

Federal Fleet Compliance with Executive Order 13149

Fiscal Year 2002

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ACRONYMS USED IN FY 2002 FEDERAL FLEET REPORT

AFV(s)	Alternative Fueled Vehicle(s)
B20	Biodiesel blended fuel that is 20 percent biodiesel with 80 percent petroleum diesel
B100	Neat biodiesel fuel
CMSA	Consolidated Metropolitan Statistical Area
CNG	Compressed Natural Gas
E85	Ethanol-blended fuel that is at least 85 percent ethanol and 15 percent petroleum gasoline
ECRA	Energy Conservation Reauthorization Act of 1998, Public Law 105-388
EPAct	Energy Policy Act of 1992, Public Law 102-486
E.O. 13149	Executive Order 13149, "Greening the Government through Federal Fleet and Transportation Efficiency," 65 FR 24607
FAST	Federal Automotive Statistical Tool (the Federal fleet's web-based data collection and reporting system, at http://fastweb.inel.gov)
FY	Fiscal year
GGE	Gasoline gallon equivalent
GVWR	Gross vehicle weight rating
LDV	Light duty vehicle
LNG	Liquified Natural Gas
LPG	Liquified Petroleum Gas
M85	Methanol-blended fuel that is at least 85 percent methanol and 15 percent petroleum gasoline
MPG	Miles per gallon
MSA	Metropolitan Statistical Area
NEV	Neighborhood Electric Vehicle

ACRONYMS OF FEDERAL AGENCIES

AAFES	Army & Air Force Exchange Service
DCMA	Defense Contract Management Agency
DESC	Defense Energy Support Center
DLA	Defense Logistics Agency
DOC	U.S. Department of Commerce
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOI	U.S. Department of Interior
DOJ	U.S. Department of Justice
DOL	U.S. Department of Labor
DOS	U.S. Department of State
DOT	U.S. Department of Transportation
EOP	Executive Office of the President
EPA	U.S. Environmental Protection Agency
GSA	General Services Administration
HHS	U.S. Department of Health and Human Services
HUD	U.S. Department of Housing and Urban Development
NASA	National Aeronautics and Space Administration
NEX	Navy Exchange Service
OMB	Office of Management and Budget
Treasury	U.S. Department of the Treasury
USAF	U.S. Air Force
USDA	U.S. Department of Agriculture
USMC	U.S. Marine Corps
USPS	U.S. Postal Service
VA	U.S. Department of Veterans Affairs

EXECUTIVE SUMMARY

As directed in section 301(b)(8) of Executive Order (E.O.) 13149, "Greening the Government through Federal Fleet and Transportation Efficiency," the U.S. Department of Energy (DOE) has prepared this report which assesses the performance of Federal agencies in meeting the goals and objectives of E.O. 13149 and the associated alternative fueled vehicle (AFV) requirements of the Energy Policy Act of 1992 (EPAct) for fiscal year (FY) 2002.

It is important to note that petroleum consumption in the Federal fleet represents a negligible portion of petroleum consumption in the United States (U.S.) transportation sector. In FY 2002, total U.S. petroleum consumption in transportation was 12.5 million barrels per day, of which the Federal fleet consumed far less than 1 percent (19,433 barrels per day)¹.

Federal agencies annually report conventional and AFV acquisitions and inventory, alternative fuel consumption in AFVs, petroleum consumption, and vehicle operations data. The data reported shows that in FY 2002, covered petroleum consumption by the Federal agencies decreased by 1.53 percent compared to the FY 1999 baseline levels. The data, however, also shows a rapid increase in alternative fuel use in AFVs. In FY 2002, most agencies were implementing measures to reduce petroleum consumption, including AFV acquisitions, alternative fuel use, and increased fuel economy of non-AFV, light-duty vehicle acquisitions. Despite these efforts, because of an increase in fuel consumption caused by expanded mission or normal growth patterns, net petroleum consumption reduction figures were insignificant in FY 2002.

E.O. 13149 also emphasizes agency compliance with EPAct. EPAct requires that 75 percent of vehicle acquisitions each year in covered fleets be AFVs. In fact, FY 2002 AFV acquisitions accounted for 60 percent of covered light-duty vehicle acquisitions, short of the 75 percent requirement for that year, but an improvement over the 45 percent level achieved in FY 2001.

Eleven of the 18 covered agencies met the 75 percent EPAct requirement: The Department of Agriculture (USDA), DOE, Department of Health and Human Services (HHS), Department of Housing and Urban Development (HUD), Department of Interior (DOI), Department of Justice (DOJ), Department of State (DOS), Environmental Protection Agency (EPA), General Services Administration (GSA), U.S. Postal Service (USPS), and Executive Office of the President (EOP). Although the Department of Defense (DOD) as a whole did not meet the 75 percent requirement, the U.S. Marine Corps (USMC) not only met but significantly surpassed this requirement.

In FY 2002, EPAct-covered agencies acquired 9,387 AFVs and independent agencies acquired 12 AFVs for a Federal Government total of 9,399 AFVs. This is an increase of 12.8 percent from FY 2001 inventory, bringing the FY 2002 inventory of AFVs in the Federal fleet (including independent agencies) to 65,795. Agencies earn one AFV acquisition credit toward compliance with the EPAct 75 percent acquisition requirement for each AFV acquisition, regardless of

¹ Davis, Stacy and Susan Diegel, Oak Ridge National Laboratory, Transportation Energy Data Book: Edition 22, prepared for the U.S. Department of Energy, September 2002.

geographic placement or exemption status. To maintain the emphasis on actual alternative fuel use, E.O. 13149 allows additional EAct acquisition credits for vehicles of any size that operate only on alternative fuel (i.e., “dedicated” vehicles as compared to vehicles that are flex- or bi-fuel). Beyond AFV acquisitions, additional EAct credits are generated when fleets use biodiesel fuel (typically as B20, a blend of 20 percent biodiesel with 80 percent petroleum diesel). EAct-covered agencies generated 1,483 additional credits in FY 2002 for a total of 10,870 EAct credits.

E.O. 13149 requires that, by the end of FY 2005, “a majority of the fuel” used in AFVs must be “alternative fuel.” This means that more than 50 percent of the fuel used in the operation of AFVs must be alternative fuel by that date. While more than 50 percent is not required until the end of FY 2005, several agencies reported meeting this requirement in FY 2002, and most agencies did show progress toward this goal. The Departments of Commerce (DOC), DOD, DOI, and Veterans Affairs (VA) reported meeting this goal, while DOE, the Department of Treasury (Treasury), EPA and GSA demonstrated significant progress toward the goal. Thus, over 7 million gasoline gallon equivalent (GGE) of alternative fuels were reported as consumed in FY 2002, which is a decrease from the 8.6 million GGEs reported in FY 2001. Indications are that agencies had over-reported alternative fuel consumption in FY 2001.

E.O. 13149 also requires agencies to increase the miles per gallon (mpg) rating of light-duty vehicle (LDV) acquisitions, excluding AFVs. The first requirement is an increase of 1 mpg in the fuel economy ratings of light-duty vehicle acquisitions by FY 2002; the second is an increase of 3 mpg by FY 2005. These increases are measured relative to the fuel economy of the agencies’ light-duty, non-AFV acquisitions in FY 1999.

