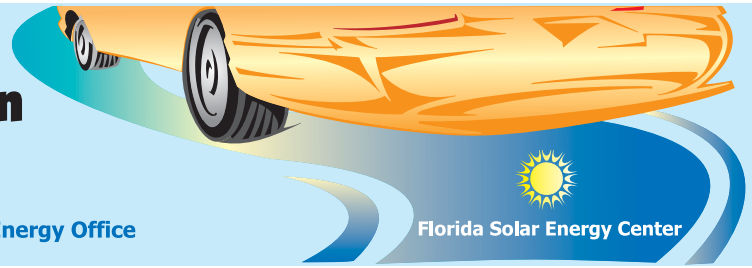


The Path to Alternative Transportation in Florida

Clean Fuel Florida Advisory Board

Florida Energy Office

Florida Solar Energy Center



Introduction

A great deal of talk is taking place around the country about alternative fuel vehicles (AFVs), which are powered by fuels other than gasoline or diesel. In Florida, the same amount of interest exists for the same reasons, clean air and energy security. Vehicles with electric drive systems or hydrogen fuel cell power units spark the imagination.

Florida and U.S. dependence on gasoline as a transportation fuel source continues to grow while more and more oil is imported. Petroleum makes up about half of the U.S. trade deficit and is predicted to account for up to 70% within the next 20 years. U.S. imports of oil, motor vehicles and parts accounted for 57% of the \$322 billion deficit in 1999.

Currently, the United States consumes more than one-fourth of the world's oil production, yet produces only

about one-tenth of it domestically. In 2000, Florida produced enough crude oil to refine 1.9 million gallons of gasoline, but consumed over 20.6 million gallons daily. The transportation sector is the largest consumer of petroleum fuels in the U.S. and Florida and accounts for about 33% of carbon dioxide and NO_x emissions, 77% of carbon monoxide emissions, and more than 33% of volatile organic compounds. A major contributor to our country's air quality problem is the exhaust from highway transportation vehicles. Assuming continued growth in the number of licensed motor vehicles, as well as continued growth in vehicle miles traveled, much of the gain in cleaner air anticipated from new motor vehicles technologies will not be realized unless something is done to reduce aggregate demand for petroleum as a transportation fuel source.

What is the Federal government doing?

There are two federal laws fleet operators need to keep in mind: 1) the 1990 Clean Air Act Amendments (CAAA) and (2) the Energy Policy Act of 1992 (EPAAct). These Acts came into existence in response to concerns about the environment and our country's dependence on imported petroleum and require certain fleets to acquire vehicles that operate on alternative fuels.

CAAA seeks to improve air quality nation wide. The Act's original goals were to reduce mobile source pollutants by requiring use of cleaner fuels. Several programs were created as initiatives to reinforce these objectives. Among these programs is the Clean Fuel Fleet Program (CFFP) administered by the U.S. Environmental Protection Agency (EPA). This program requires fleets in metropolitan areas with high ozone and/or carbon monoxide levels to acquire clean fuel vehicles (CFV). These fleets can use any fuel as long as the vehicles acquired are certified to meet the EPA's low emission vehicle (LEV) standards or better, which are stricter emission standards than otherwise required by law.

EPAAct's primary purpose is to increase energy security through energy conservation and increased use of domestic alternative fuels. The U.S. Department of Energy imple-

ments the EPAAct by directing certain fleets in larger metropolitan areas to acquire Alternative Fuel Vehicles (AFVs). An added benefit of EPAAct is that most of the required vehicles exhibit lower emissions and meet the CFFP emission standards.

What Purchasing Requirements Exist?

If your fleet is covered by one or both programs, a determination must be made about how many qualified vehicles you must acquire. Determine the number of covered acquisitions made by your fleet during the model year, then multiply that total by the percentage requirement of CFVs or AFVs for that year (see tables on page 3). The two laws use different schedules of acquisition requirements.

What fleets are covered by EPOact or CAAA?

Federal, state and alternative fuel provider fleets are currently mandated by both EPOact and CAAA, whereas, municipal and private fleets are presently mandated only by CAAA. Coverage includes vehicles owned, operated,

leased or controlled by the fleets. The laws do exempt certain vehicles such as law enforcement, emergency vehicles, non-road vehicles, those used for military purposes and a few other special cases.

