

**Department of State**  
**Fleet AFV Program Report for Fiscal Year 2008**  
**January 28, 2009**

This report summarizes the U.S. Department of State (DOS) fiscal year (FY) 2008 performance in meeting the requirements of: Executive Order (EO) 13423, Strengthening Federal Environmental, Energy, and Transportation Management; and the Energy Policy Act of 1992 (EPAAct; 42 U.S.C. 13211-13219) as amended by the Energy Conservation Reauthorization Act of 1998 (ECRA; Public Law 105-388) and the EPAAct of 2005 (Public Law 109-58).

Exhibit 1 summarizes DOS’s progress in meeting the EO and EPAAct requirements. Appendices A and B reflect DOS vehicle acquisitions (for FYs 2008, 2009, and 2010) and fuel consumption data, respectively, and Appendix C contains a glossary of acronyms and terms used in this report.

**Exhibit 1. DOS Performance – EPAAct/EO Requirements FY 2008**

<b>Authority /Mandate</b>	<b>Performance Measure</b>	<b>Requirement</b>	<b>DOS Performance in FY 2008</b>
EPAAct 1992	Alternative Fuel Vehicle (AFV) acquisitions	75 percent of the 44 covered <sup>1</sup> fleet vehicle acquisitions must be AFVs.	Accumulated 156 AFV credits (355 percent of covered acquisitions). <b>COMPLIANT</b>
EO 13423	Reduce annual covered petroleum consumption	Reduce petroleum consumption of covered <sup>2</sup> vehicles by two percent annually by end of FY 2015 from FY 2005 baseline of 278,985 gasoline gallon equivalents (GGEs).	Consumed 208,684 GGEs, a decrease of 25 percent from baseline (far exceeding the target of a six percent decrease [262,245 GGEs total] by end of FY 2008). <b>COMPLIANT</b>
EO 13423	Increase annual alternative fuel (AF) consumption	Equal or exceed the FY 2008 AF usage target of 37,906 GGEs, based on a compounded 10 percent annual rate of increase over the FY 2005 baseline of 28,480 GGEs.	Used 13,192 GGEs, which is only 35 percent of the FY 2008 target. However, it is an increase of 5.9 percent over the previous year. <b>NON-COMPLIANT</b>
EPAAct 2005, Sect. 701	Operate all dual-fuel non-waived AFVs on AF	AF use must comprise 95 percent or more of fuel used in non-waived dual-fuel AFVs.	Actual usage is about five percent. <b>NON-COMPLIANT</b>

<sup>1</sup>By definition, the term “covered” relative to vehicle acquisitions includes all domestic non law-enforcement (LE), light-duty (LD) vehicles operated in a metropolitan statistical area (MSA) and acquired by lease or purchase in FY 2008.

<sup>2</sup> By definition, the term “covered” relative to petroleum fuel reduction includes all domestic, non-LE vehicles of any weight and operating in or out of an MSA.

**EPAct AFV Acquisition Compliance**

DOS exceeded EPAct AFV acquisition requirements in FY 2008 as follows:

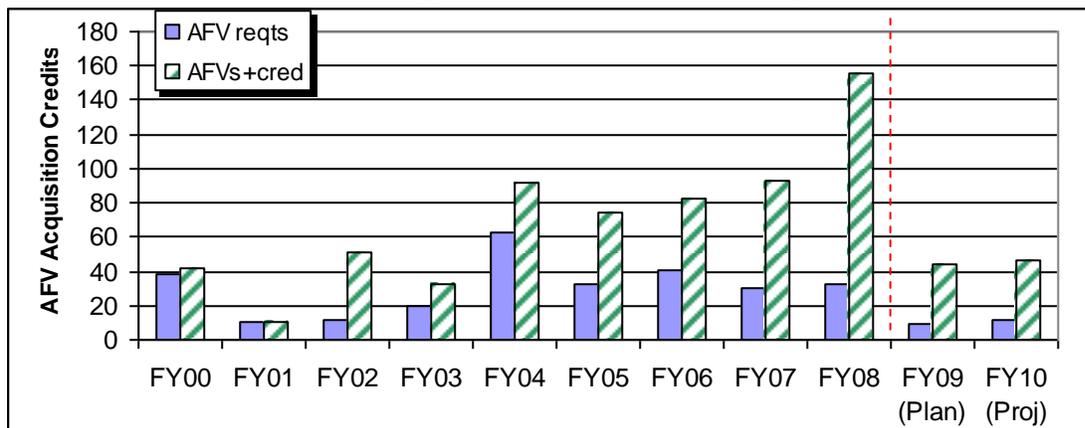
- DOS acquired 44 EPAct-covered LD vehicles (as shown in Appendix A).
- DOS accumulated 156 AFV credits through acquisition of 156 AFVs (includes both EPAct-covered and non-covered vehicles).
- This resulted in an AFV percentage of covered LD vehicle acquisitions of 355 percent (156/44).