As evident in Table 1, DOC, DOE, HHS, the Department of Transportation (DOT), and the National Aeronautics and Space Administration (NASA) increased the fuel economy of covered vehicles by 1 mpg in FY 2002, thereby meeting the FY 2002 interim goal. Ten agencies – USDA, DOD, DOI, DOS, Treasury, VA, EPA, GSA, USPS, and EOP – exceeded the goal. Only the DOJ reported decreased fuel economy of vehicle acquisitions. Two agencies, HUD and Department of Labor (DOL), reported that the fuel economy of their vehicle acquisitions did not change.

In summary, the Federal agencies overall did not meet the 75 percent AFV acquisition requirements of EAct in FY 2002, although the agencies were much closer to compliance than in previous years. Agency projections indicate expanded acquisitions of AFVs in the coming years.

Additionally, the Federal agencies as a whole, and most individual agencies, do not appear on track for achieving the E.O. 13149 goal of reducing petroleum consumption by 20 percent between FY 1999 and FY 2005. This is likely due to an increase in fuel consumption caused by expanded mission or normal growth patterns, and in some cases, also due to alternative fuel tracking difficulties and limited access to alternative fuels in some areas. Overall a petroleum consumption reduction of 1.53 percent was achieved in FY 2002, in comparison to the FY 1999 baseline.

BACKGROUND

Three authorities establish requirements or goals for Federal fleets to reduce petroleum consumption, acquire alternative fueled vehicles and use alternative fuel: Title III of EPAct, E.O. 13149, and the Energy Conservation Reauthorization Act (ECRA) of 1998, which amended EPAct.

Energy Policy Act of 1992

EPAct established annual AFV acquisition targets for Federal agencies. In FY 1999 and thereafter, 75 percent of a Federal fleet's covered vehicle acquisitions must be AFVs. These requirements apply to fleets with 20 or more light-duty vehicles (LDVs) operating primarily in a Metropolitan Statistical Area (MSA) or Consolidated Metropolitan Statistical Area (CMSA) with a population of 250,000 or more, according to 1980 census data. Vehicles heavier than 8,500 lbs. gross vehicle weight rating (GVWR) or not located or operated primarily in a covered MSA or CMSA are exempt from the requirements of EPAct. Law enforcement, emergency, and military tactical as well as off-road vehicles are also exempt from this requirement.

Compliance with EPAct is measured by AFV acquisition "credits," which are granted based on the number of AFVs acquired and the quantity of biodiesel fuel used. Agencies earn one AFV acquisition credit for each AFV acquisition, regardless of geographic placement or exemption status. To maintain the emphasis on actual alternative fuel use, E.O. 13149 allows fleets to receive additional credits for acquiring dedicated AFVs. Dedicated alternative fueled medium- and heavy-duty vehicles earn multiple credits because they displace more petroleum on a per-mile basis than LDVs. Fleets may also earn credits based on the quantity of biodiesel used in a fiscal year (one credit per 450 gallons of neat [100 percent] biodiesel, but only up to 50 percent of the annual requirement). Credits accrued by the Federal fleets do not carry over from one fiscal year to the next, nor can these credits be traded among Federal fleets.

Executive Order 13149

The purpose of E.O. 13149 (65 FR 24607, April 21, 2000), "Greening the Government through Federal Fleet and Transportation Efficiency," is to ensure that the Federal Government exercises leadership in reducing petroleum consumption through fleet fuel efficiency improvements and the use of alternative fuels and AFVs.

Under E.O. 13149, each Federal agency with 20 or more vehicles in the U.S. must reduce its annual vehicular petroleum use by at least 20 percent by FY 2005 compared to the agency's FY 1999 baseline petroleum consumption. Independent agencies and agencies with fewer than 20 vehicles are exempted from coverage, but are encouraged to comply with the provisions of this Executive order.

Although the method by which Federal agencies achieve the 20 percent petroleum use reduction is not rigidly prescribed by EPAct, agencies must acquire a certain percentage of AFVs when replacing fleet vehicles (by purchase, lease from GSA, or commercial lease). Under E.O. 13149, by FY 2005, agencies must use alternative fuels in AFVs for a majority of the total fuel use of

those vehicles, and increase the average DOE/EPA Fleet Fuel Economy Guide rating of all light-duty, non-AFV acquisitions by at least 1 mile per gallon (mpg) by FY 2002 and 3 mpg by FY 2005 compared to FY 1999 fuel economy data.

Federal agencies may choose to use additional, creative approaches for complying with E.O. 13149. Possible approaches include reductions in fleet size and vehicles miles traveled, or improved efficiency of fleet management and vehicle use.

In the summer of 2000, DOE issued guidance to agencies on complying with the requirements of E.O. 13149. This guidance detailed preparing compliance strategies, designating responsible senior level officials, and reporting compliance data. In the fall of 2000, DOE and GSA unveiled the Federal Automotive Statistical Tool (FAST), available at <http://fastweb.inel.gov>, which is the on-line reporting system. Federal agencies must use FAST to collect and compile data concerning petroleum consumption, conventional and alternative fueled vehicle acquisition and inventory, alternative fuel consumption in AFVs, fuel efficiency of vehicle acquisitions, and vehicle operations. Agencies' vehicle acquisition data is to be reported for the prior, current, and subsequent FYs. Each year agencies are given a set amount of time to enter data into FAST. The system will not accept any new information subsequent to that deadline, which is determined in the early stages of the annual reporting cycle. The data reported for FY 2002 was locked down in January 2003.

Since its introduction, DOE and GSA have worked together to develop and implement enhancements to the FAST system. These ongoing efforts continue to make the FAST system easier to use for fleet managers, agency administrators and DOE staff. DOE continues to provide guidance to agencies in meeting these requirements, including efforts to improve the collected data by training agency personnel responsible for submitting this information. Additionally, an interagency working group chaired by DOE is facilitating the communication of alternative fuel infrastructure and vehicle issues among the Federal fleet community and industry.

Energy Conservation Reauthorization Act of 1998

ECRA, Public Law 105-388, amended EPAct to allow one AFV acquisition credit for every 450 gallons of pure biodiesel purchased for the use in diesel vehicles of more than 8,500 lbs. gross vehicle weight rating (GVWR). To receive credit for an AFV acquisition, the biodiesel must be neat (also known as B100) or in blends that contain at least 20 percent biodiesel (B20) by volume. B100 is equivalent to 2,250 gallons of B20.

Federal fleets are only allowed to use biodiesel credits to fulfill up to 50 percent of their EPAct AFV acquisition requirements. These credits can only be claimed in the year in which the fuel is purchased for use, and they cannot be traded among fleets.

Under this authority, Federal agencies are also required to provide an annual compliance report to Congress by November 13 of the reporting year, starting in FY 1999 and continuing for the next 14 years. The report must address compliance with the requirements of EPAct and related Executive orders and detail a plan for attaining compliance if the reporting agency has not met its requirements. This report must be placed on a publicly available website, and a notice of its availability must be published in the *Federal Register*, including the website address.

ANALYSIS AND REPORTING

As previously noted, ECRA requires each agency covered to provide Congress with an annual report on compliance activities. The written report must also include a discussion of agency petroleum and alternative fuel consumption data, and average fuel economy numbers for non-AFV LDV acquisitions. Each agency must submit a copy of its report to DOE. DOE then evaluates the reports and writes a consolidated report, *Federal Fleet Compliance with E.O. 13149*.

