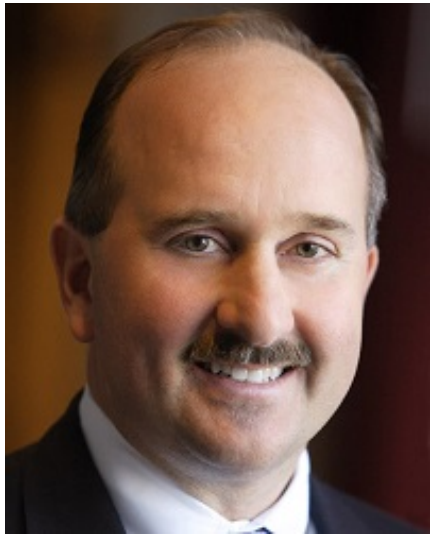
WELCOME TO

DIESEL
TECHNOLOGY FORUM
IHS Markit™
NEW INSIGHTS ON THE U.S.
COMMERCIAL TRUCK FLEET



Allen Schaeffer

Executive Director, Diesel Technology Forum

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Meet the Leaders

In Clean Diesel Technologies

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Today's Session

1. Overview of diesel, commercial vehicles, new technology diesel engines
2. What is the penetration of new technology diesel engines in the U.S. trucking fleet?
3. A deeper dive into new technology diesel trucks on the road in the MARAMA Region
4. What are the benefits from the operation of these trucks?
5. Q&A
6. Summary
7. Resources Available

One Out of Every Two Economic Sectors Relies on Heavy-Duty Vehicles, Equipment or Engines to Get the Job Done

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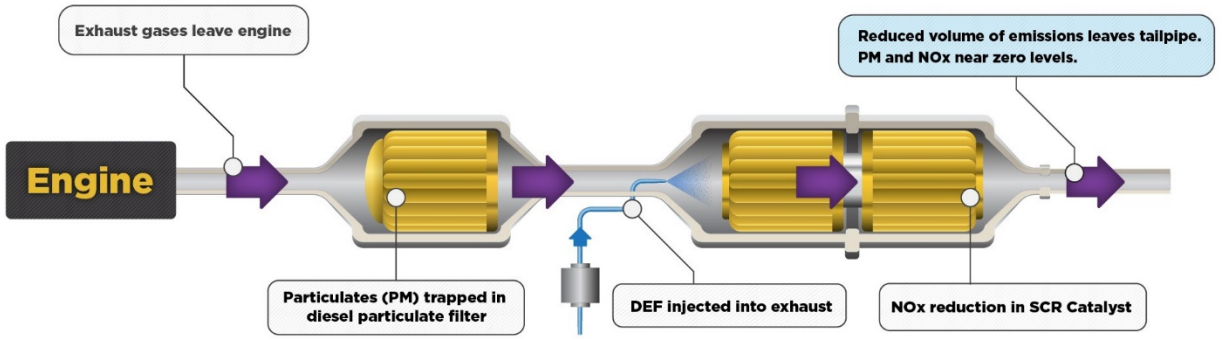
What is a new technology diesel truck?

2010 and later model year

- Incorporates the most advanced emissions control systems – Selective Catalytic Reduction (SCR) and particulate filters.
- Achieves near zero emissions.

Diesel Emissions Control System



This schematic shows how Selective Catalytic Reduction (SCR) with a Diesel Particulate Filter (DPF) System works. Untreated exhaust gas passes from the engine into a DPF that traps over 95 percent of particulate matter or soot. The exhaust moves into a mixing chamber where the exhaust gas is dosed with a precise spray of diesel exhaust fluid (DEF) reacts with oxides of nitrogen (NOx) on a special catalyst and converts these gases into nitrogen dioxide and water vapor. The system reduces PM and NOx and other emissions to near zero levels.

*Schematic is not representative of all manufacturers' approach to achieve near zero emissions.

