



**ZERO EMISSION  
TRANSPORTATION  
ASSOCIATION**

October 18, 2022

**National Highway Traffic Safety Administration**

Docket Management Facility, M-30  
U.S. Department of Transportation  
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RE: Notice of Intent To Prepare an Environmental Impact Statement for Model Years 2030 and Beyond New Medium- and Heavy-Duty Fuel Efficiency Improvement Program Standards

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.

Pursuant to the Energy Independence and Security Act of 2007 (EISA), the National Highway Traffic Safety Administration (NHTSA) will propose fuel economy (FE) standards for Model Years (MY) 2030 and beyond for medium-and heavy-duty vehicles (MHDVs). As a result, NHTSA will propose “Phase 3” of the Medium and Heavy Vehicle Fuel Efficiency Standards program.

ZETA recommends NHTSA develop maximum feasible standards for the “Preferred Alternative.” NHTSA must consider the improved fuel economy of zero-emission heavy duty (HD) vehicles and rapid technological changes in the HD market as it works to create a program that keeps pace with these transformative changes. More stringent federal standards will incentivize all auto manufacturers to produce more EVs—not strive to make inherently inefficient internal combustion engine vehicles (ICEVs) marginally more efficient. The transportation sector accounts for 29%<sup>1</sup>—the majority—of the economy’s GHG emissions,<sup>2</sup> and expanding EV adoption is a powerful tool for reducing transportation’s environmental impact. We look forward to working with the Administration to ensure a future with dramatic reductions

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<sup>1</sup><https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#:~:text=The%20primary%20sources%20of%20greenhouse,share%20of%20greenhouse%20gas%20emissions>.

<sup>2</sup><https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#:~:text=The%20primary%20sources%20of%20greenhouse,share%20of%20greenhouse%20gas%20emissions>

of fossil-fuel dependence, on-road pollution, and greenhouse gas (GHG) emissions. These goals are consistent with the President's Executive Order (EO) 14037, which directs NHTSA and the Environmental Protection Agency (EPA) to take actions under EISA and the Clean Air Act to set standards for light-, medium-, and heavy-duty vehicles as appropriate and consistent with applicable law.

## **Current Medium- and Heavy Duty (MHDV) Market and Landscape**

NREL found that heavy-duty electric vehicles (HDEVs) will be cheaper to purchase, operate, and maintain than fossil fuel-powered HDVs by 2035.<sup>3</sup> Continuing improvements to ZEV technologies will allow HDEVs to become even cheaper and more accessible over the next decade.<sup>4</sup> 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, growing commitments by incumbent OEMs to transition to all-electric offerings, and state legislative action to phase out new ICEV sales.<sup>5</sup> In July, seventeen states, D.C., and the province of Quebec formed a coalition committed to electrifying 30% of new trucks and buses. Nevada, in particular, committed to electrifying 100% of all new trucks and buses by 2050.<sup>6</sup>

## **Environmental and Health Imperative of Decarbonization**

Electric vehicles present the strongest pathway to decarbonizing our transportation sector and unlocking tangible environmental and public health benefits. Electrifying this vehicle segment will improve public health, minimize GHG emissions, and reduce the country's fossil fuel reliance and net energy consumption. Each year, more than 12.2 million MHDVs across the U.S. travel 297 billion miles and consume 46 billion gallons of gasoline and diesel.<sup>7</sup> HDVs produce 24.4% of all emissions across the transportation sector, making them the single largest contributors to U.S. emissions of particulate matter (PM<sub>2.5</sub>), NO<sub>x</sub>, volatile organic compounds (VOC), and carbon dioxide (CO<sub>2</sub>).

With an average lifespan of 33 years, most heavy-duty vehicles (HDVs) spend more time and miles on the road before retirement than light-duty vehicles. As a result, failing to electrify these vehicles means that fossil fuel-powered MHDVs rolling off the assembly line today will remain on the road well beyond 2050, adding hundreds of thousands of vehicle miles and associated deadly emissions over the coming decades. All of these elements are linked to long-term respiratory, cognitive, and autoimmune impairment. Overall, HDV emissions are getting worse:

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<sup>3</sup> [https://www.google.com/url?q=https://www.nrel.gov/docs/fy22osti/82081.pdf&sa=D&source=docs&ust=1651682526583368&usg=AOvVaw2fO\\_IyMdhtnFT-I4P6iJeD](https://www.google.com/url?q=https://www.nrel.gov/docs/fy22osti/82081.pdf&sa=D&source=docs&ust=1651682526583368&usg=AOvVaw2fO_IyMdhtnFT-I4P6iJeD)

<sup>4</sup> <https://www.energy.gov/articles/doe-projects-zero-emissions-medium-and-heavy-duty-electric-trucks-will-be-cheaper-diesel#:~:text=WASHINGTON%2C%20D.C.%20%E2%80%94%20The%20U.S.%20Department,diesel%2Dpowered%20combustion%20engine%20vehicles>

<sup>5</sup> <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>

<sup>6</sup> <https://electrek.co/2022/04/01/nevada-pledges-to-electrify-all-new-trucks-and-buses-by-2050/>

