



16 June 2023

TO: Administrator Michael Regan  
U.S. Environmental Protection Agency  
[RE: Docket No. EPA-HQ-OAR-2022-0985](#)  
Submitted Electronically via Regulations.gov

## **BlueGreen Alliance Comment on the Phase 3 Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles**

The BlueGreen Alliance (BGA) unites labor unions and environmental organizations to solve today's environmental challenges in ways that create and maintain quality jobs and build a clean, thriving, and equitable economy. We thank you for the opportunity to comment on the proposed Phase 3 Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles.

Climate change, economic injustice, and racial inequity are the most fundamental challenges we face today—and we know they're inextricably intertwined. In the transportation sector, which accounts for nearly 30% of U.S. greenhouse gas emissions, this intersection is visible in the disproportionate impact of transportation emissions—particularly emissions from heavy-duty vehicles—on low-income and non-white communities.<sup>1</sup> It's visible in the disparities in access to cleaner vehicles and other mobility options across income levels. And it's visible in the economic impacts of decades of disinvestment in auto manufacturing communities, which have seen good jobs offshored and anchor facilities shuttered due to ill-conceived policies that gutted the middle class. That's why it is critical that regulators, policymakers, and advocates coordinate standards, policies, investments, and infrastructure projects that engage and benefit all people—from the manufacturing workers who build the vehicles of the future, to the people who drive them, to the communities they drive through. Strong heavy-duty vehicle standards—accompanied by policies to rebuild manufacturing, protect and create good family supporting jobs, and revitalize communities—are critical to achieving these aims.

BGA urges the U.S. Environmental Protection Agency (EPA) to finalize its Phase 3 Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles while keeping the following principles in mind:

- 1) Climate policy must not fail the auto manufacturing workers and communities who are going to make ambitious emissions reduction targets possible.
- 2) Industry stakeholders must be honest brokers in both the stakeholder process, and in their efforts to comply with the standards.
- 3) EPA's heavy-duty vehicle standards have significant impacts on the U.S. auto manufacturing sector, with major stakes for workers. EPA should leverage its analytical and research capacities to fully understand these impacts and conduct this rulemaking process accordingly.