DieselForum.org/SCR

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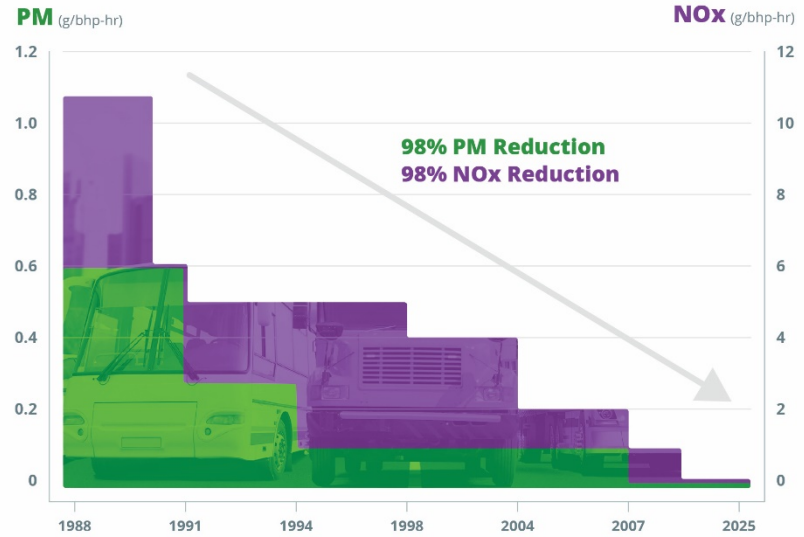
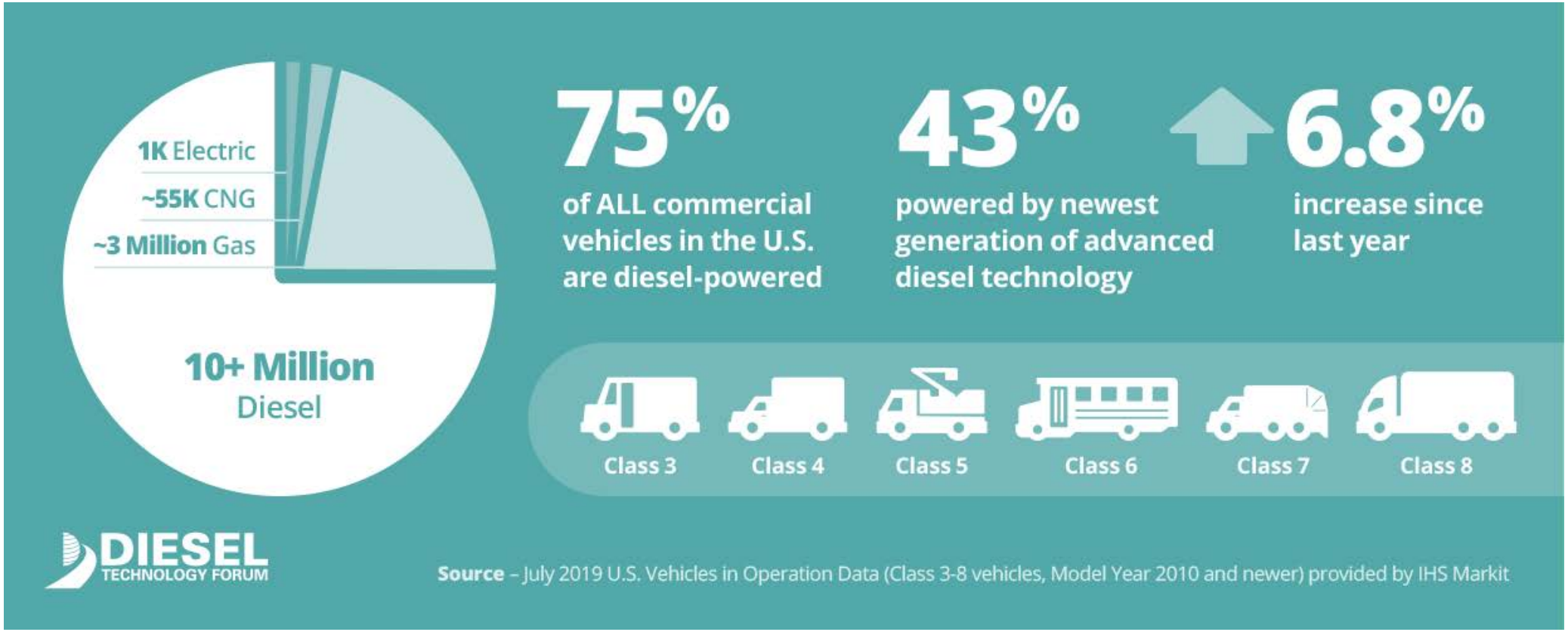
CLEAN DIESEL PROGRESS

