American
Fuel & Petrochemical
Manufacturers

1667 K Street, NW
Suite 700
Washington, DC
20006

202.457.0480 office
202.457.0486 fax
afpm.org

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Secretary Elaine L. Chao
US Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Administrator Scott Pruitt
Environmental Protection Agency
Mail Code: 1101 A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Attention: Docket ID Number EPA-HQ-OAR-2015-0827
Submitted to the Federal eRulemaking Portal (www.regulations.gov)

Re: Request for Comment on Reconsideration of the Final Determination for the Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light-Duty Vehicles; Request for Comment on Model Year 2021 Greenhouse Gas Emissions Standards, 82 Fed. Reg. 39,551 (Aug. 21, 2017) EPA-HQ-OAR-2015-0827

Dear Administrator Pruitt and Secretary Chao:

The American Fuel & Petrochemical Manufacturers ("AFPM") respectfully submits these comments in response to the Request for Comment on Reconsideration of the Final Determination for the Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light-Duty Vehicles; Request for Comment on Model Year 2021 Greenhouse Gas Emission Standards issued by the National Highway Traffic Safety Administration ("NHTSA") and the U.S. Environmental Protection Agency ("EPA") (collectively, the "Agencies").[1]

AFPM is a national trade association representing nearly 400 companies that encompass virtually all U.S. refining and petrochemical manufacturing capacity. These companies provide jobs, directly and indirectly, to some four million Americans, contribute to our economic and

[1] 82 Fed. Reg. 39,551 (Aug. 21, 2017).

national security, and enable the production of thousands of vital products used by families and businesses throughout the United States. AFPM members produce U.S. transportation fuels and as such are impacted by the "Mid-Term Evaluation" and the Corporate Average Fuel Economy ("CAFE") regulations and greenhouse gas ("GHG") emissions standards in general.

I. AFPM Supports Reconsideration of the Mid-Term Evaluation

AFPM supports the Agencies' reconsideration of the Obama Administration's Mid-Term Evaluation. After the Presidential election last year, EPA abruptly cut short the evaluation process and issued a premature decision that failed to take account of important policy questions and stakeholder interests.

In 2012, EPA set GHG standards for Model Year ("MY") 2017-2025 light duty cars and trucks, in conjunction with NHTSA setting CAFE standards for MY2017-2021 light-duty vehicles ("LDVs").[2] In that joint rulemaking, the Agencies recognized the inherent uncertainty and variability created by setting standards so far into the future. EPA therefore committed to review and, if necessary, adjust the GHG standards in light of available information and evolving policy preferences. That regulatory "safety valve" is referred to as the Mid-Term Evaluation.[3]

EPA agreed to consider several factors in deciding whether the MY2022-2025 standards remain appropriate under Section 202(a) of the Clean Air Act ("CAA"), including the impact of the standards on:

- The reduction of emissions, oil conservation, energy security, and fuel savings by consumers;
- Consumer behavior, including, but not limited to, consumer purchasing behavior and consumer automobile usage behavior (e.g., fleet turnover); and

[2] 77 Fed. Reg. 62,625 (Oct. 15, 2012).

[3] *See* 40 CFR § 86.1818-12(h).

- Advanced fuels technology, including, but not limited to, the potential for high-octane blends.[4]

The Energy Policy and Conservation Act ("EPCA") limits NHTSA's ability to set CAFE standards to no more than five model years at a time due to the inherent uncertainty of setting regulatory standards so far into the future.[5] As a result, NHTSA must conduct a new rulemaking to set CAFE standards for MY2022-2025 LDVs. That process was intended to be coordinated with the Mid-Term Evaluation, promoting harmony between EPA's GHG standards and NHTSA's CAFE standards.

When EPA agreed to the Mid-Term Evaluation as part of the 2012 GHG rule, it set an April 1, 2018, deadline for issuing its final determination on the appropriateness of the MY2022-2025 standards. Shortly after the 2016 election, however, EPA announced that it had moved up the date for completing the evaluation so that it could be concluded before the Obama Administration ended. As a result, EPA provided only 24-days to comment[6] on a voluminous docket[7] and denied multiple requests to extend the severely abbreviated comment period. On January 12, 2017—eight days before the Inauguration—the EPA Administrator signed the Final Determination of Mid-Term Evaluation, confirming the MY2022-2025 standards after making short shrift of comments submitted during a rushed regulatory process. That action was done unilaterally, without NHTSA coordination.

[4] *See* 82 Fed. Reg. at 39,553.

[5] 49 U.S.C. § 32902(b)(3)(B).

[6] The agency's proposed action on the Mid-Term Evaluation was published in the *Federal Register* on December 6, 2016, and the comment period ended on December 30, 2016, violating the minimum 30-day public comment ordinarily provided for regulatory actions under the Administrative Procedure Act. *See* 5 U.S.C. § 553(d).

[7] The proposed determination on the Mid-Term Evaluation stretched to 268 pages, and the Technical Support Document was 719 pages.

On March 22, 2017, EPA announced that it intended to reconsider the Obama Administration's Final Determination of the Mid-Term Evaluation, while maintaining its commitment to issue a final decision by the original deadline of April 1, 2018. In its request for comment on the reconsideration, EPA emphasized its consideration of any new information that may inform its final decision on the appropriateness of the previously established standards for MY2022-2025.[8]

II. Summary of AFPM's Comments

The Agencies should use the Mid-Term Evaluation process to reset their relative roles. Specifically, EPA should defer to NHTSA taking the lead role in setting fuel economy. EPCA's statutory text, structure, and legislative history demonstrate that Congress intended NHTSA to take the lead role in setting and coordinating fuel economy standards. To be sure, EPA's endangerment finding currently requires it to address GHGs from LDVs. But fuel economy and GHGs from vehicles are essentially equivalent, and EPA may simply defer to NHTSA's CAFE standards. Squeezing two separate agencies into the same regulatory space spawns uncertainty, complicates compliance, and wastes scarce government resources.