A total of 18 Federal agencies (Table 1) are covered by these requirements. All covered agencies have provided a written report to DOE addressing FY 2002 E.O. 13149 activities and compliance with EPAct. Each covered agency has also made its annual report available on its respective agency website. The link to these web pages is provided on the Federal Fleet Program website at <http://www.eere.energy.gov/vehiclesandfuels/epact/federal/>. Additionally, 10 independent agencies that are not required to comply with EPAct requirements acquired a total of 12 new AFVs in FY 2002. These agencies combined have accumulated over 100 AFVs (Table 4) that are currently in operation.

Agencies enter data on vehicle acquisitions, petroleum and alternative fuel use, and other information into the web-based FAST database application. This database tool was designed for DOE and GSA to facilitate collecting vehicle data annually.

The database was opened for FY 2002 data on October 1, 2002, and remained open until December 31, 2002. It was opened for three additional days in January 2003 (14th through the 16th) to accommodate requests from agencies for additional time for data entry and review. During this period, agencies could enter FY 2002 data, modify this data, and change the agency's FY 1999 baseline data (petroleum consumption and fuel economy data), if justified.

The FY 2002 data set was permanently closed on January 16, 2003, and no changes have subsequently been made. Nonetheless, several agencies submitted data changes, with supporting explanations, subsequent to the January lockdown. Although these additional data are not reflected in FAST, the data is included and highlighted in bold italics in Tables 1, 2, and 3 of this report. Data that is not in bold italics is as it appears in FAST.

Agency Compliance with Executive Order 13149

Agency compliance with E.O. 13149 is summarized in Table 1 which addresses the three main areas of the Executive order: Petroleum Consumption, Alternative Fuel Use, and Fuel Economy.

Since the objective of E.O. 13149 is to reduce petroleum consumption in Federal vehicles by 20 percent by 2005, all agencies are currently considered to be compliant with the petroleum

Table 1: EO 13149 COMPLIANCE, FY 2002

(Includes revised data submitted after FAST database closed in January 2003)*

Agency	Petroleum Consumption			Alternative Fuel Use		Fuel Economy		
	FY 1999 Covered Petroleum Consumption Baseline ¹ (GGE)	FY 2002 Covered Petroleum Consumption ¹ (GGE)	Consumption Reduction (%) <i>Increases in parentheses</i>	FY 2002 Alternative Consumption ² (GGE)	Alt Fuel Use in AFVs ³ (%)	FY 1999 Fuel Economy Baseline ⁴ (mpg)	FY 2002 Fuel Economy ⁴ (mpg)	Increased Fuel Economy (mpg) <i>Decreases in parentheses</i>
USDA	17,712,621	19,974,218	(13)	39,012	1	17	20	3
DOC	1,132,791	1,003,883	11	98,930	70	17	18	1
DOD	77,198,152	73,878,975	4.3	3,331,970	57	19	22	3
✓ USAF	13,016,001	12,218,290	6.1	400,262	15.26	17	26	9
✓ Army	32,339,654	33,989,778	(5)	1,130,220	20.41	20	21	1
✓ Corps of Engineers	4,416,061	4,172,588	5.5	281,225	67.78	18	22	4
✓ DCMA		49,242		13,983				
✓ DLA	1,648,285	1,146,464	30.4	318,097		19		
✓ USMC	10,527,804	7,948,855	24.5	574,254	30.43	17	21	4
✓ Navy	14,435,855	13,607,018	5.7	598,136	32.98	18	20	2
✓ Other Defense ⁵	814,492	746,740	8.3	15,814	60.82	18	23	5
DOE	6,837,150	6,756,600	1	556,384	42	17	18	1
HHS	4,623,795	3,920,230	15	95,263	13	19	20	1
HUD	210,122	188,099	10	14	0	23	23	0
DOI	21,221,692	22,923,782	(8)	824,276	53	16	18	2
DOJ	741,491	883,203	(19)	16,234	4	19	18	(1)
DOL	3,027,793	2,644,834	13	256,672	0	21	21	0
DOS	91,780	88,415	4	8,862	16	16	18	2
DOT	5,785,589	4,797,886	17	322,692	6	24	25	1
Treasury	870,705	739,507	15	1,325	33	18	20	2
VA	6,277,134	5,274,712	16	537,189	69	18	24	6
EPA	622,645	526,629	15	121,164	30	17	19	2
GSA	677,681	533,418	21	65,285	22	18	21	3
NASA	1,478,081	1,317,344	11	29,527	15	18	19	1
USPS	125,547,125	124,393,640	1	725,612	4	18	20	2
EOP	35,722	42,497	(19)	3,271	7	18	21	3
TOTAL	274,092,069	269,887,872	1.53	7,033,701				

* Note: The data included in this report are taken from the FAST database, input from agency sources. Data revisions to FAST, submitted by agency sources after April 2003, are not reflected in this report. Revisions received prior to that date are highlighted in bold italics. Shaded areas indicate that data were not submitted or that data are insufficient to calculate meaningful totals.

- In E.O. 13149, "covered" vehicles are all on-road vehicles that are not law enforcement, emergency, or military tactical.
- Combination of all types of alternative fuels (natural gas, E85, electricity, biodiesel, M85, and LPG). Biodiesel blend (B20) figures entered into FAST have been converted to pure biodiesel (B100) to accurately calculate alternative fuel usage for the Federal fleets. The 80 percent diesel portion of the B20 fuel blend (80 percent diesel, 20 percent biodiesel) used in on-road vehicles has been excluded from the agency's petroleum consumption in Table 1, since agencies have not attributed this fuel use to covered vehicles.
- Excludes biodiesel because it is not used in AFVs.
- Of LDV acquisitions excluding AFVs.
- Includes data entered by smaller DOD organizations, listed in FAST as "Defense Agencies".

consumption reduction and alternative fuel use provisions specified for FY 2002 in E.O. 13149. An increase of 1 mpg in fuel economy for light-duty, conventionally fueled vehicle acquisitions was required in FY 2002 and agency compliance with this goal is described below.

Petroleum Consumption: Each agency provided its FY 1999 petroleum consumption as its baseline value against which all future petroleum-use data is measured. The value for petroleum consumption in FY 2002 is contrasted with the baseline value to calculate the percentage reduction (or increase) in petroleum use for this fiscal year. Note that the FY 1999 baseline data was initially collected in FY 2000, and since it was the first data set of this kind collected by the Federal fleets, appropriate mechanisms often were not in place for accurate data collection. In some cases, agencies have re-evaluated and updated baseline numbers, which are reflected in the table.

Based on Table 1, Federal petroleum consumption decreased by 1.53 percent. Petroleum reductions were achieved at 14 agencies: DOC, DOD, DOE, HHS, HUD, DOL, DOS, DOT, Treasury, VA, EPA, GSA, NASA, and USPS. Four agencies reported increased petroleum consumption: USDA, DOI, DOJ and EOP.

Agencies are striving to develop better methods for tracking fuel use and in some cases have submitted incomplete or incorrect estimates. DOE continues to work with agencies to improve data collection mechanisms.

Alternative Fuel Use: To fulfill E.O. 13149 requirements, each agency must provide the types and quantities of alternative fuels used, in GGE in its AFVs for FY 2002. By the end of FY 2005, a majority of the fuel used by agencies in their AFVs must be alternative fuel. Alternative fuel consumption is summarized in Table 1 and reported by fuel type for each agency in Table 2.

