

DEFENSE AGENCIES

Fleet Alternative Fuel Vehicle Acquisition Report

Compliance with EAct and E.O. 13149 in Fiscal Year 2006

This report summarizes the Department of Defense (DoD), Defense Agencies, DoD Field Activities and Joint Staff (hereafter referred to collectively as “Defense Agencies”) fiscal year (FY) 2006 fleet performance. This report meets the requirements of the Energy Policy Act (EAct) of 1992 (Public Law 102-486), as amended by the Energy Conservation Reauthorization Act of 1998 (Public Law 105-388), and in meeting the goals set by Executive Order (E.O.) 13149, “Greening the Government through Federal Fleet and Transportation Efficiency” (Exhibit 1). Section 705 of the EAct of 2005 (Public Law 109-58), amended the due date of this report to February 15th.

Exhibit 1. DEFENSE AGENCIES Performance in Meeting EAct and E.O. 13149 Requirements, FY 2006

Authority/Mandate	Performance Measure	Goal/Requirement	Defense Agencies Performance in FY 2006
EAct	Alternative fuel vehicle (AFV) acquisitions	75 percent of the 336 covered light-duty vehicles (LDV) acquired in FY 2005 must be AFVs	Acquired 279 AFVs for total of 279 credits; or 83 percent of covered acquisitions
E.O. 13149	Alternative fuel use in AFVs	By FY 2006, increase alternative fuel use in AFVs to a majority of the total fuel used in those vehicles	Achieved 8 percent alternative fuel use in AFVs
	Fuel economy of light-duty acquisitions	By FY 2006, increase fuel economy by 3 miles per gallon (mpg) compared to FY 1999 baseline of 17 mpg	Increased to 23.5 mpg, an increase of 5.8 mpg over the FY 1999 baseline
	Petroleum consumption	By FY 2006, reduce covered consumption by 20 percent compared to FY 1999 baseline ¹ of 7,542,469 gasoline gallon equivalent (GGE)	Consumed 1,151,289 GGE, a decrease of 53.3 percent from the FY 1999 baseline

¹Baseline adjusted in FY 2006 to account for unreported fuel used in vehicles leased from the General Services Administration.

EPAct Compliance

For the 8th consecutive year, Defense Agencies exceeded its EPAct requirements. As a result of its AFV acquisitions Defense Agencies in FY 2006 earned AFV acquisition credits amounting to 83 percent of its covered vehicle acquisitions, which is 8 percentage points higher than the 75 percent AFV acquisition requirement (Appendix A). In short, Defense Agencies:

- Acquired 336 EPAct-covered LDVs. Of these, 279 were AFVs—27 more vehicles than the 75 percent compliance requirement of 252 AFVs.

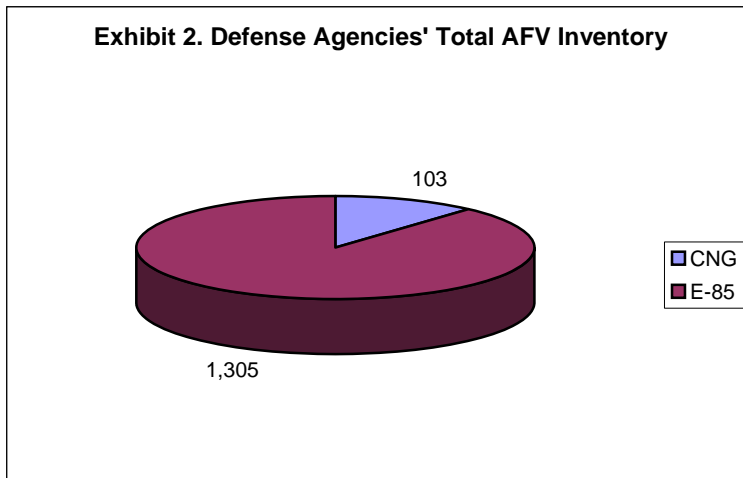
Credits

In FY 2006, Defense Agencies earned 279 credits. Federal fleets earn one credit for every bi- or flexible-fuel AFV acquired and for every 450 gallons of neat biodiesel (B100) or 2,250 gallons of B20 (20 percent biodiesel and 80 percent petroleum diesel) used. Additional credits are earned for AFVs that operate exclusively on alternative fuels. For this reporting period, Defense Agencies earned 279 credits for AFV acquisitions only.