The Agencies also should exclude state mandates, such as the California "zero emissions vehicle" ("ZEV"), from the reference fleet; indeed, EPCA expressly preempts all State regulations "related to fuel economy standards or average fuel economy standards for automobiles…." 49 U.S.C. § 32919(a). Even if the Agencies use such a reference fleet, it should not be interpreted or construed as waiving or limiting EPCA preemption of California's ZEV mandates.

[8] EPA's reconsideration of the Mid-Term Evaluation is not necessarily limited to consideration of new information. An "agency's view of what is in the public interest may change, with or without a change in circumstances." *National Ass'n of Homebuilders v. EPA*, 682 F.3d 1032 (D.C. Cir. 2012) (denying a petition for review of EPA's reversal of a prior rule after a change in administrations) (internal quotation marks and citation omitted).

As the Agencies proceed, they should recalculate the costs and benefits associated with the original rulemaking. New data on the projected future price of gasoline show that the fuel savings benefits of the MY2022-2025 standards are dramatically lower than the Agencies originally estimated in 2012.

The Agencies also should consider that America's energy security picture has changed dramatically, affecting the appropriateness of the MY2022-2025 standards. Innovations in the exploration and production of crude oil have led to a significant expansion of U.S. crude production, while the rare earth metals used to produce battery technologies, such as lithium and cobalt, are mined predominately overseas, raising significant concerns regarding energy security.

Finally, EPA raises the issue of whether it should consider higher octane fuels as part of the Mid-Term Evaluation process. AFPM agrees that the combination of higher-octane fuel and higher-compression engines is a tool for improving the efficiency of internal combustion engines. Indeed, AFPM's members today produce a high-octane (91 AKI) fuel designed for cars with more efficient higher-compression engines. But there are numerous technical, logistical, and legal challenges and uncertainties that militate against EPA considering higher octane fuels as part of the Mid-Term Evaluation process. For example, as discussed more below, there are uncertainties around what fuel octane levels would appropriately balance feasibility, cost, and environmental concerns, and how such fuel would be integrated into the existing fuel infrastructure and markets. There is also uncertainty around EPA's legal authority to mandate higher octane fuels and whether such fuels can be sold in all U.S. markets, particularly California. These uncertainties must be addressed before EPA justifies any standard, in whole or in part.

III. EPA Should Defer to NHTSA in Setting GHG Tailpipe and CAFE Standards

EPA's prior action on the Mid-Term Evaluation illustrates the lack of standard-setting consistency and its coordination with NHTSA. Rather than issuing a joint determination on the Mid-Term Evaluation, EPA rushed out a unilateral decision before the inauguration. That political decision, in turn, forced NHTSA into a Hobson's choice between blindly deferring to its sister agency and subjecting industry to inconsistent standards.

Relegating NHTSA to a spectator is unlawful and bad policy. The Congressional Research Service has observed that EPA's GHG standards and NHTSA's CAFE standards "are closely linked" because "[t]he vast majority of vehicle GHG emissions result from the burning petroleum products, so reducing fuel consumption is the most direct means of reducing emissions."[9] In light of that reality, *Massachusetts v. EPA* made clear that EPA should administer and interpret its authority over GHG vehicle emissions in a manner consistent with NHTSA.[10] EPA should coordinate with, but ultimately defer to, NHTSA regarding GHG tailpipe emissions. As NHTSA has concluded, "CO_2 emissions are always and directly linked to fuel consumption because CO_2 is the ultimate end product of burning gasoline."[11]

EPCA's statutory text and structure demonstrate that Congress intended NHTSA to take the lead role in setting these standards. Before establishing CAFE standards, EPCA requires NHTSA to consult with EPA and the Department of Energy ("DOE").[12] EPCA forces boundary

[9] Congressional Research Service, Automobile and Truck Fuel Economy (CAFE) and Greenhouse Gas Standards, at 1 (Sept. 11, 2012), *available at*, https://fas.org/sgp/crs/misc/R42721.pdf.

[10] *Massachusetts v. EPA*, 529 U.S. 497 (2007) ("[T]here is no reason to think the two agencies cannot both administer their obligations and yet avoid inconsistency."). Note that *Massachusetts v. EPA* did not touch upon whether EPCA pre-empted State fuel economy standards.

[11] 71 Fed. Reg. 17,566, 17,654, 17,659 (Apr. 6, 2006).

[12] 49 U.S.C. § 32902(b)(1).

conditions on NHTSA's standard-setting authority, requiring NHTSA to set the "maximum feasible average fuel economy" in light of "technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need for the United States to conserve energy."[13] None of these express procedural and substantive checks on setting fuel economy standards would have any meaning if EPA could simply circumvent them by unilaterally issuing a standard that it found to be "appropriate" under Section 202(a) of the CAA.[14]

The legislative history of EPCA confirms that Congress envisioned NHTSA as the lead agency on fuel economy. The negotiations over the legislation suggest that environmental groups wished to have EPA regulate fuel economy, while the regulated community preferred DOE to perform that role. Congress compromised by granting NHTSA primacy over fuel economy, a legislative judgment that would be unwound if EPA could "go it alone" on standard-setting.[15]

Unfortunately, the gaps between the Agencies' programs continue to widen. The automakers filed a petition last year to harmonize several aspects of CAFE and the GHG programs, a request that continues to await a decision at EPA.[16] Similarly, a bipartisan group of Senators have sponsored the Fuel Economy Harmonization Act to address the growing discrepancies between NHTSA and EPA.[17]

We respectfully submit that EPA should defer to NHTSA taking the lead role in setting fuel economy, in keeping with Congressional intent and that Agency's decades of expertise in that

[13] 49 U.S.C. § 32902(a), (f).