Heavy-Duty On-Highway

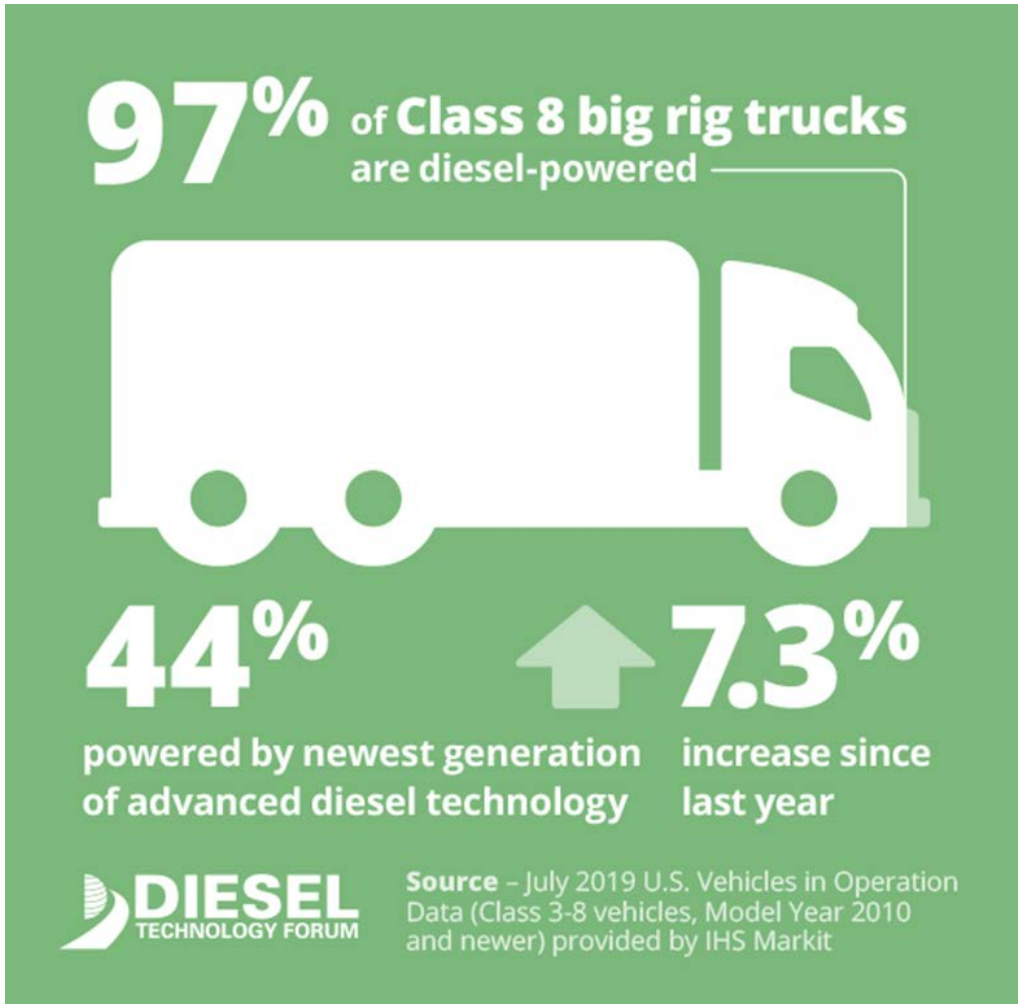


Source: U.S. EPA Office of Transportation and Air Quality (OTAQ)

