

DEFENSE AGENCIES

Fleet Alternative Fuel Vehicle Acquisition Report

Compliance with EAct and E.O. 13423 in Fiscal Year 2008

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) 2008 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.) 13423, “Greening the Government through Federal Fleet and Transportation Efficiency” (Exhibit 1). Section 705 of the EAct of 2007 (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. 13423 Requirements, FY 2008

Authority/ Mandate	Performance Measure	Goal/Requirement	Defense Agencies Performance in FY 2008
EAct	Alternative fuel vehicle (AFV) acquisitions	75 percent of the 466 covered light-duty vehicles (LDV) acquired in FY 2009 must be AFVs	Acquired 351 AFVs for total of 378 credits; or 233 percent of covered acquisitions
E.O. 13423	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 2.78 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	20 GGE per vehicle. A 4 percent increase from last year.
	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 1,220,728 GGE

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

EPAct Compliance

For the 9th consecutive year, Defense Agencies exceeded its EPAct requirements. As a result of its AFV acquisitions Defense Agencies in FY 2008 earned AFV acquisition credits amounting to 233 percent of its covered vehicle acquisitions, which is 165 percentage points higher than the 75 percent AFV acquisition requirement (Appendix A). In short, Defense Agencies:

- Acquired 162 EPAct-covered LDVs. A total of, 351 were AFVs were purchased for the Defense Agencies—256 more vehicles than the 75 percent compliance requirement of 95 AFVs.

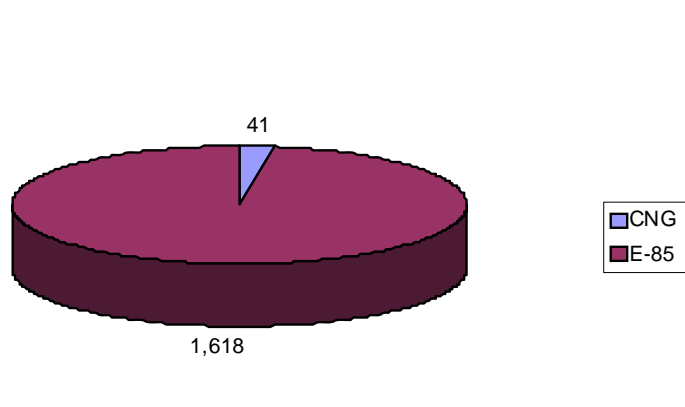
Credits

In FY 2008, Defense Agencies earned 378 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 21 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 2008. Of the 284 AFVs acquired in FY 2008, 351 of them were FFVs.

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' 1,618 AFVs.



Exemptions

Of the 351 total LDVs acquired by Defense Agencies in FY 2008, 296 vehicles (84 percent) were considered exempt from compliance with EPCa. 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 2008 total exemptions were as follows:

- Fleet Size (0)
- Geographic (0)
- Law Enforcement (8)
- Non-MSA/CMSA Operation/Fleet (0)
- 701 Waiver (296)

FY 2009/2010 Projected Acquisitions

The attachments to this report offer a detailed look at Defense Agencies' FY 2008 acquisitions and its projected acquisitions for FY 2009 and FY 2010. Defense Agencies have exceeded its annual EPCa acquisitions requirements and plans to continue to exceed these requirements in the next two years (Appendices B and C).

E.O. 13423 Compliance

E.O. 13423 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 EPCa'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 2008, as compared to baseline FY 1999 acquisitions.

Use Alternative Fuels in AFVs

In FY 2008, 2.78 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 2008 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 EPC Act 2007 should speed construction alternative fuel infrastructure.

Exhibit 3 Defense Agencies' Total Covered Fuel Use

Improve Fuel Economy

Toward the petroleum reduction goal set forth in E.O. 13423, 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 2008. 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) <small>see note</small>	FY 2008 (GGE)
Alternative Fuel		
B100	NA	12,384
CNG	574	899
E85	14,256	20,673
Electricity	NA	0
LNG	NA	0
LPG	703	0
Total Alternative Fuel Use	15,533	33,956
Petroleum		
Diesel	304,722	282,975
Gasoline	2,158,055	903,797
Total Covered Petroleum Use	2,462,777	1,186,772
<i>Total Covered Fuel Use</i>	<i>2,462,777</i>	<i>1,220,728</i>
<i>Alternative Fuel Use as a Percentage of Total Fuel Use</i>	<i>NA</i>	<i>2.78</i>
Note: No alt fuel data available from FY99. CNG, LPG and E85 data from FY 01.		

