



MOTOR & EQUIPMENT MANUFACTURERS ASSOCIATION

FUEL ECONOMY STANDARDS:

INVESTMENTS AND JOBS IN THE U.S. ARE ON THE LINE

NOVEMBER 27, 2018



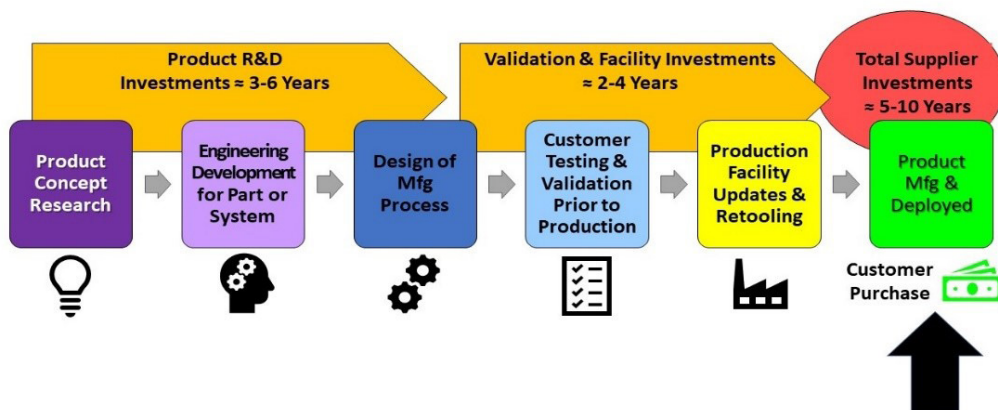
Fuel Economy Standards: Investments and Jobs in the U.S. Are on the Line

Introduction

In April 2018, the Trump administration’s U.S. Environmental Protection Agency (EPA) signed the mid-term evaluation final determination that found that the vehicle emissions standards for model years 2022 – 2025 set in 2012 are no longer appropriate and therefore should be revised. In August 2018, the National Highway Traffic Safety Administration (NHTSA) and the EPA issued a notice of proposed rulemaking of the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 for Passenger Cars and Light Trucks. This was the administration’s first step in negotiating where the vehicle emissions and fuel efficiency standards should be set. The Motor & Equipment Manufacturers Association (MEMA) has asserted to the Trump administration that freezing progress in the fuel efficiency and vehicle emissions standards will impact American jobs and strand significant U.S. investments in technology development. MEMA also emphasizes suppliers’ need for a One National Program negotiated with California that provides long-term regulatory certainty.

The argument for year-over-year increases in the stringency of the corporate average fuel economy (CAFE) and the greenhouse gas (GHG) vehicle emissions standards has moved past the potential impact on the environment to the impact on the economy. There are two solid economic reasons why the United States should make sure that emissions standards have continued progress: investments by U.S. companies and continued job growth. Changing the standards now would strand investments and move investments overseas and would leave America behind in the global race to fuel-efficient vehicles. It is not an overstatement to assert that U.S. companies’ ability to compete could be set back a decade.

Motor Vehicle Parts Suppliers Product Planning and Investments Timeframe



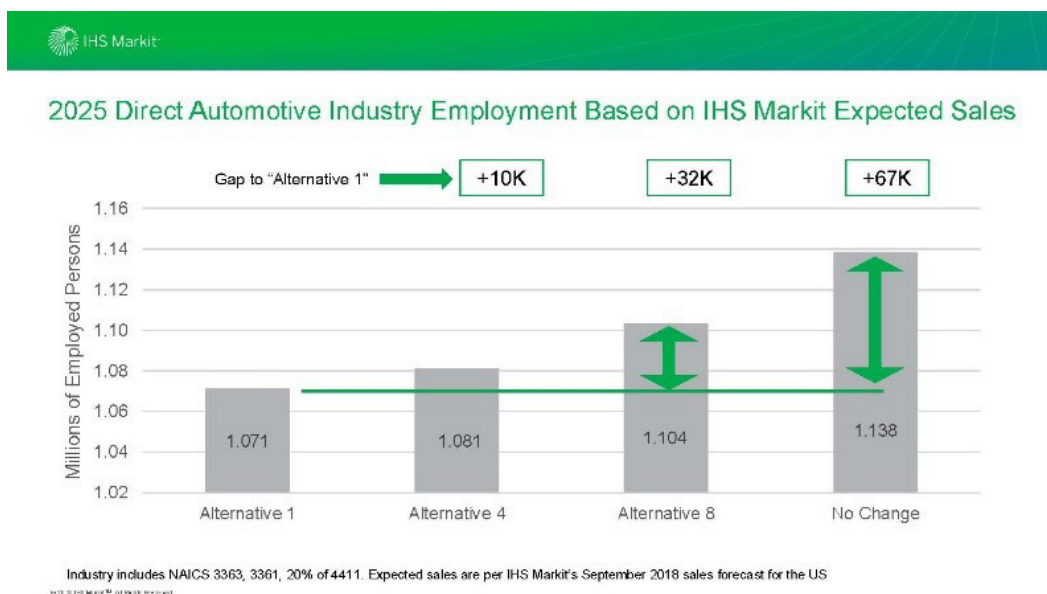
Specifically, eliminating progress in the fuel efficiency and emissions standards for light vehicles starting in 2021 and extending until 2026, as the Trump administration has proposed, puts motor vehicle suppliers at the greatest risk of stranded investments. Suppliers have made long-term planning decisions committing to developing the necessary technologies and materials for their