Of note, two of the FY 2008 LD acquisitions were hybrid electric vehicles (HEVs) (1 SUV 4x4 by commercial lease and 1 SUV 4x2 by GSA lease), which were not classified as AFVs in FY 2008, but which helped to reduce petroleum fuel consumption.

***AFV Acquisitions***

DOS has successfully met the EPAct requirement every year (see Exhibit 2), as reflected in FAST, due to the agency’s policy of acquiring AFVs for all covered vehicles so long as AFVs meeting operational requirements are available from original equipment manufacturers.

**Exhibit 2. EPAct AFV Requirements vs. AFV Acquisitions + Credits**



**Appendix A** contains FAST data on the numbers and types of LD vehicles that DOS leased or purchased in FY 2008, as well as the projections for FY 2009 and FY 2010.

### ***FY 2009 Planned and FY 2010 Projected Acquisitions***

DOS plans to continue its policy of acquiring AFVs exclusively for its non-exempt fleet except where operational requirements make that impractical.

- For FY 2009, DOS plans to acquire 39 flex-fuel vehicles (FFVs) and three (2 bi-fuel and 1 dedicated) natural gas vehicles (NGVs) through GSA leases, as well as 4 HEVs from commercial lease sources. The EPAAct percentage for FY 2009 is expected to exceed 100 percent.
- For FY 2010, DOS projects that 46 FFVs and one bi-fuel NGV will be acquired through GSA leases. The expected EPAAct percentage for FY 2010 will exceed 100 percent.

### **EO 13423 – Compliance with Petroleum Use Reduction and AF Use Increase**

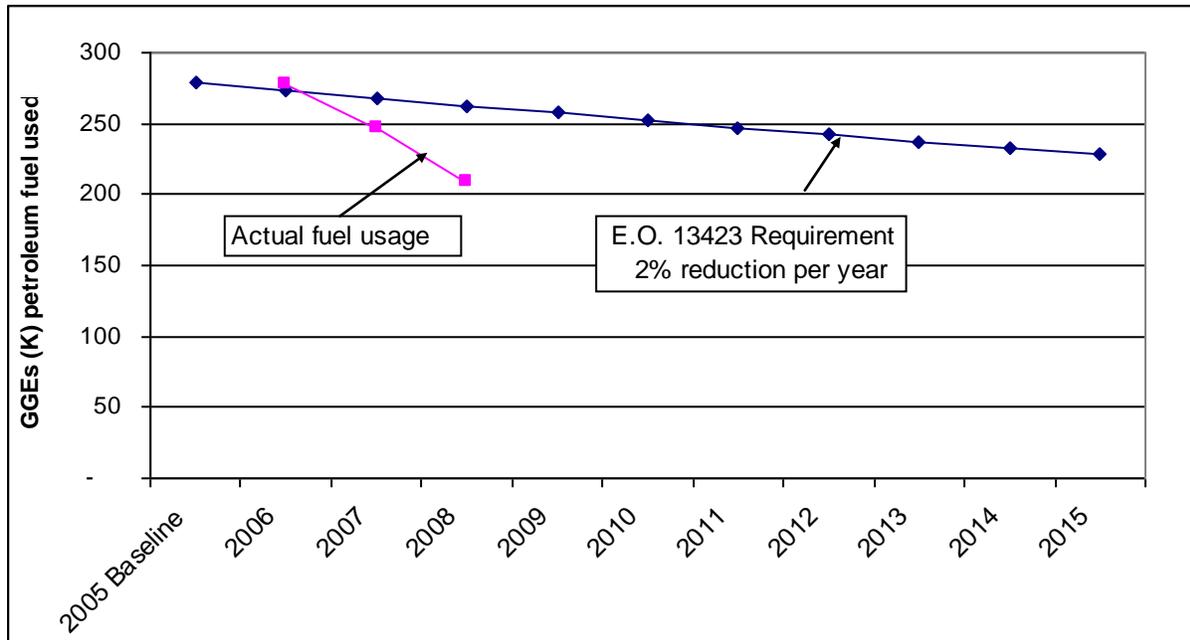
In FY 2008 DOS pursued the petroleum reduction targets specified in EO 13423 (signed January 24, 2007), which calls for each federal agency to:

