



## Propane Autogas

Did you know that propane autogas is the third most commonly used transportation fuel in the world? Propane autogas, also referred to as liquefied petroleum gas (LPG), can power a variety of vehicles, from school buses and shuttle vans to pickup trucks and police cruisers. More than 23 million vehicles worldwide use propane autogas to get where they need to go.

Propane autogas is a domestic product — over 99 percent is generated within the United States. And it's readily available across the country, including in Western Washington, which contains over a dozen public fueling stations with propane autogas.

### Propane autogas makes sense

Although propane autogas has slightly less energy content than conventional fuels, its low cost makes it an economical choice. Traditionally, propane autogas is 30-50 percent less expensive than gasoline and diesel fuel, generating a quick return on investment for those who make the switch. The price for propane autogas has remained remarkably stable over time and is widely expected to stay steady. Additionally, propane autogas

### What is propane autogas?

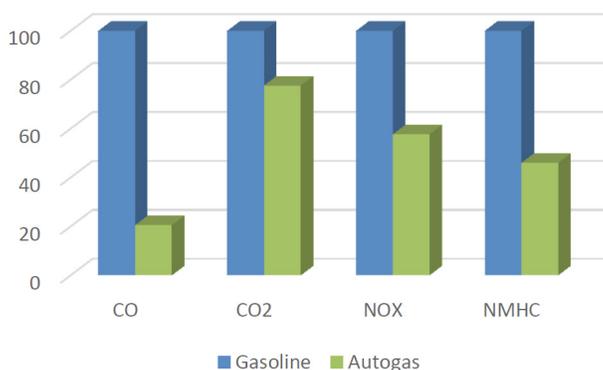
Propane autogas is a low-cost, clean-burning fuel. Made as a by-product of refining natural gas and oil, propane autogas is often considered a fuel for heating or other domestic uses. It can also be used to power vehicles — in fact, it's the third most common transportation fuel in the world, ranking only behind gasoline and diesel.

### Propane autogas benefits:

- Inexpensive
- Produced domestically
- Emits less air pollution
- Less vehicle maintenance
- Longer engine life
- Simple fueling infrastructure
- Safer to handle and store

fueling infrastructure is among the least expensive to install, operate and maintain of any transportation fuel.

## Propane Autogas vs. Gasoline Emissions



A 2015 Environmental Protection Agency study showed that propane autogas reduced the emissions of carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and non-methane hydrocarbons (NMHC).

### Safer, cleaner & greener

Besides being a good investment, propane autogas is a greener choice for the environment. Propane autogas vehicles produce nearly ten percent less greenhouse gas pollution than gasoline vehicles. Switching to propane autogas can also reduce other harmful pollutants such as carbon monoxide, nitrogen oxides, and particulate matter.

Propane autogas is one of the safest transportation fuels to handle and store. It is non-toxic, cannot be spilled (due to its gaseous form) and, if released, is not a greenhouse gas that contributes to climate change. Propane autogas vehicles have even proven to be quieter than their diesel equivalents, making for a safer and more pleasant working environment.

## Less maintenance equals more savings

Propane autogas is good for the vehicles that use it. Because propane autogas has a simple chemical structure, it burns cleaner than gasoline or diesel. Engines powered by propane autogas need less maintenance, reducing operating costs. With less build-up of engine deposits, vehicles tend to last longer when using propane autogas, especially high-mileage vehicles.

## Propane vehicles: more options than ever

Fleets can choose from two types of propane vehicles: dedicated and bi-fuel. Dedicated propane vehicles run only on propane, while bi-fuel propane vehicles have two separate fueling systems that enable the vehicle to use either propane or gasoline. Propane autogas vehicles can be procured directly from the manufacturer, or existing gasoline vehicles can be converted. EPA-certified conversions are easy to install and do not violate a vehicle's factory warranty.

Purchasing or converting newer propane-powered vehicles, depending on the type and model, tend to cost \$6,000-15,000 more than conventional vehicles. But the cost difference is quickly negated by the lower cost of fuel and vehicle maintenance. The more miles a fleet drives, the faster the payback.

## Alternative fuel tax incentive

In Washington State, businesses can receive tax credits up to \$100,000 for purchasing new commercial vehicles or converting existing vehicles to operate on alternative fuels, including propane autogas. The tax credit's amount, which covers up to 50 percent of the incremental or conversion cost of an alternative fuel vehicle, is based on the vehicle's gross vehicle weight rating.

For more information on Washington State's alternative fuel commercial vehicle tax credit, visit [afdc.energy.gov/laws](http://afdc.energy.gov/laws).

## About Us

Western Washington Clean Cities Coalition is a not-for-profit membership organization dedicated to expanding the use of alternative fuels and advanced vehicle technologies. We provide education, technical expertise, and networking opportunities to help our members transition from petroleum to more sustainable energy

## Propane autogas in Western WA:

Several Western WA Clean Cities members already know the benefits of propane autogas.

Propane autogas fuel suppliers:

- Amerigas
- Blue Star Gas
- Ferrellgas

Propane autogas technology providers:

- Blue Bird
- Bryson Bus Sales
- Creative Bus Sales, Inc.
- Pacific Propane Gas Association
- ROUSH CleanTech

Propane autogas fleet users:

- City of Mercer Island
- City of Redmond
- City of Seattle
- King County
- Kitsap County
- Oak Harbor School District
- Snohomish County Public Utility District
- Snohomish County School District
- Thurston County
- University of Washington
- Washington State Department of Transportation

## Considering a shift toward alternative fuels?

Let Western Washington Clean Cities be your guide.

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