

Why Consider Natural Gas?

Natural gas vehicles (NGVs) produce fewer emissions than conventional gasoline vehicles. Beyond this, the Department of Energy (DOE) reports nearly 87% of the natural gas used in the U.S. is domestically produced.

There are over 1,000 Natural Gas fueling stations in the U.S.

Health Benefits of Natural Gas



- Produce fewer harmful emissions and toxic carcinogens
- Fewer emissions reduce the creation of smog
- Smog can create new cases of asthma, emphysema, and bronchitis; reduced emissions mean reduced effects on individuals that are predisposed to these conditions

Environmental Benefits of Natural Gas



- Cleanest of all hydrocarbon fuels
- Reduces carbon monoxide, hydrocarbon, and particulate matter emissions when compared to both conventional diesel and gasoline fueled vehicles

Economic Benefits of Natural Gas



- Natural gas is largely produced domestically
- Natural gas sold as fuel is generally less expensive than conventional gasoline
- Pipeline and transportation infrastructure is already in place; expansion is feasible
- Domestic deposits will create jobs

Energy Security Benefits of Natural Gas



- According to the DOE, 87% of the natural gas consumed in the U.S. is produced from domestic sources
- Is much less utilized than other hydrocarbon fuels; less demand keeps prices low
- Research is being conducted to collect biogas from recycled organic matter; could offer a source of domestically renewable fuel

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What Is Natural Gas?

Like coal and oil, natural gas is a fossil fuel. Unlike other fossil fuels, natural gas is a clean-burning fuel and emits lower levels of harmful byproducts into the air.

Natural Gas as a Fuel

Natural gas has been used as a cooking and heating fuel for centuries. Many people do not know that it is also a viable domestic vehicle fuel.

There are two forms in which natural gas is used as a fuel for vehicles: **compressed natural gas (CNG)** and **liquefied natural gas (LNG)**. CNG and LNG are made of almost entirely **methane (CH₄)**. Methane can be concentrated by pressure, which produces CNG, or by extremely cold temperatures, which produces LNG.



Natural Gas flame. Source: NAFTC.



Did You Know?

Natural gas has the highest energy density by mass of any hydrocarbon fuel used for vehicles. Natural gas has over 21,000 Btu/lb of energy.

What Vehicles Can Use Natural Gas?

Natural gas vehicles employ many of the same components used in conventional vehicles. In order to utilize natural gas as a fuel, special consideration must be made for the vehicle's compression ratio and fuel management system.

Today, very few manufacturers offer dedicated natural gas vehicles. However, many companies specialize in gasoline to natural gas conversions. There are also companies that provide conversions for heavy-duty diesel engines.



Natural Gas vehicles (NGVs). Source: NAFTC



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