- Reduce vehicular petroleum consumption (for domestic, non-LE vehicles of any weight and operating in or out of an MSA) by two percent annually through FY 2015 (compared to the FY 2005 usage, which is referred to as the FY 2005 baseline).
- Increase vehicular non-petroleum based fuel (i.e., alternative fuel) consumption by 10 percent compounded annually.

### ***Reducing Covered Petroleum Consumption***

DOS's covered petroleum fuel consumption in FY 2008 was 208,684 GGEs, a 25 percent reduction from the FY 2005 baseline of 278,985 GGEs. This total is already below the reduction target for 2015. Consequently, DOS was fully compliant with the petroleum use reduction requirement in FY 2008.

### Exhibit 3. DOS Petroleum Fuel Usage vs. EO 13423 Goals



Factors contributing to DOS’s success in reducing covered petroleum consumption include:

- DOS’s continued efforts to use more fuel efficient vehicles by renewing its formal agreement with the GSA Fleet Office that SUVs will not be provided to any DOS entity as scheduled replacements or to fill new vehicular requirements without the prior approval of the Fleet Management and Operations Division (A/OPR/GSM/FMO). More fuel efficient minivans can sometimes substitute for the SUVs.
- Continued emphasis on efficiencies, such as combining trips; shared-use of vehicles; conducting business by telephone, e-mail or teleconference; and using commercial delivery services, taxi cabs, DOS shuttle buses, and public transportation.
- Reclassification of about 20 vehicles by the Diplomatic Security subfleet from administrative to law enforcement, more accurately reflecting their current mission. This caused their fuel consumption to change from “covered” to exempt.

#### ***Increasing Annual AF Consumption***

EO 13423 requires each Federal agency to increase annual AF consumption by 10 percent per year (compounded annually) through the end of FY 2015, based on a FY 2005 baseline. The FY 2005 baseline for DOS is 28,480 GGEs, so the target for FY 2008 is 37,906 GGEs. Unfortunately, despite efforts to increase AF

use, DOS consumed only 13,192 GGEs of AF in FY 2008, which is 35 percent of the FY 2008 target. Consequently, DOS is not compliant with this requirement. On a positive note, FY 2008 AF consumption increased 5.9 percent over the previous year's AF use. The limitations to increasing AF use are detailed by fuel type below.

- CNG Use: DOS is now operating 23 NGVs, down from 33 in FY 2007, due to the limited availability of NGVs from manufacturers. Moreover, commercial compressed natural gas (CNG) refueling infrastructure is insufficient, with only one source (the Pentagon Navy Exchange [NEX] station) convenient for daily DOS use. There are two backup sources for CNG refueling: the Washington Navy Yard and the Arlington Transit (ART) site in Shirlington, VA, but these are not convenient to the vehicles. Nevertheless, CNG fuel consumption increased 10 percent over the FY 2007 level, indicating increased use of the CNG DE buses, which had been underutilized in FY 2007 due to a temporary shortage of qualified drivers.
- E85 Use: The amount of E85 (a fuel blend of 85 percent ethanol and 15 percent gasoline) that is reported in FAST continues to remain in the 3,000- and 4,000-GGE range, as it has over the period FY 2003 to FY 2008. The actual amount is difficult to measure due to point-of-purchase coding problems. At the Pentagon NEX station, E85 purchases are erroneously coded as unleaded gas, but the NEX manager says they cannot afford the software necessary to correct this problem. Meanwhile, the number of FFVs in the fleet has increased from 290 in FY 2007 to 424 in FY 2008; combined with the increased efforts to make drivers aware of their responsibility to refuel with E85, we expect to see increases in E85 use in the future. However, actual consumption will continue to be difficult to track until industry-wide fuel coding problems, over which DOS has no control, are rectified. Furthermore, while new E85 stations are gradually being established in the Washington DC metropolitan area, only a few serve a large geographic area. Waivers were requested and approved for many of DOS's FFVs, which are not within five miles or a 15-minute drive of an E85 station (explained below).
- Biodiesel Use: Diesel vehicles make up only six percent of DOS's domestic fleet. DOS would like to use biodiesel in all of those vehicles, but only two B20 stations in the Washington DC area are convenient to any (a small number of) DOS vehicles. In FY 2008, DOS consumed 350 GGEs of B20.

