

# **U.S. Department of Housing and Urban Development Fleet Alternative Fuel Vehicle Acquisition Report**

Compliance with EPO and E.O. 13423 in Fiscal Year 2007

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## **Introduction**

This report summarizes the Department of Housing and Urban Development (HUD) Fiscal Year (FY) 2007 performance requirements of Executive Order (E.O.) 13423, "Strengthening Federal Environmental, Energy, and Transportation Management" (January 2007), which revokes E.O. 13149, "Greening the Government through Federal and Transportation Efficiency" (April 2000) and the Energy Policy Act of 1992 (EPO; 42 U.S.C. 13211-13219), as amended by the Energy Conservation Reauthorization Act of 1998 (ECRA Public Law 105-388) and the EPO of 2005 (Public Law 109-58).

## **Legislative and Executive Order Requirements**

Section 303 of the EPO (42 U.S.C. 13212) requires that 75 percent of all covered light-duty vehicles (LDVs) acquired by federal fleets in FY 1999, and each year thereafter, must be Alternative Fuel Vehicles (AFVs). The EPO requirements apply to agency fleets of 20 or more LDVs (vehicles less than or equal to 8,500 pounds gross vehicle weight rating) that are "centrally fueled or capable of being centrally fueled," and are primarily operated in Metropolitan Statistical Areas (MSAs) or Consolidated Metropolitan Statistical Areas (CMSAs) that have populations of more than 250,000, according to 1980 census data. Certain emergency, law enforcement, and national defense vehicles are exempt from these requirements.

The Energy Conservation Reauthorization Act of 1998 amended the EPO to allow one AFV acquisition credit for every 450 gallons of pure biodiesel fuel (B100), and/or 2,250 gallons of B-20, a blend of 20 percent biodiesel with 80 percent petroleum diesel, that is consumed in vehicles over 8,500 pounds gross vehicle weight rating. These "biodiesel credits" may fill up to 50 percent of a federal fleet's EPO acquisition requirements, but do not carry over into subsequent years and they cannot be traded among fleets.

Section 310(b) of the EPO requires the head of each federal agency to prepare and submit an annual report to Congress outlining the agency's AFV acquisitions and its plans for future acquisition. Federal agencies are to submit compliance data using the General Services Administration's (GSA) web-based Federal Automotive Statistical Tool (FAST).

E.O. 13423 requires each federal agency that operates 20 or more vehicles within the United States to reduce petroleum consumption in fleet vehicles by 2 percent annually through 2015, increase purchase of nonpetroleum-based fuel by 10 percent annually, and use plug-in hybrid (PIH) vehicles when commercially available at a life-cycle cost reasonably comparable to non-PIH vehicles. Fleets may achieve the petroleum consumption reductions through a combination of increased use of nonpetroleum-based fuel in AFVs, improved efficiency of non-AFV acquisitions, reductions in fleet sizes and vehicle miles traveled, and/or improvements in overall fleet operating efficiencies.

**Table 1. HUD Compliance with the EPAct and E.O. 13423**

Authority/ Mandate	Performance Measure	Goal/Requirement	HUD's Performance In FY 2007
EPAct	Alternative fuel vehicle (AFV) acquisitions	75 percent of the 85 EPAct-covered light-duty vehicles (LDV) that HUD acquired in FY 2007 must be AFVs	87 percent of the 85 EPAct-covered acquisitions (74 vehicles) were AFVs
E.O. 13423	<p>Petroleum consumption</p> <p>Alternative fuel use in AFVs</p> <p>Plug-in hybrid vehicles (PIH)</p>	<p>Relative to the agency's baseline for FY 2005, reduce the fleet's total petroleum consumption in covered light duty vehicles by 2 percent annually through FY 2015</p> <p>Increase the total fuel consumption that is nonpetroleum based by 10 percent annually through the end of FY 2015</p> <p>Use PIH vehicles when vehicles are commercially available at a cost reasonably comparable, on the basis of lifecycle cost, to non-PIH vehicles.</p>	<p>Petroleum consumption increased by 5.2 percent from 193,370 Gasoline Gallon Equivalents (GGEs) in FY 2006 to 203,553 GGE in FY 2007.</p> <p>Nonpetroleum based fuel was increased by 285.9 percent over FY 2006.</p> <p>No PIH vehicles were available.</p>

