



The Vehicle Suppliers Association

Comments of
MEMA, The Vehicle Suppliers Association
to the
National Highway Traffic Safety Administration
on the
Corporate Average Fuel Economy Standards for Passenger Cars and
Light Trucks for Model Years 2027–2032 and Fuel Efficiency Standards
for Heavy-Duty Pickup Trucks and Vans for Model Years 2030–2035
Notice of proposed rulemaking
Docket No. NHTSA–2023–0022
October 16, 2023

Introduction

MEMA, The Vehicle Suppliers Association, is the leading trade association in North America for vehicle suppliers, parts manufacturers, and remanufacturers. It has been the voice of the vehicle supplier industry since 1904.

Automotive and commercial vehicle suppliers are the largest employer of manufacturing jobs in the United States employing over 900,000 people throughout the country. Direct, indirect, and induced vehicle supplier employment accounts for over 4.8 million U.S. jobs and contributes 2.5 percent to U.S. GDP.

Member companies conceive, design, and manufacture the OE systems and technologies that make up two-thirds of the value of every new vehicle and supply the automotive aftermarket with the parts that keep millions of vehicles on the road, fueling international commerce and meeting society’s transportation needs. MEMA members are committed to safety and sustainability.

Summary

MEMA supports the goals of NHTSA and the Administration to reduce consumption of petroleum and reduce dependency on foreign oil imports. However, the Agency must make changes to the rule as proposed in order to achieve its goal of reduced fuel consumption.

1. **Regulatory Certainty**

Motor vehicle suppliers depend on regulatory certainty to establish the confidence to continue to invest in research and manufacture of energy saving technologies to meet the nation's goals for energy transformation and vehicle electrification. The realization of these market transformation goals shared by NHTSA and the transportation industry will ensure reduced consumption of petroleum (both foreign and domestically produced).

Regulatory certainty is not simply the publication of a final rule with clear timelines. The rule must be both technologically and financially feasible, reflect and appreciate the technological state of the art, respect current and projected future supply chain challenges, and be a well-crafted rule that will survive future changes in political leadership. This kind of regulatory certainty will ensure manufacturers can realize the full potential of their investments and reduce or eliminate stranded capital. As is mentioned in the proposed rule narrative, the final rule must balance and be consistent with other regulations, in this case from the Environmental Protection Agency (EPA) and California Air Resource Board (CARB).

2. **Interagency Collaboration and Cooperation, not Coordination**

NHTSA states its intent to coordinate the CAFE/HDPUV standards rule with EPA's emissions rules. This is not enough. The previous NHTSA and EPA fuel efficiency rules were not just coordinated, they were *written jointly* and issued as a *single* final rule.

Harmonization of these programs provides regulatory clarity and the certainty needed for OEMs and suppliers to make the necessary technology investment decisions. Program harmonization also creates economies of scale and improves market availability for the needed technologies. Since motor vehicle suppliers are responsible for a significant proportion of research and development of the technologies needed to meet and exceed the standards, any initiative to further align regulatory requirements is equally important to suppliers.

MEMA urges NHTSA to return to this model and jointly collaborate with EPA in writing one final rule. Joint regulatory action will also allow EPA to fill in the gaps in NHTSA's congressional authority regarding EVs.

3. **The Preferred Alternative**

Passenger cars and light trucks should not be subject to the same level of stringency, in terms of fuel economy standards. The current passenger cars and light truck markets have different levels of advanced technology penetration and differ in terms of the extent of technological improvements that can be made. PC2LT4 represents the maximum feasible fuel economy improvement standard for passenger cars and light trucks from MY 2027 to MY 2032.

The proposed standards for HDPUV10 fuel efficiency are stringent and will become even more so in the later years of the implementation of the standards. NHTSA should more carefully analyze the assumptions and conditions needed to ensure feasibility of a compounded 10% efficiency improvement in the outyears.

MEMA appreciates NHTSA's openness to using different constellations of powertrains (BEV, PHEV, Mild Hybrid, ICE, FCEV, etc.) to comply with the standards.

4. Infrastructure Opportunities and Challenges must be Included in the Analyses

In the notice of proposed rulemaking (NPRM) and preliminary regulatory Impact analysis (PRIA) NHTSA has not sufficiently captured the myriad challenges facing investment and installation of a nationwide EV charging infrastructure. This investment is essential to consumer adoption and effective, beneficial electrification of the transportation sector. Regardless of Congressional authority, it is important that NHTSA undertake a thorough assessment of infrastructure needs and clearly illustrate the current shortfalls and future needs of the national EV fleet. NHTSA should also do all it can to promote investment in faster, more reliable EV charging infrastructure and increased electricity generation capacity and delivery. These factors must also be reflected in the PRIA.

