

A Few Facts

About CNG Fuel & Vehicles



CNG Today – the next choice of Automotive fuel

Natural Gas is the cleanest burning fuel *available* for automotive transportation today. Vehicles that run on Compressed Natural Gas emit very low levels of carbon monoxide – about 70% lower than the same vehicles using gasoline. Natural Gas is truly domestic – over 90% of all natural gas consumed in the United States is delivered from wells in the North America. Many Federal and State agencies and administrations are backing CNG as their fuel of choice for Alternative Fueled Vehicles and offer promotions and grants for CNG purchases including the US Department of Energy, US Environmental Protection Agency, the Massachusetts Department of Environmental Protection and the Massachusetts Division of Energy Resources. Thanks to government commitment to using CNG vehicles, the choice of cars, vans and trucks as well as fueling stations are multiplying every day.

For more on Government promotion of Alternative fuels including CNG see: www.cities.doe.gov
(click on Vehicle Buyers Guide & then on Incentives)

Also: www.otf.gov/epact for laws requiring use of AFVs today

Typical CNG Vehicles in Use Today

CNG engines are at work right now in vehicles from simple Chevy Cavalier sedans to Zamboni ice resurfacers. Pickups, vans, garbage haulers and even locomotives are using Compressed Natural Gas and its cousin, Liquefied Natural Gas across the country. There are currently over 130,000 natural gas vehicles on U.S. roads today. Transit buses are leading the way in many states as users of natural gas – weather compressed or liquefied. Here in Massachusetts, CNG fleets of buses are growing in Boston and on Cape Cod. The MBTA is currently using 17 40-foot CNG buses for the new Silverline Rapid Transit route, with 300 more CNG buses on order for expanding this service outside the city. Massport uses 33 CNG shuttle buses at Logan Airport. Visitors to Woods Hole on the Cape can now ride on three CNG shuttle buses bringing them from the satellite parking areas to the Ferry docks. Other fleets in Massachusetts include State Police sedans, Highway Department light duty trucks and vans and Environmental Management cars and trucks. In Middleborough, the MG&E is owner of a Crown Victoria sedan, a hybrid (CNG & gasoline) 150 pickup truck and a dedicated CNG service van.

For more on CNG vehicles in use see: www.ccities.doe.gov
(click on success stories)

Also: www.ngvc.org

The Cost of Driving a CNG Vehicle

CNG Technology in vehicles is gaining ground but still new. Drivers will pay a premium for a non-standard engine in currently existing models by all major manufacturers. MG&E recently paid about \$3,000 above the sticker price for a standard Ford Econoline van fitted with a dedicated CNG engine. While our purchase was dictated by the need to satisfy DOT clean air fleet standards, most buyers can qualify for grants that offset the higher price nearly completely. MG&E has applied for a grant of \$2,000 for each of our dedicated CNG vehicles. The cost of the fuel – compressed natural gas – at the pump is about the same as the gasoline equivalent.

How Fuel Stations Work

This new type of “gas” station looks very much like standard gas stations. The fuel pumps stand under a canopy and on a cement pad. They look and operate much like standard gas pumps with similar nozzles that a driver inserts into the fill opening in the tank. In this case, a seal is closed on the tank fill opening and natural gas which has been compressed by freezing it is then pumped into the specialized tank in the vehicle which keeps it in this form. Depending on its size, the tank can be filled in three to six minutes, very much like regular

gasoline. Drivers in most cases, can pay at the pump with a standard credit card and many stations, including the new one in Middleborough will be open 24 hours a day.

For a listing of CNG filling stations in Mass. In 2003, see: www.nega.com
(download PDA file, CNG Stations Available to the Public, 2003)

The Hydrogen Fuel Cell Connection

Recently, the Department of Energy has promoted and supported the development of Hydrogen Fuel Cell technology for automotive engines. This technology uses a hydrogen chemical reaction within a type of battery or cell which produces electricity to power the engine. It runs similar to an electric car – with near zero percent emissions - but needs hydrogen instead of electricity. Existing natural gas technology is a primary source of hydrogen and can readily convert natural gas to hydrogen at fueling stations to be supplied to vehicles as needed. There are other options but natural gas stations and technology already exists in a cost effective way and already has the fueling infrastructure to meet the need today. The natural gas option today will facilitate the growth of the hydrogen fuel cell vehicle of tomorrow. It can act as a bridge to the future.

For more information on Hydrogen Fuel Cells see www.ngvc.org

CNG – An Alternative Fuel for Local Fleets

CNG is ideal for vehicles in constant and similar operation that travel in a limited area. Actually, fleets which are centrally fueled such as town-owned buses and local departments, are the targets of most federal clean air regulations. While many CNG vehicles have the range of a standard vehicle of the same make, drivers of CNG vehicles in a town-wide area will have constant access to a fueling station at all times. They will also be using a cleaner burning fuel in that area, cutting back substantially on polluting emissions concentrated in their towns and saving on fuel costs for necessary and constant engine operation.

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