Fleet vehicle requirements:	CAAA	EPOact
Number of vehicles centrally fueled or capable of being centrally fueled	100%	75%
Number of light-duty vehicles (8,500 lbs or less)	10	50
Number of heavy-duty vehicles (8,500 lbs - 26,000 lbs)	10	0
Number of fleet vehicles operating in an affected area	10	20
Model years effected	1999	1997

Fleets affected are located in Consolidated Metropolitan Statistical Areas (CMSA) or cities that had a population of at least 250,000 at the time of the 1980 U.S. census. The following is a list of Florida CMSAs covered by CAAA or EPOact.

CMSA location

Daytona Beach
 Jacksonville
 Lakeland-Winter Haven
 Miami-Ft. Lauderdale
 Melbourne-Titusville-Palm Bay
 Orlando
 Pensacola
 Tampa-St. Petersburg-Clearwater
 West Palm Beach-Boca Raton-Delray Beach

Florida Counties

Flagler, Volusia,
 Clay, Duval, Nassau, St. Johns
 Polk
 Brevard
 Broward, Dade
 Lake, Orange, Osceola, Seminole
 Escambia, Santa Rosa
 Hernando, Hillsborough, Pasco, Pinellas
 Palm Beach

What fuels and vehicle can be used?

CAAA defines a clean fuel as any power source for which a vehicle is certified to meet federal Clean Fuel Vehicle emissions standards. Clean fuels include alternative fuels, oxygenated fuels, reformulated gasoline and conventional gasoline. A CFV is a vehicle that is certified to meet low emission vehicle standards or better, and operates on the fuel for which the vehicle was certified as a LEV. The fleet operator must always use the clean fuel in the affected geographic area.

In addition, EPOact defines an alternative fuel as any fuel that is substantially non-petroleum and yields energy security and environmental benefits. EPOact currently recognizes the following fuels: compressed natural gas, liquefied natural gas, liquefied petroleum gas, hydrogen, coal-derived liquid fuels, fuels derived from biological materials and electricity. Vehicles designed to run on any of these alternative fuels may be dedicated or dual-fuel, including bi-fuel and flexible fuel.

What programs and policies exist?

DOE administers the Clean Cities Program which coordinates voluntary efforts between locally based government and industry to accelerate the use of alternative fuels and expand AFV refueling infrastructure.

Under DOE's State Energy Program, individual states promote the conservation of energy, adoption of renewable energy technologies as well as the reduction of energy demand and dependence on imported oil through the development and implementation of a comprehensive State Energy Plan. States may choose to allocate grant funds to activities to increase transportation efficiency, including programs to accelerate the use of alternative transportation fuels for government vehicles, fleet vehicles, taxis, mass transit and privately-owned vehicles.

The U.S. Internal Revenue Service (IRS) oversees a regulation in EPOact that can help you purchase an AFV. A \$2,000 to \$50,000 federal income tax deduction is available for the incremental cost to purchase or convert qualified business or personal clean fuel vehicles, except EVs eligible for the federal EV tax credit. The deduction is not amortized and must be taken in the year the vehicle is acquired

The Clean Fuel Fleet Program

as part of the *Clean Air Act Amendments (CAAA)*

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
GVWR less than 8,500 lb(% of CFVs)	N/A	N/A	30%	50%	70%	70%	70%	70%	70%	70%
GVWR less than 26,000 lb(% of CFVs)	N/A	N/A	50%	50%	50%	50%	50%	50%	50%	50%

The Energy Policy Act

Public Law 102-486 Titles III-VI

Year	Federal	State	Alternative Fuel Provider	Municipal and Private*
1997	33%	10%	30%	
1998	50%	15%	50%	
1999	75%	25%	70%	
2000	75%	50%	90%	
2001	75%	75%	90%	
2002	75%	75%	90%	20%
2003	75%	75%	90%	40%
2004	75%	75%	90%	60%
2005	75%	75%	90%	70%
2006	75%	75%	90%	70%

*Percentages listed for municipal and private fleets are tentative; there are currently no mandates under EPAAct.

with each fleet location having a limit of \$100,000. The amount of the tax deductions for qualified clean fuel vehicles is based on the gross vehicle weight (GVW) and types of vehicles as follows:

- Truck or van, gvw of 10,000-26,000 lb = \$5,000
- Truck or van, gvw more than 26,000 lb = \$50,000
- Buses, with seating capacity of 20+ adults = \$50,000
- All other vehicles, off-road vehicles excluded = \$2,000

Also, EPAAct provides a tax credit up to \$4,000 for 10% of the purchase price of an EV used for business or personal use. Beginning in 2001, the size of the credit is reduced by 25% per year until the credit is fully phased out. To qualify for the credit, the vehicle must be powered primarily by an electric motor drawing current from batteries or other portable sources of electric current. All dedicated, plug-in only EVs and all series HEVs qualify. Also, some parallel HEVs qualify. Information is available in publication 535. IRS form 8834 can be used for this credit.