DOS took a number of steps to increase AF use in FY 2008:

- DOS continued or established dialogue with various governmental agencies, commercial firms and other entities, to promote AF availability. Possible access to B20 and CNG was discussed with the Central Texas Clean Cities Coalition and the Washington Metropolitan Area Transit Authority, respectively. Contact with Burke Oil in Boston revealed that they would open an E85 pump in June 2008 in Chelsea, MA. The custodian of a DOS FFV only two miles from that pump was notified when the pump opened.
- Notified AFV custodians that DOS is required by EO 13423 to increase annual usage of AFs and by the EPAct (Section 701) to use AFs in AFVs when an AFV is garaged within five miles or 15 minutes of an AF station.
- E-mailed the Alternative Fuel Station Locator web site address to AFV custodians and informed them of the location of the closest AF stations.

### **EPAct 2005, Section 701 - Operating Dual-fuel AFVs on AF**

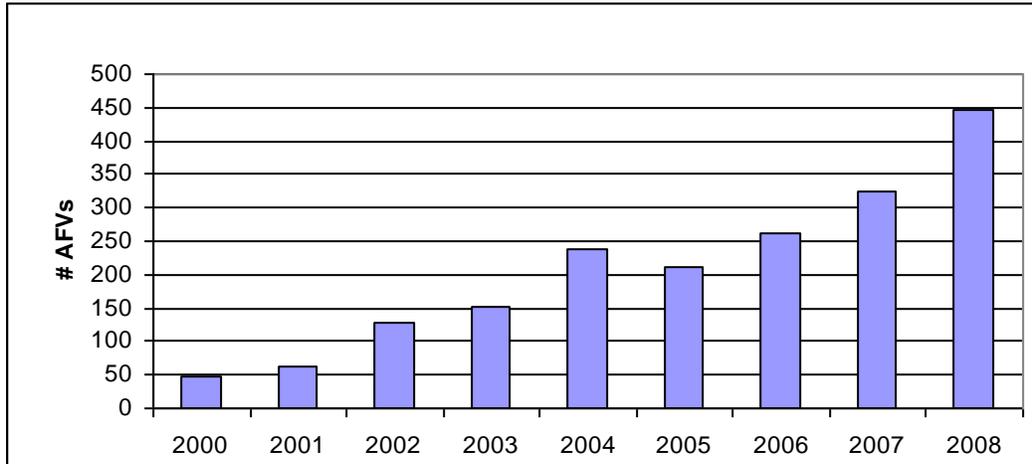
EPAct 2005, Section 701 requires that dual-fuel vehicles (e.g., vehicles that can run equally well on gasoline or an AF) use AF exclusively unless the AF is (1) not reasonably available (not within a 15-minute drive or within five miles from garaged location) or (2) unreasonably expensive (costs more per gallon than gasoline at the same station). Federal agencies can request a waiver (annually via FAST by June 30) for each dual-fuel AFV for which the distance and/or cost exceed these criteria.

In June 2007, DOS had requested waivers for 67 dual-fuel vehicles (for FY 2008), and in June 2008, DOS requested waivers for 61 vehicles (for FY 2009). All of the waivers for both years were approved by DOE.

In FY 2008, DOS had 102 non-waived dual-fuel AFVs in inventory; on average, these vehicles utilized the alternative fuels only about five percent of the time. While correct coding of commercial E85 purchases would likely increase this percentage, the extent of that increase is not known.

Driven by the EPAct requirement for 75 percent of the covered vehicles to be AFVs, DOS has set a policy to obtain as many AFVs as possible, and continues to increase the total number of AFVs every year as shown in Exhibit 4. But it will be necessary to have a more extensive and convenient AF refueling infrastructure to prevent many of these vehicles from needing waivers from the EPAct, Section 701 requirements.