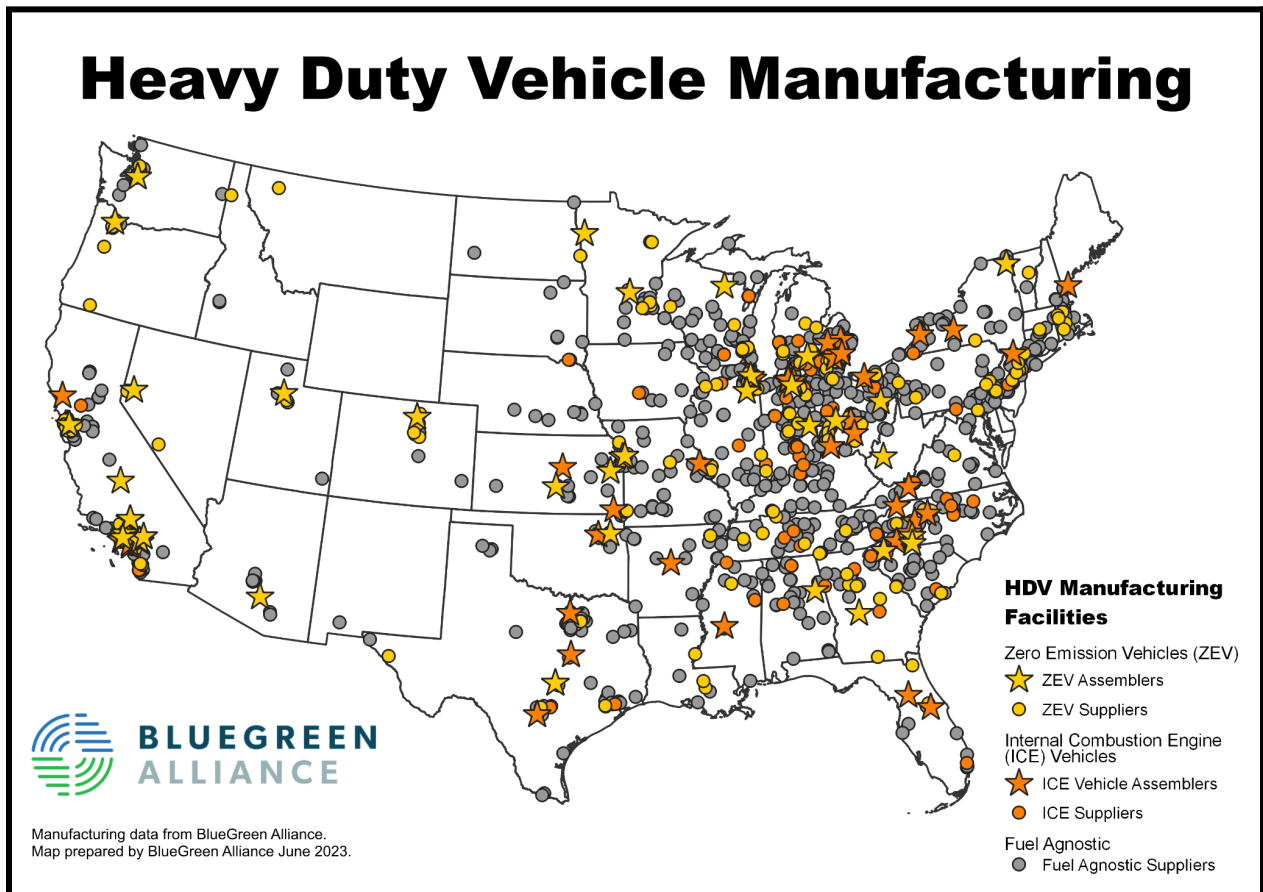
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<sup>1</sup> The Moving Forward Network, *Making the case for zero-emission solutions in freight*, May 2021. Available Online: [https://www.movingforwardnetwork.com/wp-content/uploads/2021/10/MFN\\_Making-the-Case\\_Report\\_May2021.pdf](https://www.movingforwardnetwork.com/wp-content/uploads/2021/10/MFN_Making-the-Case_Report_May2021.pdf).

**Strong, technology-forcing vehicle standards are essential to meeting climate goals, advancing environmental justice, and creating good jobs in the clean economy.** Heavy-duty vehicles make outsized contributions to climate-warming greenhouse gas emissions, and to local air pollution—with the burden largely falling on low-income and non-white communities located near high-traffic areas and industrial zones.<sup>2</sup> Their supply chains, and the manufacturing jobs within them, however, are critical to the economic health and stability of auto manufacturing communities across the country (see Figure 1).

Figure 1: Heavy-Duty Vehicle Assemblers and Component Manufacturers



Source: BGA Research

Contrary to the repeated threats of industry stakeholders opposing regulation, strong vehicle emissions standards do not have to come at the cost of good auto manufacturing jobs. In fact, they can support U.S. competitiveness in the global auto market, which protects and creates jobs. BGA analysis on the impact of former rounds of light-duty vehicle standards has found that when they are well-designed and supported by

<sup>2</sup> *ibid.*



worker protections and investments, standards can generate high-quality jobs, and position the domestic auto industry as a leader in a competitive global market.<sup>34</sup> The same is true of heavy-duty vehicle standards.

The EPA's proposed Phase 3 Heavy-Duty Vehicle Emissions Standards are both technology-forcing, and technology-agnostic, which means that manufacturers will need to deploy some zero emission technologies to meet the emissions targets, but their choice of zero emission technology is not prescribed. Additionally, manufacturers can leverage a range of fuel and engine efficiency technologies to help bring their fleets into compliance, including high compression ratio engines, waste heat recovery, cylinder thermal insulation, reduced friction losses, aerodynamics, efficient transmissions, cylinder deactivation, high efficiency turbochargers, and micro- and mild hybrids.

The range of EPA's proposals effectively advances research, development and deployment of zero-emission technologies like those in battery electric and fuel cell vehicles, while also pushing advanced fuel and engine efficiency technologies for use cases where zero-emission technology is not yet available, affordable, or scalable. The tech-forcing and tech-agnostic nature of EPA's proposals also means that the standards have the potential to create and protect domestic manufacturing jobs in a diverse range of facilities, from those producing battery components for electric transit buses to those making low rolling resistance tires and lightweight sheet metal for tractor trailers (see Figure 2). A standard that advances the deployment of zero emission *and* fuel efficiency technologies provides manufacturers with ample flexibility as they determine how they will meet the requirements, while also maximizing the standards' potential to create and protect jobs in the domestic automotive supply chain.

