

## Alternative Fuel Information

An alternative fuel vehicle (AFV) is designed and manufactured to operate in either dual-fuel, flexible-fuel, or dedicated modes on fuels other than gasoline or diesel. This does not include a conventional vehicle that is limited to operation on blended or reformulated gasoline fuels.

Alternative fuel sources most commonly used include the following:

**Liquefied Petroleum Gases (LPG):** Propane, propylene, normal butane, butylene, isobutane, and isobutylene produced at refineries or natural gas processing plants (includes plants that fractionate raw natural gas plant liquids).

**Compressed Natural Gas (CNG):** Natural gas compressed to a volume and density that is practical as a portable fuel supply. (Note: Even when compressed, natural gas is not a liquid.)

**Liquefied Natural Gas (LNG):** Natural gas that has been refrigerated to temperatures at which it exists in a liquid state.

**M85:** A fuel containing a mixture of 85 percent methanol and 15 percent gasoline.

**Ethanol** (otherwise known as ethyl alcohol, alcohol, or grain-spirit): A liquid used in the United States to enhance octane in gasoline and as a gasoline oxygenate (10 percent concentration). Ethanol can also be used in high concentration in vehicles optimized for its use.

**E85:** A fuel containing a mixture of 85 percent ethanol and 15 percent gasoline.

**Biodiesel:** Any liquid biofuel suitable as a diesel fuel substitute or diesel fuel additive or extender. A diesel substitute made from the conversion of oils of vegetables such as soybeans, rapeseed, or sunflowers (end-product known as methyl ester) or from animal tallow (end-product known as methyl tallowate). Biodiesel can also be made by the conversion of hydrocarbons produced by the Fisher-Tropsch process from agricultural by-products such as rice hulls.

**Electricity:** Energy arising from electric charge interaction. Electricity is usually provided by batteries, but can be provided by generators, fuel cells, or electrical conductors. Voltages range from 48 volts to 480 volts, both alternating current (AC) and direct current (DC).

For more information on alternative fuels and AFVs, visit the following Web sites.

<http://knownet.hhs.gov/log/fleetDR/LAI/Module2/Phase1/alternat.htm>

<http://www.dol.gov/oasam/programs/boc/EPAAct2003.htm>

<http://www.epa.gov/otaq/consumer/fuels/altfuels/altfuels.htm>

<http://www.eere.energy.gov/>

<http://facultystaff.vwc.edu/~gnoe/avd.htm>