**HUD's Approach to Compliance with the EPAct and E.O. 13423**

To meet the requirements of the EPAct and E.O. 13423, the Department is revising its *Compliance Strategy* developed in accordance with the previous E.O. 13149. The *Strategy* is a detailed 5-year plan begun in FY 2003. It was developed in conjunction with fleet data available in FY 1999. The *Strategy* specifies that HUD will comply with the EPAct by requiring that a minimum of 75 percent of its new LDV vehicle acquisitions be AFVs. The FY 2003 *Strategy* is being updated to include the E.O. 13423 requirement and HUD's FY 2008 field realignment.

To meet the requirements of the EPAct and E.O. 13423, the Department is centralizing the fleet management policy oversight at Headquarters and instituting a new and rigorous policy of education and monthly monitoring. This will enable the Department to increase its level of compliance and proactively address issues that would decrease the progress of achieving compliance. Additionally, the Department is collaborating with fleet management personnel who have direct responsibility for managing vehicles to create fresh and enforceable strategies for increasing fuel economy and decreasing petroleum consumption. The incorporation of the mandates into relevant position descriptions and performance evaluations also will provide significant assistance in these efforts.

## HUD AFV Acquisitions in FY 2007

Table 2 shows the number and types of HUD's LDV acquisitions in FY 2007. Of the 90 LDVs HUD acquired, 85 were EAct-covered vehicles and 74 were AFVs. Therefore, HUD exceeded the 75 percent EAct AFV acquisition goal by 12.1 percent, for a total of 87.1 percent. ( $74/85 \times 100 = 87.1\%$ )

**Table 2. HUD Fiscal Year 2007 Acquisitions**

Actual HUD HQ Fleet FY 2007 Vehicle Acquisitions					
Actual FY 2007 Light-Duty Vehicle (LDV) Acquisitions					Total Vehicle Inventory
	Leased	Purchased	Total		
Total number of LDV Acquisitions (8,500 GVWR)		90	0	90	450
Exemptions	Fleet Size	0	0	0	0
	Geographic	0	0	0	0
	Law Enforcement	5	0	5	47
	Non-MSA Operation (fleet)	0	0	0	0
	Non-MSA Operation (vehicles)	0	0	0	(n/a)
<b>EAct Covered Acquisitions</b>		<b>85</b>	<b>0</b>	<b>85</b>	<b>403</b>
Actual FY 2007 AFV Acquisitions					Total Vehicle Inventory
Vehicle	Leased	Purchased	Total		
Sedan	E-85 Flex-Fuel Compact	2	0	2	23
Sedan	E-85 Flex-Fuel Midsize	62	0	62	130
SUV 4x4	E-85 Flex-Fuel	1	0	1	4
Minivan 4x2 (Passenger)	E-85 Flex-Fuel	9	0	9	28
<b>Total Number of AFV Acquisitions</b>		<b>74</b>	<b>0</b>	<b>74</b>	<b>185</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>74</b>	<b>0</b>	<b>74</b>	
<b>AFV Percentage of Covered LDV Acquisition</b>				<b>87%</b>	

Table 3 is the fuel usage for the HUD fleets in FY 2007. Most vehicles acquired by HUD are leased from GSA, with all maintenance and fuel costs for the vehicle included in the lease. HUD uses the GSA Voyager credit card to pay for fuel.

