

UNDERNEATH, I'M ACTUALLY GREEN.

Powered By Clean Natural Gas & 

What is CNG?

CNG stands for compressed natural gas, a readily available alternative to gasoline and diesel fuel that is made by compressing natural gas and storing it at a high pressure (usually 3600 psi). Consisting mostly of methane, CNG is odorless, colorless, tasteless and produces fewer emissions than conventional vehicle fuels. CNG is also safer than other fuels in the event of a spill, because it is lighter than air and disperses quickly into the air when released. Natural gas is drawn from domestically drilled natural gas wells or in conjunction with crude oil production.

Why use CNG for transportation?

Natural gas vehicles outperform conventional fuels with a significantly higher octane rating, better fuel efficiency, lower operating costs and dramatic emissions reductions. It is the only alternative fuel that can power heavy-duty trucks and buses, the busiest vehicles on the road today.

Visit Noble Colorado @
www.noblecolorado.com

How do CNG vehicles work?

Natural gas is compressed and then enters a vehicle through a natural gas dispenser. From the dispenser, the compressed natural gas goes into high-pressured cylinders located in the vehicle. When the vehicle accelerates, CNG leaves the on-board storage cylinder, passes along the fuel line and enters the engine compartment. It then enters the regulator, which reduces the pressure from as high as 3,600 psi to atmospheric pressure. A natural gas valve enables natural gas to move from the regulator into the gas mixer or fuel injectors. Mixed with air, natural gas flows through the carburetor or the fuel injection system and enters the engine's combustion chambers.



DID YOU KNOW?

- Depending on how many miles traveled, each bus will save between \$2,000 and \$5,000 annually
- 155,000 natural gas vehicles on U.S. roads today
- 1783 NGV fueling stations (CNG and LNG) as of May 2016
- In the U.S. alone, NGVs offset the use of 500 million gallons of gasoline in 2014
- In the U.S. 50 different manufacturers produce 100 models of light, medium, and heavy duty vehicles and engines
- NGVs meet the strictest emissions standards for vehicles
- NGVs are safer than traditional gasoline and diesel vehicles
- Prices for natural gas per gasoline gallon equivalent (GGE) range approximately from \$1.50 - \$2.25

*Sources: DOE AFDC (www.afdc.energy.gov), NGVs Now (www.NGVsNow.com) and NGVAmerica (www.ngvamerica.org)

MATCHING GRANT PROGRAM FOR COMPRESSED NATURAL GAS (CNG) SCHOOL BUSES



Colorado can have the energy we need, the economy we want, and the environment we value. That's why we're working together with our state's Regional Air Quality Council (RAQC). Noble Energy is matching grants to Colorado school districts to fund the purchase of buses powered

by clean-burning compressed natural gas (CNG). The program is an extension of Noble Energy's CNG School Bus Project, which supported the purchase of new CNG buses in Weld County in 2013-2014. As a result, the school districts will save approximately \$3,000 on fuel per CNG bus per year, and children will breathe cleaner air, as CNG buses emit fewer emissions than traditional buses.

To qualify, applying school districts should:

- Be located in an area designed by RAQC as being non-compliant with federal ozone levels in the Northern Front Range counties.
- Agree in writing that the grant will be used only for purchase of a new CNG school bus.
- Allow signage on any bus acquired using the funds.
- Participate in a bus delivery event or announcement.

To apply:

The process begins by first applying for a CNG school bus grant to RAQC, which contributes up to 80% of incremental costs with a maximum amount of \$35,000 for the new vehicle. The school district then sends a copy of its RAQC application directly to Noble Energy. After the RAQC approves the grant award, Noble Energy will provide another \$60,000 to the school district to apply toward the purchase of an 80 passenger CNG school bus (\$40,000 for 30 passenger).

Each school district is responsible for any funds needed above the combined potential of \$95,000 received from RAQC and Noble Energy to acquire the vehicle.

For more information and to apply, please contact:

Sherrie Merrow

303-228-4062

sherrie.merrow@nblenergy.com

Curtis Rueter

303-228-4048

curtis.rueter@nblenergy.com

HOW CNG SCHOOL BUSES HELP COLORADO AND YOUR SCHOOLS

According to the U.S. Department of Energy's Office of Transportation Technologies:

- A Compressed natural gas (CNG) school bus typically displaces 2,000 gallons of diesel fuel per year.
- Natural gas engines dramatically reduce air pollutants.
 - > Carbon monoxide by 70%
 - > Non-methane organic gas by 87%
 - > Nitrogen oxides by 87%
- Clean-burning natural gas is up to one-third less expensive than diesel fuel on an equivalent energy basis.
- CNG is typically 25% to 40% less expensive than diesel fuel.
- Almost all CNG used in America is produced in the U.S.



TRADITIONAL
DIESEL BUS COST*
\$110,000



CNG ALTERNATIVE
FUEL BUS COST*
\$55,000

\$145,000 - \$30,000 - \$60,000 = \$55,000

(RAQC Grant) (Noble Grant)

* Approximate cost

