



Federal Fleet Compliance with EFACT and E.O. 13149

Fiscal Year 2006



www.eere.energy.gov/femp



U.S. Department of Energy
**Energy Efficiency
and Renewable Energy**

Bringing you a prosperous future where energy
is clean, abundant, reliable, and affordable

Executive Summary

This report summarizes the Federal Government's fiscal year (FY) 2006 fleet performance in meeting the alternative fueled vehicle acquisition requirements of the Energy Policy Act of 1992 (EPACT) (42 U.S.C. 13212 (b)), and in meeting the goals of Executive Order (E.O.) 13149, "Greening the Government through Federal Fleet and Transportation Efficiency" (65 FR 24607; April 2000) which continued to remain in effect in FY 2006 (Exhibit 1). Additional requirements placed on Federal fleets by EPACT of 2005 (Public Law 109-58; August 2005), did not impact Federal fleets in FY 2006, but will be incorporated in subsequent reporting. On January 24, 2007, E.O. 13423, "Strengthening Federal Environment, Energy, and Transportation Management" (72 FR 3919), replaced E.O. 13149. Agencies will report on compliance activities with E.O. 13423 beginning in FY 2007.

During FY 2006, the Federal Government was successful in meeting the requirements of EPACT 1992, but fell significantly short of the petroleum reduction requirements of E.O. 13149. The Federal Government will need to install additional alternative fuel infrastructure and implement measures to reduce petroleum use through fleet management practices as well as acquire more fuel efficient vehicles in order to achieve substantial petroleum savings.

Exhibit 1. Federal Fleet Performance with EPACT and E.O. 13149, FY 2006

Authority/ Mandate	Performance Measure	Goal/Requirement	Federal Fleet Performance in FY 2006 ¹
EPACT	Alternative fuel vehicle (AFV) acquisitions	75 percent of the 18,258 covered light-duty vehicles (LDV) acquired in FY 2006 must be AFVs	Acquired 18,307 AFVs, earned 3,446 additional credits ² for total of 21,753 credits or 119 percent of covered acquisitions
E.O. 13149	Alternative fuel use in AFVs	Increase alternative fuel use in AFVs to a majority of the total fuel used in those vehicles	None of the 21 covered agencies used alternative fuel in AFVs for a majority of the fuel used in those vehicles.
	Fuel economy of light-duty acquisitions	Increase fuel economy by 3 miles per gallon (mpg) compared to FY 1999 baseline	Ten of the 21 covered agencies increased their fuel economy by at least 3 mpg, in comparison to FY 1999
	Petroleum consumption	Reduce covered petroleum consumption by 20 percent compared to FY 1999 baseline ³ of 282,347,685 gasoline gallon equivalents (GGE)	Consumed 264,536,196 GGE of petroleum, a decrease of 6.3 percent from the baseline. One agency, NASA, achieved the 20 percent reduction; several other agencies claimed greater than 20 percent reduction, but have not presented data to support these claims.

¹Individual agency performance detailed in Appendices A and B.

²Additional credits earned for the acquisition of dedicated light-, medium-, and heavy-duty AFVs and the use of biodiesel.

³Baseline adjusted in FY 2006 to account for unreported fuel.

EPACT Compliance

In FY 2006, and for the fourth consecutive year, the overall Federal fleet exceeded its EPACT 1992 alternative fuel vehicle (AFV) acquisition requirement with 19 of the 21 covered agencies meeting and/or exceeding the requirement (Appendix A). As a result of its AFV acquisitions and biodiesel fuel use, the Federal Government, as a whole, achieved a record compliance rate by earning AFV acquisition credits amounting to 119 percent of the Government's covered vehicles acquisitions, which is 44 percentage points higher than the 75 percent AFV acquisition requirement. In FY 2006, covered Federal agencies:

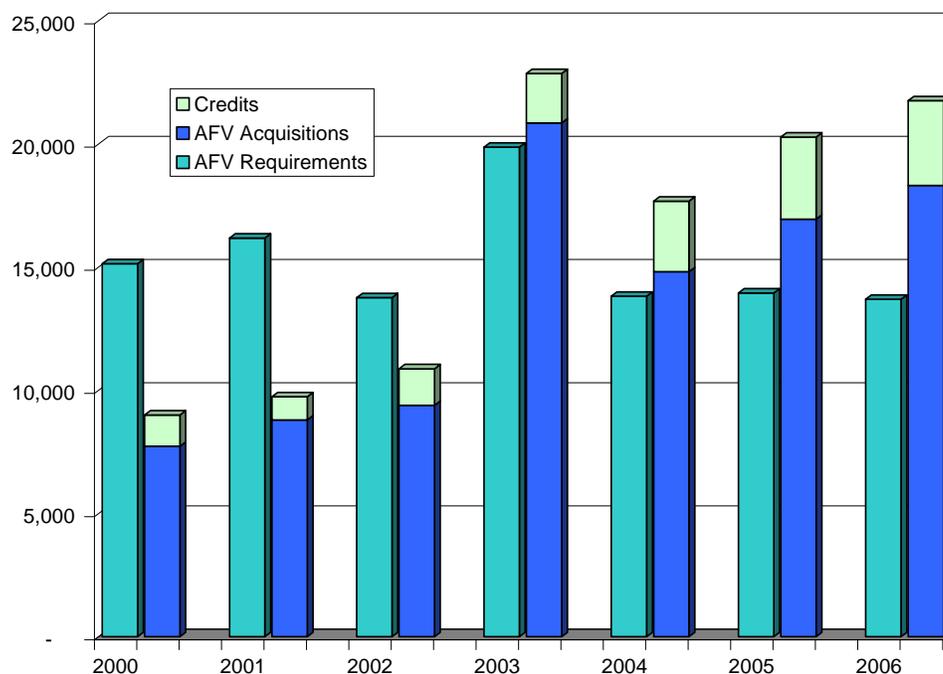
- Acquired 18,258 covered light-duty vehicles (LDV) and 49 non-covered for a total of 18,307 AFVs.
- Received an additional 3,446 credits through the acquisition of dedicated AFVs and the use of biodiesel.
- Earned a total of 21,753 credits (vehicle acquisitions plus additional credits)—119 percent of covered acquisitions.

Credits

Federal fleets earn one credit for every bi- or flexible-fuel AFV acquired. Additional credits are earned for every 450 gallons of pure biodiesel (B100) or 2,250 gallons of B20 (20 percent biodiesel and 80 percent petroleum diesel) used. Additional credits are also earned for AFVs that operate exclusively on alternative fuels.

In FY 2006, covered Federal agencies earned 18,307 credits for AFV acquisitions, 3,310 credits for biodiesel use, and 136 additional credits for acquiring dedicated light-, medium-, and heavy-duty AFVs, for a total of 21,753 credits. As such, in FY 2006, Federal AFV acquisitions alone accounted for more than 100 percent of all covered acquisitions (totaling to 18,258, as shown in Appendix A). This is because many of the agencies with campus-type operations are acquiring AFVs outside of the geographically covered areas (Exhibit 2).

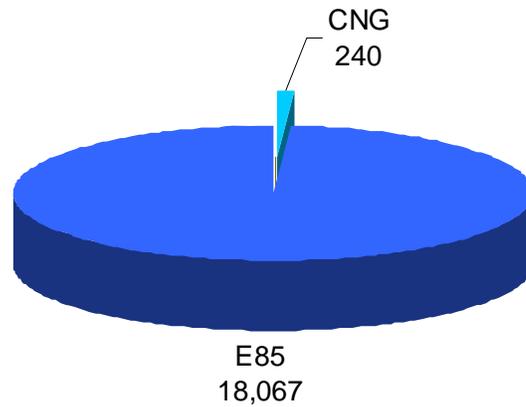
Exhibit 2. EPACT AFV Acquisitions, Credits and Requirements



Vehicles

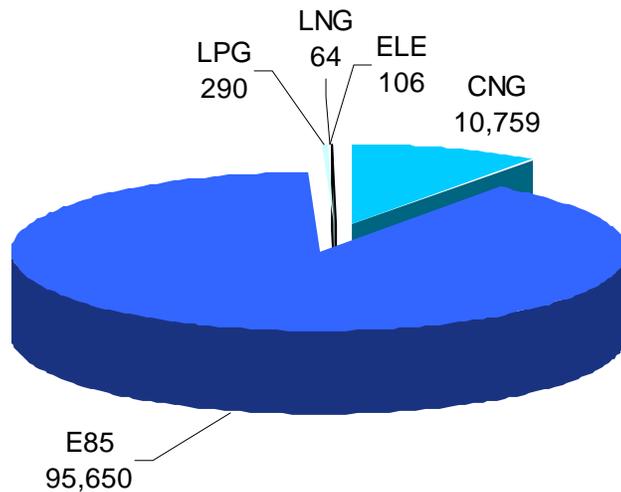
As in previous years, flexible-fuel vehicles (FFV) that can run on any mixture of E85 (85 percent ethanol, 15 percent gasoline) or gasoline were the AFVs of choice in FY 2006 (Exhibit 3). In FY 2006, of the 18,307 AFVs acquired, 18,067 (99 percent) were FFVs. The other 240 AFVs acquired were compressed natural gas (CNG) vehicles.