Tables 1 and 2 show that Federal agencies consumed over 7 million GGE of alternative fuels in FY 2002, displacing gasoline and diesel fuel. This is a decrease from the approximately 8.6 million GGE of alternative fuels reported in FY 2001. It is likely that some of this decrease is due to the restriction of non-military vehicles from refueling on military bases after September 11, 2001. Also, agencies have indicated that alternative fuel use in AFVs leased from GSA may have been over-reported in FY 2001.

In FY 2002, all agencies reported the data necessary to calculate alternative fuel use in AFVs; however, some appear to have over-reported alternative fuel use. Among those reporting, several agencies have made good progress toward meeting the majority fuel use target: DOC, DOD, DOE, DOI, Treasury, EPA, GSA, and VA.

Agencies have had difficulty collecting and reporting alternative fuel use information accurately, because alternative fuels have not been assigned unique product codes by industry. Without product codes, credit card companies cannot correctly identify the fuel types. Therefore, these numbers should be viewed with limited confidence. Nonetheless, it appears that most agencies will have to make a significant effort in expanding alternative fuel use to meet the FY 2005 requirement.

Fuel Economy: The average fleet fuel economy for light-duty, non-AFV acquisitions, for the FY 1999 baseline and the FY 2002 reporting cycle, was calculated by agencies based on the DOE/EPA Fleet Fuel Economy Guide (www.fueleconomy.gov). E.O. 13149 requires that agencies increase the fuel economy of non-AFV LDV acquisitions by 1 mpg by FY 2002 and 3 mpg by 2005.

Table 2: ALTERNATIVE FUEL CONSUMPTION (GGE), FY 2002**(Includes revised data submitted after FAST database closed in January 2003)***

Agency	CNG	LPG	LNG	E85	Electric	M85	Biodiesel (B100) ¹	Total
USDA	94	8,185	0	475	0	0	30,258	39,011
DOC	3,997	266	0	94,667	0	0	0	98,930
DOD	1,094,519	22,590	0	2,016,008	3,864	2,842	192,167	3,331,990
✓ USAF	197,620	115	0	78,751	3,200	0	120,576	400,262
✓ Army	218,443	7,863	0	902,914	0	0	0	1,130,220
✓ Corps Engineers	3,244	478	0	277,503	0	0	0	281,225
✓ DCMA	977	0	0	13,006	0	0	0	13,983
✓ DLA	26,737	518	0	290,842	0	0	0	318,097
✓ USMC	119,826	6,502	0	379,326	81	2,842	65,677	574,254
✓ Navy	525,835	6,393	0	59,410	583	0	5,915	598,136
✓ Other Defense ²	837	721	0	14,256	0	0	0	15,814
DOE	81,439	9,713	27,315	341,293	5,959	0	90,665	556,384
HHS	<i>9,431</i>	1	0	<i>77,202</i>	0	0	<i>8,630</i>	<i>95,263</i>
HUD	14	0	0	0	0	0	0	14
DOI	48,009	46,783	0	725,652	185	738	2,909	824,276
DOJ	5,349	0	0	10,885	0	0	0	16,234
DOL	4,342	1,482	0	250,848	0	0	0	256,672
DOS	7,091	0	0	1,771	0	0	0	8,862
DOT	22,114	0	0	300,578	0	0	0	322,692
Treasury	142	0	0	1,183	0	0	0	1,325
VA	6,910	794	0	529,362	0	0	123	537,189
EPA	4,988	452	0	115,721	3	0	0	121,164
GSA	10,335	0	0	54,950	0	0	0	65,285
NASA	26,890	131	0	14	0	0	2,492	29,527
USPS	389,230	17,927	0	122,406	45,666	0	150,383	725,612
EOP	128	0	0	3,143	0	0	0	3,271
TOTAL	1,715,022	108,324	27,315	4,646,158	55,677	3,580	477,627	7,033,701

* Note: The data included in this report are taken from the FAST database, input from agency sources. Data revisions to FAST, submitted by agency sources after April 2003, are not reflected in this report. Revisions received prior to that date are highlighted in bold italics.

1. For the purpose of this report, the biodiesel blend (B20) figures entered in the FAST system by the Federal agencies have been converted to pure biodiesel (B100) to accurately calculate alternative fuel usage in Federal fleets.
2. Includes data entered by smaller DOD organizations, listed in FAST as "Defense Agencies".

DOC, DOE, HHS, DOT, and NASA increased the fuel economy of covered vehicles by 1 mpg in FY 2002 (see Table 1). Ten agencies – USDA, DOD, DOI, DOS, Treasury, VA, EPA, GSA, USPS, and EOP – exceeded the goal. Only DOJ reported decreased fuel economy of vehicle acquisitions. Two agencies, HUD and DOL, reported that the fuel economy of their vehicle acquisitions did not change.

Additional Requirements: In addition to the information on petroleum consumption, alternative fuel use, and fuel economy, E.O. 13149 required each agency to submit the following information to DOE:

- Designation of a Senior Agency Official responsible for leading the agency's AFV and fleet fuel efficiency programs and meeting the requirements of E.O. 13149;
- Strategy outlining the agency's approach to complying with E.O. 13149; and
- The agency's annual AFV acquisition and fuel use report.

All agencies have designated a Senior Agency Official, and have provided the necessary information to DOE and the Office of Management and Budget (OMB), as required. OMB has reviewed and approved strategies for compliance with E.O. 13149, submitted by all covered agencies. DOE was responsible for preliminary review and evaluation of those strategies.

Agency Compliance with EPAct

In FY 2002, EPAct required Federal fleets to acquire 75 percent of their covered acquisitions as AFVs. Table 3 summarizes EPAct compliance among the fleets, including data submitted by HHS after the FAST database closed in January 2003.

Data are presented for the number of covered acquisitions by each agency, as well as the number of actual AFVs and the total number of AFV credits including AFV credits and additional credits earned for acquiring dedicated light-, medium-, and heavy-duty AFVs and biodiesel fuel use. An agency's compliance with EPAct is based on this total number of credits earned, including AFV acquisitions and additional credits.

In FY 2002, 11 of the 18 agencies required to comply with EPAct met the requirement for acquiring 75 percent of their covered LDV acquisitions as AFVs. However, several agencies' FY 2002 performance was particularly notable. EPAct acquisition for DOS was 340 percent and 103 percent for DOJ. EPA and EOP each reported 100 percent compliance.

Overall DOD acquisitions of AFVs accounted for only 59 percent of its covered acquisitions in FY 2002, yet USMC was successful in achieving an EPAct compliance of 182 percent.