Vehicles

Flexible-fuel vehicles (FFVs), that can run on E85 (85 percent ethanol, 15 percent gasoline) or gasoline, were the AFV of choice in FY 2006. Of the 249 AFVs acquired in FY 2006, 117 of them were FFVs. Also, 2 compressed natural gas (CNG) vehicles were acquired.

FFVs capable of operating on E85 comprise the majority of Defense Agencies' AFV fleet (Exhibit 2), with CNG vehicles making up most of the balance. As the availability of CNG vehicle models decreases, these vehicle types will become less prevalent in Defense Agencies' fleet. Of Defense Agencies' 1,411 AFVs, 3 are liquefied petroleum gas (LPG) vehicles and one is an electric vehicle.



Exemptions

Of the 537 total LDVs acquired by Defense Agencies in FY 2006, 336 vehicles (53 percent) were considered exempt from compliance with EPAct. Exemptions are granted for fleet size, geographic location or use outside a Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area (MSA/CMSA), and use for law enforcement. In FY 2006, total exemptions were as follows:

- Fleet Size (5)
- Geographic (283)
- Law Enforcement (160)
- Non-MSA/CMSA Operation/Fleet (0)

FY 2007/2008 Projected Acquisitions

The attachments to this report offer a detailed look at Defense Agencies' FY 2006 acquisitions and its projected acquisitions for FY 2007 and FY 2008. Defense Agencies have exceeded its annual EPAct acquisitions requirements and plans to continue to exceed these requirements in the next two years (Appendices B and C).

E.O. 13149 Compliance

E.O. 13149 calls for each agency to reduce vehicular petroleum consumption by 20 percent by the end of FY 2006 and specifies three approaches agencies should take to achieve this goal:

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

Use Alternative Fuels in AFVs

In FY 2006, 8 percent of the fuel used in Defense Agencies AFVs was alternative fuels. As more infrastructure becomes available, this percentage will increase. At Defense Agencies' permitted sites, Defense Agencies plan, if economic analysis warrants, to invest in building new alternative fuel stations. As these stations come on line, more alternative fuel will be available for the bi- and flexible-fuel vehicles that dominate the Defense Agencies' AFV fleet. Defense Agencies will continue to work toward greater access to alternative fuel for fleet vehicles.

Exhibit 3 compares Defense Agencies fuel use in FY 2006 and FY 1999. Alternative fuels use has increased from FY 01 (the first year alternative fuel data was available). As mentioned before, we expect this figure to increase as more commercial fueling infrastructure becomes available. Credits available to commercial vendors under EPA 2006 should speed construction alternative fuel infrastructure.

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Exhibit 3 Defense Agencies' Total Covered Fuel Use

Improve Fuel Economy

Toward the petroleum reduction goal set forth in E.O. 13149, the E.O. calls for each agency to increase the fuel economy of its LDV acquisitions (excluding AFVs). Each year since FY 1999, Defense Agencies has increased the average fuel economy of its vehicles and achieved a 5.5 mpg improvement in FY 2006. It has been a long standing policy of Defense Agencies to acquire the smallest, most fuel efficient vehicles that meet our mission requirements.