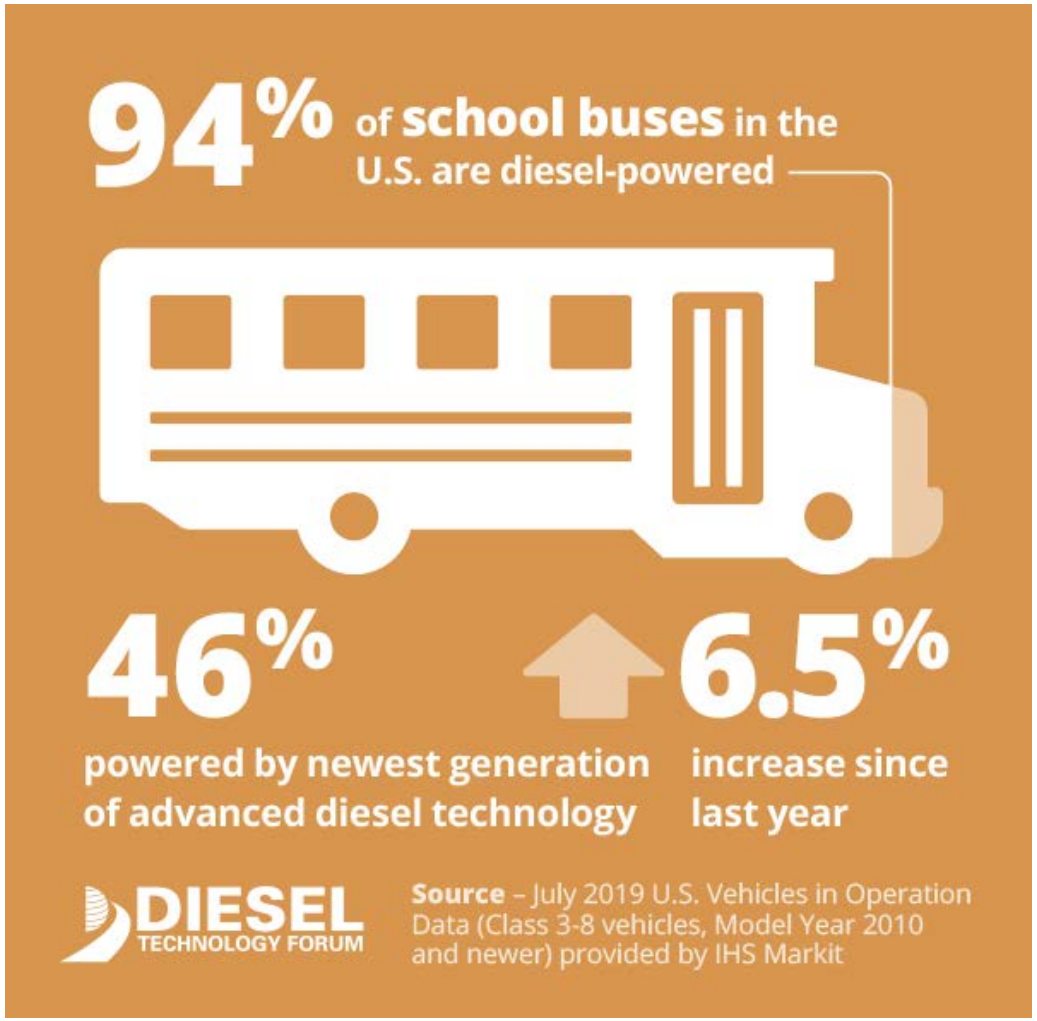
Diesel is the Technology of Choice for America's Trucks