#### Exhibit 4. DOS AFV Fleet by Fiscal Year



At the end of FY 2008, there were 447 AFVs in the DOS inventory, 23 of which were NGVs (13 CNG bi-fuel and 10 CNG dedicated) and the remaining 424 were E85 FFVs. DOS continues to evaluate options for 61 waived dual-fuel vehicles located where no AFs are reasonably available or planned. Options include turning in vehicles no longer needed, replacement with non-AFVs or HEVs, and no action when an AF station will soon be located within five miles of a vehicle's primary garage location.

#### Conclusion

DOS remains fully committed to compliance with EPCa and EO requirements. With its policy of exclusively acquiring AFVs for its non-exempt fleet, except where operational requirements make such acquisitions impractical, DOS expects to continue its record of meeting or exceeding the 75 percent EPCa percentage for the foreseeable future. This policy will likely increase the number of dual fuel vehicles for which a waiver must be obtained if there is no AF station within five miles or 15 minutes of their operating location. In turn, an increase can be expected in the number of non-waived vehicles whose drivers must be made aware of the need to take extra time and drive additional distance, if necessary, to get AF rather than to refuel with gasoline at the closest station.

A lack of adequate commercial AF infrastructure continues to hinder AF refueling, but DOS endeavors to keep its waiver requests to a minimum, to monitor the expansion of the AF infrastructure, and to strengthen its efforts to increase driver awareness to use AF whenever the distance/cost criteria are met.

## Appendix A Department of State AFV Report

Actual Department of State FY 2008 Vehicle Acquisitions					
<i>Actual FY 2008 Light-Duty Vehicle Acquisitions</i>					Total Vehicle Inventory
	Leased	Purchased	Total		
Total number of Light-Duty (8,500 GVWR) - Vehicle Acquisitions		193	3	196	1,022
Exemptions	Fleet Size	0	0	0	0
	Geographic	0	0	0	0
	Law Enforcement	137	3	140	739
	Non-MSA Operation (fleet)	0	0	0	0
	Non-MSA Operation (vehicles)	12	0	12	(n/a)
<b>EPACT Covered Acquisitions</b>		<b>44</b>	<b>0</b>	<b>44</b>	<b>283</b>
<i>Actual FY 2008 AFV Acquisitions</i>					Total Vehicle Inventory
Vehicle	Leased	Purchased	Total		
Sedan	E-85 Flex-Fuel Compact	2	0	2	6
Sedan	E-85 Flex-Fuel Midsize	58	0	58	107
Sedan	E-85 Flex-Fuel Large	47	0	47	47
Pickup 4x2	E-85 Flex-Fuel	1	0	1	8
Pickup 4x4	CNG Bi-Fuel	0	0	0	2
Pickup 4x4	E-85 Flex-Fuel	4	0	4	12
SUV 4x2	E-85 Flex-Fuel	3	0	3	34
SUV 4x4	E-85 Flex-Fuel	19	0	19	123
Minivan 4x2 (Passenger)	E-85 Flex-Fuel	21	0	21	79
Minivan 4x2 (Cargo)	E-85 Flex-Fuel	1	0	1	2
Van 4x2 (Passenger)	CNG Bi-Fuel	0	0	0	1
Van 4x2 (Passenger)	CNG Dedicated	0	0	0	1
Van 4x2 (Passenger)	E-85 Flex-Fuel	0	0	0	6
Bus	CNG Dedicated	0	0	0	6
Van MD (Passenger)	CNG Bi-Fuel	0	0	0	5
Van MD (Passenger)	CNG Dedicated	0	0	0	2
Van MD (Cargo)	CNG Bi-Fuel	0	0	0	5
Van MD (Cargo)	CNG Dedicated	0	0	0	1
<b>Total Number of AFV Acquisitions</b>		<b>156</b>	<b>0</b>	<b>156</b>	<b>447</b>
Zero Emission Vehicle Credits		0	0	0	
Dedicated Light-Duty AFV Credits		0	0	0	
Dedicated Medium-Duty AFV Credits		0	0	0	
Dedicated Heavy-Duty AFV Credits		0	0	0	
Biodiesel Fuel Usage Credits - Actual				0	
<b>Total AFV Acquisitions with Credits</b>		<b>156</b>	<b>0</b>	<b>156</b>	
<b>AFV Percentage of Covered Light-Duty Vehicle Acquisition</b>				<b>355 %</b>	

