



July 13, 2017 | Diesel Technology Forum

## Press Release

# Newest Technology Clean Diesel Trucks Now Make Up 30% of Commercial Vehicles in Operation in U.S., Saving 4.2 Billion Gallons of Fuel, and Slashing Emissions

**Indiana (51%), Utah (42%) & Oklahoma (42%) have highest percentages of new trucks; California (22.6%) ranks 46**

Washington, DC – Introduction of more advanced clean diesel truck engines and emissions control systems into the nation’s trucking fleet over the last five years is now at a 30 percent level and has yielded significant emission reductions and substantial fuel savings, according to new research commissioned by the Diesel Technology Forum.



“Almost 3 million heavy-duty diesel commercial vehicles introduced in the U.S. from 2011 through 2016 are now on the road powered by the latest generation clean diesel engines, and these trucks have delivered important benefits in the form of cleaner air, fewer carbon dioxide emissions and dramatic fuel savings. Over a 5 year period, the newest generation commercial vehicles have saved 4.2 billion gallons of diesel fuel, and reduced 43 million tonnes of carbon dioxide (CO<sub>2</sub>), 21 million tonnes of nitrogen oxides (NO<sub>x</sub>) and 1.2 million tonnes of particulate matter,” said Allen Schaeffer, Executive Director of the [Diesel Technology Forum](#).

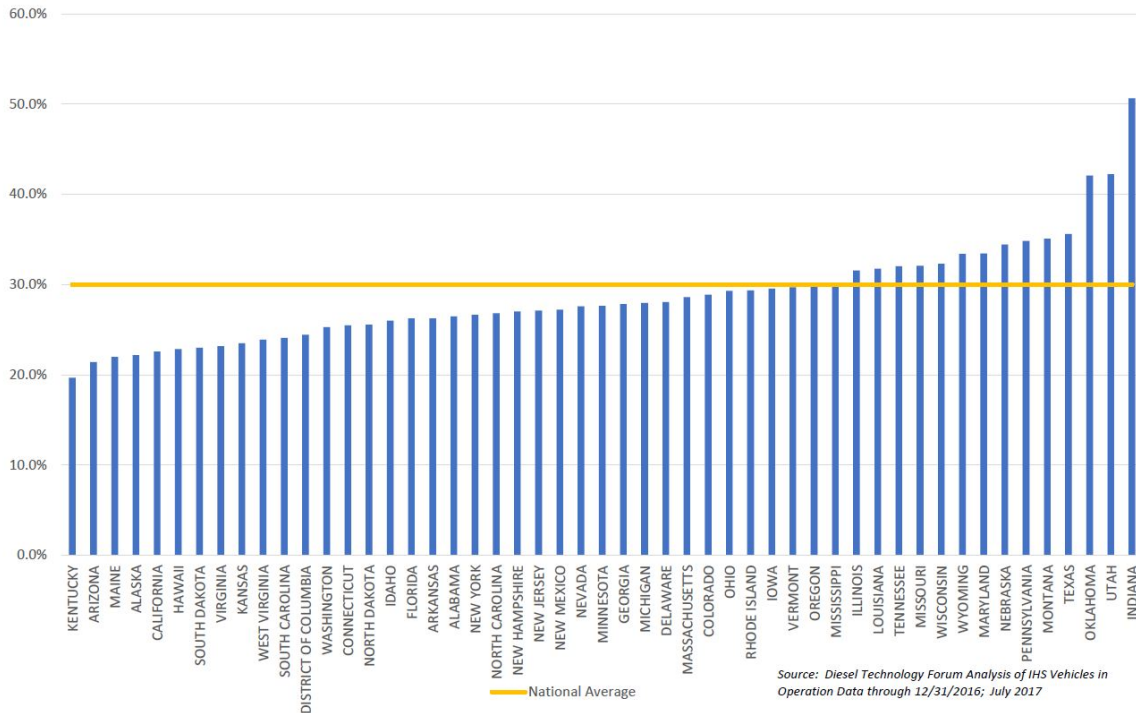
“Because diesel overwhelmingly dominates the heavy-duty truck sector and is also the number one power source for medium-duty vehicles, the transition to newer generations of clean diesel technology (2011 and later MY) is significant. The 30 percent national average is up from just 25.7 percent last year. The research also estimated that significant further benefits would accrue to communities across the country if more of these newer generation clean diesel trucks enter into service.