customers to meet the targets set for model years (MYs) 2017 – 2021 and the augural standards for MYs 2022 - 2025.

With investments and technology development in the U.S. come high-quality jobs. Motor vehicle suppliers make up the largest sector of manufacturing jobs in the U.S., employing over 871,000 workers in all 50 states with a total impact of 4.26 million jobs. The Trump administration has said many times that the driving goal behind new policies is to bring manufacturing jobs back to the U.S. Continued progress in the fuel economy emissions standards will support this goal. Out of the automotive industry’s direct and indirect jobs, suppliers make up 44 percent of those jobs compared to OEMs’ 33 percent and auto dealers’ 23 percent.¹ Suppliers take the leading role in developing these fuel efficiency and emissions-reducing technologies, and therefore take on the greatest risks. If progress in the standards is eliminated, these investments will be stranded, and jobs will be impacted, too. These are jobs that the U.S. will lose to other markets, including China.

A deeper look at the alternatives proposed in the “Safer Affordable Fuel Efficient (SAFE) Vehicles for Model Years 2021-2026 for Passenger Cars and Light Trucks” notice of proposed rulemaking released by U.S. EPA and NHTSA might help illustrate how maintaining the standards would impact jobs. Alternatives 6 and 8 best preserve long-term supplier investments, jobs, and ensure the U.S. continues to be a global technological leader. In comparison to alternative 1, implementing alternative 8 would provide enough demand for these advanced technologies that it would result in the automotive industry growing 32,000 more direct jobs by 2025. The full impact of alternative 8 would result in 250,000 more direct, indirect and induced jobs by 2025 in comparison to the employment levels of alternative 1. Alternative 4 would result in only one-third of the growth by 2025 compared to alternative 8. From an economic standpoint alone, the choice is simple: the industry needs continued progress in the standards.

2025 Direct Employment Impact in Comparison to Alternative 1²



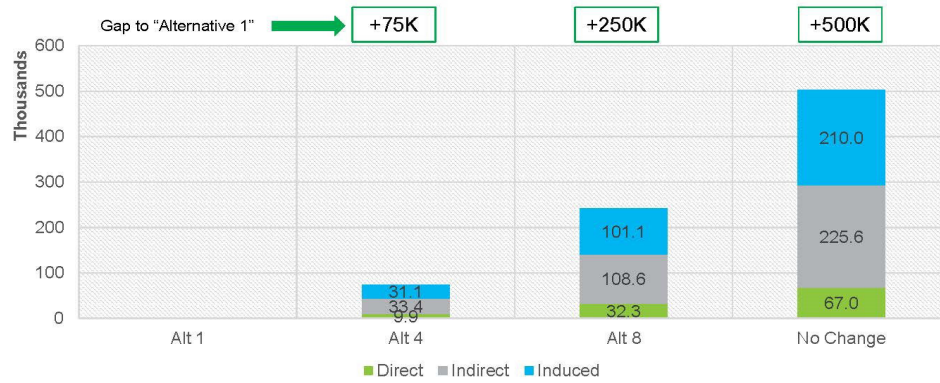
¹ Alliance of Automobile Manufacturers’ Cars Move America: State of the Auto Industry available here: <https://autoalliance.org/economy/cars-move-america/>

² Based on IHSM modeling and data.