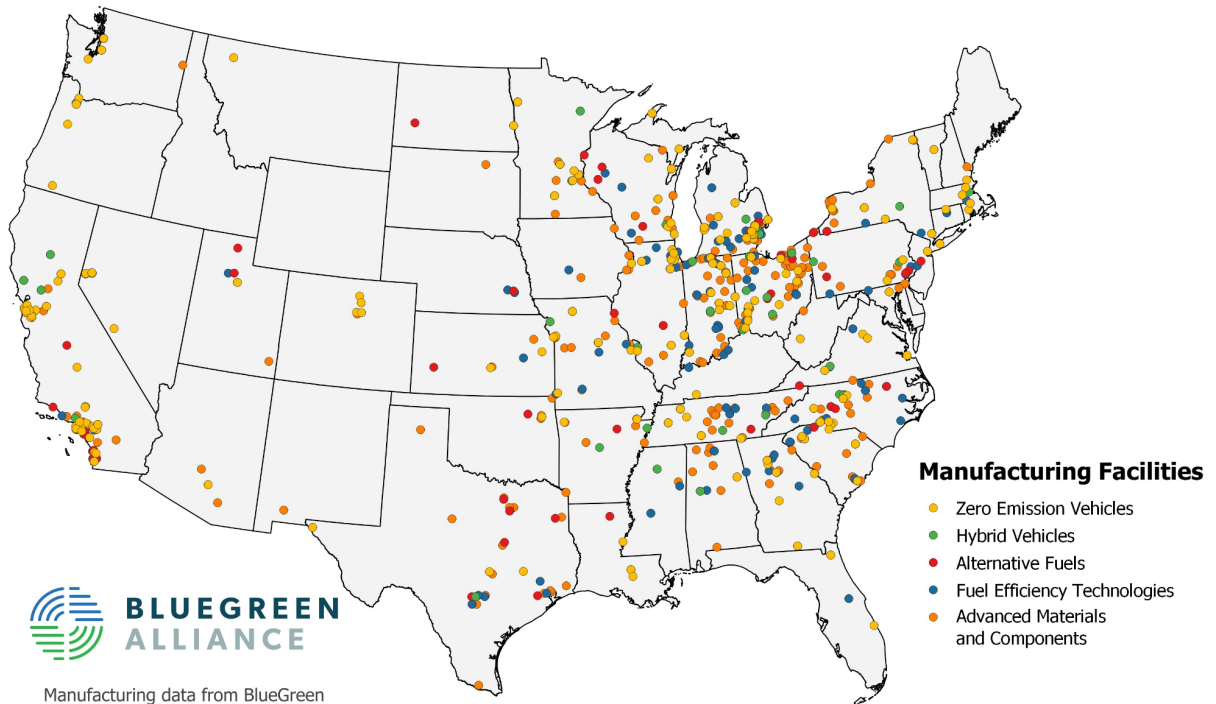
Figure 2: Zero Emission and Fuel Efficiency Technology Manufacturing for Heavy-Duty Vehicles

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<sup>3</sup> BlueGreen Alliance, *Supplying Ingenuity II*, May 2017: Available Online: <https://www.bluegreenalliance.org/resources/supplying-ingenuity-ii-u-s-suppliers-of-key-clean-fuel-efficient-vehicle-technologies/>.

<sup>4</sup> BlueGreen Alliance, *Tech@Risk*, August 2019. Available Online: <https://www.bluegreenalliance.org/resources/techrisk-the-domestic-innovation-technology-deployment-manufacturing-and-jobs-at-risk-in-stepping-away-from-global-leadership-on-clean-cars/>.

## HDV Manufacturing: ZEV & Advanced Tech



Manufacturing data from BlueGreen Alliance. Map prepared by BlueGreen Alliance June 2023

Source: BGA Research

And while regulatory progression and certainty are an important part of creating and protecting the domestic auto manufacturing jobs of the future, standards must be designed with workers in mind in order to maximize employment benefits.

