of Fuel Economy Standards on Vehicle Weight Dispersion and Accident Fatalities*, National Bureau of Economic Research, Cambridge MA, April 2017, p.28, available at: https://www.nber.org/papers/w23340.pdf.

that automakers will not be able to provide compliant vehicles under the standards. Given the lengthy lead times required by automakers to design and engineer production prior to a given model year to be available for purchase, these automakers would not have recently collectively committed billions of dollars of capital to design and produce vehicles that would not meet both the current and augural standards. Therefore, PADEP believes that this Proposed Rule fails to adequately consider the significant monetary investments that companies have already made both in response to consumer demand and towards meeting the existing standards.

d. The Proposed Rule Does Not Account for Future Impacts, including Social Costs, of GHG Increases

The agencies' analysis is largely silent on the effects of eliminating the augural CO_2 standards for MYs 2022 through 2026. They conclude that the effects of the forgone CO_2 reduction benefits would have a negligible impact between the 2012 standards and the Proposed Rule. 83 Fed. Reg. 42,996 and 42,997.

PADEP believes that the Proposed Rule does not fully consider the potential effects of global climate change resulting from these forgone reductions or the interests of states in preventing or mitigating the impacts of climate change on their citizens and environment. In Pennsylvania alone, the impacts of climate change range from more frequent and severe inland waterway flooding from increased storm intensity, increased landslides and sedimentation runoff resulting in water pollution and infrastructure damage, an increase in the number of days with dangerously high temperatures, increased energy consumption, disruption of commerce, and an increase in the number of invasive species.[11] For example, Pennsylvania experienced severe flooding from extreme weather events throughout the Ohio and Susquehanna River Basins in 2018. The volume of extreme weather events and other effects of climate change will drastically increase mitigation and recovery costs to the Commonwealth, including its counties and municipalities, as well as to businesses and homeowners.[12] The Proposed Rule fails to consider the costs of these impacts on state, county, and municipal governments and the harm to human health and welfare and the environment.

e. The Proposed Rule Fails to Consider Factors Influencing Consumer Choice and Vehicle Cost Estimates

As Pennsylvania citizens tend to retain vehicles longer than national averages, the new analysis not only seems to discount these future effects, it rationalizes not providing cleaner, fuel-efficient vehicles on the premise that they will be too costly, thus forcing drivers to keep their older vehicles. This assumption, however, diminishes many of the other factors that govern an

[11] EPA, What Climate Change Means for Pennsylvania, EPA430-F-16-040, August 2016, available at: https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-pa.pdf; *See*, "Pennsylvania Climate Impacts Assessment Update," May 2015, available at: http://www.depgreenport.state.pa.us/elibrary/GetDocument?docId=5342&DocName=2015%20CLIMATE%20CHANGE%20ACTION%20PLAN%20UPDATE.PDF%20#.

[12] *See generally*, Kirshen, P., Elly Best, H. Stone, J. Kovatch, L. Yeghiazrian, J. Noel, J. Stark, E. Emery, J. Trimboli, D. Raff, J. Arnold, and R. Drum, "Ohio River Basin Pilot Study- Formulating Climate Change Mitigation/ Adaption Strategies through Regional Collaboration with the ORB Alliance", U.S. Army Corps of Engineers, Washington D.C., 2017, available at: https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NRMRL&dirEntryId=339719.

individual purchasing decision. While final cost is considered when making a new vehicle purchase, it is not necessarily the most important factor. The agencies discount other factors (tax credits and rebates, utility, safety, fuel efficiency, environmental impact potential, drivability, convenience features, aesthetics, brand loyalty, warranties and, in Pennsylvania, replacing vehicles that are damaged by weather or do not pass vehicle safety inspection, and others) that can influence a purchasing decision. By singly emphasizing final cost in the analysis while discounting the potential effects of others, the agencies have pre-determined the analysis to support an assertion that automakers cannot meet the augural standards because the cars will be too expensive for consumers.

The estimated final cost to consumers presented in the new analysis fails to account for federal and state tax credits and depreciation expense allowances available to certain consumers. It appears that tax credits or tax deductions from depreciation that businesses receive when they purchase fossil fueled vehicles, a large portion of which are pickup trucks and large SUVs, were not included in the cost analysis to determine the incremental increase in vehicle costs. The Proposed Rule did consider tax credits given to purchasers of electric vehicles, but no mention was given for tax relief provided to owners of conventionally fueled vehicles. Many states, including Pennsylvania, have existing programs that provide tax incentives and/or rebates for individual and fleet electric and alternative fuel vehicle purchases. Moreover, many of these programs will continue to be expanded by states in the coming years as the result of the Volkswagen Mitigation Trust Agreement, which allocated the states funding to reduce NOx emissions from diesel vehicles and other eligible mitigation projects.

