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Environmental Protection Agency (EPA)
National Highway Traffic Safety Administration (NHTSA)
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and
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Comments of
The BlueGreen Alliance

RE: Midterm Evaluation Draft Technical Assessment Report for Model Year 2022–2025 Light Duty Vehicle GHG Emissions and CAFE Standards (Docket ID No. EPA–HQ–OAR–2015–0827 and Docket No. NHTSA–2016–0068)

Thank you for the opportunity to make comments on behalf of the BlueGreen Alliance on the Midterm Evaluation Draft Technical Assessment Report for Model Year 2022–2025 Light Duty Vehicle GHG Emissions and CAFE Standards.

The BlueGreen Alliance (BGA) unites America’s largest labor unions and its most influential environmental organizations to identify ways that meeting today’s environmental challenges can create and maintain quality jobs and build a stronger, fairer economy.

The Agencies’ Technical Assessment Report is the first step in the Midterm Evaluation that reviews the technology and cost assumptions used to set the out-year 2022-2025 targets in Phase 2 of the nation’s landmark fuel economy standards. In their assessment, EPA and NHTSA find that automakers have met, and in many cases exceeded, required standards. They find rapid technology adoption, adoption of additional unanticipated technology, and confirm that the industry is on track to meet 2025 standards at anticipated cost.

As an organization that brings together labor and environmental stakeholders, BGA focuses its comments on the connection between the regulation, technology adoption and the economy, that is, on the economic and jobs impacts of this technological transformation. The TAR shows innovative technology being rolled out rapidly in new vehicles, and we see jobs building that technology all across the country.

In short, these standards are working. In fact, these soundly structured standards are a model for achieving deep energy security and greenhouse gas reduction gains while at the same time spurring the job growth and economic recovery America needs.

Implementation of the fuel economy and GHG standards has been simultaneous with a dramatic recovery of the industry

Five years into implementation of landmark fuel economy standards, new vehicles have become significantly more fuel efficient, while over the same period, U.S. automakers have made a dramatic return to profitability. In 2015, the industry also recorded record sales of these new more fuel efficient vehicles, despite low gas prices.

Since the recession, overall job growth in the industry has been strong and has aided in recovery in U.S. manufacturing as a whole

The motor vehicle industry has added 700,000 direct jobs since mid-2009, almost 300,000 of these in manufacturing¹. These jobs support several million additional jobs throughout the economy. This brings total manufacturing employment in the motor vehicle and parts industry, as of July 2016, to just under 1 million—representing nearly 50 percent growth since 2009. Employment at auto and parts dealers is currently at 2.01 million—its highest level ever. Motor vehicle and parts manufacturing job growth accounted for 40 percent of *all net jobs added in U.S. manufacturing* since the recession. This is without accounting for job growth in sectors such as aluminum, steel, glass, plastics and rubber, strongly impacted by growth and innovation in the automotive sector. While the automotive industry has yet to bring back the hundreds of thousands of manufacturing jobs lost in the decade *before* the recession, the past eight years represent the first period of sustained growth in auto manufacturing or U.S. manufacturing as a whole since 1999.

Studies predict significant additional jobs benefits specifically as a result of the standards

A series of studies done between 2010 and 2012 predicted 50,000-100,000 additional manufacturing jobs (across both rounds of standards) by 2025-30, above and beyond business as usual industry investments or growth.²

These added jobs come from enhanced investment to develop, manufacture, and incorporate additional technology necessary to improve fuel efficiency and meet the standard. The replacement of traditional 4- and 5-speed transmissions with 6-, 8-, 9-, and 10-speed transmissions, or the addition of start-stop systems to conventional powertrains, provide classic examples of added content that has been rapidly introduced as a

¹ All employment data in this section is from the U.S. Bureau of Labor Statistics. Analysis and calculations, BlueGreen Alliance.