<sup>7</sup> <https://drive.google.com/file/d/1N8tQp0v1RPK86Kle08ZQ83rKsY4Ja5Tx/view>

between 1990 and 2019, GHG emissions from heavy-duty trucks and buses grew by 93% and 162%, respectively.<sup>8</sup>

Frontline communities will benefit the most from MHDV electrification. Members of these communities are disproportionately likely to live near highways and suffer from poor air quality, and this proximity to transportation corridors exposes them to unnecessary health risks and higher healthcare costs.<sup>9</sup> Overall, the reductions in pollution that would come as a result of a widespread transition to zero-emission transportation could save \$72 billion in avoided health harms, approximately 6,300 lives, and prevent over 93,000 asthma attacks and 416,000 lost work days each year.<sup>10</sup>

Beyond negative health impacts, transportation-based pollution damages the environment in a number of ways. Reactions between VOCs and NO<sub>x</sub> emitted by diesel vehicles form dangerous ground-level ozone, creating smog that leaves agricultural crops and forests particularly susceptible to stunted growth and a decreased ability to sequester CO<sub>2</sub>. Likewise, nitric acid, another tailpipe pollutant, forms acid rain that leaches into the ground and waterways. Perhaps the most dramatic effect of diesel burning is its emission of global warming-causing GHGs. Global warming causes extreme weather patterns, reductions in air quality, a rise in sea levels, and leads to widespread species extinction.<sup>11</sup>

### **Cost Savings and Economic Advantages of Electrification**

Electrifying HDVs also presents several economic benefits. HDEVs' total cost of ownership is lower than that of comparable fossil fuel-powered HDVs, especially amidst record-high gasoline and diesel prices. HDV electrification is also precipitating tremendous job creation. A 2019 study found that in California alone, policies designed to electrify MHDVs could generate 1.31 million more job-years than the status-quo.<sup>12</sup> The charging infrastructure necessary to accommodate this transaction alone could create more than 29,000 jobs across the country.<sup>13</sup>

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,<sup>14</sup> and ZETA's monthly report consistently finds that EVs are vastly cheaper to fuel per mile than gas cars—even as gas prices fluctuate.<sup>15</sup> Together, these factors have contributed to an unparalleled growth in sales that continues to surpass expectations.

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<sup>8</sup> <https://www.epa.gov/greenvehicles/archives-fast-facts-us-transportation-sector-greenhouse-gas-emissions>

<sup>9</sup> <https://www.smithsonianmag.com/history/how-federal-government-intentionally-racially-segregated-american-cities-180963494>

<sup>10</sup> <https://www.lung.org/getmedia/99cc945c-47f2-4ba9-ba59-14c311ca332a/electric-vehicle-report.pdf>

<sup>11</sup> <https://www.epa.gov/dera/learn-about-impacts-diesel-exhaust-and-diesel-emissions-reduction-act-dera>

<sup>12</sup> [https://calstart.org/wp-content/uploads/2022/02/ZIO-ZETs-Report\\_Updated-Final-II.pdf](https://calstart.org/wp-content/uploads/2022/02/ZIO-ZETs-Report_Updated-Final-II.pdf)

<sup>13</sup> <https://secureenergy.org/the-commanding-heights-of-global-transportation-quantifying-the-employment-effects/>

<sup>14</sup> <https://advocacy.consumerreports.org/wp-content/uploads/2020/10/EV-Ownership-Cost-Final-Report-1.pdf>

<sup>15</sup> <https://8829857.fs1.hubspotusercontent-na1.net/hubfs/8829857/Zeta%20Report%20August%20v1.pdf>

Relatedly, the transportation industry is also experiencing considerable shortages of available truck drivers, and HDV electrification could ameliorate this crisis. The trucking industry is an estimated 80,000 drivers short, with many long-term employees citing stress as a reason for quitting.<sup>16</sup> This trend is expected to worsen by 2030 as the industry struggles to meet the growth in freight demand.<sup>17</sup> Drivers consistently report higher satisfaction with the EV driving experience compared to fossil fuel-powered vehicles, however, and trucking is expected to benefit from the same trend. EVs provide a smoother ride with minimal vibrations, less noise pollution, and a high-tech driving experience free from the fumes of diesel exhaust.<sup>18</sup> As a result, the health benefits associated with eliminating diesel fume inhalation and improved experience from a quieter drivetrain may reduce healthcare costs and increase driver retention.<sup>19</sup>

## **Conclusion**

Accelerating the EV transition by implementing more stringent 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.

Sincerely,



**Joseph Britton**

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<sup>16</sup> <https://www.nytimes.com/2021/11/09/us/politics/trucker-shortage-supply-chain.html>

<sup>17</sup> <https://www.trucking.org/news-insights/ata-chiefeconomist-pegs-driver-shortage-historic-high>

<sup>18</sup> <https://www.trucks.com/2021/07/26/electric-trucks-cost-driver-benefits/>

<sup>19</sup> <https://www.c2es.org/wp-content/uploads/2020/02/Insights-On-Electric-Trucks-For-Retailers-And-Trucking-Companies.pdf>