

A Domestic Resource

- Propane autogas¹ is the leading alternative fuel in the United States and the third most commonly used vehicle fuel, following gasoline and diesel.
- More than 90 percent of the United States propane autogas supply is produced domestically, with an additional 7 percent from Canada.
- Almost 75 percent of propane used in the U.S. comes from natural gas refining, and the remaining comes from petroleum during the refining process.

Readily Available and Abundant

- More than 27 million vehicles travel worldwide with propane autogas in their fuel tank. This includes shuttles, school buses, taxis, delivery vans, construction trucks, paratransit vehicles and more.
- There are thousands of propane autogas fueling stations in the United States, with stations in every state.
- Many fleet managers elect to install low- or no-cost on-site refueling infrastructure, eliminating trips to off-site stations.
- Propane autogas fueling infrastructure costs less than any other transportation energy source — conventional or alternative.

Environmental and Economic Benefits

- Vehicles that run on propane autogas emit fewer greenhouse gases, smog-producing hydrocarbons, and particulate emissions than gasoline vehicles.
- Vehicles fueled by propane autogas emit fewer greenhouse gases and total hydrocarbon emissions, and virtually eliminate particulate matter, when compared to diesel vehicles.
- Propane autogas is naturally lower in nitrogen oxides (NO_x) than diesel and gasoline. Exposure to NO_x exhaust can trigger health problems, such as asthma, bronchitis and other respiratory issues.
- The Ford 6.8L V10 3V engine equipped with a ROUSH CleanTech fuel system is certified to the ultra-low NO_x level of 0.02 grams per brake horsepower-hour. This engine (used in

¹ Propane autogas is the internationally recognized term for propane when used in on-road engines.

Blue Bird Type C school buses and Class 4-7 Ford commercial vehicles) is 90 percent cleaner than EPA's most stringent heavy-duty engine standard.

- Operating vehicles on propane removes the complexity and cost of after-treatment measures, which can accelerate return on investment and cut operating costs. There is no need for additional fluids or filters; exhaust after-treatment or diesel emissions fluids; particulate trap systems; turbochargers and intercoolers.
- For more than 30 years, the cost of propane autogas has been, on average, 30 to 40 percent less than the cost of gasoline and 40 to 50 percent less than and diesel.

Safety and Performance Characteristics

- Propane autogas is a nontoxic, non-carcinogenic and non-corrosive fuel classified as a non-containment by the Environmental Protection Agency.
- Propane autogas vehicle fuel tanks are 20 times more puncture-resistant than gasoline or diesel tanks. They are constructed from carbon steel in compliance with the American Society of Mechanical Engineers.
- Vehicles fueled by propane autogas reduce noise levels by about 50 percent when compared to diesel, allowing drivers to focus more on the road ahead.
- Propane buses have no cold-start issues.
- Unlike gas or diesel, propane autogas is part of a close-looped system, meaning the fuel is never exposed to air and won't spill.

Organizations Fueling with Propane Autogas

ROUSH CleanTech has deployed over 18,000 Ford vehicles and Blue Bird school buses fueled by propane autogas to fleets across America, including:

- **Private fleets** such as AmeriPride, Bimbo Bakeries USA, ConocoPhillips, DISH Network, Frito-Lay, Nestlé Waters and U-Haul.
- **Government municipalities** like King County, Washington and the Cities of Santa Ana and Santa Monica, California.
- **Transit agencies** such as Broward County Transit, South Carolina's COMET, Greater Cleveland Regional Transit Authority, Flint Mass Transportation Authority, West Palm Beach Transit and SMART in Michigan.
- **850 school districts**, including Boston Public Schools; Fulton County School District, Georgia; Broward County Public Schools, Florida; Detroit Public Schools; Kyrene School District, Arizona; and Los Angeles Unified School District.

Learn More

- ROUSH CleanTech: [ROUSHcleantech.com](https://www.ROUSHcleantech.com)

- Propane Education & Research Council: propane.com
- Department of Energy's (DOE) Clean Cities: cleancities.energy.gov
- DOE Office of Energy Efficient and Renewable Energy: afdc.energy.gov
- World LP Gas Association (WLPGA): auto-gas.net

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