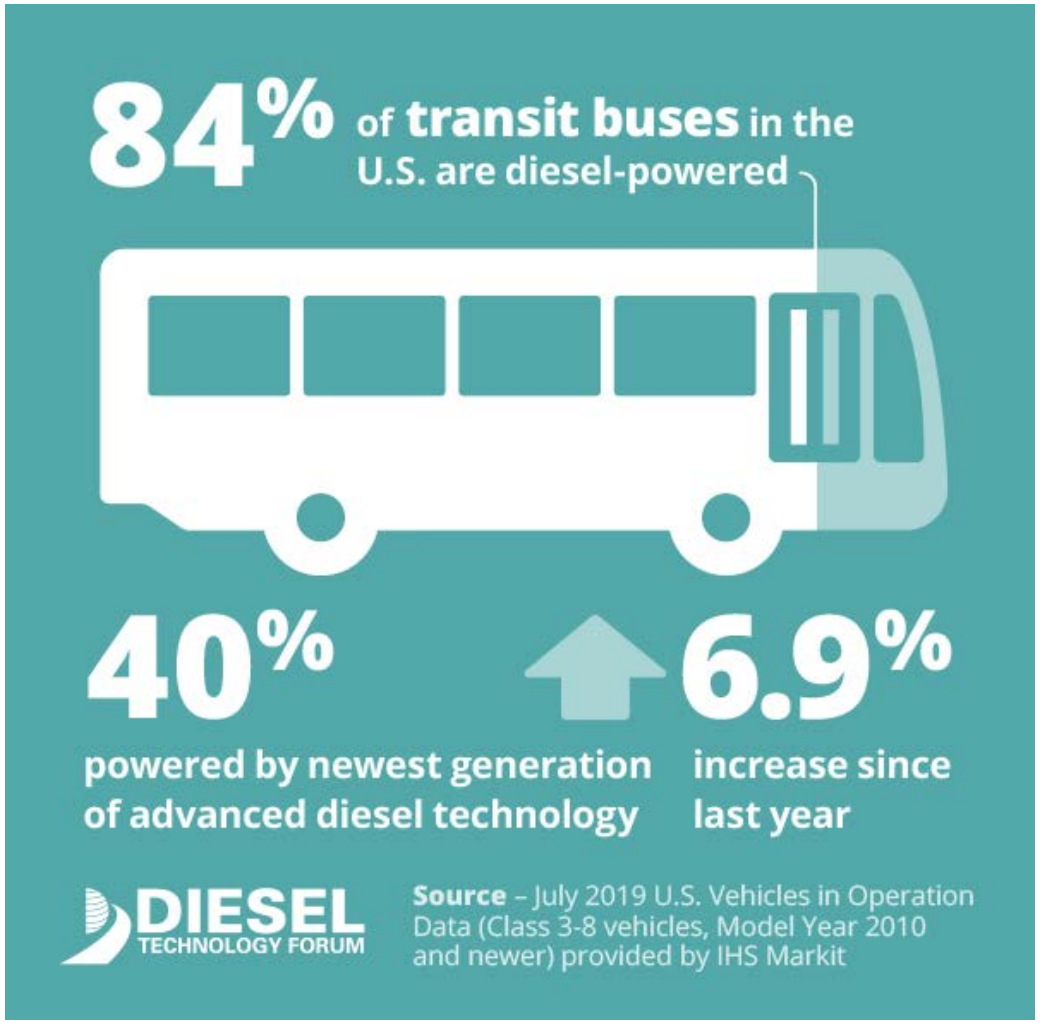


Growth of New Technology Diesel Trucks on the Road Class 8, classes 3-8



Expanding Investments in New Technology
Diesel in School, Transit Buses





Midwest Leads in Adoption of New Technology Diesel Trucks

Percentage of Newest Generation Heavy-Duty Trucks

NATIONAL 43%

Ranking

1	Indiana	65%	6	Tennessee	47%
2	Oklahoma	56%	7	Maryland	47%
