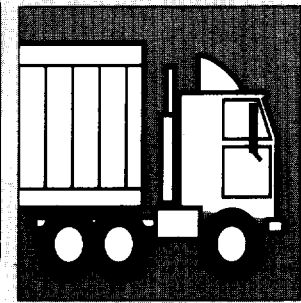


Alternative FUELS IN TRUCKING



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FUEL TAX CONSEQUENCES OF ALTERNATIVE-FUELS- POWERED VEHICLES

By Jan Balkin

With congressional incentives to put more alternative-fuels-powered vehicles on the road to comply with clean air standards, companies may need to familiarize themselves with the fuel and other tax consequences of the use of such vehicles. ATA Foundation staff recently reviewed state statutes, and found as many approaches to taxation as there are states in the United States [We have not reviewed laws in Puerto Rico or the territories.]

For the purposes of this article, the focus is on those more common alternative fuels—gasohol, especially, alcohol and gaseous fuels, such as ethanol, natural gas, and propane. Let's begin with the bottom line — tax rates.

In the 1970s and into the early 1980s, some states pursued a policy of assisting the local farm economy by offering tax breaks for gasohol or blended fuel use, as well as to those actually blending the fuel (the latter will not be discussed here). Those tax breaks ranged anywhere from 100% relief to a 1¢, 2¢ or maybe a 3¢ reduction in the tax rate. States choose to periodically "sunset" those tax breaks, and over time, many, in fact, have disappeared from state statutes. The vestiges of tax breaks remain in the area of agricultural use or off-highway use (construction vehicles, power take-off equipment), although current technology

does not generally allow for widespread use by heavier vehicles.

Tax rates on gasohol currently range from a low of 5¢ in Wyoming to the full gasoline tax rates in most states. Tax rates for compressed natural gas are expressed in cents-per-cubic-foot, and range from 5.25¢ in New Jersey to the full tax rate in most states. [All tax rates expressed throughout this article are for at least the first calendar quarter of 1992.]

Alternative Forms of Taxation. What appears to be occurring in a number of states is that, either in addition to or in lieu of the fuel tax, vehicles may be taxed on an annual flat tax basis. [Many of these flat taxes are in addition to vehicle registration fees as well.] Fifteen states have in their statutes such a provision applicable primarily to propane (LPG) vehicles. The option may be attributable to the lack of specific conversion factors for liquefied gas fuel into a gallonage rate. Arizona solves that problem by assessing a registration fee based on the depreciated price of the vehicle, thus eliminating any conversion table.

States that opt for the flat tax in lieu of or in addition to the fuel tax assess the tax based on the weight of the vehicle — the higher the weight, the higher the fee. California's present tax structure ranges from \$36 for vehicles under 400 lbs. to \$168 for vehicles in excess of 12,000 lbs. Kansas, for example, adds another component — mileage — to the tax calculation. [Kansas also has one of the higher flat tax rates: up to \$3800 for a vehicle over 48,000 lbs. GVW traveling

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Project Profile

DOE AWARDS ALTERNATIVE FUELS CONTRACT TO TRUCKING RESEARCH INSTITUTE

The Department of Energy and the American Trucking Associations Foundation recently joined forces to conduct a multi-year nationwide study of the impact of alternative fuels on the nation's trucking industry.

Earlier this summer, the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) awarded the ATA Foundation's Trucking Research Institute (TRI) a halfmillion dollar sub-contract for the first phase of the alternative fuels study.

According to the agreement, TRI will manage several real-life demonstration projects involving alternatively-fueled

heavy duty trucks and will collect data on several other ongoing demonstration projects involving heavy-duty trucks in on-the-road use. The demonstration projects will determine how alternative fuels affect the trucking industry in terms of economics, operations, safety and emissions. The alternative fuels involved in the studies include ethanol, methanol, liquid natural gas, compressed natural gas, and liquid propane gas.

The data collected will be sent to the Alternative Fuels Data Center, a national alternative fuels database maintained by the NREL in Golden, Colorado.

"The importance of this program cannot be overstated. As America moves toward alternative fuel use, it is imperative

that we have reliable information." said Bill Peerenboom, vice president of the ATA Foundation. "The information collected for the national database will help public policy makers and industry leaders determine the viability of proposed alternative fuels."

TRI is the research arm of the ATA Foundation, providing information on emerging technological, demographics, productivity, and public policy issues of concern to the trucking industry.

FUEL TAX CONSEQUENCES

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60,000 miles or more in a year.] As more nonattainment areas are identified, and the pressure is placed on them to comply with clean air standards, more states may use this mechanism as well.

Definitions. Our review of the tax provisions found few states with explicit tax rates or schedules by specific fuel type (gasohol, ethanol, LPG, CNG, etc.). The tax rates for alternative fuels are treated mostly under motor fuel or special fuel tax provisions. Definitions of gasoline (sometimes more broadly characterized as motor fuels) include gasohol and explicitly exclude most liquefied gases. It is important to review the definitions found in these provisions of the tax codes, as state oftentimes have differing rates for gasoline and special fuel, the latter term virtually always including diesel fuel for motor carriers but also including other liquids such as liquefied petroleum gas.

Tax Breaks. Taxable uses of fuel always include fuel consumed in motor vehicle engines for propulsion on the highways. Off-highway uses, however, are treated very differently among the states.

