

Newly Proposed Heavy-Duty Truck Efficiency Standards for 2018–2029

Commercial trucks could use less fuel and save billions

Heavy-duty trucks—ranging from tractor-trailers and garbage trucks to delivery vans and large pickups—make up just 7 percent of vehicles on the road, but use more than 25 percent of the fuel. And with projected increases in freight volume, that number is likely to grow.

The Obama administration has proposed new rules governing the fuel efficiency and global warming emissions of these vehicles that build on an earlier round of standards (2014–2018). This is the most comprehensive effort yet to reduce the fuel use and global warming emissions of commercial trucks and, if adopted, will help improve upon technologies already in the marketplace, saving truckers fuel and reducing costs for consumers. However, UCS analysis shows that setting higher targets than those proposed is feasible

Proposed Standards Would Save Billions of Gallons of Oil, But We Could Save Even More

		Tractor-Trailers	Vocational Vehicles	Pickups and Vans
Proposed Standards	% Reduction in 2027	21–33%	12–16%	16%
	Savings in 2035	550,000 barrels of oil per day 120 MMT of global warming emissions		
UCS Analysis	% Reduction in 2025	24–37%	25%	16%
	Savings in 2035	750,000 barrels of oil per day 160 MMT of global warming emissions		

All classes of heavy-duty vehicles can be improved in the coming years. Our analysis indicates that these trucks could deliver more savings than the government’s proposed standards require, in a shorter time.

NOTE: Savings in 2035 and percent improvement are compared with business as usual, represented by the government’s “more dynamic” baseline. The proposed standards would achieve a 36 percent reduction in new truck fuel consumption compared with 2010; the UCS analysis would achieve a 40 percent reduction. Ranges indicate different levels of fuel consumption reductions for different types of vehicles within a particular class. MMT = million metric tons.

SOURCES: EPA AND NHTSA 2015; KHAN, COOKE, AND TONACHEL 2015.

and could deliver even greater savings, sooner (see the table).

Reducing Oil Consumption, Global Warming Emissions, and Consumers’ Expenses

The costs of fuel used by commercial trucks are included in the price of goods we purchase (UCS 2015). By shielding owners of truck fleets from volatile oil prices, the proposed medium- and heavy-duty vehicle global warming emissions and fuel economy standards for model years (MY) 2018 through 2029 would reduce costs for businesses and, by extension, all consumers.

According to Environmental Protection Agency (EPA) estimates, these standards would, if finalized:

- Reduce oil consumption by 550,000 barrels of oil per day in 2035—that’s about half the oil the United States imports from Saudi Arabia daily (EIA 2015)
- Avoid 1 billion metric tons of global warming emissions over the lifetime of the trucks covered by the rule—roughly equivalent to the emissions created by powering *all* U.S. homes for one year (EPA 2015)
- Save truckers more than \$160 billion over the length of the rule, even when factoring in the additional up-front cost of improved truck technologies
- Reduce toxic air pollution from idling trucks and refineries that produce fuel, resulting in an additional \$37 billion in health and welfare benefits, including reductions in mortality and hospitalizations

The Proposed Standards for MY2018–2029: An Overview

The proposed regulations cover three classes of vehicles: tractor-trailers (or “big rigs”), vocational vehicles (a diverse category that includes delivery vans, buses, garbage trucks, and utility trucks), and heavy-duty pickup trucks and cargo vans.

The standards for each vehicle class are set in discrete steps, with the strongest level of improvement occurring in 2027; however, the rule runs through 2029 and would prevent requiring further improvement until at least 2030.

TRACTOR-TRAILERS

Tractor-trailers are the biggest guzzlers of fuel on the road, averaging just about six miles per gallon. By 2027, the proposed standards would require tractors to become 18 to 24 percent more efficient than under the earlier standards, depending on tractor type.

Trailers were not regulated under the first round of standards, but are included in the proposed rule. Improving trailer tires and reducing the aerodynamic drag of trailers will have big benefits for fuel economy and emission reductions (UCS 2014). The proposed standards would apply to standard box van trailers and would result in an additional 12 percent fuel savings by 2027 for tractor-trailers, while other trailers like flatbeds and tankers would be required to improve 4 percent.

VOCATIONAL VEHICLES

Vocational vehicles are the broadest class of heavy-duty vehicles, but are subdivided into just three categories in the regulations, depending on how they are used: urban vehicles, multi-purpose vehicles, and regional vehicles. The proposed rule would require improvements in all categories, yielding a 12 to 16 percent improvement over the previous regulations.

HEAVY DUTY PICKUPS AND CARGO VANS

Pickup trucks and cargo vans with a weight rating (including payload) of greater than 8,500 pounds (e.g. Ford F-250 Super-Duty) are also considered heavy-duty vehicles. While the standards for these vehicles fall well short of the improvements expected in their light-duty counterparts, heavy-duty pickups and cargo vans would nevertheless be required to reduce fuel consumption 16 percent beyond the earlier regulations.

