



Improving Medium- and Heavy-duty Truck Fuel Standards in Model Year 2019

Overview

Vehicle fuel efficiency and emission standards do a lot more than cutting costs at the pump and reducing pollution in the air. They also lessen the economic and national security threats posed by dependence on foreign oil and price volatility, and they provide U.S. manufacturers with incentives to develop new technologies that spur investment in production of advanced vehicles, including research and development.

In August 2012, the U.S. Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHTSA) finalized standards of 54.5 mpg for light-duty trucks and passenger vehicles by model year 2025 that will effectively double the distance that cars can drive on a gallon of gas. In September 2011, the same agencies completed the first standards for medium- and heavy-duty trucks, covering model years 2014 through 2018. In spring 2015, the EPA and NHTSA will propose new standards for these classes of trucks and vans, as well as vocational vehicles (e.g., delivery trucks, buses, and garbage trucks) and trailers, beginning with model year 2019.

Transportation and fuel consumption statistics

The transportation sector consumes 70 percent of the oil used in the United States, so it represents an opportunity for substantial efficiency improvements. In 2013, heavy-duty trucks used 2.7 million barrels of oil per day, a total that is expected to rise as demand for goods shipped by truck increases.¹ Although medium- and heavy-duty trucks make up only 7 percent of the traffic on U.S. roads, they account for more than 25 percent of transportation fuel use and significant greenhouse gas emissions.²

Fuel efficiency measures create economic savings

Inefficient trucks cost their owners and operators money. Fuel is the single largest cost of owning and operating a heavy-duty truck, and fuel prices have increased 58 percent since 2009.³ Combination trailers, which get approximately 6.5 mpg, move up to 70 percent of all freight tonnage in the United States at a cost of about \$73,000 per year per vehicle.⁴

Fuel efficiency standards save Americans money. Heavy-duty trucks represent one of the fastest-growing sources of petroleum use in the country, and fueling them costs the average household \$1,100 per year through delivered goods and services. Experts calculate that robust standards could save American consumers more than \$32 billion annually.⁵

Stronger standards can further reduce costs

Existing medium- and heavy-duty truck standards have proved successful. They are projected to save the United States 530 million barrels of oil and reduce carbon pollution by approximately 270 million metric tons over the life of model year 2014-18 vehicles.⁶

The forthcoming proposed standards could reduce the cost of moving freight by 7 percent, saving a net average of 21 cents per mile.⁷ Truck owners could expect \$30,000 in fuel savings annually from the improvements, translating into a 13-month return on investment for tractor-trailers. (See Table 1.)

Experts say the upcoming standards for trucks beginning with model year 2019 can help make significant strides. Fuel efficiency improvements of 40 percent for new trucks, along with the existing standards, would cut fuel use by 1.4 million barrels per day and significantly reduce harmful emissions by 2030.⁸

The existing truck efficiency standards for model years 2014-2018 are expected to save \$50 billion in fuel costs.

The White House

Table 1

Fuel-Saving Improvements Across Vehicle Categories

Vehicle category	Percentage of total fuel use by medium- and heavy-duty vehicles	Percent reduction in fuel consumption and carbon pollution from 2010	Estimated improvement in fuel efficiency, 2010-25	Payback
Tractor-trailers (long haul and regional)	66%	46%	5.8 to 10.7 mpg	13 months
Vocational vehicles*	19%	32%	9.7 to 14.3 mpg	48 months
Heavy-duty pickups and vans	15%	28%	11.3 to 15.7 mpg	35 months
New fleet average[†]		40%		23 months

* The payback calculations for vocational vehicles are based on a fleet with 25 percent hybrids. Nonhybrids would have shorter payback periods than hybrids. The vocational vehicle category covers a wide range of applications, including refuse, utility, and dump trucks, transit buses, motor coaches, shuttle buses, medium-duty delivery vehicles, motor homes, and other specialized vehicles.

[†] Reductions include the first phase of standards, which are applicable from 2014 to 2018 and are projected to reduce fuel consumption and carbon pollution by 16 percent from 2010 levels.

Source: Natural Resources Defense Council et al., "Big Fuel Savings Available in New Trucks" (2014)

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Improving American competitiveness

Strong fuel efficiency standards provide incentives for innovation and make U.S. businesses more competitive globally by lowering transportation costs. Investment in the research, production, and deployment of advanced vehicle technologies would give the United States an opportunity to lead in markets such as advanced batteries that are growing quickly because technology costs have declined 50 percent since 2009.⁹

Endnotes

- 1 Natural Resources Defense Council et al., "Big Fuel Savings Available in New Trucks," June 2014, <http://www.nrdc.org/transportation/files/fuel-savings-in-trucks-FS.pdf>.
- 2 Union of Concerned Scientists, "Heavy-Duty Vehicle Global Warming Emissions and Fuel Economy Standards," September 2013, http://www.ucsusa.org/assets/documents/clean_vehicles/HDV-emissions-fuel-economy-factsheet.pdf.
- 3 Environmental Defense Fund, "Save Your Company Costs: Support Stronger Truck Efficiency Standards," last modified June 11, 2014, <http://business.edf.org/blog/2014/06/11/save-your-company-costs-support-stronger-truck-efficiency-standards/>; Energy Information Administration, "Weekly Retail Gasoline and Diesel Prices," accessed July 21, 2014, http://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_nus_a.htm.
- 4 Consumer Federation of America, "Paying the Freight: The Consumer Benefits of Increasing the Fuel Economy of Medium and Heavy Duty Trucks," February 2014, <http://www.consumerfed.org/pdfs/Paying-the-Freight.pdf>.
- 5 Ibid.
- 6 The White House, "Improving the Fuel Efficiency of American Trucks," February 2014, <http://www.whitehouse.gov/sites/default/files/docs/finaltrucksreport.pdf>.
- 7 Environmental Defense Fund, "Save Your Company Costs."
- 8 Natural Resources Defense Council et al., "Big Fuel Savings Available in New Trucks."
- 9 U.S. Department of Energy, "Revolution Now: The Future Arrives for Four Clean Energy Technologies," September 2013, <http://energy.gov/sites/prod/files/2013/09/f2/200130917-revolution-now.pdf>.

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