Propane Autogas is an alternative vehicle fuel that has been around for nearly 100 years. It costs less than gasoline or diesel fuel and 90% of it is produced in the United States. Coming from the same wells as natural gas, recent U.S. discoveries have led to an abundance of natural gas and natural gas liquids which is propane. Because of this increased production, 20% of propane production is now exported overseas causing a revolution in the energy industry with gaseous technology beginning to displace significant amounts of imported petroleum. This has helped America to become more energy independent and has put more Americans to work. Propane Autogas produces 20%-25% fewer greenhouse gas emissions than gasoline or diesel fuel. Although it may not be the ultimate answer to America’s fuel needs in 50 years, Propane Autogas may be the bridge fuel for the next 15-20 years.

Propane Autogas is the most widely used alternative fuel in world – powering more than 23 million vehicles worldwide.

**AUTOGAS FACTS**

- More than 23 million vehicles worldwide run on Propane Autogas
- Clean-burning, green alternative fuel
- Reduced carbon-based emissions in the atmosphere
- Economical and affordable
- Produced in the USA
- Less expensive per gallon than gasoline or diesel fuel
- Storage tanks and dispensers can be located virtually anywhere
- Reduced engine maintenance
- Easily affordable fuel dispensers
- Approximately 95% of the mileage of gasoline
WITH OVER 400 PROPANE BUSES, CONNECTICUT ALREADY SAVES ON FLUIDS, FILTERS, FUEL AND REPAIRS FOR A LOWER TOTAL COST-OF-OWNERSHIP.

**WHAT IS PROPANE AUTOGAS?**

Currently, 90% of propane is produced from natural gas processing with the balance coming from domestic oil refining. It is 270 times more compact as a liquid than as a gas. Its pressure is about 150 PSI, depending on temperature making it highly economical to store and transport, providing four times the range for the same size fuel tank as compressed natural gas which has a tank pressure of 3600 PSI and requires large pumps and much greater electrical expense.

**HOW BIG IS THE MARKET FOR VEHICLES FUELED BY AUTOGAS?**

Globally there are more than 23 million vehicles in service using Propane Autogas as a fuel source. In the U.S., Propane Autogas vehicles number over 270,000, making it the third most common engine fuel behind gasoline and diesel. The proven use of Propane Autogas and the domestic availability of Propane Autogas fueling stations make Propane Autogas a smart primary fuel option that’s available today.

Propane school buses are an excellent choice to keep students safe every day, meeting rigorous U.S. FMVSS motor vehicle safety standards. Propane buses also operate noticeably quieter than diesel buses, allowing the bus driver to focus better, keeping students safer.

PROpane BUS sNAPSHOT

**CONNECTICUT**

710 THOUSAND POUNDS OF NOx EMISSIONS A YEAR COULD BE REDUCED*  
*By replacing the state’s 2,014 diesel buses older than the model year 2007 with new propane buses.
PROPANE VEHICLES OEM OR AFTERMARKET UPFITS?

There are many vehicles being produced by the OEM’s with a factory Propane Autogas option. No gasoline is used on these vehicles. They include:

- **FORD** - F 450-750, E 350-450 CUTAWAY equipped with 6.8 liter engines, and the 6.2 in 2018
- **GM** - 1500-3500, 6.0 Liter Vans, Low CAB Forward 3500; 4500’s and most SUV’s
- **ISUZU** - 6.0 liter
- **FREIGHTLINER** – 18-33,000 GVW 8.0 liter
- **BLUE BIRD, COLLINS, INTERNATIONAL (IC) BUSES + MANY MORE VEHICLES BECOMING AVAILABLE**

EPI Certified aftermarket upfit systems are available for a variety of vehicle configurations from class 2-8.

The advantages of the upfit systems would be that the existing gasoline fueled vehicles can be left in place. A liquid injection propane system is installed that starts on conventional gasoline in order to keep the gasoline system working and switches automatically to propane after a minute or so and switches back to gasoline if the propane runs out before the propane tank can be refilled. This eliminates any “range anxiety” associated with a propane only system for long distance travel.