5. Concern about Penalty and Fines Estimates

As noted in a preceding statement, regulatory certainty and, subsequently, investment certainty is central to a sound final rule. MEMA notes that money spent on non-compliance fines is money not spent on technology investment or workforce training. It is important to factor these "lost" funds and unrealized improvements into the regulatory impact analysis.

6. Continue FCIV Credit Programs

The supplier community, working independently and in collaboration with OEMs, develop and engineer innovative technologies that contribute to vehicle manufacturers' strategies for real-world GHG and fuel/energy consumption reductions often beyond those measured with standard test procedures. These flexibilities have helped to support industry investment in innovative and forward-looking technologies that provide consumer and environmental benefits. These technologies offer measurable, demonstrable, and verifiable real-world benefits that improve efficiencies and reduce GHG emissions. They also provide an important cost-effective option for OEMs to achieve fuel economy and GHG targets. *NHTSA should not discontinue PC/LT AC credits or off-cycle FCIV credits.*

7. Consider All Fuel and Energy Sources

NHTSA must examine all opportunities to reduce domestic consumption of petroleum. By excluding alternative fuels and energy sources from its analysis, NHTSA omits several key parameters of the full scope of issues. As noted in our comments to the Environmental Protection Agency¹, thorough analysis of all fuel and energy sources should be done to fully inform regulatory decisions. Alternate fuels, with reduced emissions, such as green hydrogen and carbon-neutral renewable fuels should also be included in the rulemaking analysis.

DETAILED COMMENTS

Interagency Cooperation with EPA will Allow NHTSA to Address EVs

NHTSA's focus on internal combustion engine (ICE) efficiency and related petroleum consumption in its analysis does not adequately capture or effectively encourage the significant reductions in consumption caused by the purchase and operation of electric vehicles (EV). If the EPA rulemaking for light duty multi pollutant emissions is correct in its forecasting, over 50% of new car sales will be zero tailpipe emissions vehicles (ZEV) at the end of the regulatory implementation period. This alone will result in a significant market shift in terms of oil consumption, without NHTSA intervention. Were NHTSA to have written the CAFE/HDPUV standard proposed rule in concert with EPA, fuels consumptions reductions from the joint rule would be captured differently. We again urge NHTSA to collaborate on a single, cooperative national program final rule.

Future Compliance Estimates Should be Revised

In the discussion of the baseline no-action alternative in the PRIA NHTSA makes several assumptions. These include "The existing national CAFE and GHG standards are met, and that the CAFE and GHG standards for MY 2026 finalized in 2022 continue in perpetuity" and that "(m)anufacturers will comply with the ZEV/ACC2/ACT standards that California and other states have adopted through 2035."

The first of these assumptions is flawed. In its own analysis of compliance, NHTSA makes clear reference to the frequency of payment of penalties for non-compliance. Ergo, NHTSA cannot assume manufacturers will *meet* the existing CAFE standards broadly when they do not today. As documented in tables such as PRIA Table 6-9, manufacturers are forecast to pay substantial penalties. Some of these will be offset by credits. However, NHTSA also proposes to end multiple credit pathways and the U.S. Department of Energy (DOE) has proposed to devalue the petroleum equivalency factor (PEF) by over 60% which will further challenge CAFE compliance calculations.

For manufacturers to offset the production of non-compliant ICE vehicles with EV credits, millions of EVs will have to be built. For manufacturers to recover their production costs these EVs must also be sold. There are numerous articles and references to EV charging anxiety

¹ <https://www.regulations.gov/comment/EPA-HQ-OAR-2022-0829-0644>

concerns among the populace, yet NHTSA assumes consumers will buy *and operate* EVs as full replacements for ICE vehicles or pay substantial penalties for ICE options instead. The fact that compliance with NHTSA CAFE standards is tied to vehicle *production* and not *sales* compounds the difficulty of estimating actual use of EV versus ICE. NHTSA knows this well but has not adequately factored consumer acceptance and consumer concerns for EV into the PRIA. NHTSA analysis for EV penetration does not adequately include investigation of public concern for the charging and repair support infrastructure needed for EVs post-sale. It is not enough to hope the EV charging and repair infrastructure is fully realized in time to support 2027 EV and sales. NHTSA must identify ways to assist in the realization of an adequate infrastructure if it publishes a final rule that ultimately encourages EV sales.