[14] 42 U.S.C. § 7521(a).

[15] https://www.congress.gov/bill/94th-congress/senate-bill/622.

[16] https://www.epa.gov/aboutepa/petition-direct-final-rule-regard-various-aspects-corporate-average-fuel-economy-program.

[17] https://www.congress.gov/bill/115th-congress/senate-bill/1273.

area. To be sure, the endangerment finding on mobile sources pushes EPA to take action to address GHG emissions from light-duty vehicles. But nothing in that finding, *Massachusetts v. EPA*, or the CAA precludes EPA from assessing and ultimately deferring to NHTSA's fuel economy standards to address GHGs. Fuel economy and GHG emissions from vehicles are essentially equivalent. Squeezing two separate agencies into the same regulatory space creates uncertainty and unnecessary costs, and wastes scarce government resources.

IV. Nothing in the Agencies' Consideration of the "Reference Case" Immunizes the California ZEV Production Mandate from EPCA Preemption

The Agencies requested comment on the "appropriate reference fleet," meaning the fleet of vehicles that would be produced absent the MY2022-2025 standards.[18] The Agencies define the reference fleet to include vehicles that would be produced in the nine states that have adopted the California ZEV mandate. The reference fleet should not be based on hypothetical projections. Instead, a better approach might be for the Agencies to base the reference fleet on the last year where actual sales and technology cost data are available (*e.g.*, MY2016 or MY2017). Regardless of the baseline EPA chooses, state mandates, such as the California ZEV mandate, should not be considered part of the reference fleet, so that the incremental costs of those state mandates can be appropriately ascribed to those state actions. Legally, consideration of such state initiatives is prohibited. Additionally, from a policy perspective, the Agencies should not turn their backs on the free market to favor ZEV technology over other technologies that may produce similar or better results.

California enacted production mandates in 2012 that compel automakers to increase their production of so-called ZEVs, beginning at 4.5 percent of their sales in model year 2018 and

[18] *See* 82 Fed. Reg. at 39,533.

increasing to 22 percent by 2025 and beyond,[19] despite the fact that ZEVs (1) do not have zero emissions as the battery is powered by the electric grid;[20] and (2) lack significant consumer support, currently comprising less than one percent of national auto sales. EPA subsequently granted a preemption waiver under CAA Section 209(b),[21] which allowed nine other states to adopt California's mandate on automakers.[22] Collectively, these ten ZEV States account for approximately 30 percent of U.S. auto sales.[23] Thus, automakers would be forced to increase ZEV sales to 671,400 vehicles in the ZEV States alone in 2025. This is nearly a four-fold increase over *nationwide* ZEV sales, which amounted to only 159,000 in 2016.[24]

Under EPCA, NHTSA establishes CAFE standards using its expertise on technological feasibility and economic practicability.[25] Congress also expressly adopted a policy that preserves

[19] 13 Cal. Code Regs. tit. 13 § 1962.2(b). Recognizing that automakers are unlikely to meet these mandates, California will allow them to obtain and sell credits for certain electric vehicles. An Indiana University study estimates that, with the use of credits, California ZEV sales are unlikely to exceed 15.4 percent. *See* Sanya Carley, Associate Professor, Indiana University School of Public and Environmental Affairs, "Policies for the U.S. Light Duty Vehicle Sector: Technical and Policy Considerations" (2016) ("Carley, Technical and Policy Presentation").

[20] *See, e.g*., Zivin et al, "Spatial and temporal heterogeneity of marginal emissions: Implications for electric cars and other electricity-shifting policies," Journal of Economic Behavior & Organization, at 1 (2014) ("In the upper Midwest . . . charging during the recommended hours at night implies that [plug-in electric vehicles] PEVs generate more emissions per mile than the average car currently on the road. Underlying many of our results is a fundamental tension between electricity load management and environmental goals: the hours when electricity is the least expensive to produce tend to be the hours with the greatest emissions.").

[21] California State Motor Vehicle Pollution Control Standards; Notice of Decision Granting a Waiver of Clean Air Act Preemption for California's Advanced Clean Car Program and a Within the Scope Confirmation for California's Zero Emission Vehicle Amendments for 2017 and Earlier Model Years, 78 Fed. Reg. 2,112 (Jan. 9, 2013). In granting this CAA preemption waiver, EPA declined to consider EPCA preemption because "EPA may only deny waiver requests based on the criteria in section 209(b), and inconsistency with EPCA is not one of those criteria." *Id.* at 2,145.

[22] *See* 42 U.S.C. § 7507.

[23] Carley, Technical and Policy Presentation at 11.

[24] Sanya Carley et al, Indiana University, School of Public and Environmental Affairs, Rethinking Auto Policy: Technical and Policy Suggestions for the 2016-2017 Midterm Review (2016).

[25] 49 U.S.C. §§ 32902(a), (f).

consumer choice by allowing manufacturers to average fuel economy across fleets, as opposed to the California ZEV program's mandate to produce and sell specific volumes of vehicle types.