Please note that the most robust upfit systems are those using liquid injection technology (as opposed to older vapor injection) and that it is critical that the system carry an EPA CERTIFICATION. New gasoline powered vehicles should be ordered with a gaseous fuel prep package and a “mid ship” gasoline fuel tank. This enables the use of space behind the rear axle for a propane storage tank.

DRIVE DOWN COSTS WITH PROPANE AUTOGAS

You have choices when it comes to Propane Autogas fleet vehicles, especially when it comes to aftermarket conversions. A wide variety of conversion options are available from major manufacturers you trust.
IS PROPANE AUTOGAS COST EFFECTIVE?

Propane Autogas has historically been less expensive (20–50%) per gallon than gasoline and diesel fuel. And burning a cleaner fuel in your engine means way lower maintenance costs. Since Propane Autogas systems are sealed and under pressure, the fuel stays in the vehicle it was intended for. There are no evaporative emissions, fuel contamination issues, ethanol issues, DEF issues, or spill or theft issues with Propane Autogas.

PAYBACK

High mileage vehicles offer the fastest payback. If your FLEET vehicles drive 25-50,000 miles per year the payback of the cost of conversion is much quicker than those vehicles that travel fewer miles per year.

IS PROPANE AUTOGAS ENVIRONMENTALLY FRIENDLY?

By using Propane Autogas, a vehicle’s environmental impact is significantly reduced, with 60 percent less carbon monoxide, 20 percent less nitrogen oxides, up to 24 percent less greenhouse gas and 99% fewer particulate emissions. Compared to gasoline or diesel, choosing Propane Autogas reduces your carbon footprint.

IS PROPANE AUTOGAS SAFE?

Although Propane Autogas is clearly flammable, it is a nontoxic, non-carcinogenic, and noncorrosive fuel. It poses no hazard to groundwater, surface water, or soil. Because it is released as a gas, propane does not spill, pool, or leave residue. Since Propane Autogas is heavier than air, there are no garage modifications required for working on Propane Autogas vehicles as opposed to natural gas vehicles.

ARE PROPANE AUTOGAS VEHICLES SAFE?

Propane Autogas vehicles are tested extensively to perform safely in both normal driving and crash situations, with specially designed pressure relief devices installed in every tank to allow the safe release of pressure should it rise above preset levels. In addition, the tanks used to hold propane are many times more puncture resistant than gasoline tanks, require no continued testing like CNG tanks and as long as they hold product and have an identifiable data plate they can be used essentially, forever.
PROPANE AUTOGAS FUELING INFRASTRUCTURE

Propane Autogas infrastructure availability is one of the main questions with regard to alternative fuels. Fleet vehicles that return to base are the best candidates since a fuel storage tank can be easily placed in the consumers’ place of business. Propane Autogas vehicles get about 5% less miles per gallon than gasoline powered vehicles. The aftermarket liquid injection EPA certified systems we use to upfit vehicles allow the use of gasoline as a back up fuel in case of a run out, alleviating any range anxiety issues.

TYPES OF INFRASTRUCTURE

We will design and install a propane storage and dispensing system designed to fit the size of your fleet and budget, from as small as a 1,000 gallon tank with a mechanical register to an 18,000 or 30,000 gallon tank with multiple dispensers equipped with fuel management capability. A 1,000 gallon tank, can generally handle a fleet of 10 vehicles, a 2,000 gallon tank, 20 vehicles, and 2-2000 gallon tanks, 40-60 vehicles. Since Propane Autogas operates on relatively low pressure, the systems are generally 1/10 the cost of a CNG system and can be located virtually anywhere. A remote tank reading monitor is installed at every location to ensure adequate fuel is always on hand. We offer purchase, rent or charge on a per gallon basis for the dispensing systems and fuel purchases are based on a fixed margin over cost as published daily on The Wall Street Journal or on a “Fixed Price” basis.

Propane is delivered to the site by a local delivery truck holding 3-5,000 gallons as a liquid and pumped into the onsite storage as a liquid with a metered delivery ticket like gasoline or diesel. The larger storage systems of 18,000 or 30,000 gallons are designed to receive tractor trailer loads of propane direct from the source, reducing delivery expense. Propane is injected into the engine from the vehicle fuel tank as a liquid and every Propane Autogas tank is equipped with an automatic stop-fill valve designed to prevent overfilling. We use the low emission dispenser nozzles designed so that <2ccm of gas is released when disconnected from the vehicle after refilling, eliminating the need for eye and hand protection.