Fuel Use	FY 1999 (GGE) see note	FY 2006 (GGE)
Alternative Fuel		
B100	NA	0
CNG	574	507
E85	14,256	57,357
Electricity	NA	0
LNG	NA	0
LPG	703	0
Total Alternative Fuel Use	NA	57,864
Petroleum		
Diesel	304,722	197,180
Gasoline	2,158,055	954,109
Total Covered Petroleum Use	2,462,777	1,151,289
<i>Total Covered Fuel Use</i>	<i>2,462,777</i>	<i>1,900,263</i>
<i>Alternative Fuel Use as a Percentage of Total Fuel Use</i>	NA	5
Note: No alt fuel data available from FY99. CNG, LPG and E85 data from FY 01.		

Petroleum Consumption Progress Report

In FY 2006, Defense Agencies consumed 57,962 GGE of alternative fuels, thereby reducing gasoline and diesel fuel consumption in 2,405 vehicles. Because of the Defense Agencies support for the ongoing war in Afghanistan and Iraq and the lack of commercial alternative fuel infrastructure, petroleum consumption has not been reduced by the targeted 20 percent goal.

Defense Agencies Fleet Success

In FY 2006 Defense Agencies acquired 279 AFVs for a 83 percent AFV acquisition rate, that is 8 percent higher than the 75 percent AFV acquisition requirement under EPAct.

Summary and Conclusions

In FY 2006, Defense Agencies exceeded its AFV acquisition requirements and expects to exceed them in FY 2007 and FY 2008. Toward compliance with E.O. 13149, Defense Agencies achieved a 5.5 mpg increase in fuel economy. Defense Agencies will continue its efforts to reduce petroleum consumption through increased alternative fuel usage, accelerated replacement of conventional vehicles with AFVs, and acquisition of hybrid and fuel efficient vehicles for fleets not covered by these requirements. Due to a major reorganization in FY2005, Defense Security Services transferred 1,592 vehicles to OMB. The results of this transfer greatly reduced the GGE consumption for the entire Defense Agencies Exhibit. The reorganization of Defense Security Services will affect the relationship between the 1999 baseline in future reporting. Exhibit 4 summarizes Defense Agencies FY 2006 performance.

Exhibit 4. Defense Agencies Performance in Meeting its Requirements

	FY 1999 Baseline	FY 2006	Change FY 1999 vs. FY 2006
EPAct Note: Baseline data not available.	-----	305	-----
Alternative Fuel Use in AFVs (GGE) Note: No alt fuel data available from FY99. Data from FY 01	14,830 (see note)	47,501	
Fuel Economy of LDV Acquisitions	18	23.46	5.5
Petroleum Consumption	2,462,777 GGE	1,151,289 GGE	53 percent

Appendix

Appendix A

Actual Defense Agencies FY 2006 Vehicle Acquisitions					
Actual FY 2006 Light-Duty Vehicle Acquisitions					Total Vehicle Inventory
	Leased	Purchased	Total		
Total number of Light-Duty (8,500 GVWR) - Vehicle Acquisitions		529	8	537	2,853
Exemptions	Fleet Size	8	0	8	5
	Geographic	130	0	130	283
	Law Enforcement	40	0	40	160
	Non-MSA Operation (fleet)	0	0	0	0
	Non-MSA Operation (vehicles)	23	0	23	(n/a)
EPACT Covered Acquisitions		328	8	336	2,405
Actual FY 2006 AFV Acquisitions					
Vehicle		Leased	Purchased	Total	Total Vehicle Inventory
Sedan	CNG Bi-Fuel Subcompact	0	0	0	13
Sedan	E-85 Flex-Fuel Compact	111	0	111	557
Sedan	E-85 Flex-Fuel Midsize	48	0	48	180
Pickup 4x2	CNG Bi-Fuel	0	0	0	43
Pickup 4x2	E-85 Flex-Fuel	43	0	43	105
Pickup 4x2	LPG Bi-Fuel	0	0	0	3
Pickup 4x4	CNG Bi-Fuel	0	0	0	6
Pickup 4x4	E-85 Flex-Fuel	6	0	6	16
SUV 4x2	E-85 Flex-Fuel	7	1	8	20
SUV 4x4	E-85 Flex-Fuel	8	0	8	57
Minivan 4x2 (Passenger)	E-85 Flex-Fuel	45	6	51	366
Minivan 4x2 (Cargo)	E-85 Flex-Fuel	1	0	1	10
Van 4x2 (Passenger)	E-85 Flex-Fuel	0	0	0	3
Van 4x2 (Cargo)	CNG Bi-Fuel	0	0	0	3
Van 4x2 (Cargo)	CNG Dedicated	0	0	0	1
Van 4x2 (Cargo)	E-85 Flex-Fuel	1	0	1	0
Pickup MD	CNG Bi-Fuel	0	0	0	9
Van MD (Passenger)	CNG Bi-Fuel	0	0	0	11
Van MD (Cargo)	CNG Bi-Fuel	0	0	0	7
Van MD (Cargo)	CNG Dedicated	0	0	0	1
MD 8,501-16,000 GVWR	CNG Bi-Fuel	1	0	1	0
HD 16,001 + GVWR	CNG Bi-Fuel	1	0	1	0
Total Number of AFV Acquisitions		272	7	279	1,411
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	
Total AFV Acquisitions with Credits		272	7	279	
AFV Percentage of Covered Light-Duty Vehicle Acquisition					83%