EPCA expressly preempts all State regulations "related to fuel economy standards or average fuel economy standards for automobiles…." 49 U.S.C. § 32919(a). NHTSA, the agency authorized by Congress to administer EPCA, interpreted the statute in April 2006 as precluding all State regulations of CO_2 from automobiles. NHTSA held that these CO_2 regulations are expressly and impliedly preempted by EPCA as they are inextricably tied to the regulation of fuel economy.[26] Further, it specifically determined that EPCA preempted California's greenhouse gas regulations targeting the automotive sector.[27] NHTSA re-affirmed its interpretation in May 2008.[28] Although President Obama, through a January 26, 2009, memorandum to the Secretary of Transportation and the Administrator of NHTSA, pressured NHTSA to abandon its interpretation of EPCA's plain language, NHTSA has so far refused to do so.[29] Indeed, it would be arbitrary for NHTSA to change its position on preemption in light of the case law supporting it.[30]

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[26] Average Fuel Economy Standards for Light Trucks Model Years 2008-2011, 71 Fed. Reg. 17,566, 17,654-70 (Apr. 6, 2006).

[27] *Id.* at 17,664-67.

[28] Average Fuel Economy Standards, Passenger Cars and Light Trucks; Model Years 2011-2015, 73 Fed. Reg. 24,352, 24,478 (May 8, 2008). In re-affirming its interpretation, NHTSA correctly determined that the U.S. Supreme Court in *Massachusetts v. EPA*, 549 U.S. 497 (2007) did not address EPCA preemption. *See* 73 Fed. Reg. at 24,478. NHTSA also explained its disagreement with two district court decisions that held that there was no relationship between State regulation of greenhouse gases from automobiles and the regulation of fuel economy. *Id.* These holdings not only differ from NHTSA's position but from those of EPA and CARB itself, both of whom see the regulation of fuel economy as the only practicable method of reducing automotive greenhouse gas emissions. *See, e.g.*, CARB Resolution No. 12-35 (Nov. 15, 2012) (explicitly characterizing its ZEV mandates as part of a joint program with EPA to reduce greenhouse gases through fuel economy regulations).

[29] *See* Corporate Average Fuel Economy Standards; Effect Upon State Laws and Regulations, 74 Fed. Reg. 11,993, 11,994 (Mar. 20, 2009) (stating only that it was "reconsidering its views regarding preemption under EPCA"); Proposed Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 74 Fed. Reg. 49,454, 49,635 (Sept. 28, 2009) ("deferring further consideration of the preemption issue" as "unnecessary … at this time….").

[30] *Cent. Valley Chrysler-Plymouth v. CARB*, No. CV-F-02-5017, 2002 WL 34499459, at 3-5 (E.D. Cal. June 11, 2002) (preliminary injunction against earlier version of the California ZEV mandate); *Ophir v. City of Boston*, 647

When it passed EPCA, Congress sought not only to improve fuel economy, but also to preserve consumer choice and allow compliance flexibility for automotive manufacturers. The ZEV mandates, on the other hand, pursue fuel economy at the expense of all other factors, especially consumer demand, and allow California to effectively seize control over a substantial portion of the national automotive market. This will expressly require manufacturers to produce, and dealers to offer for sale, vehicles that consumers have consistently spurned and, if infrastructure development does not improve, may not be able to effectively use. Dealers may be left with electric vehicles ("EVs") on the lots, unwanted, hurting their businesses, and crowding out more desired models. On top of all this, even if better fuel economy and reduced fuel use were Congress's sole focus, mandating one type of technology—electric battery-run vehicles—stifles the development of other, better technologies that might accomplish the same energy goals at lesser cost or lesser harm to the environment. The ZEV States are inhibiting the free market, choosing winners prematurely, and favoring certain industries and technologies over others.

In light of these considerations, the Agencies' reference case is incorrect and, if they continue to use it, it should not be interpreted or construed as waiving or limiting EPCA preemption of California's ZEV mandates.

V. The Benefits of the MY2022-2025 Standards Are Much Lower than Originally Projected

After EPA promulgated the regulation governing the Mid-Term Evaluation, the Supreme Court issued an important decision that should carry significant weight in the Agencies' reconsideration process. In *Michigan v. EPA*, the Court held that "reasoned decision-making" in

F. Supp. 2d 86, 88-94 (D. Mass. 2009) (EPCA preempted municipal ordinance mandating all-hybrid taxi fleet by 2015); *Metro. Taxicab Bd. of Trade v. City of New York*, 633 F. Supp. 2d 83, 85, 101-02 (S.D.N.Y. 2009) (finding city ordinance effectively mandating taxi owners to shift fleets to hybrids to be expressly preempted), *aff'd on modified grounds by Metro Taxicab Bd. of Trade v. City of New York*, 615 F.3d 152 (2d Cir. 2010).

a rulemaking process ordinarily requires an agency to consider the costs of regulation.[31] Specifically, the Court reviewed EPA's Mercury and Air Toxics Standards ("MATS") rule. EPA had promulgated the MATS rule pursuant to Section 112(n)(1) of the CAA, which requires EPA to determine whether such regulation was "appropriate and necessary" in light of the other requirements imposed on power plants in the statute.[32] The Court held that EPA had unreasonably refused to analyze costs when deciding whether it was "appropriate" to regulate hazardous air pollutants from power plants. The Court considered "appropriate" a "broad and all-encompassing term" that required "consideration of all relevant factors."[33]

An agency cannot consider "all relevant factors" if it "entirely fail[s] to consider an important aspect of the problem"—namely, cost.[34] By not paying "at least some attention to cost," the Court found EPA's assessment of "appropriate" regulation unreasonable. The Court explained:

> Agencies have long treated cost as a centrally relevant factor when deciding whether to regulate. Consideration of cost reflects the understanding that reasonable regulation ordinarily requires paying attention to the advantages and the disadvantages of agency decisions. It also reflects the reality that too much wasteful expenditure devoted to one problem may well mean considerably fewer resources available to deal effectively with other (perhaps more serious) problems.