**Table 3: HUD Fiscal Year 2007 Fuel Usage**

Fuel Type	Cost	Natural Units				GGE				Conversion Ratio
		GSA- Leased	Comm. Leased	Owned	Units	GSA- Leased	Comm. Leased	Owned	Total	
A	b	c	d	e	f	G	H	i	j	k
E-85	\$ 4,607	1,645	0	0	gallons	1,178	0	0	1,178	72% (gal x 0.72 = GGE)
Gasoline	\$ 516,560	195,167	7,583	803	gallons	195,167	7,583	803	203,553	No conversion needed
Gasoline - Law Enforcement Vehicles	\$ 35,672	13,925	0	0	gallons	13,925	0	0	13,925	No conversion needed

### **AFV Acquisition and Other Use Issues**

The lack of an AFV fueling infrastructure to support HUD AFVs continues to be a major obstacle. When AFVs are leased, difficulties remain in locating fuel sites in close proximity to a large population of HUD vehicle users. There are still less than 1500 E-85 refueling sites in the United States. Until the number of refueling sites is substantially increased, the goal of using alternative fueling in AFVs remains extremely difficult and in some areas impossible.

To counteract the lack of available alternative fuel stations, HUD continues to work in concert with other federal agencies to establish alternative fuel infrastructure. Development is a process and will require continued negotiation with private industry. Further, new issues arise as HUD collectively continues the dialogue with potential providers. HUD, however, will continue to engage in this kind of dialogue until a feasible solution can be devised to increase the availability of alternative fuel. In addition, the use of fuel cards remains an issue, with dialogue continuing on an interagency level.

### **Summary**

HUD has experienced a number of challenges in FY 2007 in its attempt to achieve the goals of the EPAct and E.O. 13423. In particular, the Department in FY 2006 began a realignment of field operations, which was finalized in FY 2007. This realignment inadvertently created an unanticipated but significant compromise to the reporting structure for HUD's fleet data. To overcome this obstacle and complete the FAST data call, HUD acquired its data solely from GSA and worked with GSA specifically to resolve all anomalies that presented themselves in the Data Quality Consistency Report. Unfortunately, however, these actions were insufficient to detect vehicles incorrectly identified. This resulted in HUD's uploading of skewed data into FAST. In particular, the data from GSA showed 85 vehicles as exempt as Non-MSA Operation vehicles, zero as exempt law enforcement vehicles, and only five EPAct covered acquisitions. Upon discussion with GSA personnel, the Department was informed that an apparent "glitch" in GSA's system resulted in HUD's data being misclassified.

HUD has continued the dialogue with GSA but has not been able to obtain answers as to how the "glitch" happened. With advice from GSA regarding the figures, HUD has reported the adjusted data.

HUD exceeded the 75 percent EPAct AFV acquisition goal by 12.1 percent, for a total of 87.1 percent. HUD failed, however, to use alternative fuel in the AFVs a majority percent of the time.

Going forward, HUD is centralizing its fleet policy oversight at Headquarters and has established an effective communication structure for collecting fleet data. The Department also is instituting new procedures to proactively reduce petroleum consumption, particularly by mandating use of alternative fuels where available, and requiring monthly reporting to monitor and to ensure improved compliance posture under the EPO Act and E.O. 13423. HUD continues to promote its internal policy establishing AFVs as the “vehicles of choice” for new acquisitions. In accordance with E.O. 13423, HUD also will begin ensuring that the smallest vehicles meeting mission requirements will be ordered. Guidance documents, policy statements, and senior management briefings will be routinely used to collaborate with HUD fleet managers to achieve key targets of the EPO Act and E.O. 13423.

HUD has begun a dialogue in conjunction with the Department of Energy and other federal agencies to investigate the feasibility of establishing relations with private-sector stakeholders to stimulate the creation of infrastructure and bring alternative fuel stations to locations with high concentrations of AFVs. These actions will be taken to ensure the furthering of HUD’s commitment to comply with the EPO Act and E.O. 13423 in FY 2009.

## Appendix A

Acronym	Phrase
AFV	Alternative Fuel Vehicle
B100	Biodiesel (100 percent, neat)
B20	Biodiesel (20 percent biodiesel, 80 percent petroleum diesel)
CNG	Compressed Natural Gas
HUD	U.S. Department of Housing and Urban Development
E-85	Ethanol (85 percent ethanol, 15 percent petroleum)
E.O.	Executive Order
EPAAct	Energy Policy Act
FFV	Flexible Fuel Vehicle
FAST	Federal Automotive Statistical Tool
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