Exhibit 3. Total FY 2006 AFV Acquisitions by Federal Agencies Covered by EPACT 1992



FFVs capable of operating on E85 comprise the majority (89.5 percent) of the AFVs in the overall Federal fleet inventory (Exhibit 4), with CNG vehicles making up most of the balance (10.1 percent). As the availability of gaseous fuel (CNG and LPG, liquefied petroleum gas) vehicle models continues to decrease, it is likely that these vehicle types will become less prevalent in the Federal fleet. Liquefied natural gas (LNG), electric (ELE), and LPG vehicles combined account for less than 0.5 percent of the 106,869 AFVs in the 21 EPACT-covered agencies.

Exhibit 4. Total AFV Inventory of Federal Agencies Covered by EPACT 1992



Covered Vehicles and Exemptions

Of the 44,268 total LDVs acquired by covered Federal agencies in FY 2006, 26,010 vehicles (59 percent) were not subject to the acquisition requirement or were considered exempt from compliance with EPACT.

In FY 2006, these vehicles were not subject to the acquisition requirement or were considered exempt from the requirement:

- Fleet Size (2,209)
- Geographic (1,125)
- Law Enforcement (11,071)
- Non-MSA/CMSA Operation/Fleet (3,662)
- Non-MSA/CMSA Operation/Vehicles (7,943)

E.O. 13149 Compliance

E.O. 13149 calls for each agency to reduce vehicular petroleum consumption by 20 percent in comparison with a base year of FY 1999, and specifies three approaches agencies should take to achieve this goal:

- Comply with EPACT's annual AFV acquisition requirements (as previously discussed).
- Use alternative fuels in fleet AFVs a majority of the time.
- Increase the fuel economy of light-duty acquisitions (excluding AFVs) by 3 mpg by the end of FY 2006, as compared to FY 1999 baseline acquisitions.

E.O. 13149 was replaced with E.O. 13423 on January 24, 2007. As of the end of 2005, none of the covered agencies met the 20 percent petroleum reduction goal of E.O. 13149. Therefore, a challenging, yet achievable annual petroleum reduction goal for each of the covered agencies was introduced. Beginning in FY 2007, E.O. 13423 directs each agency to reduce its petroleum consumption by 2 percent annually, compared to FY 2005 levels. Agencies will be required to implement and report on compliance with this order in FY 2007.

The following sections discuss the overall level of compliance with E.O. 13149, which was in effect in FY 2006, throughout the Federal fleet. Individual agency information is outlined in Appendix B.

Use Alternative Fuels in AFVs

In FY 2006, none of the 21 covered agencies used alternative fuel in AFVs for a majority of the fuel used in those vehicles. One reason for the relatively low alternative fuel use rate is the lack of sufficient alternative fuel infrastructure. To remedy this, several agencies have invested in alternative fuel stations throughout the United States (Exhibit 5) over the past several years.