² U.S. EPA, *Regulatory Impact Analysis, 2012*; Center for American Progress, Natural Resources Defense Council (NRDC), and United Autoworkers (UAW), *Driving Growth, 2010*. Available: <http://drivinggrowth.org/driving-growth-report/>.

result of the standards as described in the TAR. This added content in vehicles requires additional plant investment and added labor, resulting in added employment. These analyses also find that while fuel economy standards drive additional innovation and investment, the scale of domestic job growth that results is strongly dependent on what share of this advanced technology investment and manufacturing takes place in the United States.³

Johnson Controls' manufacturing facility in Holland, OH, which builds absorbent glass mat (AGM) batteries for stop-start systems, provides a good example of the impact of new demand for an added component. The company has invested \$130 million in that facility since it began production of the AGM batteries in 2012 and recently announced plans to double North American production to meet increased demand.⁴

Macroeconomic studies also looked at *total* employment impacts of the standards due to direct and indirect job growth, and to consumer re-spending of fuel savings. A recent analysis that combined these analyses for Phases 1 and 2 of the Program and adjusted for lower gas prices, predicts an additional 650,000 jobs added throughout the economy in 2030 as a result of the standards.^{5, 6}

There is significant real world evidence that these benefits are happening, and should continue

While it is difficult to fully disentangle the positive effects of the larger economic recovery from the effects of targeted investment to meet the standards, real world evidence from the first five years of implementation suggests important and additive gains.

The industry has seen repeated and ongoing multi-billion dollar investments in fuel economy related retooling and expansion, not just by automakers, but by component manufacturers and materials suppliers. The footprint-based structure of the standards is also key. Requiring steady increases for each size class (or footprint) of vehicle means that consumers see fuel savings no matter what kind of vehicle they need. But it also means that innovation happens across the entire industry, not just in one kind of powertrain or size of vehicle.

³ *Ibid.*

⁴ Johnson Controls to double N.A. production of stop-start batteries, Auto News, June 13, 2016. Available: <http://www.autonews.com/article/20160613/OEM10/160619979/johnson-controls-to-double-n.a.-production-of-stop-start-batteries>

⁵ Ceres, *More Jobs per Gallon*, 2012. Available: <https://www.ceres.org/resources/reports/more-jobs-per-gallon/view>; BlueGreen Alliance, *Gearing Up*, 2012. Available: <https://www.bluegreenalliance.org/resources/gearing-up-what-clean-cars-mean-for-michigans-economy-at-least-20000-jobs-will-be-created-by-2030-in-michigan-as-a-direct-result-of-vehicle-fuel-economy-standards-proposed-by-the-obama-administrati/>; UCS, *Factsheet: Midterm Review*, 2016. Available: <http://www.ucsusa.org/sites/default/files/attach/2016/06/Fuel-Economy-Standards-2017-2025-summary.pdf>.

⁶ UCS, *Factsheet: Midterm Review*, 2016. Available: <http://www.ucsusa.org/sites/default/files/attach/2016/06/Fuel-Economy-Standards-2017-2025-summary.pdf>.

A late 2012 study of actual employment in automotive states showed automotive job growth strongly outpacing the recovery, and numerous plant-level examples of fuel economy-related reinvestment.⁷ Manufacturing mapping and analysis done by NRDC, NWF and the UAW in 2011, as well as more recently updated analysis, continues to show hundreds of companies and hundreds of thousands of workers employed at facilities making key fuel economy related technology.⁸ Not only do the number of companies and workers engaged in these specific technologies appear to be growing, but today fuel economy related innovation is increasingly happening in nearly every plant.

Again, the standards are working. As BGA detailed in a policy brief this year, the Ford F150 pickup truck provides a concrete example of how fuel economy improvements are driving investment and jobs.⁹ The 2015 F-150 achieves 21 percent higher fuel economy than the 2010 model—and this rolls up to very significant fuel savings and GHG reductions. For example, the F-150's sold in 2015 alone will save 11 million metric tons of CO₂ over their lifetimes on the road. These fuel and pollution savings are real, and result directly from innovation in investment in dozens, if not hundreds of manufacturing facilities across the country.

Ford spent over \$1 billion dollars to retool its Kansas City Assembly plant where the F150 is built in order to move to a lightweight aluminum body on a high-strength steel frame. To deliver advanced automotive aluminum, Alcoa invested, expanded, and hired at its plants in Tennessee and Iowa and developed new aluminum products and joining processes. ArcelorMittal speeded its product development cycle for its high-strength lightweight steel products and upgraded its hot dip galvanizing capability to support speeded innovation in the automotive sector.

Less immediately obvious but very important to building and maintaining jobs in the industry, these companies collaborated with the automakers and with their own suppliers to develop the new fuel efficient materials and components, demonstrating how the industry has rebuilt a far more dynamic and competitive domestic supplier network over the past five years.

