# Form EIA-886
# Annual Survey of Alternative Fueled Vehicle Suppliers & Users 2004

## General Information

### I. Purpose

Form EIA-886 collects information on the following:

- The number and type of alternative fueled vehicles (AFVs) and other advanced technology vehicles (e.g., hybrid and fuel cell vehicles) that vehicle suppliers made available in 2004 and plan to make available in 2005;
- The number, type, and location of AFVs in use in 2004;
- The amount and distribution of each type of alternative transportation fuel (ATF) consumed in 2004;
- The number of miles traveled by AFVs in 2004; and
- Retirements of AFVs.

The data from this form are used to satisfy public requests for information on AFVs and ATFs and to provide Congress with a measure of the extent to which the objectives of the Energy Policy Act of 1992 (EPACT) are being achieved.

### II. Who Must Submit

All organizations supplying alternative fuel vehicles or other advanced technology vehicles (e.g., hybrid and fuel cell vehicles) are requested to complete this form. Also, all organizations using any quantity of alternative fuel vehicles are requested to complete this form.

### III. When to Submit

Respondents have 30 days from receipt of notification to comply to submit the Form EIA-886.

### IV. Where to Submit

Respondents can submit data for this survey by mail, facsimile, email, or the Internet using an encrypted web system. With the Internet-based option, EIA uses security protocols to protect the information against unauthorized access during transmission. Commonly used facsimile and e-mail transmissions (including files attached to e-mail messages) travel over ordinary telephone lines and are not considered secure electronic methods of transmitting survey data. Any questions regarding the submission of this form can be directed to the Survey Manager, Cynthia Sirk, through Michelle Kirby, at mok@inel.gov (208) 526-4273.

**Secure Communications Methods**

**By mail:** (First class mail is considered a secure communications method for confidential data)
Ms. Michelle Kirby
Form EIA-886
Department of Energy's
Idaho National Engineering and Environmental Laboratory
P.O. Box 1625 Mailstop 2507
Idaho Falls, ID 83415-2507

**By Internet:** https://eiaweb.inel.gov (256 bit Secure Sockets Layer [SSL] encryption system)

**Unsecured Communications Methods**

**By email:** mok@inel.gov
**By phone:** (208) 526-4273
**By facsimile:** Fax Number (208) 526-0560
Attn: Form EIA-886

## V. Provisions Regarding Confidentiality of Information

The information reported on Form EIA-886 will be kept confidential and not disclosed to the public to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the DOE regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905. The Energy Information Administration (EIA) will protect your information in accordance with its confidentiality and security policies and procedures.

The Federal Energy Administration Act requires the EIA to provide company-specific data to other Federal agencies when requested for official use. The information reported on this form may also be made available, upon request, to another component of the Department of Energy (DOE); to any Committee of Congress, the General Accounting Office, or other Federal agencies authorized by law to receive such information. A court of competent jurisdiction may obtain this information in response to an order. The information may be used for any non-statistical purposes such as administrative, regulatory, law enforcement, or adjudicatory purposes.

Disclosure limitation procedures are applied to the statistical data published from EIA-886 survey regarding alternative fuel vehicles "planned to be made available in the following calendar year." This ensures that the risk of disclosure of identifiable information is very small.

For all other data published from the Form EIA-886, disclosure limitation procedures are not applied. Thus, there may be some statistics that are based on data from fewer than three respondents, or that are dominated by data from one or two large respondents. In these cases, it may be possible for a knowledgeable person to estimate the information reported by a specific respondent.

## VI. Sanctions

The timely submission of Form EIA-886 by those required to report is mandatory under the Federal Energy Administration Act of 1974 (FEAA), Public Law 93-275, as amended. Failure to respond may result in a civil penalty of not more than $2,750 for each violation or a fine of not more than $5,000 for each criminal violation. The Government may bring a civil action to prohibit reporting violations that may result in a temporary restraining order or a preliminary or permanent injunction without bond. In such civil action, the court may also issue mandatory injunctions commanding any person to comply with these reporting requirements.

**Title 18 U.S.C. 1001 makes it a criminal offense for any person knowingly and willingly to make to any Agency or Department of the United States any false, fictitious, or fraudulent statements as to any matter within its jurisdiction.**

# Form EIA-886 Instructions

This survey is designed to capture AFV data from two different entities: **AFV Users** and **Suppliers of AFVs and other advanced technology vehicles**.