The U.S. Department of Transportation administers the Congestion Mitigation and Air Quality (CMAQ) Improvement Program authorized by the Transportation Equity Act (TEA-21). The CMAQ program funds projects and programs in non-attainment and maintenance areas to reduce transportation-related emissions.

State legislation

Several states have incentives for purchasing AFVs, but Florida presently does not. As an example, California will pay 90% of the incremental cost up to \$9,000 for a zero emission car or truck.

In order to off set the loss of excise tax on gasoline from AFVs, a person operating an AFV must purchase a decal annually from the Florida Department of Motor Vehicles. The decal must be properly displayed on the vehicle in order to use refueling stations. State and local government AFV fleets are exempt from paying the decal fee (reference

(Continued on page 4)

(continued from page 3)

(Sec. 206.874 and 206.877). Also, anyone who wishes to be a wholesale distributor of an alternative fuel must first obtain a licence from the Florida Department of Motor Vehicles (reference Sec. 206.89).

In years past, electric vehicle owners had difficulty getting insurance at a reasonable cost. Now, electric vehicles are protected from insurance surcharges based on factors such as new technology, passenger payload, weight-to-horsepower ratio and the types of materials used to manufacture the vehicle (reference Sec. 627.06535).

County governments can receive waste reduction credits for using yard clippings, clean wood waste or paper waste as feedstock for the production of clean-burning fuels such as ethanol (reference Sec. 403.706).

In 1999, Governor Jeb Bush signed the Florida Clean Fuel Act, which established the Clean Fuel Florida Advisory

Board to study alternative fuel vehicles and formulate and provide policy recommendations. The Board provides the Secretary of Community Affairs with recommendations on how to expand and fund the use of AFVs in the state. The Board will dissolve in 2006 (reference Sec. 403.42).

Other support

A private incentive is offered by the National Ethanol Vehicle Coalition (NEVC) to increase the introduction of E85 vehicles and the use of ethanol based fuels, decrease the nation's dependence on imported energy resources, improve environmental quality and stimulate the national economy. NEVC is a non-profit corporation that educates the public about the benefits of using E85 as an alternative transportation fuel and offers financial assistance for the development and installation of public E85 fueling facilities and infrastructure.

Sources of information

CAAA information and EPA Websites:

Office of Mobile Sources: www.epa.gov/OMSWWW
Clean Fuel Fleets: www.epa.gov/oms/cff.htm

U.S. EPA Office of Mobile Sources contacts:

Jim Lindner lindner.jim@epa.gov 734-214-4558
Sally Newstead newstead.sally@epa.gov 734-214-4474

EPA State Contact for Florida:

Marlin Gottschalk (Georgia) 404-363-7024

EPAct Websites:

EPAct Fleet Information and Regulations www.ott.doe.gov/epact
Alternative Fuels Data Center www.afdc.cdoe.gov
Alternative Fuel Vehicle Fleet Buyer's Guide www.fleets.doe.gov
Infrastructure locator www.afdcmap.nrel.gov/nrel

U.S. Department of Energy Contacts:

National Alternative Fuels Hotline: hotline@afdc.nrel.gov 800-423-1363
DOE Regulatory Line: regulatory_info@afdc.nrel.gov 202-586-9171
Federal Fleets: fed_fleets@afdc.nrel.gov 202-586-7011
Atlanta Regional Office: david.dunagan@ee.doe.gov 404-562-0561
Gold Coast Clean Cities Coalition: carlog@sfrrpc.com 954-985-4416
Space Coast Clean Cities Coalition: young@fsec.ucf.edu 321-638-1443

Other organizations:

U.S. Internal Revenue Service www.treas.gov 202-622-3110
Florida Energy Office DCA alexander.mack@dca.state.fl.us 850-488-2475
Center for Urban Transportation Research www.cutr.eng.usf.edu 813-974-3120

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