Appendix B

Planned Defense Agencies FY 2007 Vehicle Acquisitions				
Planned FY 2007 Light-Duty Vehicle Acquisitions				
		Leased	Purchased	Total
Total number of Light-Duty (8,500 GVWR) - Vehicle Acquisitions		553	2	555
	Fleet Size	0	0	0
	Geographic	57	0	57
	Law Enforcement	70	0	70
	Non-MSA Operation (fleet)	0	0	0
	Exemptions Non-MSA Operation (vehicles)	63	0	63
EPACT Covered Acquisitions		363	2	365
Planned FY 2007 AFV Acquisitions				
Vehicle		Leased	Purchased	Total
Sedan	CNG Bi-Fuel Subcompact	10	0	10
Sedan	E-85 Flex-Fuel Compact	111	0	111
Sedan	E-85 Flex-Fuel Midsize	43	0	43
Pickup 4x2	CNG Bi-Fuel	12	0	12
Pickup 4x2	E-85 Flex-Fuel	13	0	13
Pickup 4x2	LPG Bi-Fuel	2	0	2
Pickup 4x4	E-85 Flex-Fuel	2	0	2
SUV 4x2	E-85 Flex-Fuel	3	0	3
SUV 4x4	E-85 Flex-Fuel	5	1	6
Minivan 4x2 (Passenger)	E-85 Flex-Fuel	27	1	28
Van MD (Passenger)	CNG Bi-Fuel	3	0	3
Total Number of AFV Acquisitions		231	2	233
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 - Planned				0
Total AFV Acquisitions with Credits		231	2	233
AFV Percentage of Covered Light-Duty Vehicle Acquisition				64%

Appendix C

Projected Defense Agencies FY 2008 Vehicle Acquisitions				
Projected FY 2008 Light-Duty Vehicle Acquisitions				
		Leased	Purchased	Total
Total number of Light-Duty (8,500 GVWR) - Vehicle Acquisitions		564	12	576
	Fleet Size	0	1	1
	Geographic	57	0	57
	Law Enforcement	36	0	36
	Non-MSA Operation (fleet)	0	0	0
	Non-MSA Operation (vehicles)	80	0	80
Exemptions		80	0	80
EPACT Covered Acquisitions		391	11	402
Projected FY 2008 AFV Acquisitions				
Vehicle		Leased	Purchased	Total
Sedan	E-85 Flex-Fuel Compact	178	0	178
Sedan	E-85 Flex-Fuel Midsize	27	0	27
Pickup 4x2	CNG Bi-Fuel	9	0	9
Pickup 4x2	E-85 Flex-Fuel	7	2	9
Pickup 4x2	LPG Bi-Fuel	1	0	1
Pickup 4x4	E-85 Flex-Fuel	2	0	2
SUV 4x2	E-85 Flex-Fuel	1	0	1
SUV 4x4	E-85 Flex-Fuel	9	0	9
Minivan 4x2 (Passenger)	E-85 Flex-Fuel	55	9	64
Van 4x2 (Cargo)	CNG Bi-Fuel	3	0	3
Van 4x2 (Cargo)	CNG Dedicated	1	0	1
Van MD (Passenger)	CNG Bi-Fuel	3	0	3
Van MD (Cargo)	CNG Bi-Fuel	1	0	1
Total Number of AFV Acquisitions		297	11	308
Zero Emission Vehicle Credits		0	0	0
Dedicated Light-Duty AFV Credits		1	0	1
Dedicated Medium-Duty AFV Credits		0	0	0
Dedicated Heavy-Duty AFV Credits		0	0	0
Biodiesel Fuel Usage Credits - Projected				0
Total AFV Acquisitions with Credits		298	11	309
AFV Percentage of Covered Light-Duty Vehicle Acquisition				77%

