

June 16, 2023

The Honorable Michael S. Regan
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Ave, NW
Washington, D.C. 20460

**RE: Docket ID No. EPA-HQ-OAR-2022-0985 – Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles—Phase 3\_**
Dear Administrator Regan:

On behalf of the American Bus Association (ABA), we submit the following comments in response to the Notice of Proposed Rulemaking: Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles—Phase 3, Docket ID No. EPA-HQ-OAR-2022-0985, published on April 27, 2023 (Notice).

The ABA represents the private over-the-road bus industry, including both vehicle manufacturers and vehicle operators, along with those businesses who support motorcoach operations. All of these entities produce, distribute, maintain, or operate class 7/8 heavy-duty diesel engines and vehicles. Additionally, ABA also represents group travel and tour entities, both public and private, who rely on motorcoach operations and their passengers. We appreciate the opportunity to provide comments in this proceeding and appreciate the engagement the Environmental Protection Agency’s (EPA) Office of Air and Radiation (OAR) has undertaken with the motorcoach industry regarding engine emissions, particularly with regard to the recently finalized Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards final rule, Docket EPA-HQ-OAR-2019-0055 (Engine Rule) and its derate schedule. The EPA’s recognition in the Engine Rule of the diverse nature of real world fleets, and particularly passenger carrier fleet operations, along with efforts to address operator frustrations in the final rule by improving both the type and amount of information operators receive as well as developing appropriate inducement schedules, were welcomed outcomes by the passenger carrier industry. In line with these efforts and outcomes, ABA seeks similar consideration and flexibility by the EPA in this proceeding.

In reviewing this proposal, ABA has concerns with the future composition of fleets and the adoption of specific technologies, the capacity of the existing and future infrastructure to support selected technologies, and we believe that the net environmental benefit of a vehicle and its entire lifecycle should be considered within the context of this proposal.

**Fleet Composition and Infrastructure**

The Notice lays out several future fleet adoption rates for zero emissions vehicles (Table ES-3 and IF-3). While modestly aggressive estimates, the estimates significantly discount the current and future state of the infrastructure. Based on the grant programs outlined and recently unveiled under the Inflation Reduction Act (IRA) and the Infrastructure Investment and Jobs Act (IIJA), the technology suite being prioritized for adherence with these future goals appears to be electric vehicles. However, the research has not yet been finalized in terms of what plug technology is best suited for heavy-duty vehicle charging. In addition, according to the US Department of Energy’s Alternative Fuels Data Center (<https://afdc.energy.gov/fuels/electricity_infrastructure.html>), Direct Current (DC) Fast Charging Stations would be needed to support heavy-duty vehicle charging given their current operational models. There are currently less than 4800 of those type of DC charging stations in the United States and very few in the midwestern and southern parts of the US. Based on projections in the Notice that are looking to have roughly 2-3 vehicles supported at every charging station, the current infrastructure is far below being able to support the current fleet offerings, even with reasonable adoption rates of the new technologies. To go further, our current energy grid would not be able to support a significant increase in electrical output to charging facilities. There are already rolling blackouts in many parts of the country today (<https://www.americanexperiment.org/most-of-the-u-s-faces-elevated-risks-of-blackouts-during-heatwaves-this-summer/>).

We additionally have operational concerns about electric battery adoption for interstate motorcoach operations, due to decreased baggage storage capacity in the luggage bay, plus increased operating weight for the battery packs. If people are no longer able to travel as far, as quickly or as comfortably as they are used to, will they continue to travel at all? Will motorcoach vehicles even be able to operate without enduring costly overweight tickets, as mandated by our current highway bridge formula which dictates vehicle size and weight? In just looking at the specification sheets for new electric motorcoaches versus current diesel models currently commercially available for sale, the below floor baggage storage capacity will be limited by at least 75% (<https://www.mcicoach.com/coach/electric-series/specs/> vs. <https://www.mcicoach.com/coach/j-series/specs/>). While operational testing under fully loaded passenger vehicles is somewhat incomplete, new research released by AAA points to range decreases for electric vehicles approaching maximum load capacity (<https://www.ttnews.com/articles/AAA-evs-range-weight>). Such unexpected and unplanned range decreases could cripple long-range heavy-duty vehicle operations given the current status of the charging infrastructure. As noted in the specifications sheet for current and electric motorcoaches, currently diesel motorcoaches can travel roughly 1200 miles on a full tank of fuel and takes about 10-15 minutes to fill with diesel fuel. A fully loaded electric motorcoach currently has a max range of 180-220 miles before needing a charge, which also takes a minimum of 4 hours. This is a significant issue for motorcoach companies and passengers needing to operate over long distances. Our passengers cannot afford to travel roughly 3 hours, wait 4 hours for a full charge (assuming we can plug in upon arrival and no wait at a charging station) and may unintentionally be left short of a charging station given the current infrastructure, resulting in a safety hazard and increased operating costs.

We also share concerns with other commenters that even if the electric infrastructure expands to meet the demand for expanded capacity and range, will charging speeds also advance to meet operational requirements, to stay in phase with hours of service compliance requirements and other safety concerns.