Petroleum Consumption Progress Report

In FY 2008, Defense Agencies consumed 33,956 GGE of alternative fuels, thereby reducing gasoline and diesel fuel consumption in 1,669 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 2008 Defense Agencies acquired 351 AFVs for a 84 percent AFV acquisition rate, that is 14 percent higher than the 75 percent AFV acquisition requirement under EPC Act. The Defense

Agencies receive most of their vehicles from GSA fleet and can only acquire what is offered by GSA.

Summary and Conclusions

In FY 2008, Defense Agencies did meet its AFV acquisition requirements and expects to meet or exceed them in FY 2009 and FY 2010. Toward compliance with E.O. 13423, 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. 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 2008 performance.

Exhibit 4. Defense Agencies Performance in Meeting its Requirements

	FY 1999 Baseline	FY 2008	Change FY 1999 vs. FY 2008
EPAct Note: Baseline data not available.	-----		-----
Alternative Fuel Use in AFVs (GGE) Note: No alt fuel data available from FY99. Data from FY 01	14,830 (see note)	33,956	
Fuel Economy of LDV Acquisitions	18		5.5
Petroleum Consumption	2,462,777 GGE	1,220,728 GGE	50 percent

Appendix

Appendix A

Actual Defense Agencies FY 2008 Vehicle Acquisitions					
Actual FY 2008 Light-Duty Vehicle Acquisitions					Total Vehicle Inventory
	Leased	Purchased	Total		
Total number of Light-Duty (8,500 GVWR) - Vehicle Acquisitions		457	9	466	2,936
Exemptions	Fleet Size	0	0	0	0
	Geographic	0	0	0	0
	Law Enforcement	8	0	8	307
	Non-MSA Operation (fleet)	0	0	0	0
	Non-MSA Operation (vehicles)	296	0	296	(n/a)
EPACT Covered Acquisitions		153	9	162	2,629
Actual FY 2008 AFV Acquisitions					Total Vehicle Inventory
Vehicle	Leased	Purchased	Total		
Sedan	CNG Bi-Fuel Subcompact	0	0	0	1
Sedan	E-85 Flex-Fuel Compact	51	0	51	304
Sedan	E-85 Flex-Fuel Midsize	165	5	170	446
Pickup 4x2	CNG Bi-Fuel	0	0	0	24
Pickup 4x2	E-85 Flex-Fuel	22	0	22	116
Pickup 4x4	CNG Bi-Fuel	0	0	0	6
Pickup 4x4	E-85 Flex-Fuel	9	0	9	52
SUV 4x2	E-85 Flex-Fuel	8	0	8	32
SUV 4x4	E-85 Flex-Fuel	29	4	33	182
Minivan 4x2 (Passenger)	CNG Dedicated	3	0	3	3
Minivan 4x2 (Passenger)	E-85 Flex-Fuel	44	0	44	445
Minivan 4x4 (Passenger)	E-85 Flex-Fuel	0	0	0	1
Minivan 4x2 (Cargo)	E-85 Flex-Fuel	4	0	4	19
Van 4x2 (Passenger)	E-85 Flex-Fuel	6	0	6	13
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	0	0	0	1
Pickup MD	CNG Bi-Fuel	0	0	0	2
Van MD (Passenger)	CNG Bi-Fuel	0	0	0	4
Van MD (Passenger)	E-85 Flex-Fuel	1	0	1	7
Van MD (Cargo)	CNG Bi-Fuel	0	0	0	7
Total Number of AFV Acquisitions		342	9	351	1,669
Zero Emission Vehicle Credits		0	0	0	
Dedicated Light-Duty AFV Credits		3	0	3	
Dedicated Medium-Duty AFV Credits		0	0	0	
Dedicated Heavy-Duty AFV Credits		0	0	0	
Biodiesel Fuel Usage Credits - Actual				24	
Total AFV Acquisitions with Credits		345	9	378	
AFV Percentage of Covered Light-Duty Vehicle Acquisition					233%