## Appendix A (continued)

Planned Department of State FY 2009 Vehicle Acquisitions				
<i>Planned FY 2009 Light-Duty Vehicle Acquisitions</i>				
		Leased	Purchased	Total
Total number of Light-Duty (8,500 GVWR) - Vehicle Acquisitions		264	0	264
Exemptions	Fleet Size	0	0	0
	Geographic	0	0	0
	Law Enforcement	240	0	240
	Non-MSA Operation (fleet)	0	0	0
	Non-MSA Operation (vehicles)	13	0	13
<b>EPACT Covered Acquisitions</b>		<b>11</b>	<b>0</b>	<b>11</b>
<i>Planned FY 2009 AFV Acquisitions</i>				
	Vehicle	Leased	Purchased	Total
Sedan	E-85 Flex-Fuel Compact	4	0	4
Sedan	E-85 Flex-Fuel Midsize	8	0	8
Pickup 4x2	E-85 Flex-Fuel	3	0	3
Pickup 4x4	E-85 Flex-Fuel	5	0	5
SUV 4x2	E-85 Flex-Fuel	3	0	3
SUV 4x4	E-85 Flex-Fuel	10	0	10
Minivan 4x2 (Passenger)	E-85 Flex-Fuel	6	0	6
Van MD (Passenger)	CNG Bi-Fuel	1	0	1
Van MD (Cargo)	CNG Bi-Fuel	1	0	1
Van MD (Cargo)	CNG Dedicated	1	0	1
<b>Total Number of AFV Acquisitions</b>		<b>42</b>	<b>0</b>	<b>42</b>
Zero Emission Vehicle Credits		0	0	0
Dedicated Light-Duty AFV Credits		0	0	0
Dedicated Medium-Duty AFV Credits		2	0	2
Dedicated Heavy-Duty AFV Credits		0	0	0
Biodiesel Fuel Usage Credits - Planned				0
<b>Total AFV Acquisitions with Credits</b>		<b>44</b>	<b>0</b>	<b>44</b>
<b>AFV Percentage of Covered Light-Duty Vehicle Acquisition</b>				<b>400 %</b>

## Appendix A (continued)

Projected Department of State FY 2010 Vehicle Acquisitions				
<i>Projected FY 2010 Light-Duty Vehicle Acquisitions</i>				
		Leased	Purchased	Total
Total number of Light-Duty (8,500 GVWR) - Vehicle Acquisitions		104	0	104
Exemptions	Fleet Size	0	0	0
	Geographic	0	0	0
	Law Enforcement	76	0	76
	Non-MSA Operation (fleet)	0	0	0
	Non-MSA Operation (vehicles)	13	0	13
<b>EPACT Covered Acquisitions</b>		<b>15</b>	<b>0</b>	<b>15</b>
<i>Projected FY 2010 AFV Acquisitions</i>				
	Vehicle	Leased	Purchased	Total
Sedan	E-85 Flex-Fuel Compact	1	0	1
Sedan	E-85 Flex-Fuel Midsize	10	0	10
Pickup 4x2	E-85 Flex-Fuel	10	0	10
Pickup 4x4	E-85 Flex-Fuel	3	0	3
SUV 4x2	E-85 Flex-Fuel	2	0	2
SUV 4x4	E-85 Flex-Fuel	13	0	13
Minivan 4x2 (Passenger)	E-85 Flex-Fuel	6	0	6
Minivan 4x2 (Cargo)	E-85 Flex-Fuel	1	0	1
Van MD (Passenger)	CNG Bi-Fuel	1	0	1
<b>Total Number of AFV Acquisitions</b>		<b>47</b>	<b>0</b>	<b>47</b>
Zero Emission Vehicle Credits		0	0	0
Dedicated Light-Duty AFV Credits		0	0	0
Dedicated Medium-Duty AFV Credits		0	0	0
Dedicated Heavy-Duty AFV Credits		0	0	0
Biodiesel Fuel Usage Credits - Projected				0
<b>Total AFV Acquisitions with Credits</b>		<b>47</b>	<b>0</b>	<b>47</b>
<b>AFV Percentage of Covered Light-Duty Vehicle Acquisition</b>				<b>313 %</b>