Exhibit 5. Federal Agency Alternative Fuel Sites in the United States

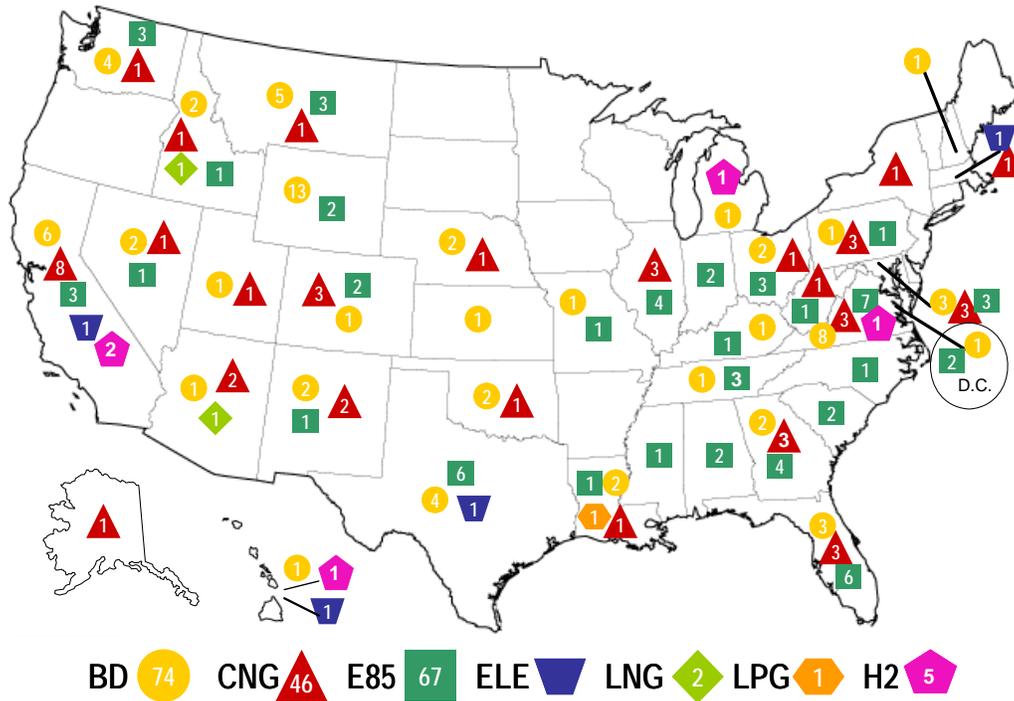


Exhibit 6 compares fuel use by covered Federal agencies in FY 2006 and FY 2005. Alternative fuels comprise a decreasing amount of agencies' covered fuel use, representing 2.13 percent in FY 2006 slightly lower from the 2.15 percent reported the year before. Alternative fuel use overall decreased by 8.2 percent from FY 2005 to FY 2006. Only biodiesel and E85 use increased slightly; use of all other fuels decreased. During this period, both the total covered fuel use (which includes alternative fuels) and covered petroleum consumption of Federal agencies decreased by 7.2 percent.

Exhibit 6. Total Fuel Use of Federal Agencies Covered by E.O. 13149

Fuel Use	FY 2005 (GGE)	FY2006 (GGE)	Change (%)
Alternative Fuel			
Biodiesel (B100)*	1,624,062	1,672,758	3.0
CNG	1,245,075	805,881	-35.3
E85	3,059,836	3,075,624	0.5
Electricity	5,540	4,450	-19.7
LNG	101,772	89,577	-12.0
LPG	230,735	104,867	-54.6
Total Alternative Fuel Use	6,267,020	5,753,157	-8.2
Petroleum			
Total Covered Petroleum Use	285,076,850	264,536,196	-7.2
<i>Total Covered Fuel Use</i>	<i>291,343,870</i>	<i>270,289,353</i>	<i>-7.2</i>
<i>Alternative Fuel Use as a Percentage of Total Fuel Use</i>	<i>2.15</i>	<i>2.13</i>	<i>-1.0</i>