**EPA must consider how the transition to clean vehicles—including heavy-duty vehicles—will impact manufacturing workers and the communities they live in. This should be an essential part of the comprehensive analysis that EPA conducts to project its proposals’ economic impacts.** The map in Figure 1 plots more than 1200 facilities manufacturing heavy-duty vehicles and their components. Of these facilities, approximately 190 manufacture internal combustion engine (ICE) heavy-duty vehicles and their components, like engines and transmissions, and fuel saving technologies. These facilities in the ICE supply chain, the nearly 1000 facilities making “fuel agnostic” components for heavy-duty vehicles, and other as yet unbuilt zero emissions vehicle (ZEV) manufacturing facilities may experience impacts as zero emission vehicles become increasingly cost competitive compared to ICE vehicles.

EPA already develops its proposed standards based on sophisticated economic analyses that model the impact of the proposal on total fuel cost savings, vehicle maintenance savings, and health cost savings from improved health outcomes. EPA’s economic analysis should also seek to project the economic and employment impacts of the shift to clean vehicles on auto manufacturing communities. For each of EPA’s proposals and alternatives, this analysis should, at minimum, identify heavy-duty vehicle manufacturing communities (as in Figure 1), quantify the share of each community’s economy that is supported by jobs

associated with heavy-duty vehicle manufacturing, and quantify the number of jobs associated with that sector. EPA should collaborate with the U.S. Department of Labor (DOL) and the U.S. Department of Energy (DOE) to conduct this analysis. EPA may consider structuring its analysis to identify communities that are particularly reliant on a domestic heavy-duty vehicle manufacturing supply chain, potentially identified as those with heavy-duty vehicle manufacturing “clusters”—or geographic areas where there are at least two manufacturing facilities within a 50-mile radius that are producing heavy-duty vehicles, or components for them. BGA collects detailed supply chain data that can support this analysis.

Considering and quantifying the employment opportunities and risks associated with each of EPA’s proposals is essential to ensuring that the regulations advance equity along economic axes, as well as climate and public health ones. The domestic auto manufacturing sector has historically been characterized by a higher unionization rate, community-supporting wages and benefits, the provision of pathways to the middle class (particularly for people without a four-year college education), and strong representation of Black workers and workers without a four-year college education. Research from the Economic Policy Institute finds that “Black workers account for 12.5% of workers economy wide, but 16.6% of workers in the auto sector, while workers without a four-year degree account for 62.2% of workers economy wide, but 74.6% in the auto sector.”<sup>5</sup> The auto manufacturing sector represents a critical path to the middle class for the very workers and communities that have disproportionately borne the brunt of neoliberal economic and trade policies. It is therefore essential that EPA leverage available data to project how its proposals will shape the domestic auto manufacturing sector, and the workers and communities that comprise it. Such analysis would also help inform stakeholders weighing in on the proposals by projecting tangible, on-the-ground, economic impacts of the transition to cleaner heavy duty vehicles, rather than limiting the scope of the economic analysis to fleet owners and automakers.

**EPA must hold automakers and industry stakeholders accountable to workers and communities in their pursuit of regulatory compliance. In particular, this means collecting data to ensure that standards do not exacerbate the offshoring of the automotive supply chain, or facilitate rent-seeking behavior from automakers seeking to reduce their regulatory burdens and labor costs.** BGA research demonstrates the significant economic footprint that the heavy-duty auto manufacturing sector has in the United States. This footprint represents both an opportunity and a risk, depending on whether or not the United States emerges as a global leader in the manufacturing of clean vehicles during this critical transitional period. The past two decades have seen significant offshoring of the automotive supply chain to other countries in Asia, Europe, and North America, where automakers have benefitted from lower labor costs, looser environmental regulations, and favorable tax regimes. Between 1998 and 2019, employment in the manufacturing of motor vehicles and motor vehicle components fell by more than 20%.<sup>6</sup> A part of a larger globalization trend, this shift not only gutted auto manufacturing communities in the United States, but it also allowed auto suppliers to establish supply chains in other countries, often with minimal labor protections and loose environmental standards.<sup>7</sup>

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<sup>5</sup> Economic Policy Institute, *The stakes for workers in how policymakers manage the coming shift to all-electric vehicles*, September 2021. Available Online: <https://www.epi.org/publication/ev-policy-workers/>.