The Proposed Rule does not provide empirical evidence to substantiate the agencies' claims about vehicle cost. For instance, the agencies state, "Put more simply, most consumers would rather spend their money on attributes other than fuel economy when they are considering a new vehicle purchase, whether it is more safety technology, a better infotainment package, a more powerful powertrain, or other features, (or, indeed, they may prefer to spend the savings on something other than automobiles)." 83 Fed. Reg. 42,993. However, no proof is given; as such, the statement has no more relevance than an opinion. Unsubstantiated statements like this should not form the basis for the agencies' analysis of the augural standards.

Finally, the new analysis places considerable emphasis on manufacturer and consumer cost and how the increased costs of the vehicles because of the augural standards would prevent or delay new vehicle purchases. Since manufacturing cost and ultimate retail price effects, albeit impermissibly, appear to be a significant rationale for the Proposed Rule, the agencies fail to account for the federal government's planned imposition of tariffs on imported aluminum and steel products. This federal action alone may have more significant impact on the ability of manufacturers to produce and consumers to purchase affordable and clean vehicles available now and will likely have a cascade effect for years to come as global markets adjust to redistribute supply to meet demand. In addition, the Proposed Rule contains no analysis pertaining to how these additional costs as a result of tariffs will be absorbed by manufacturers, automakers or consumers purchasing vehicles in the United States. Changes in the current and future market prices of steel and aluminum available to auto manufacturers and suppliers significantly affect these companies' planning decisions for future model years, yet the Proposed Rule's new analysis fails to include any discussion of the Trump Administration's imposed

tariffs and their global impact on the auto industry. Therefore, the agencies' Proposed Rule fails to adequately consider factors influencing consumer choice and vehicle costs.

V. Pennsylvania Does Not Support the Agencies' Proposal to Withdraw the Existing California Waiver of Federal Preemption

a. The Agencies' Proposed Rule is Contrary to Section 209 of the Clean Air Act

The agencies' rulemaking proposes to establish and maintain one national set of highway vehicle standards set by the Federal government. The agencies seek to accomplish this by EPA withdrawing the GHG and ZEV aspects of a waiver of federal preemption previously issued under Section 209 of the CAA for the State of California (78 Fed. Reg. 2,111, January 9, 2013). The agencies state that the current regulatory framework of harmonization of CARB vehicle emissions standards with federal standards (the method used to develop the current and "augural" vehicle CO_2 and fuel economy standards) is now a "fundamental and unnecessary complication." 83 Fed. Reg. 42,999.

PADEP believes this proposal undermines the principles of cooperative federalism established between the states and federal government. This action itself is contrary to the plain language of Section 209(b) of the CAA, its intent, and its decades of successful implementation by EPA and CARB.

Section 209(b) of the CAA sets clear criteria for the conditions by which EPA has the authority to deny a requested waiver from federal preemption established under Section 209(a). 42 U.S.C. § 7543(a). These criteria state that a waiver can only be denied if the EPA Administrator finds that:

a. The determination of the State is arbitrary and capricious,
b. Such State does not need such State standards to meet compelling and extraordinary conditions, or
c. Such State standards and accompanying enforcement procedures are not consistent with Section 202(a) of the Clean Air Act (42 U.S.C. § 7521(a)).

The agencies do not provide sufficient explanation in the Proposed Rule on how the previously issued 2013 waiver of federal preemption now meets the statutory criteria for denial. EPA claims that California now no longer meets the compelling or extraordinary conditions that were established in the 2013 waiver. The Proposed Rule states that "attempting to solve climate change, *even in part* (emphasis added), through the Section 209 waiver provision is fundamentally different from that section's original purpose of addressing smog-related air quality problems." 83 Fed. Reg. 42,999.

This view by the agencies ignores EPA's own health and welfare endangerment finding related to the contributions of GHGs to the environment. 74 Fed. Reg. 66496 (Dec. 15, 2009). This finding by EPA has been upheld on judicial review.[13] In the Proposed Rule, the agencies

[13] *Coalition for Responsible Regulation, Inc. v. E.P.A.*, 684 F.3d 102, 119 (D.C. Cir. 2012) (upholding EPA's finding that greenhouse gases may "reasonably be anticipated to endanger public health or welfare" and agency's issuance of emission standards for cars and light trucks), *aff'd in part, rev'd in part sub nom. Util. Air Regulatory Grp. v. E.P.A.*, 134 S. Ct. 2427 (2014), as *amended sub nom. Coal. for Responsible Regulation, Inc. v. Envtl. Prot.*

incorrectly delineate between health and welfare impacts of non-GHG pollutants and health and welfare impacts from GHG pollutants. They arbitrarily declare that California had "disproportionately focused" on GHG emissions and that those emissions are not part of California's local air quality issues. 83 Fed. Reg. 42,999. This, in turn, serves as EPA's rationale in the Proposed Rule for revocation of the previously issued waiver to California.