NHTSA needs to include in its analysis of EV charging infrastructure investment the long lead time for distribution transformers which are essential to adding electric distribution capacity, and thus charging capacity, to sometimes far-flung and remote locations on the national grid. Current production lead times for distribution transformers are from 2-4 years². This is further compounded by the fact that the U.S. Department of Energy (DOE) is in active rulemaking and has proposed to raise minimum energy efficiency standards and associated production costs and lead times for these products with estimates of 1-2 additional years lead time³. DOE estimates publication of a final rule in 2024⁴ and intends it to become effective 1/1/2027⁵. NHTSA must more thoroughly examine electric utility infrastructure investments and risks, with careful examination of energy distribution and delivery hurdles. The PRIA must be updated to reflect these potential shortfalls, and their influence on EV acceptance and sales.

NHTSA's current approach reflects the statutory prohibition against their inclusion of alternative fueled vehicles (including BEVs) in determining the maximum feasible fuel economy level, precisely because the agency has opted to not work in concert with EPA. It is not too late to correct this mismatch. As a result of this choice, it is possible NHTSA is investing too much time examining internal combustion engine (ICE) vehicle technologies in the proposed rule, to the detriment of the overall national energy sustainability Strategy.

While NHTSA does examine renewable energy impacts on the grid and related BEV use (see PRIA section 9.2.4.1) the agency has not examined the growing investment in and potential benefits from renewable and carbon-neutral fuel sources. These energy sources can also significantly reduce domestic oil consumption. We understand NHTSA cannot set fuel consumption reduction *targets* based on increased deployment and use of renewable fuels in this rulemaking, but NHTSA should incorporate and accurately characterize these other fuel alternatives in its analyses. By encouraging and supporting all available clean energy innovations, including these carbon-neutral renewable fuels, the U.S. will benefit from

² <https://www.regulations.gov/comment/EERE-2019-BT-STD-0018-0137>

³ <https://www.regulations.gov/comment/EERE-2019-BT-STD-0018-0055>

⁴ <https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=202304&RIN=1904-AE12>

⁵ <https://www.regulations.gov/document/EERE-2019-BT-STD-0018-0065>

petroleum consumption reduction and reduced net emissions from current and future vehicles.

Infrastructure Opportunities and Needs

Infrastructure is a significant factor in EV adoption and NHTSA should expand the regulatory impact analysis to examine the agency's role in and identify opportunities to encourage and improve the nationwide EV charging infrastructure. This rulemaking should align with national charging infrastructure goals being implemented under the Joint Office of Energy and Transportation⁶. NHTSA should include the Joint Office among those from which it seeks guidance and input to this rulemaking. The public sector can also have a significant role in shaping this adoption through its EV infrastructure implementation decisions.

Publicly funded projects should prioritize Direct Current Fast Chargers (DCFC) for EV vehicle infrastructure because DCFCs benefit all EV users, operators, and site owners/stakeholders by futureproofing EV infrastructure investment and encouraging EV adoption.

NHTSA and the Administration should continue to work with industry and community stakeholders to address charging anxiety and improve driver confidence. One excellent tool to reduce anxiety is the expanded installation and availability of DCFCs, which provide the rapid charging times needed for operator and driver confidence. They also enable quicker and more efficient charging of vehicles and are critical for transitioning drivers from only using EVs for local trips to using EVs for the majority of travel, including medium and long-range drives.

DCFCs can also help to futureproof public charging infrastructure investments by enabling higher, faster levels of energy delivery. This in turn improves the cost benefit analysis and cost of ownership for larger vehicles, including BEV HDPUV. Vehicle batteries are quickly improving in size, chemistry, energy density, and efficiency resulting in increased vehicle range. These improvements will require more availability of fast charging capabilities.

DCFC also enable Vehicle-to-Grid ("V2G") technologies, allowing for bidirectional charging. A bidirectional charger can receive energy (charge) and return energy back (discharge) into the grid. V2G allows electricity to be deployed to areas of need, enabling sustainable grid management, grid resilience, utilization, and national security protection.

Industry has made and will continue to make significant investments in technology and infrastructure to develop, deploy and enable a transformed transportation sector. NHTSA and the Administration must support and help encourage these significant investments.

We appreciate NHTSA's consideration of the EPA (and California Air Resources Board) standards, and we strongly encourage NHTSA to harmonize its CAFE and HDPUV proposals with these standards to the greatest extent possible. Collaboration between these agencies

⁶ <https://driveelectric.gov/>

will help to provide much-needed regulatory certainty to suppliers and enable the industry to advance and achieve the country's environmental goals.