<sup>6</sup> Economic Policy Institute, *Botched policy responses to globalization have decimated manufacturing employment with often overlooked costs for Black, Brown, and other workers of color*, January 2022. Available Online: <https://www.epi.org/publication/botched-policy-responses-to-globalization/>.

<sup>7</sup> Strategic Management Journal, *Offshoring pollution while offshoring production*, March 2017. Available Online: <https://onlinelibrary.wiley.com/doi/10.1002/smj.2656>.

Many industry stakeholders opposing heavy-duty vehicle regulations threaten that advancing vehicle emissions forces them to cut their costs elsewhere—like in their domestic production capacities, and in the wages and benefits they provide to their employees. They suggest that compliance with the regulation will be so costly as to force them to reduce the number and quality of auto manufacturing jobs here. These claims must be thoroughly interrogated. Automakers have announced \$120 billion in new investments in clean vehicle manufacturing in the last eight years, with over 40% of those investments occurring in the six months following the passage of the Inflation Reduction Act in August 2022.<sup>8</sup> Domestic automakers' 2023 Q3 profits were the highest they have been since 2016.<sup>9</sup> Moreover, due to the passage of transformative programs in the Inflation Reduction Act and the Bipartisan Infrastructure Law, automakers and their suppliers have more federal resources than ever before to support the transition to cleaner vehicles in ways that do not shortchange their workers, their communities, or the environment.

EPA recently published a Request for Information (RFI) targeting automakers manufacturing clean school buses receiving funding through the Clean School Bus Program.<sup>10</sup> This optional RFI asks bus manufacturers to provide information about worker voice (whether employees are covered by a collective bargaining agreement, whether the company is committed to maintaining union neutrality, etc.), employee benefits, inclusive hiring practices, training and advancement programs, and community partnerships. Such an RFI can be a powerful tool through which EPA can solicit information about how manufacturers interact with their employees and their communities, and facilitate a “race-to-the-top” for the quality of auto manufacturing jobs in the United States. EPA should create a new RFI for automakers regulated by the Phase 3 Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles that, at minimum, seeks detailed information about worker voice, employee wages and benefits, inclusive hiring practices, training and advancement programs, and community partnerships. This RFI could also apply to vehicle battery manufacturers, fuel efficiency technology manufacturers, and other advanced materials and components manufacturers in the automotive supply chain, which will play a significant role in automakers' ability to meet increasingly stringent emissions standards.

**At the same time, EPA must consider that the manufacturing investments from the Inflation Reduction Act and Bipartisan Infrastructure Law will take time to achieve their full production capacity. EPA should coordinate with DOE, the U.S. Department of Transportation (DOT), and the U.S. Department of Commerce (DOC) to ensure that the manufacturing investments from the Inflation Reduction Act and Bipartisan Infrastructure Law will be fully leveraged to support regulatory compliance.** Programs like the Battery Manufacturing and Recycling Grants (DOE), the Battery Material Processing Grants (DOE), the Domestic Manufacturing Conversion Grants (DOE), the 48C Advanced Manufacturing Tax Credit (DOE/DOC), the Advanced Technology Vehicle Manufacturing Loan Program (DOE), the Clean Heavy-Duty Vehicle Program (EPA), the Clean School Bus Program (EPA), the National Electric Vehicle Infrastructure (NEVI) Program (DOT), and the Charging and Fueling Infrastructure Grant Program (DOT) all provide

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<sup>8</sup> Environmental Defense Fund, “Report finds U.S. investments in electric vehicle manufacturing reach \$120 billion, create 143,000 new jobs,” March 2023. Available Online: <https://www.edf.org/media/report-finds-investments-us-electric-vehicle-manufacturing-reach-120-billion-create-143000>.

<sup>9</sup> U.S. Bureau of Economic Analysis, *Corporate profits with inventory valuation adjustments: Domestic industries: Nonfinancial: Manufacturing: Durable goods: Motor vehicles, bodies and trailers, and parts*, March 2023. Available Online: <https://fred.stlouisfed.org/series/N411RC1Q027SBEA>.