Appendix D

EO 13149 Covered Petroleum Consumption in GGE

	FY 1999 Baseline	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006
Gasoline	2,158,055	737,551	707,068	728,845	753,925	1,522,255	1,722,438	954,109
Diesel	304,722	29,348	28,973	17,895	16,281	214,475	177,825	197,180
Diesel component from biodiesel		0	0	0	0	0	0	0
TOTAL	2,462,777	766,899	736,041	746,740	770,206	1,736,730	1,900,263	1,151,289
Reduction*	N/A	68.9 %	70.1 %	69.7 %	68.7 %	29.5 %	22.8 %	53.3 %

* Reduction is the % reduction compared to the FY 1999 Baseline Total

Alternative Fuel Consumption (in GGE)

	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006
CNG	1,045	574	837	2,490	924	14,565	507
LNG	0	0	0	0	0	0	0
LPG	0	703	721	0	46	0	98
E-85	0	14,336	14,256	229	32,173	32,936	57,357
Electric	0	0	0	0	0	0	0
M-85	0	0	0	0	0	0	0
Biodiesel (B100)*	0	0	0	0	0	0	0
Hydrogen	0	0	0	0	0	0	0
TOTAL	1,045	15,613	15,814	2,719	33,143	47,501	57,962
Estimated Total Fuel Used in AFVs	*	24,000	26,000	30,300	1,531,744	542,227	723,361
% of Alt Fuel Use in AFVs w/o biodiesel¹		65.1 %	60.8 %	9.0 %	2.2 %	8.8 %	8%

*Biodiesel 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. Biodiesel is **not** included in the calculation of total fuels used in AFVs because biodiesel itself is not burned in *Alternatively Fueled Vehicles*.

Average Fuel Economy of non-AFV Light Duty Vehicle Acquisitions (in mpg)

	FY 1999 Baseline	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006
Fuel Economy	18	0	22	23	26	19.3	23.8	0
Change Compared to Baseline		*	4	5	8	1.3	5.8	5.5

Appendix E

List of Acronyms

Acronym	Phrase
AFV	Alternative Fuel Vehicle
B100	Biodiesel (100 percent, neat)
B20	Biodiesel (20 percent biodiesel, 80 percent petroleum diesel)
CNG	Compressed Natural Gas
XXX	U.S. Department of Energy
E85	Ethanol (85 percent ethanol, 15 percent petroleum)
E.O.	Executive Order
EPAct	Energy Policy Act
FFV	Flexible Fuel Vehicle
FR	Federal Register
FY	Fiscal Year
GGE	Gasoline Gallon Equivalent
GVWR	Gross Vehicle Weight Rating
HD	Heavy-Duty
INL	Idaho National Laboratory
LD	Light-Duty
LDV	Light-Duty Vehicle
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas (Propane)
MD	Medium-Duty
MPG	Miles Per Gallon
MSA/CMSA	Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area
SUV	Sport Utility Vehicle