The Standard Should Be Strengthened to Achieve 40 Percent Fuel Savings by 2025

The administration's proposal builds strongly on the first round of standards that were issued in 2011, but there is still room for improvement. Where the proposed standards would require a 36 percent reduction in fuel consumption from new heavy-duty vehicles by 2027 (compared with 2010 levels), UCS analysis reveals that the average fuel consumption from new trucks could be reduced by 40 percent by 2025 using cost-effective technologies that are currently being deployed or demonstrated (ACEEE et al. 2014). So not only are the government's proposed targets less stringent than ours, but they are also two years slower than what our analysis indicates is both cost-effective and technically feasible.

The proposal also fails to capture the full suite of cost-effective technologies available for each vehicle class. For example, greater aerodynamic improvements are possible for trailers, and powertrain technologies for tractors and vocational vehicles that have already been identified by the government could be deployed much more broadly.

There's No Reason Not to Do Better

The heavy-duty vehicle standards as proposed by the EPA and the National Highway Traffic Safety Administration are an important step in the right direction, but the urgent need for climate action makes it critical that the agencies act to reduce oil consumption and global warming emissions from this sector as quickly as technology and cost considerations will allow.

UCS analysis shows that the technologies available to achieve a 40 percent reduction in fuel consumption can be incorporated into new trucks by 2025, rather than waiting until 2027. Doing so would save an additional 200,000 barrels of oil per day in 2035, and avoid an additional 40 million metric tons of global warming emissions annually—equivalent to shutting down 12 coal-fired power plants (EPA n.d.).



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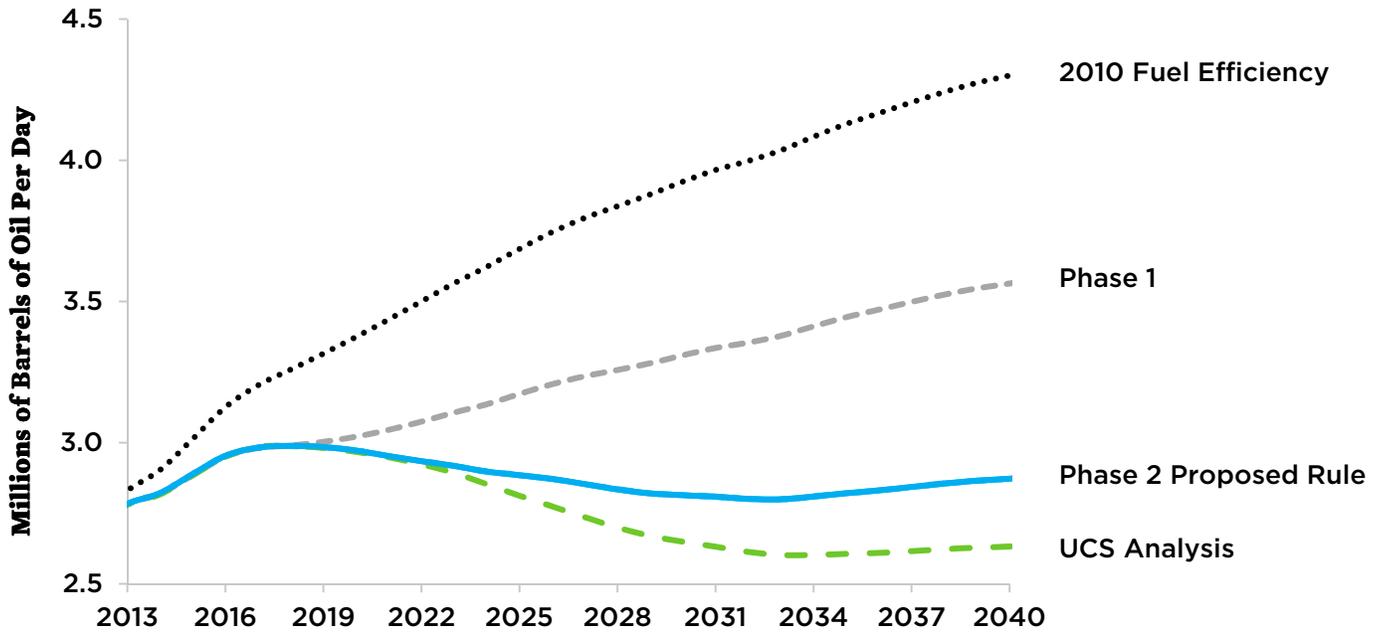
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Fuel consumption for medium- and heavy-duty trucks under different scenarios



Absent further regulation, fuel consumption for medium- and heavy duty trucks is expected to increase. The first phase of regulations (MY2014-2018) substantially reduced fuel consumption from these vehicles but did not curb overall use. While the second phase (MY2018-2029) of regulations from NHTSA and EPA will lead to even more reductions in fuel use, in all years that fuel use exceeds 2013 levels. However, UCS analysis indicates that there are further opportunities for fuel consumption reduction that would curb fuel use from medium- and heavy-duty vehicles even further.

2010 fuel efficiency indicates the fuel consumption expected with no improvements in efficiency past 2010. The phase 1 data includes reductions from the first phase of regulation as well as improvements to tractor-trailers and pick-ups and vans that would likely occur even in the absence further regulation.

SOURCES: EPA AND NHTSA 2015 AND KHAN, COOKE, AND TONACHEL 2015, MODELED USING ANL 2014.

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