Table 3: EPACT COMPLIANCE, FY 2002						
(Includes revised data submitted after FAST database closed in January 2003)*						
Agency	Covered Acquisitions ¹ (#)	AFV Acquisitions (#)		AFVs as % of Covered Acquisitions (Including Credits)	Met Requirement? ³	Total AFV Inventory
		Number of AFVs	With Credits ²			
USDA	1,057	911	970	92	Yes	2,000
DOC	151	50	69	46	No	249
DOD (Total)	10,668	5,459	6,248	59	No	20,607
✓ USAF	1,729	772	1,059	61	No	3,684
✓ Army	6,155	2,717	2,802	46	No	8,906
✓ Corps Engineers	154	85	85	55	No	335
✓ DCMA	120	65	65	54	No	404
✓ DLA	408	210	216	53	No	1,193
✓ USMC	473	512	862	182	Yes	1,795
✓ Navy	1,590	1,090	1,151	72	No	4,188
✓ Other Defense ⁴	39	8	8	21	No	102
DOE	1,099	678	905	82	Yes	3,142
HHS	144	95	111	77	Yes	368
HUD	1	19	25	2,500	Yes	61
DOI	848	649	672	79	Yes	1,534
DOJ	118	107	121	103	Yes	613
DOL	459	171	171	37	No	635
DOS	15	43	51	340	Yes	128
DOT	1,012	242	247	24	No	1,358
Treasury	63	5	5	8	No	21
VA	988	272	280	28	No	1,279
EPA	76	60	76	100	Yes	323
GSA	176	151	151	86	Yes	755
NASA	307	143	149	49	No	505
USPS	855	343	640	75	Yes	32,081
EOP	27	27	27	100	Yes	28
TOTAL	18,142	9,387	10,870	60	No	65,687

*Note: The data included in this report are taken from the FAST database, input from agency sources. Data revisions to FAST, submitted by agency sources after April 2003, are not reflected in this report. Revisions received prior to that date are highlighted in bold italics.

1. Excludes exempt vehicles. EPAct allows exemptions based on geographic location; size of fleet; non-MSA or CMSA operation; and use as law enforcement, emergency and military tactical vehicles.
2. Includes credits for acquisition of bi- or flex-fuel AFVs, plus additional credits for zero emission vehicles; dedicated light-, medium-, and heavy-duty AFVs; and biodiesel usage.
3. In FY 2002, EPAct required that AFVs represent 75 percent of all covered light duty vehicle acquisitions.
4. Includes data entered by smaller DOD organizations, listed in FAST as "Defense Agencies".

The Federal Government acquired 9,399 AFVs in FY 2002, including 9,387 AFVs acquired by Executive agencies (see Table 3) and 12 AFVs acquired by Independent agencies, as summarized in Table 4. This is an increase of 6.7 percent relative to FY 2001 AFV acquisition.

As Table 3 shows, several agencies acquired large numbers of AFVs (at least 500) in FY 2002: USDA (911), DOD (5,459), DOE (678), and DOI (649). USPS has the largest AFV fleet in the Federal Government, with 32,081 vehicles, accounting for about 49 percent of the 65,687 AFVs in EPA-covered agencies' fleets. DOD fleets combined operate more than 20,000 AFVs, or about 31 percent of all Federal AFVs.

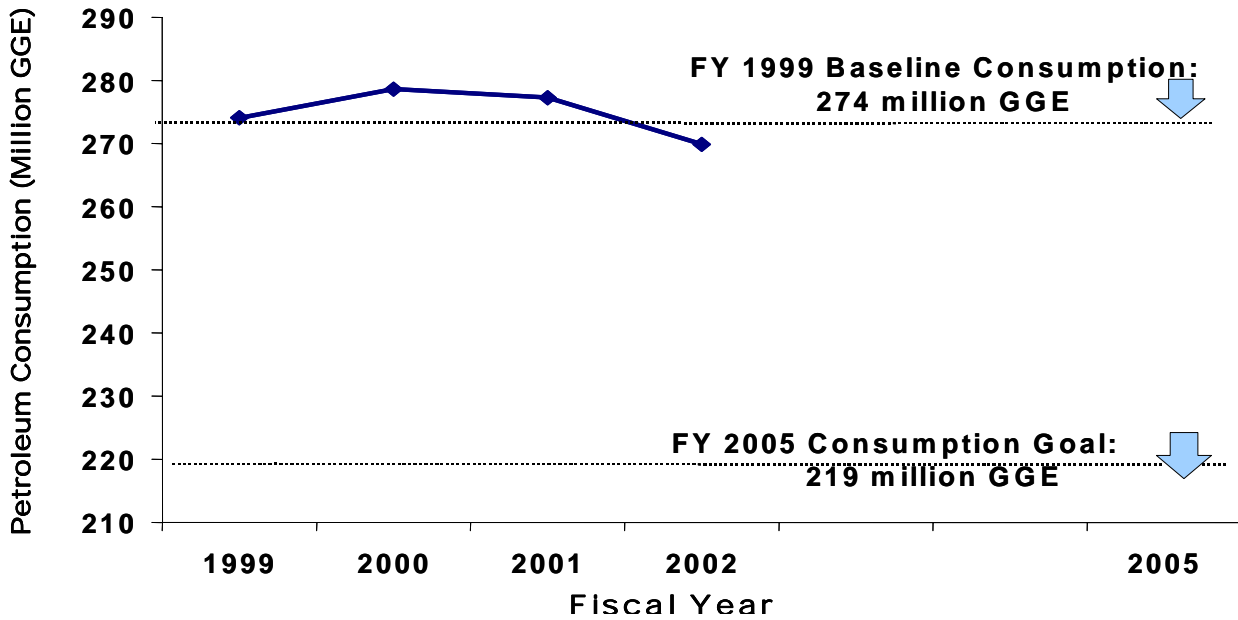
Table 4: INDEPENDENT AGENCY AFVs, FY 2002				
Agency	Acquisitions		Inventory	
	AFVs	Total LDVs	AFVs	Total LDVs
Broadcasting Board of Governors	0	5	1	33
Equal Employment Opportunity Commission	0	13	6	70
Federal Emergency Management Agency	2	15	0	196
Government Printing Office	0	0	18	42
National Labor Relations Board	0	0	1	1
National Science Foundation	2	20	17	168
Office of Personnel Management	4	4	11	23
Small Business Administration	2	53	10	151
Social Security Administration	1	2	31	51
Tennessee Valley Authority	1	268	13	1,745
TOTAL	12	380	108	2,480

CONCLUSIONS AND RECOMMENDATIONS

In FY 2002, the Federal Government as a whole made some progress toward fulfilling the petroleum consumption reduction requirements of E.O. 13149 that must be met by FY 2005. However, as demonstrated in Figure 1, each agency will need to put appropriate internal policies and procedures into place, and put sufficient emphasis on implementation, to increase alternative fuel consumption in its AFVs. Displacing petroleum fuel through alternative fuel use is the quickest and most effective method for achieving the 20 percent petroleum consumption reduction goal. Without these measures, agencies will find this goal difficult to achieve.