**Appendix B**  
**Department of State**  
**FY2008 EO 13423 Petroleum Consumption Report**

Covered Petroleum Consumption in GGE											
Baseline											
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Gasoline	237,260	210,103	166,829								
Diesel	39,640	35,895	41,505								
B20	414	35	350								
<b>Total</b>	<b>278,985</b>	<b>277,314</b>	<b>246,033</b>	<b>208,684</b>							
<b>Target</b>	273,405	267,825	262,245	256,666	251,086	245,506	239,927	234,347	228,767	223,188	
<b>Compliant</b>		<b>No</b>	<b>Yes</b>	<b>Yes</b>							

\* B20 is the diesel component from covered biodiesel consumption.

Alternative Fuel Consumption in GGE											
Baseline											
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
CNG	18,265	8,999	9,859								
LNG	0	0	0								
LPG	0	0	0								
E-85	4,523	3,454	3,245								
Electric	0	0	0								
M-85	0	0	0								
B100	104	9	88								
Hydrogen	0	0	0								
<b>Total</b>	<b>28,480</b>	<b>22,892</b>	<b>12,462</b>	<b>13,192</b>							
<b>Target</b>	31,328	34,460	37,906	41,697	45,867	50,454	55,499	61,049	67,154	73,869	
<b>Compliant</b>		<b>No</b>	<b>No</b>	<b>No</b>							

\*B100 is calculated at 20% of the reported B20 and 100% of the reported B100 fuel used in the Section III Actual Fuel Cost/Consumption by Fuel Type data input screen.

**Appendix C**  
**Department of State**  
**Glossary**

AF - Alternative Fuel; a fuel defined as alternative by the EPAct of 1992.

AFV - Alternative Fuel Vehicle; a vehicle that can run on an alternative fuel.

ART – Arlington Transit; the mass transit program of Arlington County, VA.

B20 – fuel blend of 20 percent biodiesel and 80 percent petrodiesel.

Biodiesel – a renewable alternative fuel made primarily from soybeans in the US.

CNG – Compressed Natural Gas; a domestically produced alternative fuel.

CNG Bi-Fuel Vehicle – a NGV with two separate fueling systems that enable the vehicle to use either CNG or a conventional fuel (gasoline or diesel).

CNG Dedicated Vehicle – a NGV that uses only CNG fuel.

Diesel – Petroleum diesel

Dual Fuel Vehicle – designed to operate on a combination of an alternative fuel and a conventional fuel (includes CNG bi-fuel and E85 flex-fuel vehicles).

DOS – Deartment of State

DE – Dedicated; a vehicle that uses only one type of fuel, such as a CNG DE bus.

DS – Bureau of Diplomatic Security

E85 – fuel blend of 85 percent ethanol and 15 percent gasoline.

ECRA – Energy Conservation Reauthorization Act

EO – Executive Orders

EO 13423 – Strengthening Federal Environmental, Energy, and Transportation Management

Ethanol – an alcohol-based alternative fuel made primarily from corn in the US.

FAST – Federal Automotive Statistical Tool; an online data reporting system for Federal fleet management personnel.

FFV – Flexible Fuel Vehicle; a vehicle that can run equally well on any blend of gasoline and ethanol up to 85% ethanol (E85).

FMO – Fleet Management & Operations Division, Office of General Services Management, Deputy Assistant Secretary for Operations, Bureau of Administration, DOS

FY – Fiscal Year

GGE – Gasoline Gallon Equivalent: a concept used to describe the difference in energy content of various fuels, using gasoline as the baseline.

GSA – General Services Administration

GVWR – Gross Vehicle Weight Rating

HD – Heavy Duty, a vehicle weighing > 16,000 lbs GVWR.

IBWC – International Boundary and Water Commission

LD – Light Duty; a vehicle that weighs less than 8,500 lbs. GVWR.

LE – Law Enforcement

MD – Medium Duty, a vehicle weighing between 8,500 lbs. and 16,000 lbs. GVWR

MSA – Metropolitan Statistical Area

NGV – Natural Gas Vehicle

NEX – Navy Exchange

Petrodiesel – diesel from petroleum.

SUV – Sport Utility Vehicle