Vehicle Technology Credits

Consistent with our recommendations to EPA, MEMA urges NHTSA to maintain PC/LT A/C efficiency and off-cycle Fuel Consumption Improvement Values (FCIVs) for EVs and ICE vehicles through at least MY 2032. The supplier community, working independently and in collaboration with OEMs, develop and engineer innovative technologies that contribute to vehicle manufacturers' strategies for real-world GHG and fuel/energy consumption reductions often beyond those measured with standard test procedures. These flexibilities have helped to support industry investment in innovative and forward-looking technologies that provide consumer and environmental benefits. These technologies offer measurable, demonstrable, and verifiable real-world benefits that improve efficiencies and reduce GHG emissions. They also provide an important cost-effective option for OEMs to achieve fuel economy and GHG targets.

These programs are not loopholes and do not distort the market but instead recognize technologies that are not measured accurately on the existing test-cycles. These technologies are often more cost effective than other available technologies to reduce pollutant emissions. It is important that the MY27+ programs allow a variety of regulatory tools to broaden compliance pathways for vehicles to manage their product mix during this transition period.

Therefore, we encourage NHTSA, in coordination with EPA, to recognize the important contribution these flexibilities make to the overall goals of the regulations, especially during this technological transition period. These flexibilities play an important role moving forward for both ICE and EVs.

The agency, upon receiving no additional comments on cost analysis utilized for the prior CAFE standards, has decided to utilize the same analysis for this rulemaking, occurring five years later. MEMA disagrees with this approach. Significant changes to the supply chain have been occurring due to global market forces and the pandemic. Supply chain risk, investment, reorientation, and restructuring have greatly changed since 2018. NHTSA should reexamine this and rewrite much of the 2018 playbook. Doing so would better reflect the challenges that face suppliers, OEMs, and consumers alike. Failure to account for the significant changes that have occurred on a global scale since 2018 results in a flawed analysis that does not properly reflect the true costs faced by all members of the value chain.

Technology Pathways

NHTSA's analysis predicted a rise in HDPUV PHEV use by 1.5% in all three sensitivity cases. The resulting assumption is there are no differences in social costs and benefits when varying HDPUV availability by year. We disagree with the assertion that HDPUV PHEV use will remain at 1.5% regardless of sensitivity case. PHEVs, particularly in the HDPUV segment, can meet an

important need, by reducing reliance on heavy and costly batteries to provide ample vehicle driving range, especially when towing. PHEVs have been proven to improve vehicle driving range, with a smaller battery. For these reasons and due to the growing demand for this product, we see potential for a greater focus on PHEVs in the HDPUV segment by 2030 than NHTSA predicts in this proposal. Customers who purchase PHEVs are more likely to utilize the electric component of the vehicle. Therefore, NHTSA's analysis must strike a better balance to reflect consumer behavior, rather than evaluating these vehicles solely on their gas-powered capabilities. Additionally, there are a great number of technologies, such as range extenders, that can be used to improve the electric driving range of heavy-duty pickup trucks. In short, there is great value in using PHEVs and a mix of other powertrains that enable extended range, to supplement ICE and BEV vehicles in the HDPUV vehicle segment. However, this value is not properly captured in NHTSA's analysis. We urge the agency to capture the full value of PHEVs and other powertrains in their analysis.

The agency argues that BEV phase-in caps are necessary to ensure manufacturers produce higher-range BEVs, rather than the most cost-effective models available today. We disagree. Phase-in caps can be a disadvantage for suppliers, as they would keep the production volume of BEV/FCEV technologies low. Phase-in caps make it more difficult to meet the proposed standards, by constraining the ability of the industry to pursue all compliance options. A better approach for the supplier industry would be to just launch those vehicles at later years, when battery and fuel cell technology is more advanced, and remove the phase-in caps altogether.

Consumer Response

Fuel efficiency standards can have diffuse impacts on vehicle retirement rates, as a result of changes to new vehicle prices and sales. NHTSA models the retirement of HDPUVs similarly to pick-up trucks, citing a small sample size of HDPUVs and similar vehicle characteristics and usage. We disagree with NHTSA's approach. In this analysis of the useful life of HDPUVs and light trucks, we believe it is important to draw a distinction between the average vehicle use case and the fleetwide average, in both vehicle categories.