- *Section 1* is for identification, clarification of purpose, and determination of data reporting requirements.
- *Section 2* captures information on AFVs in use as of December 31, 2004.
- *Section 3* captures information on AFVs and other advanced technology vehicles (e.g., hybrid and fuel cell vehicles) made available in calendar year 2004 and planned to be made available in 2005.
- *Code Reference Sheet* provides the necessary codes to enter data in the tabular portions of the form.

## SECTION 1: RESPONDENT INFORMATION

Provide responding organization name, address, and contact information (contact name, title, telephone number, fax number, and email address).

Identify your organization to determine whether you file Section 2, Section 3, or both. Below are definitions for AFV user and AFV supplier. Note that there are two types of AFV suppliers.

**AFV User**

Any organization that operated AFVs during the calendar year 2004, regardless of fuel consumption. Any vehicle capable of operating on an alternative transportation fuel is to be reported.

**Supplier of AFVs and Other Advanced Technology Vehicles**

- *Vehicle Original Equipment Manufacturer*: An entity (company, organization, association, etc.) that markets and warrants a vehicle (onroad) for use in the U.S. This includes organizations that perform vehicle conversions before the vehicle is initially delivered to an end user for use in the U.S.

- *Aftermarket Vehicle Conversion/Repowering Facility*: An organization or individual that converts, modifies, or repowers vehicles from one fuel or source of power to another. The conversion is performed after the vehicle's initial delivery to an end user.

If you do not fall into these categories, please indicate whether your organization is:

- No longer functioning,
- Has been sold or merged with another organization, or
- Your organization does not meet the reporting criteria.

In the case of a sale/merger, please provide EIA with forwarding information (name, address, contact, phone) so that we can accurately capture AFV data. If you feel you do not meet the reporting criteria for the Form EIA-886, please return the form with a written explanation.

If you would like to receive the form via email or would like to file electronically using the Internet, please visit **https://eiaweb.inel.gov** for further information and instructions.

## EIA-886 SECTION 2: AFV USER DATA

Section 2 of the form is to be completed by AFV users. An AFV user includes any organization that operated AFVs during calendar year 2004, regardless of fuel consumption. Please note that the Form EIA-886 requests data for the entire AFV fleet in operation as of December 31, 2004, not just AFV acquisitions for the reporting period.

For the 2004 reporting period, EIA is surveying AFV users with the following types of fleets:

- State Agency
- Electric Utility
- Natural Gas Fuel Provider
- Propane Fuel Provider
- Transit Agency
- Selected Local Government
- Selected Private

*A note to state agencies and alternative fuel providers*: The Form EIA-886 is different from the Office of Transportation Technology's State & Alternative Fuel Provider Program which tracks compliance with DOE's 10 CFR Part 490 using Form DOE/OTT/101 Annual AFV Acquisition Report for State and Alternative Fuel Provider Fleets. Form EIA-886 collects full AFV-fleet data annually while the State & Alternative Fuel Provider Program requires only light-duty AFV acquisitions for the reporting year. While there remains some overlap in data reporting, the Energy Policy Act of 1992 requires that both be filed.

Check the box(es) that identifies your type of organization. For AFVs in use as of December 31, 2004, report the vehicle type, primary application, fuel type, engine configuration, and state-level location of each AFV in your fleet. Vehicles may be grouped together on one line if they have the same vehicle type, primary application, fuel type, engine configuration, and state-level location. For each such group, report the quantity of AFVs in use as of December 31, 2004, the total miles traveled by all vehicles in the group during 2004, and the total amount of alternative fuel consumed during 2004. The amount of alternative fuel consumed may be reported in units you select (e.g., gallons, cubic feet, kwh). You must report the type of units used. Include all AFVs, even those that did not consume alternative fuels. Do not include hybrid electric vehicles or fuel cell vehicles unless their input fuel is an alternative fuel as defined in the EPACT. If your fleet consists of AFVs operating in multiple states, file separate vehicle and fuel consumption tables for each state. For vehicles that operate across state lines, provide the vehicle's predominant location of operation. The AFVs for which data are requested include vehicles owned or leased by the responding organization, as well as AFVs provided for employees under reimbursement, leaseback, owner-operator contracts, or similar programs.