**Technology Adoption**

Many researchers believe hydrogen fuel cell technology may be a better fit for heavy-duty vehicle operations and their increased need for longer range operations, and is something that is briefly explored in this proposal. However, the concerns about the infrastructure for refueling for hydrogen fuel technology are even more dire than they are currently for electric charging stations compatible with heavy duty vehicles. There are currently less than 60 hydrogen fueling stations in the United States and they are only in California. While there are a few grant incentives currently available to motorcoach companies pursuing zero-emission technology, such as the California HVIP program or the EPA DERA program, they focus on and prominently feature battery electric vehicles on their approved vehicle lists (<https://californiahvip.org/vehicle-category/transit-bus/>) or prioritize them on the verified technology list (<https://www.epa.gov/verified-diesel-tech/verified-technologies-list-clean-diesel>). So even though this proposal does explore alternate fuel technology alternatives, real world factors assume and predict the assumed adoption of battery electric technology solutions. This makes consideration of hydrogen fuel cell technology, unlikely and inconsequential. We also note from the current unified agenda published by the Administration (<https://www.reginfo.gov/public/do/eAgendaMain>), that standards are not yet fully formed for safe hydrogen battery technology and are still under development (RIN 2127-AM40). Similarly, safety standards are still being developed and adopted for heavy-duty electric batteries as well (RIN 2127-AM43). Between a lack of safe or reliable technology development or operational standards, a lack of existing infrastructure, unreliable projections for future infrastructure, it seems prudent to delay a selection of any particular low or zero-emission technology strategy and any fleet requirements or projections should be set aside.

**Net Environmental Benefits**

According to Federal Motor Carrier Safety Administration (FMCSA) statistics, there are currently about 2100 interstate motorcoach companies in the United State comprised of fleets of roughly 50,000 motorcoaches. If the goal of the EPA is to reduce overall emissions, they should be lifting our industry up and encouraging shared or group travel as opposed to other modes of individual transportation. Motorcoaches reduce pollution and congestion. Nationwide, motorcoaches have the lowest carbon footprint of the 12 different forms of passenger transportation, including all types of automobiles, rail, and jets. The current carbon footprint for motorcoaches is less than 0.17 pounds of CO2 per passenger mile. (Union of Concerned Scientists report: Getting There Greener: The Guide to Your Lower-Carbon Vacation”). Moreover, motorcoaches are constantly moving to cleaner diesel vehicles through millions of dollars spent on retrofits and replacement of older buses and the upgrading of fleets. Motorcoaches are the industry fuel conservation leader achieving 240 passenger miles per gallon of fuel (commuter rail 90, transit bus 70, hybrid cars 50 and automobiles 28). (Updated Comparison of Energy Use and CO2 Emissions from Different Transportation Modes, <https://www.buses.org/assets/images/uploads/general/2019%20UPDATE%20Comparative%20Fuel%20CO2%20FINAL-July%202019.pdf>).



The motorcoach industry provides a net environmental benefit by taking cars/vans/trucks off the road, in addition to its vehicles own limited environmental footprint. However, that net benefit does not seem to be factored into this proposal. Similarly, the amount of carbon needed to power the electric charging grid infrastructure is not currently being included in the analysis. We would hope that the benefits of the Greenhouse Gas Phase 2 requirements and their subsequent compliant engine families could be evaluated, before setting a new Phase 3 target and schedule. Moreover, we are concerned about the reopening of the Model Year 2027 emissions standards before they are even adopted, delaying research and engineering development and potentially limiting valuable upgrades at competitive and cost-effective price point, encouraging early adoption. New diesel motorcoaches are currently offered for sale at a range of $500-600,000, while new electric motorcoaches are $1.2-$1.3 million without the added cost of the necessary charging infrastructure to support even basic local daily operations. Significant consideration must be given to the engineering lead times, efficiencies, and economies of scale needed to bring those price points close enough to be competitive for small family businesses, which make up 90% of the motorcoach industry. We disagree with the projections for heavy-duty vehicle sales of electric vehicles in the motorcoach sector in the draft regulatory analysis and would appreciate a further broken out version of it to reflect all heavy-duty vehicle sectors. Currently, we project less than 1000 new motorcoaches sold in 2023 as we continue to emerge from the pandemic (<https://www.buses.org/news/article/aba-foundation-motorcoach-sales-report-shows-first-quarter-growth-for-new-v>). Even in some of the best years pre-pandemic, less than 10% of the existing fleet was being replaced by new purchases. We hope that the net environmental benefit and existing new vehicle acquisition rate are used to modify any projections of any fleet requirements.

We additionally hope that incentives will continue to be added and developed to encourage future adoption of proven technologies. There are very limited federal or state incentives for private motorcoach companies to expand their fleet offerings to include expanded zero-emissions vehicles (ZEV). Particularly when ZEV and alternative fuel powered vehicles are generally 3 to 4 times the current retail cost of a single diesel vehicle, including the cost of developing onsite recharging/refueling infrastructure.

We believe consideration of a phase 3 set of greenhouse gas standards, should be postponed until the technology and infrastructure advance enough to support these projections and that cost efficiencies and incentives are prevalent enough to make early adoption of new vehicles realistic for small businesses.

ABA and the motorcoach industry supports the exploration and investment in environmental initiatives and the limiting of the expansion of greenhouse gas pollution, while we continue to serve as a hallmark of sustainable and responsible environmental solutions. We hope that these important contributions as well as the suggestion provided in comments from a multitude of motorcoach operators, equipment manufacturers and on behalf of the traveling public will be considered.

**Motorcoaches should be exempted from consideration under a phase 3 greenhouse gas standard.**

We wish that the comment period had been extended, so that we could consider all of the items of material that were posted to this docket, plus cited materials, and respond to all aspects of the proposal. We appreciate the opportunity to comment on this important initiative.

Respectfully Submitted,



Brandon Buchanan

Director of Regulatory Affairs