From communications with manufacturers, we have one member who has heard that about 25 percent of their fleet remains active, at a rate of over 200 percent of the average vehicle's useful life. Overall fleets are expected to age and vehicles to be used longer unless regulatory pressure forces early (pre-deadline) replacements. However, we understand that OEMs are better positioned to share their experience with retirement of vehicles from their respective fleets.

We believe that NHTSA's use of vehicle footprint as the attribute over which to vary passenger car and light truck stringency gives larger vehicles an advantage over smaller vehicles, allowing the U.S. to sell larger vehicles more easily. However, we recognize that the

CAFE proposal at hand would increase the fuel economy standards for light trucks and light heavy-duty trucks, bringing these vehicle segments to a closer level of stringency to what lighter vehicles face.

Emissions/Economic Impact

NHTSA assumes that domestic fuel consumption will lead to a decline in global supply, regardless of U.S. fuel production rates. The International Energy Agency (IEA) disagrees with this assumption. They forecast petroleum demand peaking in 2025 and then decreasing⁷. Furthermore, per our opening remarks, investment in carbon-neutral renewable fuels will also reduce domestic consumption of petroleum. NHTSA must revise this assumption and expand the analysis accordingly. NHTSA is statutorily constrained from considering alternative methods of compliance, such as BEVs and alternate fuels, when formulating CAFE and HDPUV standards. As a result, NHTSA's standards are unable to reflect the reality of the market, which is already turning away from gasoline-powered ICE vehicles. This restriction should be overcome.

Due to the availability of vehicle financing, the agency has chosen to exclude financing as a cost to consumers. We disagree with this approach. The cost of financing should be included in the purchasing decision analysis, particularly because of the recent and anticipated continued rise in interest and lending rates. Interest rates directly impact purchasing decisions and current rates are not static. Recent and anticipated inflation has also resulted in higher vehicle prices, which the agency expects to increase as manufacturers pass increased costs to consumers. Therefore, by the agency's own admission, financing should continue to be considered as a cost to consumers. Similarly, the rising inflation in the U.S. economy must not be ignored and should be added to the RIA.

NHTSA utilizes social cost of greenhouse gas (SC-GHG) values calculated by an IWG that includes the DOT. However, the agency notes that understanding of SC-GHG is still evolving, with additional research emerging from both academia and federal sources, like the EPA. NHTSA should not include SC-GHG in its rulemakings until such time a globally accepted model is agreed upon. NHTSA's programs are intended to increase fuel efficiency and reduce dependency on foreign oil. While positive externalities, such as emission reductions, might result, the agency should not be including such externalities into its cost-benefits analysis until a global consensus is reached.

While the agency recognizes that supply chain risks can impact the ability of manufacturers to choose all compliance pathways, such as BEVs, NHTSA does not account for these challenges in their analysis. We disagree. NHTSA should include supply chain risks and

⁷ See the IEA Global EV Outlook 2023 Executive Summary: <https://www.iea.org/reports/global-ev-outlook-2023/executive-summary>

forecasts for material availability in its analysis. Access to critical minerals is central to important compliance pathways, therefore the agency should be considerate of supply chain risks in their cost-benefit analysis. The EPA emissions rulemakings offer numerous resources. NHTSA should work with EPA to examine and develop a shared outlook for supply chain considerations.

NHTSA notes that without considering electrification and other technologies, more stringent standards will not be technologically feasible. We agree, and NHTSA should not exclude electrification in its analysis. The regulatory outcome must balance consumer demands and utility along with technological feasibility. Otherwise, the agency is constrained from considering the full menu of compliance options in its analysis. As a result, the agency's proposed rule does not fully capture consumer demand for these options, like BEVs or carbon-neutral fuels. As federal funding from legislation like the IRA and IIJA is invested in building up EV and alternate fuels infrastructure and charging anxiety decreases, consumer demand for such options will increase. It is important that NHTSA's fuel efficiency standards reflect the demands of consumers. As the agency notes, there are also competing standards from CARB and EPA, that are already ensuring increased production of ZEVs. A NHTSA rulemaking that is unable to consider all compliance methods forces continued investment in technologies that other regulatory bodies are beginning to regulate off the market.

Conclusion

MEMA supports the goals of NHTSA and the Administration to reduce consumption of petroleum and reduce dependency on foreign oil imports. We appreciate this opportunity to provide comments on this important rulemaking proposal. We and our members are always happy to assist the agency by answering any questions or providing additional technical resources. For additional information please contact Alex Boesenberg, vice president of regulatory affairs, MEMA, The Vehicle Suppliers Association, at aboesenberg@mema.org.