Please use the codes provided to complete this section. If you have difficulty gathering fuel consumption data, please provide estimates if actual data cannot be provided; for example, estimate consumption based on vehicle miles traveled and miles per gallon.

Report any AFVs that were retired in the calendar year ending December 31, 2004. Retired AFVs are vehicles that are no longer in the custody of the respondent. If vehicles are inactive, or awaiting disposition, but still in the respondent's custody, they should not be reported as retirements. They should be reported in question 3 as vehicles in use, even if they consumed no fuel during the year. Vehicles may be grouped together if they have the same vehicle type and fuel type. For each such group, report the number of AFVs retired and the average age of the retired vehicles (in months). Also report the number of vehicles in each group that were sold, scrapped, returned to the dealer, or disposed of in some other manner.

*A note on Biodiesel*: Although vehicles capable of operating on B100 are not considered alternative fueled vehicles, the fuel B100 is considered an alternative transportation fuel. For this reason, respondents using B100 are encouraged to report their vehicles and the fuel consumption on this form. Currently, biodiesel blends, such as B20 and B2, are not considered alternative transportation fuels and any vehicle operating on those is not considered an alternative fueled vehicle and therefore not captured on this survey.

If you are an AFV user that also performs or is capable of performing aftermarket vehicle conversions, please note that you are also considered an AFV Supplier. If you qualify as an AFV Supplier, see the instructions for EIA-886 SECTION 3: AFV SUPPLIER DATA.

If you would like to receive the form via email or would like to file electronically using the Internet, please visit **https://eiaweb.inel.gov** for further information and instructions.

## EIA-886 SECTION 3: DATA FROM SUPPLIERS OF AFVS AND OTHER ADVANCED TECHNOLOGY VEHICLES

Section 3 of the form is to be completed by Suppliers of AFVs and Other Advanced Technology Vehicles. Other advanced technology vehicles include hybrid electric vehicles and fuel cell vehicles whose input fuel is gasoline or diesel fuel.

Suppliers fit into two categories:

- **Original Equipment Manufacturers**—organizations that market and warrant new alternative fueled vehicles or other advanced technology vehicles for use in the U.S. Also includes entities that perform conversions prior to the vehicle initially being delivered to an end user.
- **Aftermarket Vehicle Converters**—organizations that convert vehicles from operating on a traditional fuel (gasoline or petroleum-based diesel) to operate on an alternative transportation (ATF) or from one ATF to another ATF. The converted vehicle may operate exclusively on the fuel or power source to which it was converted or the conversion may retain the original fuel source and add a new fuel source. Aftermarket conversions are generally performed after the vehicle has been delivered to an end user. Aftermarket vehicle converters may be private companies, government agencies, research institutions, etc.

Please use the codes provided to complete this section.

For AFVs and other advanced technology vehicles made available during calendar year 2004 and planned to be made available in calendar year 2005, report the vehicle type, model, fuel type, engine configuration, and actual and projected supply quantities. Made available" implies the vehicle either was delivered to a dealer or end user, was available for delivery to a dealer or end user, or was otherwise placed "in use" during the reporting period.

Special Instructions for Heavy-Duty Vehicles: To avoid duplicate reporting of heavy-duty vehicles that may pass through several organizations at different stages of construction, use the following techniques. For buses, report only vehicles that your organization has completed. A completed vehicle is one that "requires no further manufacturing operations to perform its intended function, other than the addition of readily attachable components ... or minor finishing operations..." (definition obtained from National Truck Equipment Association). For trucks, report all alternative fuel vehicles to which your organization assigns the Vehicle Identification Number (VIN) and reports the VIN to the National Highway Transportation Safety Administration (NHTSA). Reported trucks might be complete or incomplete vehicles.

If your organization is an OEM and an Aftermarket Conversion Facility, please indicate whether the AFVs reported are OEM supplied or conversion (CONV) facility supplied in the last column in the table. This will allow EIA to better analyze and publish data below the "Supplier" level.

If you would like to receive the form via email or would like to file electronically using the Internet, please visit **https://eiaweb.inel.gov** for further information and instructions.

# Vehicle Types

***Auto – Subcompact*** - A car with interior passenger and cargo volume not greater than 99 cubic feet. Includes cars commonly designated as subcompact, mini-compact, and two-seater.

***Auto- Compact*** - A car with interior passenger and cargo volume of 100-109 cubic feet. Includes small station wagons with interior passenger and cargo volume under 130 cubic feet.