3	Utah	55%	8	Illinois	46%
4	Texas	50%	9	D.C.	46%
5	Pennsylvania	48%	10	Wyoming	45%

Indiana is #1 for 7 years in a row
at 65% for MY 2010+ heavy-duty trucks

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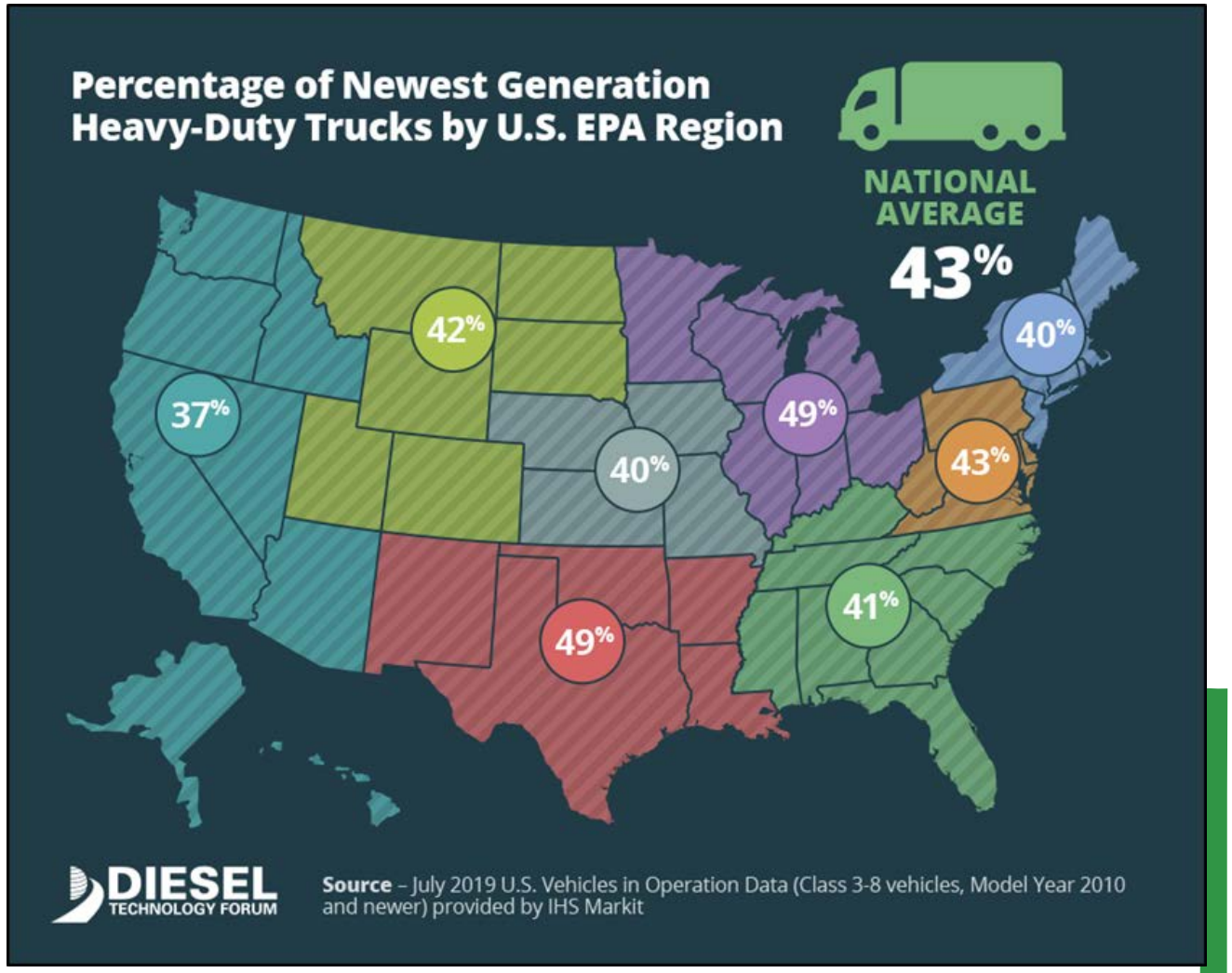
Source – July 2019 U.S. Vehicles in Operation Data (Class 3-8 vehicles, Model Year 2010 and newer) provided by IHS Markit