This is one of our portable Propane Autogas dispenser “rescue units.” It can be delivered to the site, plugged into an existing power source (or powered by a generator in case of a power failure) and filled by our delivery truck known as a bobtail and be ready to fill your vehicles in no time.
PROPANE AUTOGAS FUELING INFRASTRUCTURE

Buses fueled by Propane Autogas are providing long-term savings for school districts and private transportation contractors alike as school transportation budgets continue to shrink. Conventional and other alternative fuels cannot deliver similar savings. The refueling stations with Propane Autogas are simple, quiet, safe, and can be located virtually anywhere. It’s the same experience as refueling with diesel or gasoline, making the transition easy for school districts.

AUTOGAS: GOVERNMENT FLEETS

Government and Law enforcement fleets are turning to Propane Autogas as a reliable fuel and prolong the life expectancies of their vehicles. This also includes police, security, traffic enforcement and emergency vehicles most of which experience significant idle time and extended use. Propane Autogas vehicles burn so much cleaner than diesel or gasoline models that vehicle maintenance is significantly reduced while vehicle life expectancy is greatly extended.

AUTOGAS: TAXI CABS & LIMOUSINES

Mass transit consumer vehicles are turning to Propane Autogas, for a cleaner more reliable fuel which prolongs the life expectancies of their vehicles. The demand placed on these vehicles make Propane Autogas an obvious choice.
AUTOGAS: COMMERCIAL FLEETS

With Propane Autogas and its lower fuel and maintenance costs, Fleet Directors and Operators have found an energy source that meets their current financial needs. UPS recently purchased 1000 Propane Autogas delivery vehicles and Nestle Waters is converting the majority of their Nationwide delivery fleet to Propane Autogas powered F-650’s. Any fleet which has vehicles returning to the home base where a dispensing system can be installed can take advantage of converting to Propane Autogas.

AUTOGAS: LANDSCAPE FLEETS

Outdoor grounds maintenance equipment requires a portable, low-cost fuel that delivers sufficient power. Propane delivers nearly equivalent energy to gasoline and diesel while reducing emissions in applications, such as commercial mowers, trimmers, and leaf blowers. Propane-fueled mowers are permitted to operate when local regulations ban gasoline mowers in certain areas of air quality non-attainment.

AUTOGAS: RETAIL ITEMS

Manufacturers have found even more exciting uses for Propane Autogas. Lawn Mowers, Snow Blowers, Outboard motors, buffers, generators, and of course forklifts… anything with a gasoline engine is subject to a conversion to this clean, abundant energy source. Manufacturers are also developing conversion kits that enable gasoline-fueled motors to use propane, allowing users to save fuel costs and help clean the environment with their existing motor driven equipment.
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AUTOGAS: RESOURCES
There is a wealth of information on Propane Autogas and we encourage you to visit the links below to learn more.

www.hoconautogas.com
PERC – Propane Education and Research Council
www.propanecouncil.org

HOCON GAS, INC
Hocon Gas has been in the propane business since 1952. With six operating locations and over 120 employees, we are the largest family owned independent propane supplier in Connecticut.

Our fuel depots store over 400,000 gallons of propane. We operate 35 propane delivery vehicles with the two newest operating on Propane Autogas as well as over twenty of our installation, service and pick up trucks running on Propane Autogas. We are committed to alternative fuels!

We also carry an extensive line of high efficiency residential and commercial propane and natural gas appliances. As a recognized leader in the industry, you can count on us as a reliable resource for any questions and guidance regarding appliances, propane distribution systems for the residential, commercial and multi-unit housing segments. Our Industrial Gas division provides a full compliment of high pressure, spec, and cryogenic gases for the welding, fabrication, medical and food industries.

We designed and installed the propane dispensing systems for the cities of Torrington, Shelton and Waterbury’s propane school bus fleets as well as growing number of emission reduction-minded Fleet Operators in Connecticut such as Yale University and have been working with the governor’s GC 3 Council, DEEP, DOT and DAS to promote a wider acceptance of Propane Autogas in Connecticut.