“California, which ranks 46<sup>th</sup> nationally with only about 25 percent of commercial trucks there equipped with the latest generation clean diesel technology could see substantial benefits for accelerated adoption of newer clean diesel technology trucks. If California were to achieve the same

new technology penetration as Indiana (51 percent), it can eliminate another 200,000 tons of NOx and 11,000 tons of fine particles that would bring cleaner air faster to all California communities than any other strategies,” said Schaeffer.



**30 Percent of all Diesel Powered Commercial Trucks now Newest Generation, of Near-Zero Emission Clean Diesel Technology**  
*(MY 2011 & Newer; Class 3-8)*



The benefits research was conducted by IHS Markit, a global technical marketing research firm headquartered in Southfield, MI. State rankings data is based on Diesel Technology Forum (DTF) analysis of IHS Markit vehicles in operation data representing Class 3-8 diesel trucks from Model Year 2011 through 2015 in all 50 states and the District of Columbia through December 31, 2016.

“The U.S. trucking fleet is transitioning to newer clean diesel technology which means immediate fuel savings, lower greenhouse gas emissions and cleaner air. This newest generation of clean diesel trucks have NOx emissions that are 99 percent lower than previous generations along with 98 percent fewer emissions of particulate matter, resulting in significant clean air benefits throughout the U.S. Beginning in 2011, all heavy-duty diesel trucks sold had to meet NOx emissions of no more than 0.20 grams per brake horsepower hour (g/BHP-hr.). This is in addition to particulate emissions levels of no more than 0.01 grams per brake horsepower hour (g/HP-hr.) established in 2007.

“Achieving these substantial emissions reductions and efficiency advancements was in part the result of collaboration of the nation’s leading truck and engine manufacturers working with the Department of Energy and 21<sup>st</sup> Century Truck Partnership’s “SuperTruck” program, said Schaeffer. “While the intent of this valuable program is to push the margins of research engineering efficiency, it is clear that demand is leading many of these strategies to be integrated into the commercial truck fleet and contributing to real-world emissions reductions and fuel savings.”

## Indiana, Utah & Oklahoma Have Highest Percentage of Clean Diesel Trucks

Percentage of New Technology Diesel Trucks In Operation (MY 2011 & Newer; Class 3-8)		
	State	Percentage
1)	Indiana	51 %
2)	Utah	42 %
3)	Oklahoma	42 %
4)	Texas	36 %
5)	Montana	35 %
6)	Pennsylvania	35 %
7)	Nebraska	34 %
8)	Maryland	34 %
9)	Wyoming	33 %
10)	Wisconsin	32 %
	<b>National Average</b>	<b>30.0 %</b>
<small>(Diesel Technology Forum analysis based on IHS Automotive 2016 vehicles in operation data, December 2016; revised by source)</small>		

“In addition to these substantial societal benefits, a Class 8 tractor-trailer sized vehicle powered by the latest generation clean diesel engine will save the owner 960 gallons of fuel each year, relative to the previous generation of technology. When these benefits are compounded over the entire population of the clean diesel fleet, the 4.2 billion gallons of fuel saved between 2011 and 2016 is equivalent to almost 40 percent of the strategic petroleum reserve,” said Schaeffer.

### How Do Newer Diesels Achieve Near Zero Emission Levels?

To achieve these new levels of emissions and efficiency performance, the [new clean diesel system](#) relies on an efficient engine and optimized combustion system utilizing the most advanced fuel-injection, turbocharging and engine management strategies coupled with advanced emissions controls and after-treatment technologies including particulate filters and selective catalytic reduction (SCR) systems, all running on ultra-low sulfur diesel fuel.