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Share New Tech Diesel Trucks in MARAMA

#1 State at 64.8%

MARAMA Region	
Share of New Tech Diesel Trucks	State
41.2%	New Jersey
45.5%	D.C.
39.4%	Delaware
35.1%	West Virginia
46.6%	Maryland
34.3%	Virginia
47.6%	Pennsylvania
38.6%	North Carolina
41.9%	**MARAMA Region**

National Average = 43%

Bottom States for Adoption of New Diesel Trucks		
State Ranking	Share of New Tech Diesel Trucks	State
#40	36.3%	CALIFORNIA
#47	32.3%	SOUTH DAKOTA
#48	32.0%	HAWAII
#49	31.8%	ARIZONA
#50	31.0%	ALASKA
#51	30.6%	KENTUCKY

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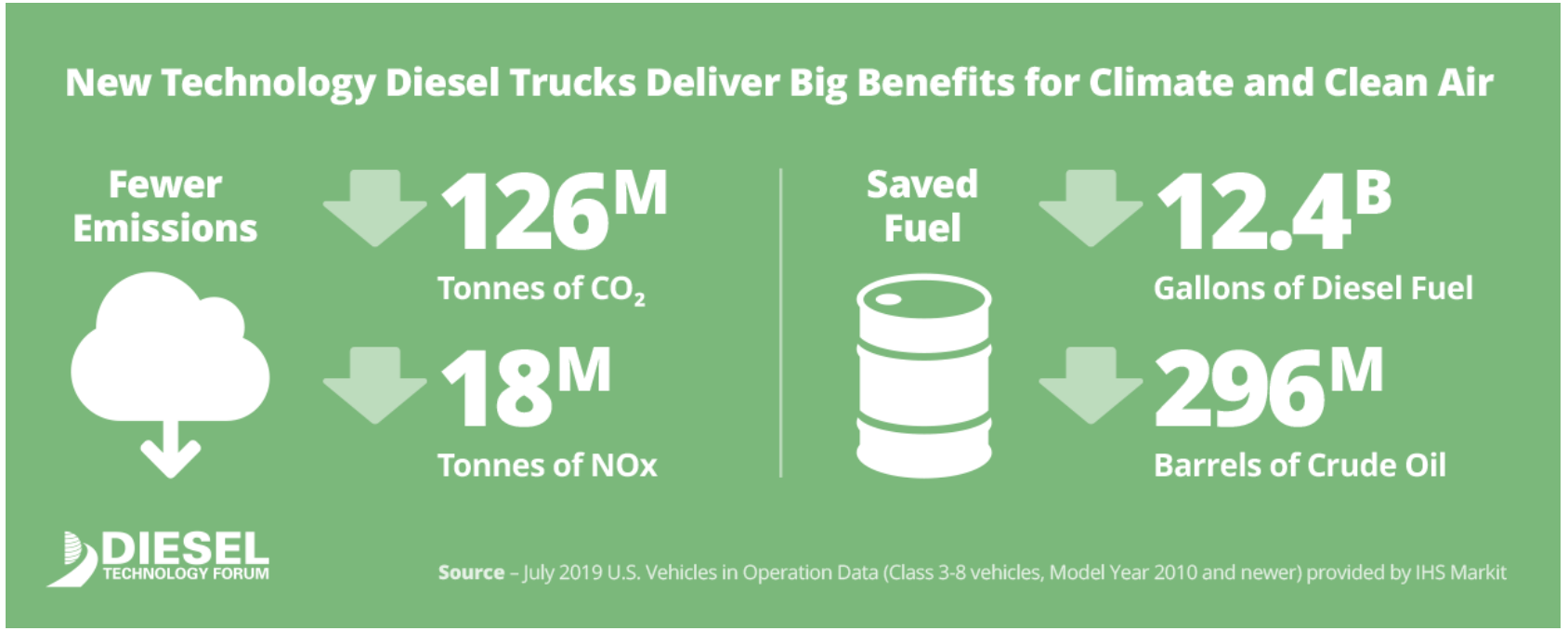
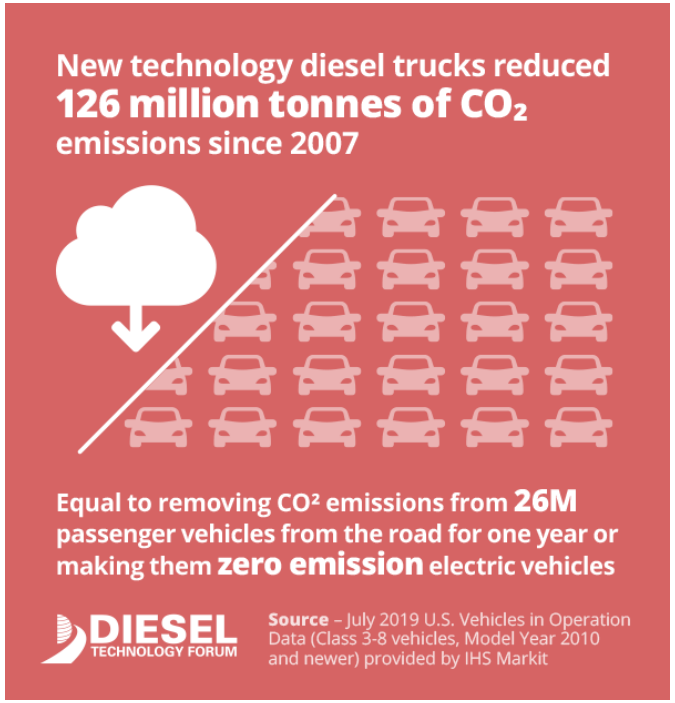
Since 2011.....

