

Natural Gas Vehicles: The Decision Starts Here

This publication is designed to help fleet managers and others interested in learning more about the use of natural gas as a transportation fuel and natural gas vehicles (NGVs). It provides an overview of natural gas as an energy source and a review of NGV and fueling technologies.

Some of the critical questions answered in this publication include:

- What Is Natural Gas and How Is It Used?
- Why Should You Use Natural Gas as a Transportation Fuel?
- How Does Natural Gas Work in Vehicles?
- What Types of Natural Gas Vehicles Are Available for Purchase Today?
- How Are Natural Gas Vehicles Fueled?
- Are Natural Gas Vehicles Really Safe?
- Are Natural Gas Vehicles Right for You?



Chapter 2
How is it Used?

How is Natural Gas Produced, Transported and Distributed?

Natural gas is "produced" by drilling wells to extract it from underground formations. Since natural gas formations are under tremendous pressure, pumping is not required to extract it. Once natural gas exits the well, it is transported through a system of underground pipelines by "pipeline companies." In the United States, the natural gas industry has constructed more than one million miles of pipeline to transport natural gas to local distribution companies, like your local gas utility company.

Because natural gas pipelines are located underground, the transmission and distribution systems remain protected from damage. Inclement weather conditions, such as ice storms, do not affect the systems. Pipelines are constructed and tested to operate at high pressures, and compressor stations are constructed every 50 to 100 miles along the pipeline. According to statistics from the United States Department of Transportation (DOT), the natural gas transmission and distribution system is the safest way to transport energy in the United States.

Pipeline companies transport natural gas from producers' wells to local distribution pipeline system, the fuel is distributed to utility customers through a similar underground pipeline system.

Chapter 5
What Types of Natural Gas Vehicles are Available for Purchase Today?

The following tables demonstrate most of the original equipment manufacturer (OEM) vehicles, engines and SVM systems available for purchase today.

Class	Category	Fuel/Technology
Light-Duty (<10,000 GVWR)		
Class 1	Light-Duty Sedan	CNG
Medium-Duty (10,000 - 33,000 GVWR)		
Class 3	Medium-Duty Truck	CNG
Class 7	Medium-Duty Truck	CNG/LNG
Class 7-8	Medium-Heavy-Duty Truck	CNG/LNG
Heavy-Duty (33,000 - 80,000 GVWR)		
Class 6-7	Medium-Duty Chassis	CNG
Class 4-5	Medium-Duty Chassis	CNG
Class 6-7	Medium-Duty Chassis	CNG
Very Heavy-Duty (80,000 - 33,000 GVWR)		
Class 4	Medium-Duty Tractor	CNG
Class 4	Medium-Duty Tractor	LNG

Chapter 6
How Are Natural Gas Vehicles Fueled?

Configurations of Typical Natural Gas Fueling Stations

Regardless of the type of natural gas fueling station utilized, there are three basic fueling station configurations:

- Quick-Fill
- Time-Fill
- Combination Quick and Time-Fill

The configuration chosen is determined by the needs of the operator.

Quick-fill is usually used when vehicles must be refueled in a time period similar to that of gasoline or other conventional fuels, say 3 to 7 minutes for automobiles and light-duty trucks. All public natural gas fueling stations are quick-fill.

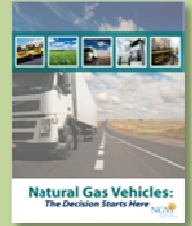
Time-fill fueling is usually recommended for fleets that utilize onsite fueling with vehicles that remain at a central location for a period of 6 to 8 hours, during which they can be refueled. Many fleet operators use time-fill fueling because the fueling station equipment required is often the least expensive.

Public Access Fast-Fill Station. Photo courtesy of Clean Energy

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Order Form

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