

PROPANE: AN ECONOMIC & ENVIRONMENTAL FUEL CHOICE

Propane, one of the nation's most versatile sources of energy, supplies about 4 percent of total domestic energy needs. Opportunities exist to expand its use as a cost-effective strategy to limit vehicle emissions.

In addition to reducing dependency on petroleum imports, alternative, cleaner fuels play a key role in addressing worsening environmental problems caused by rising consumption of conventional fuels. Propane is rapidly establishing itself as an important alternative fuel with its impressive environmental benefits and inherent practical and cost advantages over gasoline, diesel, and other alt-fuels.

RELIABLE SUPPLY AVAILABLE

Propane is one of the nation's most versatile sources of energy, supplying about 4 percent of total domestic energy needs and fueling more than 10 million vehicles worldwide.

Approximately 90 percent of the U.S. propane supply is produced domestically, while the majority of the remaining 10 percent is imported from Canada and Mexico. Approximately 60 percent of propane is produced from natural gas processing and 40 percent comes from the refining of crude oil. Thus, propane is a readily available, secure energy source whose environmental benefits are widely recognized. Propane is also an approved, alternative fuel listed in the 1990 Clean Air Act, as well as the National Energy Policy Act of 1992 and 2005.

SAFE REPUTATION UPHELD

Propane has a remarkable safety record, due in large part to the stringent codes and regulations developed by the propane industry and the National Fire Protection Association (NFPA). Among propane use benefits are:

- ◆ Only ignites, when combined with air, if the source of ignition reaches 940F.
- ◆ Gas is nontoxic and produces minimal emissions.
- ◆ Not harmful to soil or water.
- ◆ The Propane Emergencies Program established to train first responders.

ENVIRONMENTAL CHARACTERISTICS

Propane has long been recognized as a "green" energy. Nontoxic and insoluble in water, propane use can help cut emissions and protect the environment. Because it is released as a gas, it does not spill, pool, or leave a residue.

Propane exhaust creates 60 to 70 percent less smog-producing hydrocarbons than gasoline, according to studies by the Southwest Research Institute (SWRI).

Compared to gasoline, propane yields 12 percent less carbon dioxide, about 20 percent less nitrous oxide, and as much as 60 percent less carbon monoxide, according to 2003 figures from the World LP Gas Association and California Energy Commission.

Propane cuts emissions of toxins and carcinogens such as benzene and toluene by up to 96 percent compared to gasoline, according to studies by the SWRI.

ECONOMIC ADVANTAGES

Infrastructure. The cost of building propane fueling stations is similar to, or lower than, comparable-sized gasoline dispensing systems. Propane refueling facilities are designed in compliance with nationally recognized standards and local building and fire codes, which must follow stringent safety regulations and are commonly deployed throughout the country.

Operating Costs. Propane offers fleet operators distinct economic advantages over conventional gasoline and diesel fuels. *The Battelle Memorial Institute found that propane is the most economic alternative fuel for fleets (on a per-mile basis) when operating ownership, and infrastructure costs are considered.*

Operating costs associated with propane fleets typically range from 20-40 percent less than those of gasoline-operated fleets. From an economic perspec-

tive, propane is the most cost-effective alternative to conventional transportation fuels when capital costs (vehicle and infrastructure) and operation and maintenance costs are all taken into consideration. Of all available alternative fuels, it also offers the best mix of vehicle driving range, durability and performance.

The up-front costs of propane fleet vehicles can be offset by lower operating and maintenance costs over the lifespan of the vehicles. The time it takes for these savings to offset capital costs (payback period) depends on vehicle usage patterns, specifically, the average distance traveled monthly or annually. Fleet vehicles typically travel long distances and have very high fuel consumption, so the payback period on propane fleet vehicles can be very reasonable.

THE FUTURE OF PROPANE

As the country as well as the State of Alabama look for ways to reduce our dependency on petroleum imports, remember that research has already been conducted to prove PROPANE's place in the alternative fuel marketplace. We have an abundant amount of natural gas in our country; therefore, supply is not an issue. With the federal tax credits for purchasing or converting to a dedicated propane vehicle, tax credits for refueling infrastructure and the \$.50 per gallon tax incentive on propane, PROPANE is a viable option for not only commercial fleets in Alabama, but also for local and state government agencies as well. PROPANE must be a strong consideration during all phrases of ENERGY discussions.

For more information on propane as an alternative fuel, visit: www.propanecouncil.org, www.propanefreedom.com, www.propanetrucks.us or call Lisa Fountain, Executive Director, Alabama Propane Gas Association at 334-358-9590.