

Safety

- Natural gas is lighter than air; any spills or leaks will quickly dissipate into the atmosphere.
- In open air, natural gas will not explode or detonate.
- The ignition temperature of natural gas is 600 degrees Fahrenheit, higher than gasoline (vapors), and there is a narrower gas-to-air ignition range.
- Compressed natural gas (CNG) is stored in thick-walled steel or aluminum cylinders and wrapped with fiberglass for added protection. These tanks are substantially stronger than the thin metal or plastic tanks used on gasoline-fueled vehicles.

Environmental Benefits

- Natural gas is a cleaner burning fuel and will reduce vehicle emissions.
- No underground tanks are required for storage, thus, no underground leaking or pollution of underground water supplies.

Supply

- Natural gas is readily available in the U.S., and proven reserves are sufficient to meet projected demands for over 200 years.
- Use of domestic natural gas to fuel vehicles will directly reduce the U.S. reliance on imported petroleum products and, thus, will lower the balance of trade deficit.

- Existing interstate and local pipeline systems have sufficient surplus capacity to transport natural gas directly to the customer's point of use. Pipelines are the safest and most efficient means to transport energy. Gasoline and diesel fuel require transport by tanker trucks, which add to highway congestion and potential for accidents or spills.

Experience

- Natural gas has been used for over 50 years to fuel vehicles. The technology is not new.
- Currently, over 700,000 vehicles operate on natural gas worldwide.

In the coming years, there will be an increasing number of vehicles running on alternative fuels. And because of all its benefits, natural gas will be the alternative vehicle fuel of choice — on "The Road To Clean Air."

HOUSE BILL FOR
TAX 8 H-2946 (H-2945)
TAXES FROM
"The Road To
Clean Air"

Natural Gas Vehicles

FROM
CALL PAUL SAIA
8681865
CALL TIM WHITE
BOSTONGAS
0 7239210
FOR MORE INFO



Why Natural Gas?

Urban air quality is a major issue on a national scale. Emissions from motor vehicles is the major cause of today's problems of acid rain, smog and a litany of noxious pollutants — carbon monoxide, reactive hydrocarbons, airborne particulates and oxides of nitrogen.

Switching to a clean-burning alternative fuel is the pollution solution — and the best alternative fuel available is natural gas. *Why Natural Gas?* Because it is clean, safe, economical, available and abundant.

Why Boston Gas?

Boston Gas, New England's oldest and largest gas company, is committed to natural gas as a fuel for its vehicle fleet.

As early as the late 1960s, Boston Gas had a pilot program operating vehicles on natural gas. Boston Gas now expects to convert approximately 200 vehicles over the next several years.

In addition, plans are now under way to construct a fueling station to accommodate the converted vehicles. This station will replace a smaller one built in 1983.

A Cleaner Fuel For Vehicles

Motor vehicles powered by gasoline emit three major pollutants — carbon

monoxide, reactive hydrocarbons and nitrogen oxides. Diesel-fueled vehicles also emit large quantities of particulate matter (black soot).

Several cleaner burning fuels have emerged as alternatives to gasoline and diesel. Some are exotic and untried. But a familiar, safe and exceptionally clean fuel is already available — natural gas.

The key word here is "natural". It's a gaseous fuel that moves in its natural state from point of production to point of use through underground pipelines — without refineries or storage tanks in between.

Natural gas today heats nearly 50 million American homes, serves millions of businesses and industries, generates about 10 percent of our electricity, and powers 30,000 vehicles in the United States -- 700,000 around the world.

Italy, for example, which has used natural gas vehicles since the 1940s, has 300,000 of them on its roads. In New Zealand, 125,000 cars and trucks have been converted to natural gas. Canada has 20,000 natural gas vehicles, Argentina 15,000, and the Soviet Union 200,000, with plans to convert another 30,000 by the end of 1990.

How Do Natural Gas Vehicles Work?

Natural gas is compressed to about 3,000 pounds per square inch and is stored on board the vehicle in cylinders

installed in the rear or undercarriage.

When natural gas is required by the engine, it leaves the cylinders, passes through a master manual shut-off valve and travels through a high pressure fuel reducer or regulator located in the engine compartment. The natural gas enters the carburetor at atmospheric pressure through a specially-designed natural gas mixer, where it is properly mixed with air.

Natural gas then flows into the engine's combustion chamber and is ignited to create the power required to drive the vehicle. Special solenoid valves prevent the gas from entering the engine when it is shut off. A fuel selector switch and gauge are provided on the dashboard for the driver to select the use of natural gas or gasoline, and to determine the amount of natural gas remaining in the cylinders.

In Summary

The Primary Advantages To Natural Gas As a Vehicle Fuel

Economics

- Natural gas costs less than gasoline — an average of 40 to 80 cents per gallon equivalent.
- Natural gas is cheaper to produce and transport, and it does not require expensive refining as do finished petroleum products.
- Natural gas is a cleaner burning fuel and, therefore, reduces vehicle maintenance costs.

Cambridge,

6/12/91

To the Honorable, the City Council of the
City of Cambridge:

The undersigned respectfully pray

I would like THE CITY COUNCIL LOOK INTO NATURAL GAS
FOR CITY VEHICLES

Paul R. Jara
147 AMORY ST 8681865
CAMB MA 02139

RECEIVED BY
CITY CLERK
JUN 12 PM 3:12
CAMBRIDGE MA.

13.
CONSENT COMMUNICATIONS
PETITION

S-788

of Paul R. Saia
requesting the City Council to
for look into natural gas city vehicles.

No. XXXXXXXXXXXXXXXXXXXXXXXXXXXX

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*Referred to the
City Manager
Copy sent to City Mgr
6/25/91 (di)*

In City Council, June 24, 19, 91

Referred to the Committee on

Attest:

City Clerk.