

Propane

Propane, also known as liquefied petroleum gas (LPG), is used by many fleets. It has been used for decades to fuel light-duty and heavy-duty propane vehicles, and it has a high energy density, giving these vehicles good driving range. Fifteen alternative vehicles in our region are fueled by propane. Nationally it is the most commonly used alternative transportation fuel and the third most used vehicle fuel, behind gasoline and diesel.

For more information on propane fueled vehicles, visit our Propane Vehicles page.

What is Propane?

Propane, also known as liquefied petroleum gas (LPG or LP-gas) is a three-carbon alkane gas (C₃H₈). Stored under pressure inside a tank, propane turns into a colorless, odorless liquid. As pressure is released, the liquid propane vaporizes and turns into gas that is used for combustion. An odorant, ethyl mercaptan, is added for leak detection.

Propane is produced as a by-product of natural gas processing and crude oil refining. It accounts for about 2% of the energy used in the United States. Uses include home and water heating, cooking and refrigerating food, clothes drying, powering farm and industrial equipment, and drying corn. Rural areas that do not have natural gas service commonly rely on propane. The chemical industry uses propane as a raw material for making plastics and other compounds. Less than 2% of U.S. propane consumption is used for transportation fuel.

Benefits of Propane:

Propane has a high octane rating and excellent properties for spark-ignited internal combustion engines. It is non-toxic and presents no threat to soil, surface water, or groundwater. The interest in propane or LPG as an alternative transportation fuel stems mainly from its domestic availability, high energy density, and clean-burning qualities.

Propane is the most used alternative transportation fuel in the United States and the world. Propane vehicle technology is well established, and propane fueling stations are widely available. Propane has one of the highest energy densities of all alternative fuels, so propane vehicles go farther on a tank of fuel. It is also an exceptionally safe fuel: propane tanks are 20 times more puncture resistant than gasoline tanks, and propane has the lowest flammability range of all alternative fuels. Additionally, compared with vehicles fueled by conventional diesel and gasoline, propane vehicles can produce significantly lower amounts of some harmful emissions and the greenhouse gas carbon dioxide.

Incentives:

Many federal and state incentives encourage use of propane (also known as liquefied petroleum gas or LPG) as an alternative fuel. For example, in Louisiana legislature Act 35 of 1998 exempts propane from local sales when used for farming purposes. For more information, see our Incentives page.

Additional Information: For further reading on Benefits, Production, and Distribution of Propane visit <http://www.eere.energy.gov/afdc/fuels/propane.html>.

For further reading on Propane Vehicles visit <http://www.eere.energy.gov/afdc/vehicles/propane.html>.

Source: U.S. Department of Energy, Energy Efficiency and Renewable Energy, Alternative Fuels & Advanced Vehicle Data Center (<http://www.eere.energy.gov/afdc/>)