These new generation diesels are delivering significant clean air, and GHG benefits to society and fuel savings to truckers -- **TODAY.**





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DIESEL'S ROADMAP TO THE FUTURE

Hybridization Where it Makes Sense

Expanded Use of Renewable Fuels

Increasing Energy Efficiency

Emissions Closer to Zero

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Diesel Deliver Big Future Benefits

Nationwide Benefits

Phase 1&2 Rules will be Implemented….and Diesel Will Continue to Deliver Significant Benefits.

Between 2011 and 2030, Diesel Class 3-8 Trucks Will Have Saved….

130 billion gallons of fuel

1.3B tonnes CO2 = Emissions from the electricity used in 227M homes for 1 year

73 Million tonnes of NOx = Emissions from all light-duty vehicles for 26 years

4 Million tonnes of PM = Emissions from all light-duty vehicles for 130 years

Anticipated Benefits to the Northeast

What are the benefits that more efficient commercial vehicles will bring to the region between 2010 and 2030?

- ***12.9 billion gallons of fuel saved***
- ***307 million barrels of crude oil***
- ***131 million tonnes CO_2***

Greenhouse Gas Equivalencies Calculator

EPA United States Environmental Protection Agency

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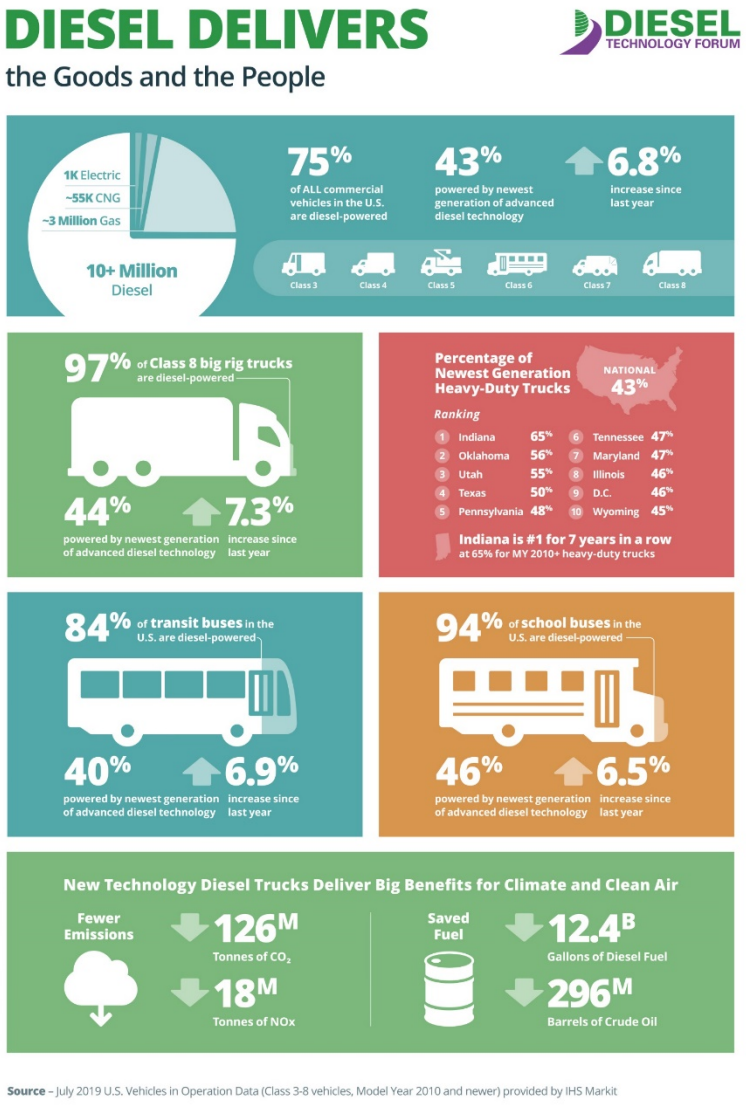
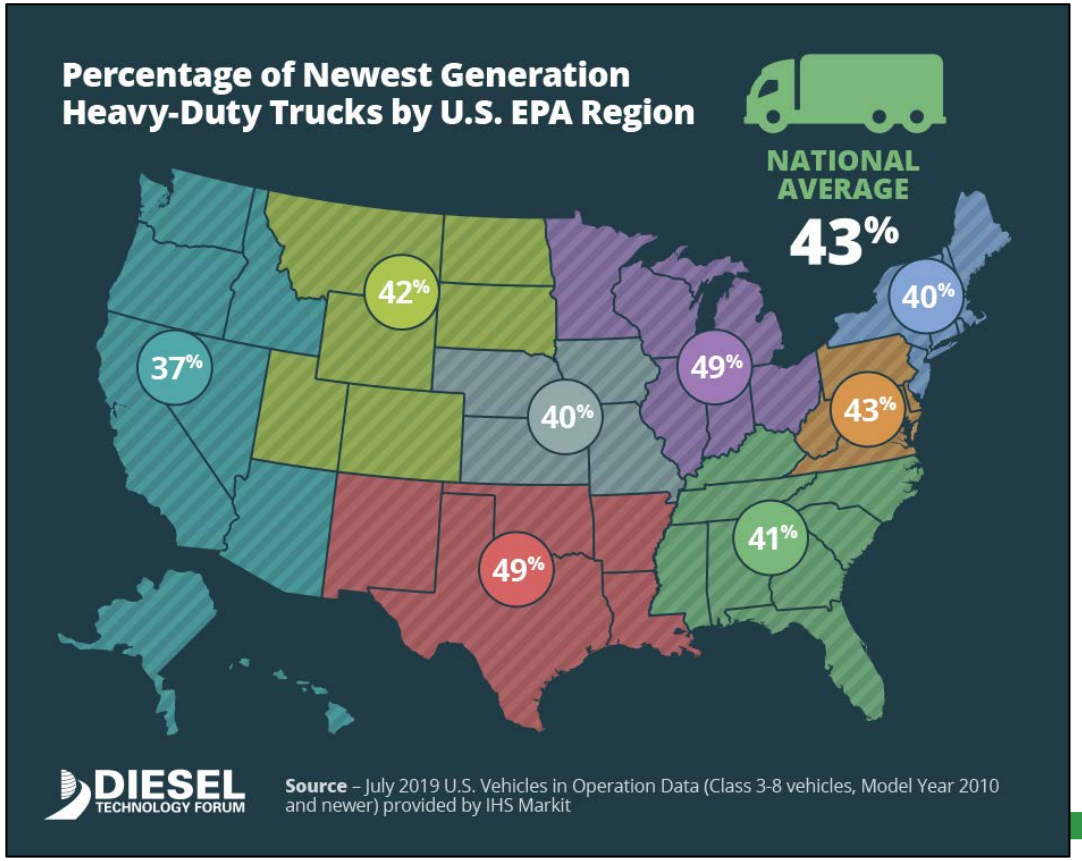
Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont

Resources for You

Find all this and more at
https://www.dieselforum.org/news-and-resources/





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Thank You

More information may be found at
https://www.dieselforum.org

Contact Us: dtf@dieselforum.org
Twitter: #cleandiesel
Facebook: https://www.facebook.com/dieseltechforum/

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