



**ZERO EMISSION
TRANSPORTATION
ASSOCIATION**

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National Highway Traffic Safety Administration

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RE: Notice of Intent to Prepare an Environmental Impact Statement for Model Years 2027 and Beyond Corporate Average Fuel Economy Standards and Model Years 2029 and Beyond Heavy-Duty Pickup Trucks and Vans Vehicle Fuel Efficiency Improvement Program Standards, Docket No. NHTSA–2022–0075

The Zero Emission Transportation Association (ZETA) is an industry-backed coalition of member companies spanning the entire electric vehicle (EV) supply chain. Together with our members, we advocate for 100% EV sales by 2030. We are committed to enacting policies that drive EV adoption, create hundreds of thousands of jobs, drastically improve public health, and significantly reduce carbon pollution.

As the National Highway Traffic Safety Administration (NHTSA) prepares and issues a Draft Environmental Impact Statement (DEIS) and the concurrent Notice of Proposed Rulemaking (NRPM), we appreciate the opportunity to provide further analysis on the Corporate Average Fuel Economy (CAFE) standards for light-duty vehicles beyond Model Year (MY) 2027 and on fuel efficiency (FE) standards for MYs 2029 and beyond for heavy-duty (HD) pickup trucks and vans.

The Energy Policy and Conservation Act requires the Secretary of Transportation to “establish average fuel economy standards at least 18 months before the beginning of each model year and to set them at ‘the maximum feasible average fuel economy level that . . . the manufacturers can

achieve in that model year.”¹ Although NHTSA may be limited in explicitly considering EVs when assessing the maximum feasible level of fuel economy improvement for passenger cars and trucks, NHTSA should nevertheless aim to drive electrification in the market by implementing the most stringent standards possible.

NHTSA can achieve this in part by updating the mathematical function by which it establishes fuel economy standards. Both the National Academy of Sciences and NHTSA itself have previously discussed the possibility of updating the standard-setting function to account for additional attributes within the confines of the statute.² Per previous NHTSA discussion in the prior CAFE rulemaking, one potential example would be to set standards as a function of work done by electric motors in the vehicle, among other attributes.³ Recognizing additional attributes that reflect or relate to rapidly accelerating trends in favor of vehicle electrification will ensure the CAFE program remains relevant, binding for the industry, and fit for its statutory purpose into the future.

Similar statutory restrictions do not necessarily govern fuel efficiency improvement standards for heavy-duty vehicles. NHTSA should develop maximum feasible standards for the HD fleet that, as far as possible under the statute, account for the fuel economy of HD zero-emission vehicles to ensure a program that keeps pace with the rapid technological changes underway in the HD market driven in part by state-level action including the Advanced Clean Trucks rule. Industry also anticipates that the U.S. Environmental Protection Agency (EPA) will develop updated companion standards soon to limit greenhouse gas emissions from heavy-duty vehicles (HDVs) further. NHTSA must align its program with those rules.

More stringent standards will incentivize all auto manufacturers to produce more EVs—not strive to make inherently inefficient internal combustion engine vehicles (ICEVs) marginally more efficient. Expanding EV adoption is a powerful tool for reducing transportation emissions, which are the largest source of emissions across all economic sectors.⁴ We look forward to working with the Administration to ensure a future where there is a dramatic reduction of fossil-fuel dependence, on-road pollution, and greenhouse gas (GHG) emissions. These goals are consistent with the President’s Executive Order (EO) 13990, which directs federal agencies to address federal regulations and other actions put into place during the previous presidential administration and immediately begin work to confront the climate crisis. EO: 13990 also

¹<https://www.federalregister.gov/documents/2022/08/16/2022-17558/notice-of-intent-to-prepare-an-environmental-impact-statement-for-model-years-2027-and-beyond>

² National Academy of Sciences, Engineering, and Medicine, *Assessment of Technologies for Improving Light-Duty Vehicle Fuel Economy 2025-2035* (2021), 13-415.