Michigan, 135 S. Ct. at 2707-08.

The costs and benefits of the MY2022-2025 standard should similarly play a central role in the Mid-Term Evaluation. Just as in *Michigan*, the fundamental question for EPA is whether those standards "are appropriate" under the CAA,[35] an issue that necessarily requires weighing

[31] 135 S. Ct. 2699 (2015).

[32] 42 U.S.C. § 7412(n)(1).

[33] *Michigan*, 135 S. Ct. at 2707.

[34] *Id.* at 57.

[35] *See* 82 Fed. Reg. at 39,551.

costs and benefits. EPA recognizes as much, acknowledging that it must consider consumer costs in setting GHG standards for vehicles.[36] Likewise, EPCA charges NHTSA with considering feasibility in setting CAFE standards.[37] Indeed, the 2007 Energy Independence and Security Act had a similar requirement.[38]

EPA last analyzed the costs and benefits of the MY2022-2025 standards when it issued the final standards in 2012. In the Regulatory Impact Analysis ("RIA") for the 2012 rulemaking, the Agencies calculated industry costs of $144-$150 billion, with net benefits of $326 (discounted at 7 percent) to $451 billion (discounted at 3 percent) over the life of the program.[39] The vast majority (approximately 80 percent) of the estimated benefits for the 2012 rulemaking were derived from consumer gasoline cost savings due to improved fuel economy, with the remaining benefits attributed to air quality benefits of reduced tailpipe emissions.[40] To estimate these fuel savings benefits, EPA multiplied the reduced fuel consumption for consumers for each model year covered by the standard by the corresponding estimated average fuel price in that year, using the reference case taken from the Energy Information Administration's ("EIA") Annual Energy Outlook ("AEO") 2012 Early Release. In doing so, EPA noted that these estimates do not account

[36] 77 Fed. Reg. 62,624-01 ("EPA considers such issues as technology effectiveness, its *cost (both per vehicle, per manufacturer, and per consumer)*, the lead time necessary to implement the technology, and based on this the feasibility and practicability of potential standards; the impacts of potential standards on emissions reductions of both GHGs and non-GHGs; the impacts of standards on oil conservation and energy security; *the impacts of standards on fuel savings by consumers*; the impacts of standards on the auto industry; other energy impacts; as well as other relevant factors such as impacts on safety.") (emphasis added).

[37] 49 U.S.C. § 32902(f) (listing "economic practicability" as a factor that DOT "shall consider" in setting CAFE standards).

[38] 49 U.S.C. 32902 (b)(2)(B) requiring the Agencies to promulgate maximum feasible average fuel economy standards for MY 2021-2030.

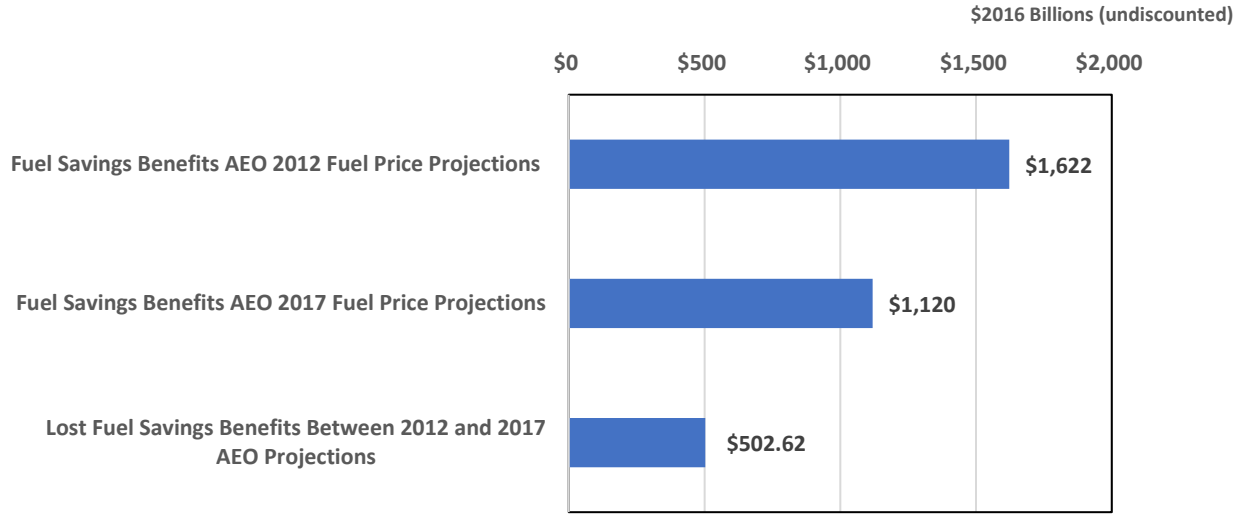
[39] https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EZI1.PDF?Dockey=P100EZI1.PDF, at ii.

[40] *Id.*

for the significant uncertainty in future fuel prices and that monetized fuel savings would be understated if actual fuel prices are higher, or overstated if fuel prices are lower than estimated.

Since 2012, the EIA has issued several updates to its transportation fuel price projections, the latest of which was issued in its AEO for 2017. EIA's current projections of future gasoline prices are substantially lower than previously estimated in 2012. Using those current projections, specifically AEO 2017, shows that $502.60 billion in lifetime undiscounted fuel savings benefits have evaporated due to the lower than anticipated future gasoline prices.[41] Table 1 below illustrates the dramatic loss in fuel savings benefits due to the updated AEO projections by comparing the total undiscounted fuel savings benefits over the life of the program using the AEO 2012 and AEO 2017 projections.