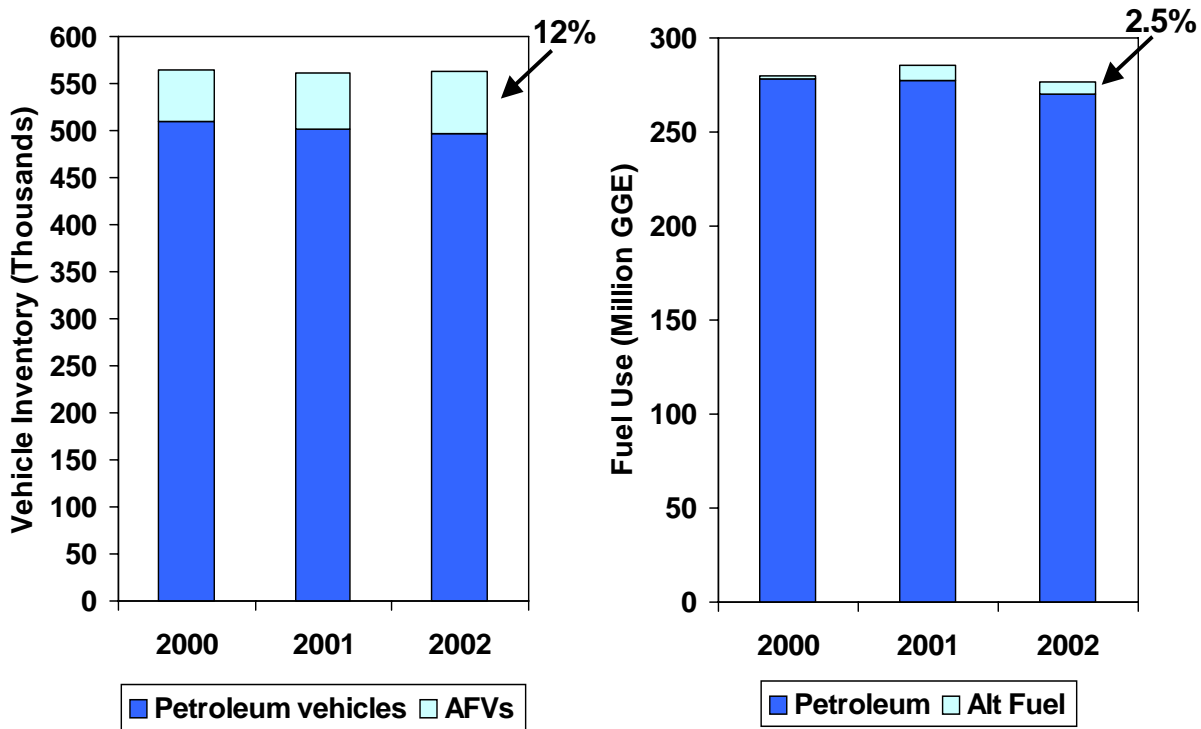
In FY 2002, Federal agencies reported a decrease of 1.53 percent in petroleum consumption compared to FY 1999 consumption levels. Many agencies are not accustomed to tracking this data, and the data may be difficult to obtain, in either case casting doubt on the accuracy of these figures. Nonetheless, the overall trend indicates that agencies are not reducing petroleum consumption quickly enough to meet the 20 percent reduction goal in FY 2005.

Figure 1. Federal Government Petroleum Consumption (FY 2002)



A closer look reveals that Federal agencies are acquiring more AFVs, but are not using alternative fuels in proportionate amounts. Figure 2 below shows that AFVs made up 12 percent of the Federal fleet in FY 2002. But the use of alternative fuel amounted to only 2.5 percent of total Federal fleet fuel use.

Figure 2. Federal Vehicle Inventory and Fuel Use



DOE recommends the following actions:

Department of Energy

- Develop and implement fleet manager and vehicle operator training programs.
- Increase coordination among GSA, DOE and other agencies to identify and resolve fuel use tracking problems.
- Assist agencies in coordinating fleet use of AFVs with expansion of infrastructure.

II Agencies

- Expand vehicle operator and fleet managers' involvement in data reporting, as well as AFV acquisition planning.
- Increase coordination among GSA, DOE and other agencies to identify and resolve alternative fuel tracking problems and to expand AFV acquisitions.

DOE will continue to provide guidance and assistance to Federal agencies to achieve the objectives of E.O. 13149, with assistance from OMB as appropriate; however, the participation and leadership of each agency will be the ultimate determinant of success.

APPENDIX

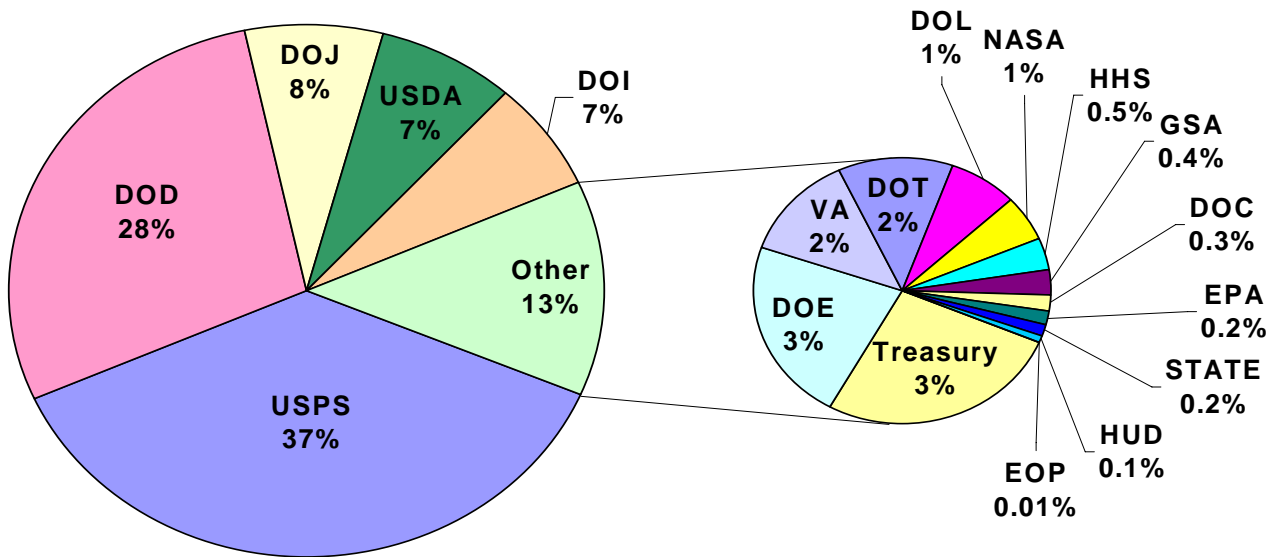
SELECTED AGENCY HIGHLIGHTS

SELECTED AGENCY HIGHLIGHTS

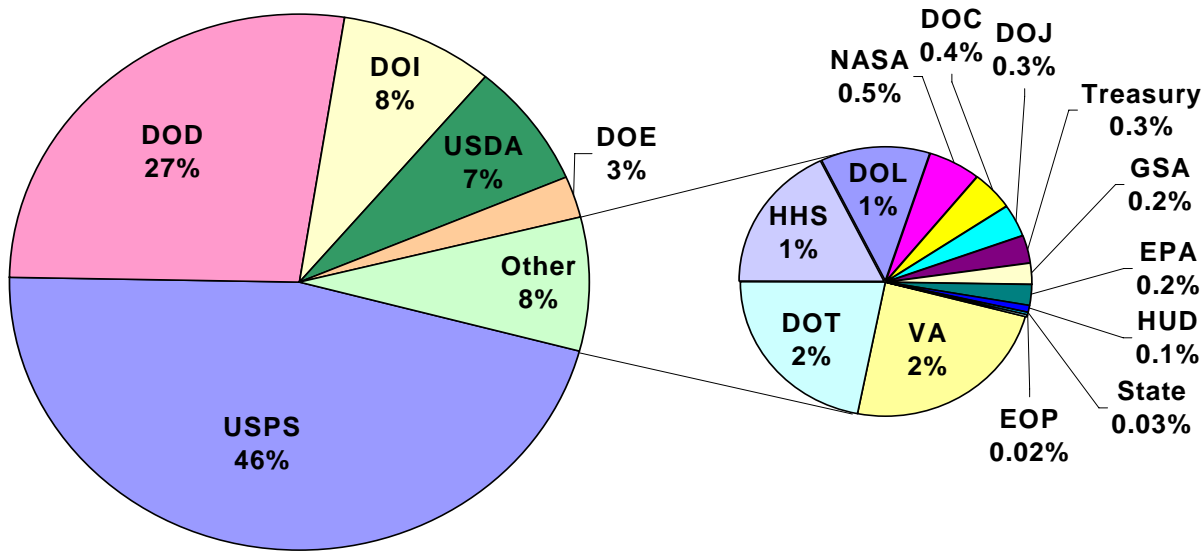
It is important to note the impact that the agencies with the largest fleets have on the overall performance of the Federal Government in meeting the objectives of E.O. 13149. As shown in Figure 3, most of the vehicles in the Federal fleet are concentrated in five agencies: USPS, DOD, DOJ, USDA and DOI. Similarly, most of the covered petroleum consumption is concentrated in these agencies, as shown in Figure 4. In fact, the agencies with the two largest fleets, USPS and DOD, combined represent 65 percent of all Federal vehicles and 73 percent of all petroleum consumption in Federal fleet. Below is a more detailed summary of the two largest agency fleets.