³ Corporate Average Fuel Economy Standards for Model Years 2024-2026 Passenger Cars and Light Trucks, 86 Fed. Reg. 169, 49,631 (Sep. 3, 2021) (revising 49 C.F.R. Parts 531, 533, 536, and 537).

⁴<https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#:~:text=The%20primary%20sources%20of%20greenhouse,share%20of%20greenhouse%20gas%20emissions>

includes a directive for NHTSA and EPA to review the SAFE Vehicles Final Rule and revise CAFE standards.⁵

Current EV Market and Landscape

Passenger EV sales continue to rise sharply in the years ahead as policy pressure increases, more models hit the market, and consumer interest takes off. As a result, BloombergNEF predicts that plug-in vehicle sales will rise from 6.6 million in 2021 to 20.6 million in 2025. By 2025, plug-in vehicles will represent 23% of new passenger vehicle sales globally, up from just under 10% in 2021.⁶

Other analysts anticipate similar trends. McKinsey's most-likely scenario anticipates that EVs will make up 53%—just over half—of all U.S. passenger EV sales by 2035.⁷ This trend appears even more likely given investments in EV technology at the federal level due to the passage of the Inflation Reduction Act, the Infrastructure Investment and Jobs Act, and state legislative action to phase out new ICEV sales,⁸ and growing commitments by incumbent OEMs to transition to all-electric offerings. California's vote to ban the sale of new gas cars by 2035, in particular, could have wide-reaching implications for the national EV market, as the state frequently sets the trend for vehicle standards—and constitutes the largest vehicle market in the country.⁹ In fact, several states anticipate adopting California's new zero-emission vehicle regulations this calendar year, with more likely to follow.

Deloitte also notes that battery EVs already outperform gas-powered vehicles globally and predicts that EVs will make up the vast majority—81%—of worldwide passenger vehicle sales by 2030.¹⁰ This growth in demand will be matched by supply: by 2026, IKT Markit predicts that 46 brands will offer 130 models to the U.S. consumer.¹¹

Emerging Technologies

EVs are proving popular amongst consumers, as indicated by the diversity of models available now, and we anticipate EV adoption will continue more quickly than expected. Transportation electrification will improve fuel economy throughout the country: EVs are cleaner to operate than ICEVs, regardless of how their electricity is produced. Therefore, EVs reduce emissions per mile relative to ICEVs:¹² A Wood Mackenzie study found that a typical mid-size EV generates 67% fewer GHG emissions than an ICEV over the vehicle's lifetime. Furthermore, the

⁵<https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/executive-order-protecting-public-health-and-environment-and-restoring-science-to-tackle-climate-crisis/>

⁶ <https://about.bnef.com/blog/net-zero-road-transport-by-2050-still-possible-as-electric-vehicles-set-to-quintuple-by-2025/>

⁷<https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/a-turning-point-for-us-auto-dealers-the-unstoppable-electric-car>

⁸<https://www.pbs.org/newshour/show/californias-move-to-ban-sales-of-new-gasoline-fueled-cars-could-spread-to-other-states#:~:text=In%20a%20historic%20vote%20last,nationwide%20shift%20to%20electric%20vehicles.>

⁹ *ibid*

¹⁰<https://www2.deloitte.com/us/en/insights/focus/future-of-mobility/electric-vehicle-trends-2030.html>

¹¹<https://www.reuters.com/article/us-autos-electric-forecast/outside-of-tesla-future-ev-sales-in-u-s-may-be-thin-for-most-brands-study-idUSKCN1SZ201>

¹² National Academies of Sciences, Engineering, and Medicine 2021. Assessment of Technologies for Improving Light-Duty Vehicle Fuel Economy 2025-2035. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26092>.

United States' grid is only getting cleaner. Improvements in electricity generation technology will continue to lower the lifecycle emissions of EVs—unlike ICEVs, which have a static, fossil fuel-based carbon footprint.¹³ ZETA encourages the Administration to consider this data as it drafts the next phase of CAFE and fuel efficiency standards.