Table 1. Fuel Savings Benefits Comparison
AEO 2012 vs AEO 2017 Fuel Price Projections



[41] *See* Attachment A to these comments, a spreadsheet re-calculating the fuel savings benefits of the standards using the 2017 AEO projections.

If we assume that the costs of the standard as previously analyzed remain unchanged, this significant new information completely changes the cost-benefit calculus for the program. EPA's previous Final Determination for the Mid-Term Evaluation hardly seems appropriate.

VI. Improvements in Domestic Energy Independence Militate Against the MY2022-2025 Standards

In conducting the Mid-Term Evaluation, it is important to recognize the marked improvement in the United States' crude and gasoline production. EPCA was enacted in 1975 on the heels of the gasoline shortages caused by the Organization of Petroleum Exporting Countries ("OPEC") Oil Embargo. Congress amended EPCA in the Energy Independence and Security Act of 2007, mandating, among other things, a minimum 35 miles per gallon CAFE standard by 2020 in light of continued concerns about domestic energy independence.[42] Those concerns remained evident when the Agencies promulgated the MY2022-2025 standards in 2012. Then, the Agencies claimed that a perceived heavy dependence on foreign oil imposed significant costs by distorting world oil prices, being subject to "disruptions to the U.S. economy … by sudden reductions in the supply of imported oil to the U.S.," and "maintaining a U.S. military presence to secure imported oil supplies from unstable regions …."[43]

Advances in technology, however, have continued to improve our global energy position. Presently, the United States imports 10 percent less crude oil than it did in 2012.[44] We are now a net exporter of petroleum products.[45] EIA predicts increasing domestic crude oil production

[42] Public Law 110-140.

[43] *See* 77 Fed. Reg. at 62,669.

[44] EIA, Petroleum & Other Liquids, U.S. Imports of Crude Oil and Petroleum Products (last visited Sept. 14, 2017).

[45] EIA, Oil: Crude and Petroleum Products Explained, Oil Imports and Exports (last visited Sept. 14, 2017).

through at least 2025,[46] and has seen finished motor gasoline exports skyrocket.[47] Crude oil prices in 2016 were at their lowest level since 2004 due to a decade-long surge in tight oil development.[48] By 2040, the International Energy Agency projects that the United States all but eliminates net imports of oil.[49]

If the Agencies continue to place weight on domestic energy security, the MY2022-2025 standards undermine that goal. The CAFE and GHG standards, as well California's ZEV production mandate, require significant deployment of hybrid, plug-in hybrid, and EVs, all of which rely on rare earth elements for batteries. According to the U.S. Geological Survey ("USGS"), domestic production of rare earth elements was zero last year.[50] The quantities of rare earth elements from recycling is "[l]imited," according to USGS, and the United States' reserves of these metals is not only small, but much of those elements are reserved for the U.S. defense purposes.[51] Thus, with virtually no ability to produce its own rare earth elements, the United States has relied on China for 72 percent of its rare earth elements between 2012 and 2015.[52] Yet, the Agencies' 2012 rulemaking preamble specifically stated that "the calculation of energy security benefits does not include any consideration of potential energy security *costs* associated with increased reliance on foreign sources of lithium and rare earth metals for HEVs and EVs."[53]

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[46] EIA, Annual Energy Outlook 2017 (Jan. 2017) at 14.

[47] EIA, Petroleum & Other Liquids, U.S. Exports of Finished Motor Gasoline (last visited Sept. 14, 2017).

[48] *Id.* at 28, 35.

[49] IEA World Energy Outlook 2016 Executive Summary at 6.

[50] USGS, Mineral Commodity Summaries (Jan. 2017) at 134 ("Rare earths were not mined domestically in 2016.").

[51] *Id.* at 134-135.

[52] *Id.* at 134.

[53] *See* 77 Fed. Reg. at 63,002 (emphasis in original).

In the face of this data, and despite its refusal to even examine the energy security implications raised by further reliance on imported rare earth elements, the Agencies saw hybrid, plug-in hybrid, and EVs as "'game changing' advanced vehicle technologies" and engineered "regulatory incentives to promote [their] penetration" into the LDV fleet.[54] From a standpoint of energy security, it is problematic to actively promote vehicles requiring rare earth elements largely imported from foreign countries in order to reduce reliance on domestically available feedstocks and fuels.

VII. Consideration of High-Octane Blends is Inappropriate and Impracticable in the Mid-Term Evaluation

EPA specifically requested comments on advanced fuels technologies, particularly "on the potential for high-octane blends."[55] AFPM members recognize the potential benefits of octane for higher fuel economy. But the issue is far more complex than simply whether "high-octane blends" might improve the efficiency of MY2021-2025 vehicles. There are questions of what octane level, the source of the octane, the infrastructure necessary to produce and deliver such fuel, integrating a new fuel into the fuel supply chain, environmental implications of higher octane options, and EPA's legal authority to mandate octane, either at the engine or fuel level. It would be premature and inappropriate for EPA to rely on potential octane improvements until these issues are more rigorously evaluated.

As a threshold matter, EPA has not considered the multitude of implementation and logistical issues associated with introducing a higher-octane fuel. For instance, depending on the octane standard, the refining sector would need to make substantial capital investments to produce

[54] *See* 77 Fed. Reg. at 62,628.

[55] *See* 82 Fed. Reg. at 39,553.

higher-octane fuel. Policymakers must also consider misfuelling mitigation, compatibility with the existing auto fleet, and the impacts on consumers. In addition, EPA would need to work with the Federal Trade Commission and ASTM to update and harmonize retail pump labels. Finally, a new federal octane standard raises questions about how such a standard would interact with other existing laws, including the Renewable Fuel Standard, national ambient air quality standards, mobile source air toxic standards, and state air quality laws.