Total Impact on U.S. Jobs in Comparison to Alternative 1³



Total Impact on Jobs in the U.S. by 2025



Industry direct employment includes NAICS 3363, 3361, 20% of 4411. Based on expected sales per IHS Markit's September 2018 sales forecast for the US
 © 2018 IHS Markit™. All Rights Reserved.

Alternative 1 Direct Automotive Industry Employment Impact in Comparison to Augural Standards⁴



2025 Direct Automotive Industry Employment Based on IHS Markit Expected Sales

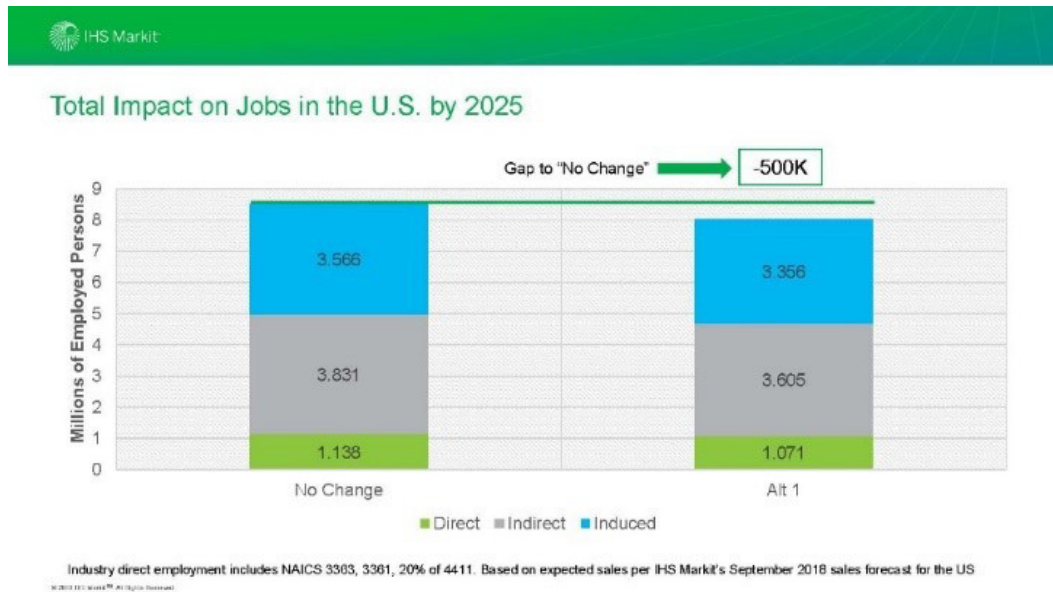


Industry includes NAICS 3363, 3361, 20% of 4411. Expected sales are per IHS Markit's September 2018 sales forecast for the US
 © 2018 IHS Markit™. All Rights Reserved.

³ Based on IHSM modeling and data.

⁴ Based on IHSM modeling and data.

Alternative 1 Total Impact on U.S. Jobs in Comparison to the Augural Standards⁵



According to analysis by IHS Markit⁶, the Trump administration's preferred choice (alternative 1) of zero percent increases year-on-year through 2026 would result in a loss of 67,000 direct automotive industry jobs.⁷ This would result in an overall industry loss of 500,000 direct, indirect, and induced jobs by 2025 in comparison to the employment levels supported by the augural standards.

The existing fuel efficiency and emissions standards have driven motor vehicle parts suppliers to make significant investments in the U.S. Incentives encouraging growth in electrification increase the likelihood that those significant investments will prove to have been wise. For example, a supplier is investing in 48-volt fuel saving technologies which will largely be implemented in Europe and China due to incentives in those markets. Many suppliers have plans for electrified component production in the U.S. that cannot be realized without adequate volumes of electrified vehicles. Suppliers have expanded electrified component and engineering teams in the U.S. Making significant changes in the standards put these and future investments, by both large and mid-sized companies, at risk of being stranded:

⁵ Based on IHS Markit modeling and data. The 2016 employment baseline is set to the BLS baseline for NAICS codes 3363, 3361, 20 percent of 4411 per Section 8 of the PRIA.

⁶ MEMA commissioned IHS Markit (IHSM) to conduct the analysis.