The most common full exemption from taxation is fuel used for agricultural purposes. Broadly defined, agriculture can include farm and range operations, horticultural activities, and the like, for commercial or private purposes. The

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Joy Miller, Editor

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The aim of **Alternative Fuels in Trucking** is to keep fleet owners and operators, equipment suppliers, government officials and other interested parties informed of important developments which impact the use of alternative fuels in heavy-duty trucks. Suggestions and comments are welcome.

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other common limited exemption is for construction and other off-highway vehicles, including power take-off equipment and auxiliary engines. More often than not, the user must pay the tax up front, and seek a refund from the state through the normal tax department refund process. That process may include posting bonds, filing specific forms, and other special requirements.

Other Taxes. At least a couple of states this year have extended certain income and sales tax exceptions to vehicles converted to alternative fuels power. Under recently enacted legislation, Connecticut will allow a credit on state income taxes for corporations, utility companies, and public service companies. Additionally, it will exempt from sales and use tax new motor vehicles powered by "clean alternative fuels," and without any other backup, fossil fuel power source.

Utah also passed legislation this year, allowing a corporate income tax credit against the cost of purchasing or converting vehicles to cleaner burning fuels, such as compressed natural gas, electricity,

DID YOU KNOW?

LPG's boiling point is -44°F (-43.3°C)

The United States produced 20 billion gallons of LPG in 1993.

Source: Encyclopedia Britannica, 1993

propane, " or other fuels that allow the state to meet clean air standards."

The broad spectrum of taxation approaches states take currently is likely to narrow, as more vehicles enter the marketplace, and as states consider incentives to improve air quality in localities. While tax discounts for gasohol use have expired in recent years, states may look to other tax schemes, such as those that benefit corporate income and sales taxpayers. In the meantime, one would expect to see further refinements in tax codes in the near future affecting the use of alternative fuels in passenger and commercial vehicles.

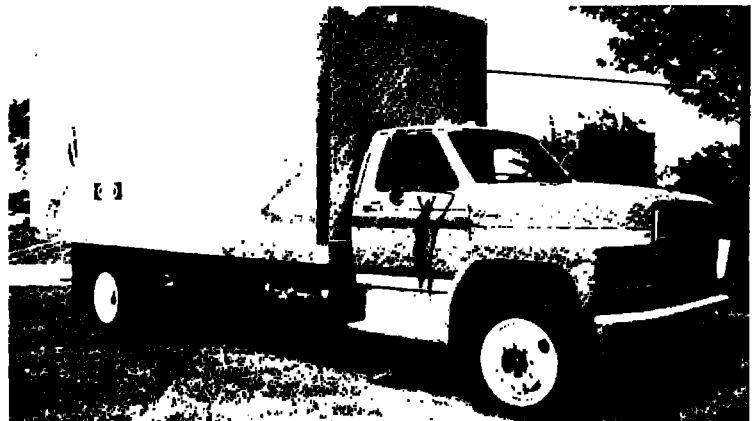
Editor's note: The writer is the Assistant Director for State Laws for the American Trucking Associations.

Engine Profile

FORD LPG TRUCK

Ford Motor Company has become the first American manufacturer to offer a production-line medium duty liquid petroleum gas ("propane") truck. The 1993 Ford F-600-G and F-700-G trucks meet California's 1991 emission standards and will exceed proposed amendments to the federal Clean Air Act. Certification tests have indicated a 55% reduction in hydrocarbons and a 35% NOx reduction.

The LPG engine includes a mixer, phase converter, pressure regulator, vacuum fuel lock system, and a hydrostatic relief valve to counter excessive fuel pressure. The engine has been dynamometer tested and the carburetor is pre-set for emissions reductions. Ford is currently seeking federal emissions certification for the vehicle.



Engine Model	Hp	RPM	Torque	GVWR Range
F600G - 7.0L	218	3600	342 lb-ft	21,000-28,000
F700G - 7.0L	218	3600	342 lb-ft	28,000-35,000

Table specifications and photo courtesy of Ford Motor Company

ALTERNATIVE FUELS HOTLINE INSTALLED BY DOE

What are the performance characteristics of a methanol-fueled truck? If I convert my vehicle to natural gas, where can I refuel? How would I go about converting a fleet to an alternative fuel?

The Department of Energy (DOE) is ready and waiting to answer these and other questions from industry and the general public through its newly established Alternative Fuels Hotline. By calling a toll-free number, 1-800-423-1DOE, callers will be provided with the answer to questions, or referred to the proper source. A variety of publications will also be available.

DOE's Assistant Secretary for Conversation and Renewable Energy, J. Michael Davis, said, "Establishing this

'Hotline' reflects DOE's increasing commitment to research and development on alternative fuels and to fulfill the public's desire to know more about their availability and performance."

Davis said that callers will also have access to information from the Alternative Fuels Data Center (AFDC), located at the National Renewable Energy Laboratory (NREL) in Golden, Colorado. The AFDC has collected data on government fleet vehicles and fleet vehicles used in demonstration projects across the country as well as information on almost 400 alternative fuel refueling stations across the U.S.

Although the "800 number" is available to all callers outside the Washington, D.C. area, local callers may use (202) 554-5047 to reach the Hotline. The Hotline will be available to callers between 10:00 a.m. and 6:00 p.m. Monday through Friday, EST.

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