In addition to the substantial implementation and technical issues, EPA's legal authority on this subject is murky at best. CAA Section 211(c)(1) authorizes EPA to restrict the sale of ("control"), or outright prohibit, certain fuels or fuel additives.[56] That authority must be exercised only where the Administrator has established that such fuels or fuel additives (1) cause or contribute to air pollution or water pollution that may reasonably be anticipated to endanger the public health or welfare ("endangerment"); or (2) the emission products of such fuels or fuel additives significantly impair the performance of an emission control device or system, either currently in use or to be implemented within "a reasonable time." ("impairment").

It is far from certain whether fuel octane fits within this authority.

AFPM is aware that ethanol producers have requested that EPA use the Mid-Term Evaluation to mandate a higher-octane ethanol blend (E15 or higher). In addition to the general legal and practical prerequisites to regulating octane, as described above, EPA has documented repeatedly the real-world constraints on E15, including in the partial waiver decisions on E15.[57] As EPA notes, both the limited number of retail stations that offer E15 as well as the limited number of vehicles that are able to use E15 constrain additional volumes of this fuel.

[56] 42 U.S.C. §7545(c)(1).

[57] 76 Fed. Reg. 4,662 (Jan. 26, 2011) (MY2001-2006 light-duty vehicles); 75 Fed. Reg. 68,084 (Nov. 4, 2010) (MY 2007 and newer light-duty vehicles).

In addition, several states, including California, currently prohibit the sale of E15 directly or indirectly through emissions limits on fuels. To the extent that the Agencies believe higher octane fuel would enable greater compliance with the standards, such a policy would further balkanize the fuel market and preclude the uniform, national CAFE and mobile source emissions standards that Congress intended.

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AFPM appreciates the opportunity to submit these comments. For the reasons explained above, we believe NHTSA should take the lead with respect to setting fuel economy. As EPA proceeds, it should recognize that the benefits of the higher fuel economy are much lower than under the original rule, that today our nation has significantly more plentiful domestic production of liquid fuels and a relative dearth of raw materials needed to produce EVs, and that mandating octane would be, at best, inappropriate, and potentially problematic for a number of reasons. We look forward to a constructive dialogue with the Agencies on the issues covered in the Mid-Term Evaluation. In the meantime, please feel free to call me with any questions at (202) 457-0480.

Sincerely,

Derrick D. Morgan
Sr. Vice President, Federal, State & Regulatory Affairs

Attachment A

Fuel Savings Per Calendar Year

Calendar Year	Annual Fuel Reductions Associated with the MYs 2012-2016 & 2017-2025 Final Rules (Gallons) - From August 2012 EPA RIA (AEO 2012 ER Data)[1]	Price/Gal of Fuel from AEO 2012($/gal, $2010)[2]	Price/Gal of Fuel from AEO 2012 converted to $2016 ($/gal, $2016)[2]	Price/Gal Fuel from AEO 2017($/gal, $2016)[3]	Delta Price/Gal ($/gal, $2016)	Lost Fuel Benefits Between 2012 EPA RIA and 2017 AEO Projections	Price/Gal of Fuel from AEO 2015 ($/gal, $2013)	Price/Gal of Fuel from AEO 2015 converted to $2016 ($/gal, $2016)[6]	Delta Price/Gal Fuel from AEO 2015 and AEO 2017 (Change from MTE to 2017 AEO Projections)	Adjusted Benefit Between 2015 and 2017 EIA AEO (2016 MTE and 2017 AEO)
	2012-2017 Comparison						2015 to 2017 AEO Projections			
2017	7,620,000,000	3.634167	3.77953368	2.301524	1.47800968	$ 11,262,433,761.60	2.697106	2.80499024	0.50346624	
2018	9,780,000,000	3.65386	3.8000144	2.263908	1.5361064	$ 15,023,120,592.00	2.697544	2.80544576	0.54153776	
2019	12,100,000,000	3.715403	3.86401912	2.477302	1.38671712	$ 16,779,277,152.00	2.704582	2.81276528	0.33546328	
2020	14,600,000,000	3.761796	3.91226784	2.598274	1.31399384	$ 19,184,310,064.00	2.736241	2.84569064	0.24741664	
2021	17,500,000,000	3.781892	3.93316768	2.71491	1.21825768	$ 21,319,509,400.00	2.780842	2.89207568	0.17716568	$ 1,137,327,000.00
2022	20,700,000,000	3.794068	3.94583072	2.825434	1.12039672	$ 23,192,212,104.00	2.816813	2.92948552	0.10405152	$ (171,816,530.00)
2023	24,100,000,000	3.78791	3.9394264	2.855825	1.0836014	$ 26,114,793,740.00	2.858415	2.9727516	0.1169266	$ 58,430,400.00
2024	27,700,000,000	3.822953	3.97587112	2.879634	1.09623712	$ 30,365,768,224.00	2.903081	3.01920424	0.13957024	$ 589,457,580.00
2025	31,600,000,000	3.874564	4.02954656	2.92304	1.10650656	$ 34,965,607,296.00	2.948608	3.06655232	0.14351232	$ 710,279,040.00
2026	35,080,000,000	3.905776	4.06200704	2.957227	1.10478004	$ 38,755,683,803.20	2.996726	3.11659504	0.15936804	$ 5,590,630,843.20
2027	38,560,000,000	3.935321	4.09273384	2.965465	1.12726884	$ 43,467,486,470.40	3.043382	3.16511728	0.19965228	$ 7,698,591,916.80
2028	42,040,000,000	3.959599	4.11798296	2.956468	1.16151496	$ 48,830,088,918.40	3.093316	3.21704864	0.26058064	$ 10,954,810,105.60
2029	45,520,000,000	4.000478	4.16049712	2.980381	1.18011612	$ 53,718,885,782.40	3.145017	3.27081768	0.29043668	$ 13,220,677,673.60
2030	49,000,000,000	4.036	4.197	3.02	1.17744	$ 57,694,560,000.00	$3.20	$3.33	0.308	$ 7,093,800,000.00
					Total	$ 440,673,737,308			Total	$ 46,882,188,029