The proposed revocation of the previously issued waiver based on EPA's failure to consider its own endangerment finding, coupled with a unilateral, arbitrary, and unscientifically supported declaration that ambient CO_2 emission increases in California do not pose a local environmental problem, is an abrogation of EPA's clear statutory obligation to protect the health and welfare of not only California's citizens but the citizens of every state that has adopted, or is considering adopting, California standards legally through Section 177 of the CAA.

The agencies need to allow states to continue to have the option of adopting California standards. The agencies, however believe that it is better that the federal government regulate from the national level and allow automakers to develop vehicles at their own pace. The agencies state:

> *Further, elimination of California's ZEV program will allow automakers to develop such vehicles in response to consumer demand instead of regulatory mandate. This regulatory mandate has required automakers to spend tens of billions of dollars to develop products that a significant majority of consumers have not adopted, and consequently to sell such products at a loss. All of this is paid for through cross subsidization by increasing prices of other vehicles not just in California and other States that have adopted California's ZEV mandate, but throughout the country.* 83 Fed. Reg. 42,999.

Pennsylvania disagrees with the conclusions reached in the above quoted paragraph. Automakers enjoyed the highest levels of U.S. new automobile sales ever at 17.5 million units in 2016. Automakers have sold over 17 million new vehicles for each of the last four years, the first time in history. In 2018, vehicle sales appear to be heading for a fifth consecutive year of being over 17 million. Environmental regulations, including the augural standards, do not seem to be a strong factor in affecting consumer demand or choices. Further, the agencies need to offer evidence of cross-subsidization occurring in other states due to some states adopting a Section 177 program before reaching conclusions about the cost of adopting California standards. When Pennsylvania was developing the Clean Vehicle Program, automobile manufacturers informed PADEP that consumers in Section 177 states would be absorbing the extra costs exclusively. Finally, the research, development and implementation of emission control systems in modern vehicles have yielded remarkable fuel economy and performance advances. CAA standards in the mid-1990s resulted in the need for microprocessor controllers to be installed in vehicles, which allowed for better engine performance and fuel economy. Pennsylvania expects that by setting the sensible augural standards, similar technological advances in vehicles, such as ZEVs, will result. Because the agencies misinterpret and exceed their authority under Section 209 of the CAA, the Proposed Rule should be withdrawn.

Agency, 606 F. Appx 6 (D.C. Cir. 2015). See *Massachusetts v. EPA*, 549 U.S. 497, 521 (2007) (The Supreme Court has described the harms associated with the warming climate as "serious and well recognized.")

b. The Proposed Rule is Contrary to Section 202(a) of the Clean Air Act

PADEP believes that EPA's interpretation of Section 202(a) of the CAA is unreasonable. Under Section 202(a)(1), "[t]he EPA Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, standards applicable to the emission of any air pollutant from any vehicle engines, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7521(a)(1). Section 202(a) also states "any regulations prescribed under paragraph (1) of this subsection… shall take effect after such period as the Administrator finds necessary to permit the development of the requisite technology, giving appropriate consideration to the cost of compliance within such period. 42 U.S.C. § 7521(a). However, EPA did not propose to make the requisite finding under Section 202(a)(2) that it is "necessary" to flat-line the standards for six years in order "to permit the development and application of the requisite technology." This statutory provision is intended to drive development and deployment of pollution-reducing technology, yet EPA concedes technological development and application is not a limiting factor here. Additionally, EPA does not explain how six years of standards with zero incremental improvement are "necessary" from a lead-time or cost-reducing perspective. PADEP believes EPA's interpretation of Section 202(a) of the CAA in this manner is unreasonable and impermissible under the statute.

Summary and Conclusions

In summary, PADEP appreciates the opportunity, albeit insufficient in duration, to examine and provide comment on the agencies' Proposed Rule. As stated in our comments, the Department does not support the rulemaking's proposed action or any of the seven alternatives.

Pennsylvania believes that the "new" analysis by the agencies is technically flawed. NHTSA and EPA make unrealistic, self-reinforcing assumptions about many of the factors influencing vehicle cost, price, consumer preferences, environmental benefit, and others, that generate results to support a predetermined outcome. Additionally, the scope of the analysis does not fully consider, or improperly reconsiders, variables that render the new analysis insufficient for consideration of a *de novo* rulemaking as claimed by the agencies.

Pennsylvania also does not support EPA's proposal to revoke the waiver of federal preemption previously issued by EPA in 2013 allowing California to set, and other states to adopt, CARB vehicle emissions standards. EPA's rationale for this reversal is not consistent with the criteria for a waiver denial specified in Section 209(b) of the CAA. For these reasons, Pennsylvania requests that EPA and NHTSA withdraw the joint Proposed Rule.

Thank you for your consideration in this matter.

Sincerely,

Patrick McDonnell
Secretary