The success or failure of the Federal fleet in achieving the objectives of E.O. 13149 and EPAct will hinge largely on the performance of these few agencies. OMB and DOE will continue to take the lead in helping Federal agencies work to achieve the objectives of E.O. 13149; however, the participation and leadership of each agency will be the ultimate determinant of success.

Figure 3. Federal Agency Vehicles (percent of total vehicles by agency)



**Figure 4. Federal Agency Vehicular Petroleum Consumption
(percent of total consumption, by agency)**



U.S. Postal Service

USPS was successful in meeting the EPAct AFV acquisition requirements in FY 2002, as it did in FYs 1998, 1999, 2000 and 2001. USPS has achieved this success through the following practices:

- All delivery (mail hauling) vehicle purchases, where available from the manufacturers, are AFVs. These vehicles make up 90 percent of the USPS fleet, and over the previous four years (none were purchased in FY 2002) 100 percent of all new delivery vehicle purchases (21,775 vehicles) were AFVs (mainly ethanol flex-fuel vehicles).
- For other (non-mail-hauling) vehicle purchases (also done at headquarters), USPS seeks out AFVs that will comply with operational requirements. In FY 2002, of the 165 purchases of covered light-duty vehicles, 104 (63 percent) were AFVs. The non-mail-hauling purchases also included 38 medium-duty CNG bi-fuel vehicles.
- Of the FY 2002 new commercial and GSA leases, 200 (24 percent) of the 839 were AFVs. About 85 percent of the new leased vehicles are from GSA, and most of those are “replacement” vehicles. These are vehicles that GSA automatically replaces when they reach a certain age or mileage threshold. Unless otherwise directed by the agencies, GSA replaces conventional-fuel vehicles with new conventional-fuel vehicles and replaces AFVs with new AFVs. To break this cycle and to increase the percentage of GSA-leased AFVs in the future, USPS revised its replacement list (an unprecedented action) in December 2002, to replace conventional-fuel leases with AFV leases for FY 2003.
- USPS is transitioning from local control of vehicle leasing to centralized control at its newly organized Vehicles Commodity Management Center in Philadelphia, Pennsylvania. This change in fleet management will translate to a greater proportion of AFV leases in the future.

- USPS continues to increase its use of the biodiesel blend, B20. It used 751,913 GGE in FY 2002, an increase of 12 percent over FY 2001 levels. This earned USPS 297 EPA credits, which constituted 46 percent of the total AFV credits for the year.
- Deployment of the 500 electric vehicles, reflected as acquisitions in the 2000 EPA compliance report, was completed in FY 2002.

Like most Federal agencies, USPS has been less successful in reducing petroleum consumption. In FY 2002, USPS decreased covered (by E.O. 13149) petroleum consumption by about 1 percent compared to FY 1999. The decrease was largely attributable to increased use of B20, and a slight decrease in the volume of mail delivered in FY 2002.

With a view to more significant petroleum reductions, USPS implemented the following measures in FY 2002:

- Existing diesel storage tanks were refilled with B20 at several sites.
- Established a new Defense Energy Support Center (DESC) contract for B20 at another large site, which is expected to double the B20 usage for USPS.

USPS has faced considerable hurdles in using alternative fuels in the 32,081 AFVs it currently operates. Using alternative fuels in AFVs is fundamental to reducing petroleum consumption. In FY 2002, alternative fuels were used in USPS AFVs only about 4 percent of the time they were operated. The following factors contributed to this low percentage:

- The manufacturer of the more than 21,000 E85 flex-fuel delivery vehicles delivered to USPS over a two year period ending in 2002 discovered that exposure to E85 could damage the fuel pump on the vehicles, and so instructed USPS not to use E85 in these vehicles. In March 2003, the manufacturer completed retrofitting these vehicles with newly designed fuel pumps capable of operating on E85.
- USPS has begun using E85 where available and has resumed negotiations to obtain E85 at hundreds of USPS locations. The lack of adequate E85 refueling infrastructure generally makes it necessary to attract commercial stations to install an E85 pump. This takes time and is not always successful because USPS fleet fuel demand alone may be insufficient to make such an installation cost-effective. Nevertheless, USPS expects to establish new E85 fueling arrangements in FY 2003, which should boost E85 consumption.
- CNG consumption in the 7,325 long-life delivery (CNG bi-fuel) vehicles, which comprise the bulk of the CNG fleet, has been decreasing. This is because of the aging CNG conversion kits, which are over 10 years old, and have been installed on vehicles which are now about 15 years old. Over time, parts availability problems, as well as CNG tank regulator defects and seal failures, have developed in a majority of these vehicle. USPS is conducting an aggressive economic and operational assessment of the CNG bi-fuel program during FY 2003 to determine which sites could be made more successful with additional funding for parts, labor and refueling infrastructure. The expected result is a smaller fleet of CNG bi-fuel vehicles using more CNG.

Despite the substantial challenges in managing this large fleet of 208,395 vehicles, using alternative

fuel in its 32,081 AFVs will not only largely reduce USPS petroleum consumption levels, but will significantly impact the overall Federal fleet consumption levels as well.

U.S. Department of Defense

DOD fleets combined represent the second largest fleet in the Federal Government. Each military service operates its fleet separately, and the alternative fuel programs of the USMC, U.S. Navy (Navy) and U.S. Air Force (USAF) are discussed below.

USMC: USMC has been very successful in complying with EAct and reducing petroleum consumption in support of the FY 2005 E.O. 13149 goal. To achieve compliance with the legislative mandates of EAct and E.O. 13149 in FY 2002, USMC acquired 75 percent of new light-duty vehicles as AFVs, and used alternative fuel in these vehicles a majority of the time. USMC has established a funding line to cover AFV incremental costs. USMC also acquired light-duty vehicles with higher fuel economy, achieving the 1 mpg goal in FY 2002 and is working to attain the 3 mpg goal in FY 2005. Several factors contributed to USMC's success in meeting EAct requirements:

- Concentrated CNG vehicles where existing CNG infrastructure was already established.
- Neighborhood Electric Vehicles (NEV) have been successfully utilized at several locations for light hauling and administrative purposes. All USMC installations are finding unique ways to utilize NEVs to reduce the number of gasoline burning vehicles. In FY 2002, five California installations were the recipients of 115 various models of NEVs.
- Throughout the FY 2003 time frame, several installations will be provided with above ground E85 tanks. This infrastructure will allow USMC to concentrate not only on CNG but E85 vehicles and to increase the utilization of alternate fuels. USMC's base at Camp Lejeune, North Carolina, has been selected to receive a DOD grant, through the E85 coalition, for \$25,000 to place an E85 fuel site there.
- During FY 2002, several USMC installations have contracted for the use of biodiesel. USMC earned 129 credits for biodiesel use in FY 2002.