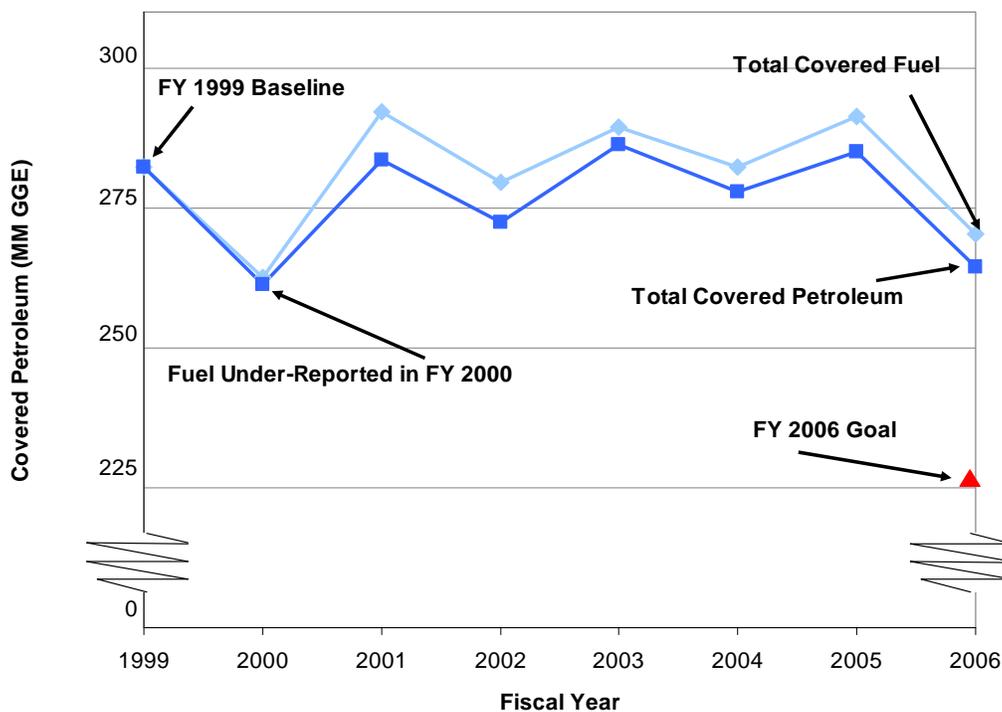
Improve Fuel Economy

To achieve the 20 percent petroleum reduction goal, E.O. 13149 called for each agency to increase the fuel economy of its LDV acquisitions (excluding AFVs). In FY 2006, 10 agencies increased the average fuel economy of these vehicles by at least 3 mpg in comparison to FY 1999.

Petroleum Consumption Progress Report

In FY 2006, covered Federal agencies consumed 5,753,157 GGE (Appendices B and C) of alternative fuels, thereby reducing gasoline and diesel fuel consumption in Federal vehicles. These agencies reported 264,536,196 GGE of covered petroleum consumed in FY 2006, down 6.3 percent from 282,347,685 GGE reported for FY 1999¹. As of the end of FY 2006, only one of the covered agencies, NASA, achieved the 20 percent petroleum reduction goal of E.O. 13149. A few other agencies reported to have met this goal, but these claims have not been substantiated with supporting data. Also, the Federal Government, as a whole, did not achieve the 20 percent reduction goal in FY 2006, but did however lower its petroleum use, as illustrated in Exhibit 7.

Exhibit 7. Vehicular Petroleum Consumption of Federal Agencies Covered by E.O. 13149



E.O. 13149 provided direction to the agencies to strategically displace petroleum fuel through displacement measures. Without these measures, the transportation petroleum consumption of covered Federal agencies would have been just over 270 million GGE in FY 2006. However, due to alternative fuel use, covered petroleum consumption in FY 2006 was less than 265 million GGE, resulting in a 6.3 percent decrease compared to FY 1999 consumption levels. As evident in Exhibit 7, the petroleum consumption data reported by covered Federal agencies is inconsistent. The U.S. Department of Energy (DOE) is working with the Federal fleets to improve the quality of their data.

¹ The baseline was adjusted in 2006 to account for previously unreported fuel.

The Office of Management and Budget (OMB) developed scorecards for each of the covered agencies to individually measure compliance and assign specific activities to improve compliance as needed. These scorecards are issued bi-annually in January and July to assess data quality and progress made toward meeting the requirements. Progress on these activities is monitored by DOE and OMB.

Summary

In FY 2006, the overall Federal fleet exceeded its EPACT AFV acquisition requirements. Covered agencies acquired 18,307 AFVs and earned 3,446 credits for a total of 21,753 credits—119 percent of covered acquisitions.

Toward compliance with E.O. 13149, covered Federal agencies consumed 5.75 million GGE of alternative fuels. Ten of the 21 covered Federal agencies increased the average fleet fuel economy of their LDV acquisitions by at least 3 mpg, but none of the agencies demonstrated using alternative fuels in their AFVs a majority of the time. The Federal fleet was somewhat successful in displacing petroleum consumption, and one agency, NASA, provided sufficient supporting data to demonstrate that it achieved the 20 percent petroleum reduction goal. Overall, however, the Federal fleet, as a whole, is not close to achieving the 20 percent reduction required by E.O. 13149.

DOE is aware that the quality of agency data is variable, particularly with respect to fuel consumption. DOE will continue to work with OMB and the General Services Administration to develop methods to help the agencies improve the fuel tracking data.