***Auto- Mid-Size*** – Also known as "Intermediate" size. A car with interior passenger and cargo volume of 110-119 cubic feet. Includes mid-size station wagons with interior passenger and cargo volume of 130-159 cubic feet.

***Auto – Full-size*** – A car with interior passenger and cargo volume of 120+ cubic feet. Includes large station wagons with interior passenger and cargo volume of 160+ cubic feet. Includes cars commonly designated as large and luxury.

***Minivan*** –light duty passenger van commonly classified as minivan (i.e., Caravan)

***Other Trucks*** *(not pickup) If <8500 lbs* - A motor vehicle on a truck chassis -- except pickup truck, van, or SUV -- with a gross motor vehicle weight rating (GVWR) of 8500 pounds or less. Includes trucks commonly referred to as "Class 1" and some "Class 2" trucks. *If (8501-26000 lbs)* **–** A truck, other than pickup truck, with gross vehicle weight rating between 8,501 and 26,000 pounds. Includes trucks commonly referred to as "Class 3 though 6" and some "Class 2" trucks. Includes SUV's larger than 8500 pounds. Medium-duty trucks are divided into 2 weight classes: commercial light trucks (8501-10000 pounds GVWR); and other medium-duty trucks (10001-26000 pounds GVWR). *If (>26000 lbs)* – A truck with gross vehicle weight rating greater than 26,000 pounds. Includes trucks commonly referred to as "Class 7" and "Class 8" trucks.

***Sport Utility Vehicle*** *(SUV) <8500 lbs* – Includes sport utility vehicles and station wagons built on a truck chassis.

***School Bus*** - A bus that, as determined by the Secretary of Transportation, is likely to be significantly used for the purpose of transporting pre-primary, primary, or secondary school students between home and school.

***Intercity Bus*** - A bus with front doors only, high backed seats, separate luggage compartments and usually with restroom facilities for use in high-speed long-distance service.

***Transit Bus*** – A bus with front and center doors, normally with a rear-mounted engine, low-back seating, and without luggage compartments or restroom facilities for use in frequent-stop service. Small transit buses are less than 27"6" in length. Large transit buses are greater than 27'6" in length.

***Trolley bus***- Rubber-tired electric transit vehicle, manually steered and propelled by a motor drawing current, normally through overhead wires, from a central power source.

***Low Speed Vehicle (also called neighborhood electric vehicle)*** – A small, possibly low-speed, electric vehicle, which meets qualifications for on-road use, at least in specified communities.

***Motorcycle*** - A two- or three-wheeled motor vehicle designed to transport one or two people, including motor scooters, minibikes, and mopeds.

# Application Types

***Transit*** - Public transportation generally provided over a fixed route with frequent stops. Passengers are usually charged directly for transportation.

***Paratransit*** - Public transportation dispatched upon demand instead of running regular routes, often to transport senior citizens or disabled passengers. Usually does not operate on a fixed route or fixed schedule.

***Airport shuttles*** - Shuttle service operated on airport property or in association with airport activities. May include passenger & employee shuttles, hotel shuttles, parking lot shuttles, rental car shuttles, etc.

***Other shuttle service*** – Shuttle service, such as parking lot shuttles and employee shuttles that are operated in association with activities other than airports. Shuttles typically start from a centralized location and return to that same location at the end of the shift.

***Student transportation*** - Transportation of pre-primary, primary, or secondary school students, primarily between home and schools.

***Interstate/intercity bus transportation*** – Long distance bus transportation between cities or states. Interstate/intercity buses usually have luggage-carrying capability. Includes tourist charters.

***For-hire (i.e., taxi/ limousine)*** - private for profit companies where passenger vehicles are for hire by the riding public

***Daily or short-term rental*** - Vehicles rented out, without a driver, to someone else on a daily or short-term basis.

***Personal Transportation*** - Transportation in private vehicle for non-business purposes.

***Utility*** - Used in public utility (telephone, gas, electric, cable television, etc.) operations. Examples include selected trucks equipped with specialized equipment (e.g. “Cherry Pickers,” those with cranes, ladders, or drills affixed to the body, etc.). Includes vehicles used for meter reading and customer service calls.