Appendix B

Planned Defense Agencies FY 2009 Vehicle Acquisitions				
Planned FY 2009 Light-Duty Vehicle Acquisitions				
	Leased	Purchased	Total	
Total number of Light-Duty (8,500 GVWR) - Vehicle Acquisitions	331	10	341	
Exemptions	Fleet Size	0	0	
	Geographic	0	0	
	Law Enforcement	23	0	
	Non-MSA Operation (fleet)	0	0	
	Non-MSA Operation (vehicles)	232	0	
EPACT Covered Acquisitions	76	10	86	
Planned FY 2009 AFV Acquisitions				
Vehicle	Leased	Purchased	Total	
Sedan	CNG Bi-Fuel Subcompact	1	0	1
Sedan	E-85 Flex-Fuel Compact	76	0	76
Sedan	E-85 Flex-Fuel Midsize	45	5	50
Pickup 4x2	CNG Bi-Fuel	3	0	3
Pickup 4x2	E-85 Flex-Fuel	6	0	6
Pickup 4x2	LPG Bi-Fuel	1	0	1
Pickup 4x4	E-85 Flex-Fuel	1	0	1
SUV 4x2	E-85 Flex-Fuel	2	0	2
SUV 4x4	E-85 Flex-Fuel	10	5	15
Minivan 4x2 (Passenger)	E-85 Flex-Fuel	48	0	48
Van 4x2 (Cargo)	CNG Bi-Fuel	3	0	3
Van 4x2 (Cargo)	CNG Dedicated	1	0	1
Pickup MD	CNG Bi-Fuel	1	0	1
SUV MD	E-85 Flex-Fuel	1	0	1
Van MD (Passenger)	CNG Bi-Fuel	1	0	1
Total Number of AFV Acquisitions	200	10	210	
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 - Planned			20	
Total AFV Acquisitions with Credits	201	10	231	
AFV Percentage of Covered Light-Duty Vehicle Acquisition			269%	

Appendix C

Projected Defense Agencies FY 2010 Vehicle Acquisitions				
Projected FY 2010 Light-Duty Vehicle Acquisitions				
		Leased	Purchased	Total
Total number of Light-Duty (8,500 GVWR) - Vehicle Acquisitions		350	10	360
Exemptions	Fleet Size	0	0	0
	Geographic	0	0	0
	Law Enforcement	6	0	6
	Non-MSA Operation (fleet)	0	0	0
	Non-MSA Operation (vehicles)	272	0	272
EPACT Covered Acquisitions		72	10	82
Projected FY 2010 AFV Acquisitions				
Vehicle		Leased	Purchased	Total
Sedan	E-85 Flex-Fuel Compact	78	3	81
Sedan	E-85 Flex-Fuel Midsize	87	0	87
Pickup 4x2	CNG Bi-Fuel	2	0	2
Pickup 4x2	E-85 Flex-Fuel	12	0	12
Pickup 4x4	CNG Bi-Fuel	1	0	1
Pickup 4x4	E-85 Flex-Fuel	3	0	3
SUV 4x2	E-85 Flex-Fuel	6	0	6
SUV 4x4	E-85 Flex-Fuel	15	5	20
Minivan 4x2 (Passenger)	E-85 Flex-Fuel	28	0	28
Minivan 4x2 (Cargo)	E-85 Flex-Fuel	2	0	2
Van 4x2 (Passenger)	E-85 Flex-Fuel	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		239	8	247
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				21
Total AFV Acquisitions with Credits		239	8	268
AFV Percentage of Covered Light-Duty Vehicle Acquisition				327%

Appendix D

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
Gasoline		954,109	1,135,279	903,797						
Diesel		197,180	282,495	238,394						
B20		0	37,737	44,581						
Total	1,900,263	1,151,289	1,455,511	1,186,772						
Target		1,862,257	1,824,252	1,786,247	1,748,241	1,710,236	1,672,231	1,634,226	1,596,220	1,558,215
Compliant		Yes	Yes	Yes						

* 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
CNG		507	394	899						
LNG		0	0	0						
LPG		98	0	0						
E-85		57,357	18,124	20,673						
Electric		0	0	0						
M-85		0	0	0						
B100		0	9,434	12,384						
Hydrogen		0	0	0						
Total	47,501	57,962	27,952	33,956						
Target		52,251	57,476	63,223	69,546	76,500	84,150	92,566	101,822	112,004
Compliant		Yes	No	No						

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