Appendices

Appendix A

EPACT Compliance, FY 2006								
Agency	Covered Acquisitions ¹ (#)	EPACT Credits				AFVs as % of Covered Acquisitions	Met Requirement ⁴	Total AFV Inventory ⁵
		Number of AFVs	Add'l AFV Credits ²	Actual Biodiesel Credits ²	Total Credits ³			
Agriculture	883	1040	2	31	1,073	122	Yes	4,639
Commerce	148	106	12	0	118	80	Yes	438
Defense (Total)	9,142	9,747	102	2,399	12,248	134	Yes	43,159
Energy	627	603	3	212	818	130	Yes	4,228
Health and Human Services	219	234	1	13	248	113	Yes	733
Homeland Security	1362	1202	0	0	1,202	88	Yes	2,641
Housing and Urban Development	117	69	0	0	69	59	No	136
Interior	407	189	11	106	306	75	Yes	2,450
Justice	197	163	0	6	169	86	Yes	1146
Labor	216	168	2	0	170	79	Yes	634
State	54	81	2	0	83	154	Yes	261
Transportation	624	466	0	0	466	75	Yes	1,436
Treasury	59	18	0	0	18	31	No	202
Veteran Affairs	1091	1004	0	31	1,035	95	Yes	2,222
Court Services and Offender Supervision	0	0	0	0	0	0	N/A	0
Environmental Protection Agency	111	92	0	1	93	84	Yes	397
General Services Administration	89	68	0	0	68	76	Yes	766
National Aeronautics and Space Administration	209	323	1	57	381	182	Yes	1,394
Smithsonian	8	1	0	0	1	13	No	19
Social Security	26	45	0	0	45	173	Yes	152
Postal Service	2,669	2,688	0	447	3,135	117	Yes	39,816
TOTAL	18,258	18,307	136	3,310	21,753	119	Yes	106,869

¹Excludes exempt vehicles. EPACT allows exclusions based on geographic location, size of fleet, non-MSA operation, and use in law enforcement, emergency, and national defense vehicles.

²Total may not represent sum of column due to rounding or because some agencies have reached the 50 percent biodiesel cap.

³Includes credits for dedicated light-, medium-, and heavy-duty vehicles, and biodiesel usage as allocated by E.O. 13149.

⁴EPACT requires that AFVs represent 75 percent of all covered light-duty vehicle acquisitions.

⁵Excluding credits.

Appendix B

Executive Order 13149 Compliance, FY 2006								
Agency	Petroleum Consumption			Alternative Fuel Use		Fuel Economy		
	FY 1999 Covered Petroleum Consumption Baseline (GGE)	FY 2006 Covered Petroleum Consumption (GGE) ¹	Consumption Reduction ¹ <i>Increases shown in parentheses</i>	FY 2006 Alt Fuel Consumption ² (GGE)	Alt Fuel Use in AFVs (%)	FY 1999 Fuel Economy Baseline	FY 2006 Fuel Economy (mpg)	Increased Fuel Economy ³ (mpg)
Agriculture	21,069,108	15,801,938	25.0 ⁴	177,651	13.04	17.0	22.2	5.2
Commerce	1,132,791	951,516	16.0	2,994	1.21	17.0	18.0	1.0
Defense (Total)	79,353,335	76,966,971	3.0	2,451,405	4.22	18.6	22.3	3.7
Energy	8,539,281	7,324,518	14.2	728,594	20.08	17.0	19.5	2.5
Health and Human Services	2,247,820	1,953,444	13.1	39,748	7.46	19.2	22.8	3.6
Homeland Security	3,475,284	3,765,730	(8.4)	554,791	18.76	19.5	20.0	0.5
Housing and Urban Development	210,122	193,370	8.0	412	0.00	23.0	0.0	0.0
Interior	21,221,692	18,068,872	14.9	320,076	21.52	16.0	22.0	6.0
Justice	842,256	736,674	12.5	97,811	14.33	19.0	24.0	5.0
Labor	3,027,793	2,852,388	5.8	124,147	0.00	21.0	0.0	0.0
State	293,729	277,315	5.6	22,892	15.99	15.7	19.7	4.0
Transportation	5,075,672	3,369,910	33.6 ⁵	68,063	10.50	24.0	24.6	0.6
Treasury	676,957	416,025	38.5 ⁵	36,441	25.63	18.0	21.1	3.1
Veteran Affairs	6,277,134	6,952,242	(10.8)	55,769	2.71	18.0	18.0	0.0
Court Services and Offender Supervision	18,948	18,948	0.0	0	0.00	24.0	25.6	1.6
Environmental Protection Agency	526,629	451,997	14.2	19,229	7.36	17.0	22.5	5.5
General Services Administration	677,681	386,875	42.9 ⁵	50,248	0.00	18.0	23.5	5.5
National Aeronautics and Space Administration	1,521,959	1,171,797	23.0 ⁵	254,665	43.06	18.0	19.9	1.9
Smithsonian	238,170	166,820	30.0 ⁵	1,982	24.61	18.9	19.0	0.1
Social Security	374,199	290,234	22.4 ⁵	19,195	0.00	18.2	0.0	0.0
Postal Service	125,547,125	122,418,612	2.5	727,044	2.73	18.5	22.1	3.6
TOTAL	282,347,685	264,536,196	6.3	5,753,157				