***Delivery of energy products (e.g., propane, LNG)*** – Includes tank trucks, bobtails, etc.

***Delivery of mail and packages*** – Vehicles used to deliver mail and packages on a regular basis.

***Other delivery fleets*** – Vehicles used to deliver any kind of goods, except mail, packages, and energy products.

***Tradesman***- Examples include trucks commonly used by electricians, plumbers, appliance repair personnel, carpenters, home improvement personnel, etc.

***Law enforcement*** – Includes police cruisers and other vehicles used in law enforcement activities.

***Emergency/medical*** – Includes ambulances, rescue units, and other emergency/medical vehicles.

***Airport ground support and maintenance*** – Service and maintenance vehicles that travel along the tarmac, such as tractors that push airplanes, baggage carriers, and baggage belt loaders.

***Maintenance of public facilities*** - Maintenance of roads, parks, etc.

***Other maintenance*** - Includes fleet maintenance, such as towing and emergency road service.

***Waste management*** – Includes refuse haulers and other vehicles used for waste management.

***General/Administrative*** –Vehicles used in the general conduct of business. For example, used for customer calls & meetings, transporting equipment, parts, or materials between business locations, pool cars.

***Mixed Use*** – There is not one primary use. Usage is evenly mixed between two or more of the above categories.

## Engine Configurations

***Bi-Fueled*:** A vehicle that can operate on two different fuels, but not on a mixture of the fuels. Each fuel is stored in a separate tank. Typically, these vehicles will consume the ATF until the supply is exhausted, then switch over, often automatically, to use the traditional fuel. Vehicles powered by electric motors are not treated as bi-fueled.

***Dual-Fueled*:** A vehicle that operates on an ATF and a traditional fuel with both fuels being consumed simultaneously. These vehicles have two separate fuel systems that inject each fuel simultaneously into the engine combustion chamber.

***Flexible-Fueled*:** A vehicle that has a single fuel storage and combustion system that can be fueled with either a blended alcohol fuel (e.g., E85), a traditional fuel (usually gasoline), or any combination of the fuels.

***Dedicated*:** A vehicle that operates **ONLY** on the ATF, as when a vehicle is configured to operate exclusively on CNG. Vehicles powered by electric motors should not be treated as dedicated -- see section below on how to classify electric vehicles.

***Tri-Fueled*:** A vehicle that can operate on three different fuels but not on a mixture of the fuels. Each fuel is stored in a separate tank. Typically, these vehicles will consume the ATFs until the supplies are exhausted, then switch over, often automatically, to use the traditional fuel.

***Non-hybrid Battery Powered*:** A vehicle that uses electric power stored in batteries as its primary energy source; the batteries are recharged by being connected to traditional electrical power sources, such as being "plugged-in" to an electrical outlet that supplies electricity generated by electric power plants. These vehicles do not include on-board electricity generating capabilities, as do hybrid electric vehicles.

***Non-hybrid Solar Direct Powered*:** A vehicle that is driven by electricity produced by on-board solar collectors.

***Hybrid*:** A vehicle with an on-board electrical generating system, excluding fuel cell technology. For example, an internal combustion engine may generate electricity to directly charge the batteries (series hybrid) that propel a vehicle; or both generate electrical power to propel the vehicle and recharge the batteries (parallel hybrid).

***Direct Driven Electric Vehicles*:** An electric vehicle directly driven by an electric supply line; e.g., an overhead wire or a “third track.” The supply of electricity is provided directly to the motor without the use of batteries or auxiliary engines (such as those used in hybrid configurations). This term defines the configuration used by electric subway vehicles, trolley buses, cable cars, etc.

***Fuel Cell(s):*** In a typical fuel cell configuration, the fuel cell will supply electricity to an electric motor that will, in turn, power the vehicle. Fuel cell configurations often include a battery whose charge will also be maintained by the fuel cell. When the motor requires more power than can be supplied by the fuel cell alone, the power to the motor is augmented by the power stored in the battery. Subsequently, when the load on the motor is reduced, surplus power produced by the fuel cell will recharge the battery.

A fuel cell produces electricity through an electro-chemical reaction that occurs between hydrogen and oxygen. Hydrogen fuel and oxygen may be fed directly into the fuel cell. Alternatively, other feedstocks (e.g., Methanol) may indirectly supply hydrogen to the fuel cell. In the latter situation, a reformer converts the feedstock (methanol) to hydrogen. The hydrogen supplied by the reformer is fed directly into the fuel cell (with oxygen).