Fuels Savings by Model Year (Vehicle Lifetime)

Model Year	MY Lifetime Fuel Reductions Associated with the MYs 2012-2016 & 2017 - 2025 Final Rules (Gallons)[4]	Price/Gal of Fuel from AEO 2012($/gal, $2010)[2]	Price/Gal of Fuel from AEO 2012 converted to $2016 ($/gal, $2016)[5]	Price/Gal Fuel from AEO 2017($/gal, $2016)[3]	Delta Price/Gal ($/gal, $2016)	Lost Fuel Benefits Between 2012 EPA RIA and 2017 AEO Projections	Price/Gal of Fuel from AEO 2015 ($/gal, $2013)	Price/Gal of Fuel from AEO 2015 converted to $2016 ($/gal, $2016)[6]	Delta Price/Gal Fuel from AEO 2015 and AEO 2017 (Change from MTE to 2017 AEO Projections)	Adjusted Benefit Between 2015 and 2017 EIA AEO (2016 MTE and 2017 AEO)
	2012-2017 Comparison						2015 to 2017 AEO Projections			
2017	28,700,000,000	3.634167	3.77953368	2.301524	1.47800968	$ 42,418,877,816.00	2.697106	2.80499024	0.50346624	$ 14,449,481,088.00
2018	31,400,000,000	3.65386	3.8000144	2.263908	1.5361064	$ 48,233,740,960.00	2.697544	2.80544576	0.54153776	$ 17,004,285,664.00
2019	34,600,000,000	3.715403	3.86401912	2.477302	1.38671712	$ 47,980,412,352.00	2.704582	2.81276528	0.33546328	$ 11,607,029,488.00
2020	38,800,000,000	3.761796	3.91226784	2.598274	1.31399384	$ 50,982,960,992.00	2.736241	2.84569064	0.24741664	$ 9,599,765,632.00
2021	45,200,000,000	3.781892	3.93316768	2.71491	1.21825768	$ 55,065,247,136.00	2.780842	2.89207568	0.17716568	$ 8,007,888,736.00
2022	50,700,000,000	3.794068	3.94583072	2.825434	1.12039672	$ 56,804,113,704.00	2.816813	2.92948552	0.10405152	$ 5,275,412,064.00
2023	55,800,000,000	3.78791	3.9394264	2.855825	1.0836014	$ 60,464,958,120.00	2.858415	2.9727516	0.1169266	$ 6,524,504,280.00
2024	61,100,000,000	3.822953	3.97587112	2.879634	1.09623712	$ 66,980,088,032.00	2.903081	3.01920424	0.13957024	$ 8,527,741,664.00
2025	66,600,000,000	3.874564	4.02954656	2.92304	1.10650656	$ 73,693,336,896.00	2.948608	3.06655232	0.14351232	$ 9,557,920,512.00
2030		4.036	4.197	3.02	1.17744		$3.20	$3.33	0.308	
2040				3.3			$3.90	$4.06	0.756	
2050										
					Total	$ 502,623,736,008			Total	$ 90,554,029,128

NOTES

1 Regulatory Impact Analysis: Final Rulemaking for 2017-2025 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, Table 7.4-7 Annual Fuel Reductions Associated with the MYs 2012-2016 & 2017-2025 Final Rules, https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EZI1.PDF?Dockey=P100EZI1.PDF, pg 7-35. Data shown for CY2026-2029 is a linear interpolation of the estimates for 2025 and 2030.

2 Annual Energy Outlook 2012 Early Release Table: Petroleum Product Prices Case: Reference Case Petroleum Prices: Transportation: Motor Gasoline, https://www.eia.gov/outlooks/aeo/data/browser/#/?id=12-EARLY2012&region=0-0&cases=early2012&start=2009&end=2035&f=A&linechart=~early2012-d121011b.27-12-EARLY2012&ctype=linechart&sourcekey=0

3 Annual Energy Outlook 2017 Table: Petroleum and Other Liquids Prices Case: Reference case Petroleum Prices: Transportation: Motor Gasoline, https://www.eia.gov/outlooks/aeo/data/browser/#/?id=12-AEO2017&region=0-0&cases=ref2017&start=2015&end=2050&f=A&linechart=ref2017-d120816a.30-12-AEO2017&ctype=linechart&sourcekey=0

4 Regulatory Impact Analysis: Final Rulemaking for 2017-2025 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, Table 7.4-1 MY Lifetime Fuel Reductions Associated with the MYs 2012-2016 & 2017-2025 Final Rules, https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EZI1.PDF?Dockey=P100EZI1.PDF, pg 7-32.

5 Converted from October 2012 dollars to December 2016 dollars using BLS multiplier of 1.04 (see, https://data.bls.gov/cgi-bin/cpicalc.pl?cost1=1&year1=201210&year2=201612)

6 Converted from December 2013 dollars to December 2016 dollars using BLS multiplier of 1.04 (see, https://data.bls.gov/cgi-bin/cpicalc.pl?cost1=1.00&year1=201312&year2=201612)