USMC is the only organization covered by E.O. 13149 that has already achieved the 20 percent petroleum reduction goal. USMC total fuel reduction to date is 2,578,949 GGE or 24.5 percent of the FY 1999 baseline.

The majority of the alternative fuel used by USMC comes from central fueling points located on USMC installations. About one-third of USMC GSA leased fleet are recruiting vehicles that are sparsely populated throughout the U.S. and rely exclusively on the commercial market for refueling. The small number of vehicles (less than five) at each location does not support a central AFV fueling location, nor does it encourage commercial companies to invest in AFV fueling infrastructure.

Navy: In FY 2002, Navy's EAct compliance was at 72 percent, just short of the 75 percent requirement. Navy's progress can be attributed in part to some recent special projects undertaken:

- AFV fueling infrastructure installations were completed at Fleet Industrial Supply Center Puget Sound, Naval Station Everett, and Jim Creek, Washington.
- Each fleet has modified its diesel fueling operations to include B20 biodiesel blends. Transportation managers of these fleets have provided successful transition stories, with no significant problems reported.
- Many Navy installations have, in the past, taken the initiative to institute on-base fueling for AFVs (mainly compressed natural gas), despite the non-availability of special funding for such costly infrastructure.
- Some Navy installations are partnering with local communities for AFV fueling or are acquiring bi-fuel or flex-fuel vehicles with plans to locate necessary alternate fueling infrastructure in the future.
- E85 vehicles are the most common new acquisitions, but fueling infrastructure is currently available in very few locations. Above ground tanks and/or conversion of gasoline tanks for E85 use is being considered.
- Biodiesel is also being considered at many locations now utilizing diesel-fueled vehicles and heavy equipment. Cold weather locations and locations with military/tactical vehicles subject to overseas deployment are considering whether biodiesel can be utilized and still meet mission requirements.

Fuel availability continues to be a problem for Navy:

- The majority of fuel used by Navy installations is either acquired from on-base fuel facilities or from commercial gas stations using a commercial credit card. However, since product code standards are not yet uniform among suppliers of alternative fuels (e.g., ethanol or E85), it is impossible for credit card vendors to accurately track the purchase of alternative fuels with their credit card. Neither source has yet to produce reliable fuel use data, by fuel type.
- A significant amount of Navy fuel use is for recruiting vehicles, based in large and small cities throughout the United States, but operating in sparsely populated areas. These vehicles rely exclusively on the commercial marketplace for fuel and the commercial sector has not yet invested in AFV fueling infrastructure, except in a very few locations, where relatively large numbers of AFVs are located. The inability to use alternative fuel in these locations will continue to adversely affect the mandated 20 percent fuel reduction in petroleum-based fuels by FY 2005.

In FY 2002, Navy achieved a 5.7 percent reduction in petroleum consumption. Navy anticipates that further reductions will be more difficult to achieve since many of the efficiencies and fleet inventory reductions have already been implemented. In addition, the increased tempo of operations as a result of the event of September 11, 2001, have increased the miles driven and fuel used at most locations; this situation is expected to continue for the foreseeable future.

USAF: USAF increased AFV acquisitions by 15 percent in FY 2002, but was unable to meet the 75 percent AFV acquisition requirement. However, USAF has laid important groundwork for future success:

In concert with the Office of the Under Secretary of Defense, USAF created and participated in the first-ever DOD AFV working group. Through this group, all DOD fleet agencies, from both the vehicle and fuels communities, came together and developed a short/long-term DOD AFV fleet strategy. Principal to this was the participation of the Defense Energy Support Center (DESC), Army & Air Force Exchange Service (AAFES) and Navy Exchange Service (NEX). This teaming effort has resulted in many synergies, and has helped gain industry support for building AFV infrastructure and other alternatives. AAFES and NEX are exploring the potential of being the group's AFV fuel provider, where building their own infrastructure is not possible or cost prohibitive.

- With the help of GSA, USAF redesignated bureau codes used to account for vehicles that USAF leases through them (significant, when one considers that USAF leases approximately 15,000 vehicles, of which a significant number fall into use categories subject to EPAct and E.O. 13149). By redesignating these bureau codes, USAF is now able to build an internal reporting hierarchy that places accountability for AFV procurements directly on procuring commands and provides data that help identify those requiring assistance.
- USAF also ensured more detailed language was added to its Annual Planning and Programming Guidance for FY 2004. This language requires that major USAF commands budget to meet all AFV goals. Additionally, USAF worked with DESC to ensure that USAF AFV refueling infrastructure is programmed. This new language and programming effort will provide USAF with the ability to better define resourcing needs within the corporate USAF and DOD structure, and more accurately quantify the cost and funding constraints for the USAF AFV program.

USAF has faced challenges in acquiring AFVs and alternative fuels:

- USAF's inability to meet the EPAct mandates continues to be impacted by the limitations of the types and quantities of AFVs available for purchase. While USAF units request sufficient quantities of AFVs in their two-year programming and planning cycles, automobile manufacturers have not produced sufficient types and quantities during the year of procurement.
- USAF strategy for FY 2003 and 2004 will continue to rely on the purchase and use of E85 flex-fuel vehicles, the use of biodiesel fuel and the continued use of CNG. A major set back to this strategy is a possible incremental cost from GSA for E85 flex-fuel vehicle procurement (up to now, there has been no incremental cost for E85 flex-fuel vehicles). The primary reasons E85 flex-fuel vehicles have been in demand for Federal fleet use has been that there has been no incremental cost. However, new incremental costs, which have not been planned nor programmed, could drive incremental costs USAF currently pays GSA from \$671K in FY 2002 to just over \$2.7M in FY 2003, and will result in a lower number of acquisitions.
- USAF dramatically increased biodiesel use in FY 2002. Through the conversion of excess fueling infrastructure at several installations throughout the continental United States, USAF achieved a substantial increase in biodiesel use (from just over 7,000 GGE in FY 2001 to over 603,000 GGE FY 2002). In FY 2003, USAF will continue to convert excess tanks to biodiesel use, and explore methods to take advantage of biodiesel use. USAF currently estimates that it will consume over 3 million GGE of biodiesel in FY 2003.

- Due to the high incremental costs associated with CNG vehicles, USAF has not procured many new CNG vehicles over the last few years, but continues to utilize CNG vehicles previously converted, and when practical, procure new CNG vehicles. In FY 2002, GSA notified USAF that there were safety certification problems with USAF vehicles previously converted to CNG use, and limited these bi-fuel vehicles to gasoline use only. The USAF will continue to maximize the use of certified CNG vehicles previously converted or procured.

As with Navy, USAF's operation tempo dramatically increased over the last year, adding miles traveled (~2 million additional miles) to their fleet, thus increasing the amount of petroleum fuel consumed. USAF does not project operations tempo to decrease over the next few years, directly impacting USAF's overall ability to meet the FY 2005 goals established by E.O. 13149.