



# CLEANING UP THE TRANSPORTATION INDUSTRY

## PROPANE CAN DO THAT

Businesses and school districts of all sizes are turning to this clean, American energy to reduce their NOx and greenhouse gas emissions affordably. Fleets that are looking to lower their total cost-of-ownership while cost-effectively reducing emissions should take a look at the advantages of propane autogas:

### MUCH CLEANER THAN INDUSTRY STANDARDS

In the Summer of 2018, Roush CleanTech and Greenkraft both developed new low-NOx engines that operate 90 percent cleaner than the required EPA standards. With

**90%  
CLEANER**  
THAN ANY EPA STANDARD

these innovations, propane autogas is considered a near-zero emissions energy solution. Including propane autogas as a purchase option is the first step in reducing emissions, reducing costs, and ensuring sustainability for your fleet.

### RENEWABLE PROPANE INNOVATIONS

There are significant environmental benefits to be gained from renewable propane. It's most commonly produced as a co-product of renewable diesel production or from renewable liquid fuels from animal fats. This fuel offers the same clean, efficient, reliable performance as conventional propane, with about half the carbon intensity value. EPA Renewable Fuel Standards (RFS) also include renewable propane pathways.

### SMARTER FOR SCHOOL BUSES

To truly understand how much cleaner propane autogas operates, just look at how dramatically you could reduce NOx emissions by switching from diesel:

THE SWITCH	REDUCED NOX EMISSIONS
Replace all older than model year-2007 diesel buses with new propane autogas buses.	More than 96 percent <sup>1</sup>
Purchase a modern propane autogas bus instead of a modern, ultra-low sulfur diesel bus of the same vehicle make.	Up to 96 percent <sup>2</sup>

1. Source: AFLEET model using Polk Registration data by state for diesel buses — June 2017. By removing 235,989 of pre-2007 diesel fueled buses from the road across the country and replacing them with new propane autogas school buses, NOx emissions would be reduced by 96 percent.

2. West Virginia University real-world testing data for 2015 Blue Bird 6.8L propane model compared with 2014 Blue Bird 6.7L diesel model.



## STOP OVERSPENDING ON DIESEL

Propane autogas gives you clean performance while lowering your cost-of-ownership in three key areas:

### FUEL

The cost of wholesale propane autogas falls between the price of oil and natural gas, the fuel's two sources. As a result, propane autogas is almost always less expensive than conventional fuels, even as fuel prices fluctuate.

### FLUIDS

New, lower-emissions diesel technology comes with an added inconvenience for daily operation. This is on top of needing more oil by volume compared with propane autogas. In cold temperatures, diesel vehicles also require anti-gelling agents to prevent clogging of fuel filters and lines. Propane autogas provides reliable performance without additional fluids.

### FILTERS

To meet emissions requirements, new diesel technology requires diesel particulate filters that must be cleaned periodically. Excessive idling will accelerate cleaning intervals. This increases extra maintenance expenses piled on top of additional lifecycle costs. Propane autogas eliminates the headaches and higher cost required for today's diesel engines.

## SWITCHING IS EASY

Switching from conventional fuel to propane is quick and cost-effective, because the requirements for a propane vehicle repair facility are generally the same as those for conventionally fueled vehicles. Other alternative fuels, however, may require different facility requirements than conventional fuels, like additional gas detection and ventilation equipment — costing fleets more to switch. Contact your local Authority Having Jurisdiction for applicable codes regarding building or modifying a propane-powered vehicle repair or maintenance facility.

Don't hesitate to start cutting emissions while enjoying the lowest total cost-of-ownership available. Go to **Propane.com** to learn more about propane autogas today.

## DON'T MISS OUT ON PROPANE AUTOGAS

The costs of diesel add up quickly: expensive fuel, additional fluids, and pricey particulate filters. These are the most influential reasons why propane autogas fleets save more money, from purchase to retirement of the asset.



### MORE UPTIME

With propane autogas, fleets can eliminate downtime linked directly to maintenance and diesel repairs. Propane autogas vehicles also provide superior cold-weather performance compared with diesel.



### SAFE FOR EVERYONE

Propane autogas buses operate noticeably quieter than diesel models, allowing drivers to better focus on their passengers and the road. Standard safety features designed into propane autogas bus fuel systems provide added peace of mind for everyone.



### AFFORDABLE INFRASTRUCTURE

Go to [propane.com](http://propane.com) to learn more about standard private stations and advanced private stations, including typical costs. There's sure to be a perfect refueling setup for your needs.



### AMERICAN FUEL

Using propane autogas supports our country's economy — nearly 90 percent of propane supplies are produced in the U.S.

### FOR MORE INFORMATION

To learn about propane-powered fleets, visit **Propane.com**.

**THE PROPANE EDUCATION & RESEARCH COUNCIL** was authorized by the U.S. Congress with the passage of Public Law 104-284, the Propane Education and Research Act (PERA), signed into law on October 11, 1996. The mission of the Propane Education & Research Council is to promote the safe, efficient use of odorized propane gas as a preferred energy source.

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