⁷ Automotive industry jobs includes auto dealership, vehicle manufacturers and motor vehicle parts supplier jobs.

- In 2017, **DENSO** announced expansion of its U.S. footprint with a **\$1 billion** investment in Tennessee. This expansion was part of DENSO's commitment to advancing automotive innovation in the U.S. and will significantly increase the role the U.S. plays in the global trend toward vehicle safety and emissions reductions. This expenditure supports system development for increasing electric vehicle demand and will also generate more than 1,000 new jobs—including technicians and engineers.
- **DENSO** has also announced investments to expand production of gasoline direct injection (GDI) capability at DENSO Manufacturing Athens Tennessee (DMAT). In February 2018, the company announced further expansion of operation through a **\$190 million** investment at DMAT. The investment will add new production lines and 320 jobs, increasing DENSO's ability to produce and deliver key parts for its customers. This project was spurred by the necessity to support the growing need of GDI in North America as automakers are turning to this technology to help meet fuel-efficiency and emissions regulations. The localization of GDI technology is resulting in new jobs, new production lines, new approaches to training, and new growth among our supply partners in the U.S.
- **Honeywell** and other suppliers, in producing a new class of alternative refrigerants, invested nearly **\$1 billion** to invent, commercialize, and expand world-scale manufacturing plants that employ hundreds of American workers. Honeywell developed the low-global-warming potential refrigerant in Buffalo, NY and now manufactures it in Louisiana.
- **Valeo** has made U.S. investments of more than **\$1 billion**, including over \$700 million in research and development and over \$300 million in its operational footprint. During that time the company has increased U.S. employment by more than 50 percent to 4,621 team members.
- **BorgWarner** has added 600 new jobs and over **\$530 million** in capital investments in the U.S. These investments include the expanding the company's research and development capabilities at its Propulsion Technical Center in Michigan, its PowerDrive Systems manufacturing facility in South Carolina, and a new 100,000 square-foot technical center in Indiana which supports BorgWarner's growing electrified product portfolio.
- **Eaton** invested **\$500 million** for new eMobility business in Michigan and Oregon.
- **Bosch** invested **\$40 million** in a research and technology center in California and another **\$327 million** in expansions of two facilities in South Carolina to grow its broad range of advanced automotive technology products.
- **Schaeffler** invested **\$60 million** in an expansion in Ohio to bolster its electrification business in both production manufacturing and engineering R&D and **\$36.5 million** in a facility expansion in South Carolina.
- **DENSO** made a **\$75 million** expansion in its North American headquarters in Michigan including a new testing facility and a **\$500,000** facility expansion in Ohio for R&D.
- **NGK/NTK** has invested over **\$25 million** in expanding and upgrading its USA technical center in Michigan, expanding production capability in West Virginia, building a new Innovation Center to incubate new technologies and improvements in other facilities in Wisconsin, Iowa, and California.
- **Veoneer Inc.** invested **\$22.6 million** in new headquarters in Michigan and will house 1500 employees.
- **Umicore Autocat USA Inc.** invested **\$10 million** in an expansion of its Michigan facility that develops and tests emission control systems based on advanced catalytic technology.

How to Best Move Forward

MEMA, which represents 1,000 U.S. companies in the motor vehicle supplier industry, has laid out a reasonable and clear path forward:

1. Continued year-over-year increases to the CAFE and the GHG vehicle emissions standards for light vehicles starting in 2021 extending until 2026
2. One National Program negotiated with California and the states
3. Continuation and expansion of the off-cycle, A/C efficiency credit programs through 2026 and beyond. Preservation of the alternative mobile A/C refrigerant credit program through 2026 and beyond

These three elements are critical to the supplier industry's stability, continued job growth, and preservation of important long-term strategic economic and investments and planning.

The U.S. has a strong history of being a global leader in innovation. Our nation is uniquely positioned to lead the world in advanced fuel efficiency and emissions-reducing technologies, many of which are already available. Based on research and real-world examples, we know that continued progress in the standards is necessary to preserve U.S. competitiveness. If we allow these technologies to fall by the wayside, the investments and jobs that support them will go elsewhere. We are at risk of leaving America behind the technical ball.



Motor & Equipment Manufacturers Association
1030 15th St, NW
Suite 500 East
Washington, DC 20005
advocacy@mema.org