<sup>10</sup> EPA, *Request for information about OEM job quality and workforce development practices*, April 2023. Available Online: <https://www.epa.gov/system/files/documents/2023-04/fy23-csb-oem-workforce-req-info-2024-04.pdf>.

unprecedented federal resources that manufacturers and fleet owners can leverage to support both supply and demand for low- and zero-emission heavy-duty vehicles. However, these programs take time to bear fruit—whether that means a complete heavy-duty vehicle-enabled EV charging network, or a robust supply chain for Buy America-compliant transit and school buses.

It is essential to workers and communities that these programs be carefully designed and implemented, with robust stakeholder engagement. This helps ensure that they adhere to Justice40 requirements as well as the new Build America, Buy America provisions that are critical to ensuring that federal programs support domestic manufacturing investment.

With that, EPA must account for the time it takes to convert federal awards and allocations into actual domestic production capacity and critical on-the-ground infrastructure. EPA should coordinate with DOT and DOE to fully assess the availability of charging and fueling infrastructure for heavy-duty vehicles, and related grants and loans.

Research from the International Council on Clean Transportation (ICCT) suggests that 85% of long haul trucking charging needs in 2030 would be met by zero emission fueling infrastructure buildout of the National Highway Freight Network as designated by the Federal Highways Administration—that is, the construction of medium- and heavy-duty fueling infrastructure every 50 miles. Additionally, the energy needs assumed by a fully-electric medium and heavy-duty fleet are not expected to be limited by power generation capacity in most areas across the country. ICCT has identified priority counties representing the most highly industrialized parts of the country, which will require significant and targeted investment to meet energy demand and fueling infrastructure needs in the near term.<sup>11</sup>

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**Ultimately, the transition to cleaner vehicles must function to raise the job quality and safety standards associated with all impacted workforces, including manufacturing workers, drivers, and warehouse workers.** It is essential, but not enough, to create and protect auto manufacturing jobs in the United States as increasingly stringent standards drive the transition to cleaner vehicles. We must also work to ensure that all jobs that will facilitate the transition are good, community-supporting jobs in safe and democratic work environments, where workers have the free and fair choice to join a union. The current landscape—wherein some new manufacturing jobs (especially in the battery sector) are low-paid contract roles in states where employers can evade union organizing, wherein truck drivers are being misclassified as contractors by their employers, and wherein port and warehouse workers endure extremely hazardous conditions must be corrected.<sup>12,13,14</sup>

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<sup>11</sup> International Council on Clean Transportation, *Near term infrastructure deployment to support zero-emission medium- and heavy-duty vehicles in the United States*, May 2023. Available Online:

<https://theicct.org/wp-content/uploads/2023/05/infrastructure-deployment-mhdv-may23.pdf>.

<sup>12</sup> The Washington Post. “The unlikely center of America’s EV battery revolution,” April 2023. Available Online: <https://www.washingtonpost.com/climate-environment/2023/04/17/georgia-evs-battery-belt/>.

<sup>13</sup> University of California Berkeley Labor Center, *Truck driver misclassification: Climate, labor, and environmental justice impacts*, August 2019. Available Online: <https://laborcenter.berkeley.edu/truck-driver-misclassification/>.

<sup>14</sup> Warehouse Workers for Justice, *For good jobs and clean air: How a just transition to zero emission vehicles can transform warehousing*, 2022. Available Online: [https://www.ww4j.org/uploads/7/0/0/6/70064813/wwj\\_report\\_good\\_jobs\\_clean\\_air.pdf](https://www.ww4j.org/uploads/7/0/0/6/70064813/wwj_report_good_jobs_clean_air.pdf).



Deregulation, unfavorable trade policy, and the systematic undermining of labor laws in this country have been chipping away at worker power in this country for decades. But as clean vehicle technologies continue to transform the auto industry—regulators, policymakers, advocates, and organizers have an important opportunity to determine what the jobs of tomorrow’s auto industry will look like. EPA must leverage its regulatory power to set the industry on the right course, for the climate, for public health, and for workers.

Thank you for the opportunity to comment.

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