Moving to powertrain, Ford holds 275 patents on the downsized turbo-charged line of more fuel efficient EcoBoost engines that power the F150 and many other Ford vehicles. Ford is investing an additional \$145 million to upgrade its Cleveland engine plant to produce the next generation engine, and \$1.4 billion at its Livonia, Michigan, transmission plant to build a 10-speed transmission that will debut in the 2017 F-150. These investments will create or retain 650 jobs.¹⁰ And even smaller components make a big difference. The

⁷ NRDC, NWF, and Michigan League of Conservation Voters, [How Fuel Efficiency is Driving Job Growth in the U.S. Auto Industry](http://drivinggrowth.org/how-fuel-efficiency-is-driving-job-growth-in-the-us-auto-industry/), 2012. Available: <http://drivinggrowth.org/how-fuel-efficiency-is-driving-job-growth-in-the-us-auto-industry/>.

⁸ NRDC, National Wildlife Federation, and United Auto Workers, [Supplying Ingenuity](http://drivinggrowth.org/supplying-ingenuity-u-s-suppliers-of-clean-fuel-efficient-vehicle-technologies/), 2012. Available: <http://drivinggrowth.org/supplying-ingenuity-u-s-suppliers-of-clean-fuel-efficient-vehicle-technologies/>.

⁹ All details in discussion of component manufacturing for the F150, unless separately footnoted, are available at: BlueGreen Alliance, “Combating Climate Change 426,000 Pickup trucks at a Time,” 2016. Available: <https://www.bluegreenalliance.org/resources/combating-climate-change-426000-pickup-trucks-at-a-time/>.

¹⁰ “More torque and better boost: 2017 ford f-150 to debut with all-new 3.5-liter ecoboost engine and 10-speed transmission, Ford Media, May 3, 2016. Available: <https://media.ford.com/content/fordmedia/fna/us/en/news/2016/05/03/2017-ford-f150-more-torque-better-boost.html>.

truck's fuel saving electric power steering is built by Nexteer, which today is the biggest employer in Saginaw County, Michigan. And this is not just a Ford story; thanks to the standard's sound structure that drives innovation across the industry but does not mandate specific technologies, a very similar story, but one featuring diesel engine and electric drive innovation could be told about Chevy's new trucks, the Mazda 3, or the Chevy Malibu.

Studies also confirm the impact of proactive manufacturing policy on domestic automotive employment and on providing a foundation for domestic innovation and growth. Economic analysis done by the Center for Automotive Research reviewed the impact of the Administration's 2009 auto recovery loans found very large economic and jobs benefits, including the preservation of 238,000 manufacturing jobs and 2.6 million jobs throughout the economy.¹¹ Similarly, analysis of the Advanced Technology Vehicles Manufacturing Loan program finds that it secured or added jobs building advanced vehicle technology in 18 manufacturing plants in eight states that directly employ 38,000 people today. These direct jobs support approximately 93,000 additional indirect manufacturing and 121,000 induced jobs – for a total of over 250,000 jobs throughout the economy.¹²

Sound vehicle standards are key to continuing job growth

The TAR finds that the technology and cost assumptions used to set the standard remain valid, and that accordingly automakers can meet the out-year standards at reasonable cost and with strong net benefits. Similarly, if we maintain effective, long-term, soundly structured fuel economy and GHG standards, there is every reason to expect continued job growth and growth of a robust, competitive automotive supply chain.

In particular, maintaining effective, long-term standards is essential to provide the certainty needed for large, long-term investment in emerging technologies and jobs. The footprint-based structure is critical to continuing broad based innovation and investment, as is the flexibility to meet standards using a variety of technology pathways. Finally, sustaining manufacturing policies and incentives that encourage domestic investment in advanced vehicle technology and domestic manufacturing of a diverse fleet of vehicles, is critical to continued strong job growth. Retaining or strengthening key manufacturing measures within and complementary to the standards—such as the minimum domestic passenger car standard or “domestic backstop”—are key to maintaining job growth and anchoring growth of critical networks of advanced transportation suppliers.

Conclusion

We welcome the detailed and rigorous analysis done by the agencies, and are very pleased to see a technological and emissions reduction transformation underway that has simultaneously complemented and enhanced a robust recovery of the automotive industry. Maintaining this trajectory is critical.

¹¹ Center for Automotive Research, [*CAR Research Memorandum: The Effect on the U.S. Economy of the Successful Restructuring of General Motors*](#), 2013.

¹² BlueGreen Alliance analysis.

Thank you.

Sincerely

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