Environmental and Health Imperative of Decarbonization

Electric vehicles present the strongest pathway to decarbonizing our transportation sector—unlocking tangible environmental and public health benefits. The transportation sector accounts for 29% of all GHG emissions,¹⁴ and light-duty vehicles, in particular, are responsible for 57% of transportation emissions.¹⁵

Despite accounting for a minority (10%) of vehicles on the road, medium- and heavy-duty vehicles have a disproportionate impact on transportation-sector emissions.¹⁶ Medium- and heavy-duty vehicles are responsible for over a quarter of this sector's environmental impact,¹⁷ and account for 57% of particulate matter pollution.¹⁸ On top of that, heavy-duty vehicle emissions are only getting worse: between 1990 and 2019, GHG emissions from heavy-duty trucks and buses grew by 93% and 162%, respectively.¹⁹

EPA has reported that road emissions are linked to long-term respiratory, cognitive, and autoimmune impairment. Likewise, the intersections of negative health outcomes, their link to transportation-related pollution, and the ties to race are well-documented. In 2019, a national study found that in 2010, people of color experienced 37% more NO₂ exposure than white populations and had 2.7 times higher concentrations of NO₂ within their communities. The same study found that those deaths were preventable: had these communities of color been exposed to the same level of NO₂ as white populations, 5,000 deaths from heart disease could have been avoided.²⁰

Cost Savings and Economic Advantages of Electrification

Though some EVs may have higher sticker prices than their gas-powered counterparts, numerous analyses have shown that EVs typically cost less over their lifetime and retain value longer. Most passenger EVs offer \$6,000–\$10,000 in lifetime savings,²¹ and ZETA's monthly report found that passenger EVs are 3-5 times cheaper to drive per mile than gas cars.²² Likewise,

¹³ <https://www.woodmac.com/press-releases/evs-up-to-67-less-emissions-intensive-than-ice-cars/>

¹⁴ <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#:~:text=The%20primary%20sources%20of%20greenhouse,share%20of%20greenhouse%20gas%20emissions.>

¹⁵ <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>

¹⁶ <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>

¹⁷ *ibid*

¹⁸ <https://www.ucsusa.org/sites/default/files/2019-12/ReadyforWorkFullReport.pdf>

¹⁹ <https://www.epa.gov/greenvehicles/archives-fast-facts-us-transportation-sector-greenhouse-gas-emissions>

²⁰ <https://www.washington.edu/news/2017/09/14/people-of-color-exposed-to-more-pollution-from-cars-trucks-power-plants-during-10-year-period/>

²¹ <https://advocacy.consumerreports.org/wp-content/uploads/2020/10/EV-Ownership-Cost-Final-Report-1.pdf>

²² <https://8829857.fs1.hubspotusercontent-na1.net/hubfs/8829857/Zeta%20Report%20August%20v1.pdf>

light-duty EVs' purchase price is expected to reach parity with new ICEVs by 2023.²³ Together, these factors have contributed to an unparalleled growth in sales that continues to surpass expectations. Additionally, electrifying the HDV segment provides significant economic benefits. Due to inherently volatile gasoline and diesel prices, a heavy-duty electric vehicle's total cost of ownership is frequently lower than its low-efficiency, gas-powered counterpart.

Overall, the reductions in transportation pollution that would come as a result of a widespread transition to zero-emission transportation could save \$72 billion in avoided health harms, save approximately 6,300 lives, and prevent over 93,000 asthma attacks and 416,000 lost work days each year.²⁴ Disadvantaged communities, and communities of color that are historically located near transportation corridors, would benefit most from this improvement.

Conclusion

Accelerating the EV transition by implementing more stringent CAFE and FE standards will streamline decarbonization and act as a key driver of environmental justice. Likewise, transportation electrification across all vehicle segments—light, medium, and heavy-duty—will serve to bring the U.S. transportation sector in line with President Biden's goals for a cleaner, climate-conscious future and will contribute to the growth of a domestic EV auto sector that can revive manufacturing communities across the nation.

We thank you for your consideration.



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²³ <https://www.bloomberg.com/hyperdrive>

²⁴ <https://www.lung.org/getmedia/99cc945c-47f2-4ba9-ba59-14c311ca332a/electric-vehicle-report.pdf>