¹Increases in petroleum consumption shown in parentheses.

²Combination of all types of alternative fuels (natural gas, E85, electricity, biodiesel, and LPG).

³Decreases in fuel economy shown in parentheses.

⁴After FAST closed for FY 2006, the U.S. Department of Agriculture performed a detailed review of the Forest Service vehicles used for emergency, emergency response, and law enforcement and associated exempted fuel consumption in those vehicles. The results of the analysis pointed to a need to adjust exempt fuel calculated in the baseline year to reflect its estimated 12.5 percent reduction in covered petroleum.

⁵Only one agency, NASA, provided sufficient documentation of achieving greater than 20 percent petroleum reduction. A claim of achieving this goal by a few other agencies has not been substantiated.

Appendix C

Alternative Fuel Consumption (GGE), FY 2006							
Agency	CNG	LPG	LNG	E85	ELE	Biodiesel (B100)	Total
Agriculture	7,764	2,033	0	151,700	0	16,154	177,651
Commerce	2	97	0	2,876	0	19	2,994
Defense (Total)	417,951	19,225	0	800,406	1,824	1,211,999	2,451,405
Energy	58,096	321	37,195	525,168	0	107,814	728,594
Health and Human Services	2,882	1,226	0	28,485	87	7,068	39,748
Homeland Security	12,579	0	0	541,821	0	391	554,791
Housing and Urban Development	0	0	0	412	0	0	412
Interior	98,024	53,071	52,382	62,435	793	53,371	320,076
Justice	48,214	0	0	46,218	0	3,379	97,811
Labor	1,957	0	0	121,952	0	238	124,147
State	18,265	0	0	4,523	0	104	22,892
Transportation	2,594	1,100	0	64,333	0	36	68,063
Treasury	4	0	0	36,437	0	0	36,441
Veteran Affairs	1,172	736	0	37,658	147	16,056	55,769
Court Services and Offender Supervision	0	0	0	0	0	0	0
Environmental Protection Agency	10,370	0	0	8,340	0	519	19,229
General Services Administration	775	140	0	49,333	0	0	50,248
National Aeronautics and Space Administration	15,760	10,661	0	199,227	0	29,017	254,665
Smithsonian	1,982	0	0	0	0	0	1,982
Social Security	528	174	0	18,493	0	0	19,195
Postal Service	106,962	16,083	0	375,807	1,599	226,593	727,044
TOTAL	805,881	104,867	89,577	3,075,624	4,450	1,672,758	5,753,157

Appendix D

List of Acronyms	
Acronym	Phrase
AFV	Alternative Fuel Vehicle
B100	Biodiesel (100 percent, pure)
B20	Biodiesel (20 percent biodiesel, 80 percent petroleum diesel)
CNG	Compressed Natural Gas
DOE	U.S. Department of Energy
E85	Ethanol (85 percent ethanol, 15 percent petroleum)
ELE	Electric
E.O.	Executive Order
EPACT	Energy Policy Act
FFV	Flexible Fuel Vehicle
FR	Federal Register
FY	Fiscal Year
GGE	Gasoline Gallon Equivalent
LDV	Light-Duty Vehicle
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas (Propane)
MPG	Miles Per Gallon
MSA/CMSA	Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area
OMB	Office of Management and Budget

Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

For more information contact:
EERE Information Center
1-877-EERE-INF (1-877-337-3463)
www.eere.energy.gov