### Connect with the Diesel Technology Forum

For the latest insights and information from the leaders in clean diesel technology, join us on [Facebook](#), follow us on [Twitter](#) @DieselTechForum, or [YouTube](#) @DieselTechForum and connect with us on [LinkedIn](#). Get it all by subscribing to our newsletter [Diesel Direct](#) for a weekly wrap-up of clean diesel news, policy analysis and more direct to your inbox.

### ABOUT THE DIESEL TECHNOLOGY FORUM

The Diesel Technology Forum is a non-profit organization dedicated to raising awareness about the importance of diesel engines, fuel and technology. Forum members are leaders in clean diesel technology and represent the three key elements of the modern clean-diesel system: advanced engines, vehicles and equipment, cleaner diesel fuel and emissions-control systems.

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## NEWEST, CLEANEST, MOST EFFICIENT TRUCKS ON THE ROAD IN THE U.S.



**1 IN 3**

TRUCKS NOW ON THE ROAD ARE POWERED BY THE NEWEST, CLEANEST AND MOST EFFICIENT DIESEL ENGINE

### BENEFITS OF NEW TECHNOLOGY CLEAN DIESEL ENGINES

(comparisons based on cumulative savings 2011-2016 MY vehicles)

#### MORE EFFICIENT

4.2 BILLION GALLONS OF DIESEL SAVED  
FUEL SAVINGS PER TRUCK - \$2,640/yr



#### FEWER EMISSIONS

43 MILLION TONNES CO<sub>2</sub>  
21 MILLION TONNES NO<sub>x</sub>  
1.2 MILLION TONNES PM



TODAY'S ULTRA-LOW SULFUR DIESEL FUEL, ADVANCED ENGINES AND EFFECTIVE EMISSIONS CONTROL COMBINE TO ACHIEVE NEAR ZERO EMISSIONS

#### SCR MEANS SAVINGS



Selective Catalytic Reduction (SCR) emission control systems help reduce emissions by over 95% and have enabled 3-4% gains in fuel efficiency

#### ENERGY SECURITY



Saved 101 million barrels of crude oil since 2010 and 4.2 billion gallons of diesel fuel

### CALIFORNIA

• Since 2010, new technology clean diesel trucks on the road in California have saved 3.7 million tonnes of CO<sub>2</sub> and 2 million tonnes of nitrogen oxide (NO<sub>x</sub>) emissions.

• In 2016, **35X more clean diesel vehicles** were added to the Class 3-8 truck fleet than compressed natural gas (CNG) vehicles.

NATIONWIDE, WORK TRUCKS AND DELIVERY TRUCKS HAVE ACHIEVED A 20X REDUCTION IN REAL WORLD NO<sub>x</sub> EMISSIONS WITH NEW TECHNOLOGY CLEAN DIESEL ENGINES.

ALMOST **1/2 MILLION** CLEAN DIESEL TRUCKS WERE ADDED TO THE FLEET IN 2016

### SHARE OF CLEAN DIESEL TRUCKS ON THE ROAD TODAY

26%  
WEST

34%  
MIDWEST

29%  
NORTHEAST

30%  
SOUTH

#### TOP TEN STATES FOR ADOPTING NEW CLEAN DIESEL TECHNOLOGY

1. INDIANA	51%
2. UTAH	42%
3. OKLAHOMA	42%
4. TEXAS	36%
5. MONTANA	35%
6. PENNSYLVANIA	35%
7. NEBRASKA	34%
8. MARYLAND	34%
9. WYOMING	33%
10. WISCONSIN	32%

Class 3



Class 4



Class 5



Class 6



Class 7



Class 8



LEARN MORE AT [WWW.DIESELFORUM.ORG](http://WWW.DIESELFORUM.ORG)

\*Numerical rankings based on Diesel Technology Forum analysis based on IHS Automotive 2016 vehicles in operation data, March 2017. Unless otherwise noted, national averages used.

\*\*Benefits study by IHS Markit calculated based on EPA MOVES model, Argonne National Laboratory and other sources, 2011-2016. Trucks manufactured beginning in 2010 must meet the latest U.S. EPA emissions standards for near-zero emissions of particulate matter and NO<sub>x</sub>.

