

**DEPARTMENT OF COMMERCE**

**AFV REPORT**

**FISCAL YEAR**

**2003**



## **U.S. Department of Commerce Fleet AFV Report for Fiscal Year 2003**

This is the *U.S. Department of Commerce's Fleet Alternative Fuel Vehicle (AFV) Report for FY 2003, including planned acquisitions and projections for FY 2004 and FY 2005*. The report has been developed in accordance with the Energy Policy Act of 1992 (EPAAct) (Public Law 102-486) as amended by the Energy Conservation Reauthorization Act of 1998 (Public Law 105-388) (ECRA), and Executive Order 13149, Greening the Government Through Federal Fleet and Transportation efficiency (April 2000).

### **Legislative Requirements**

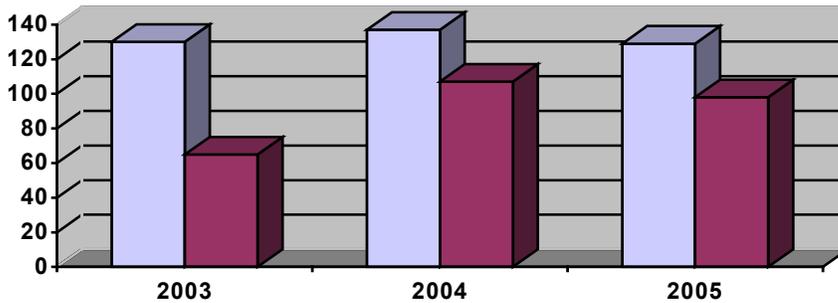
P.L. 102-486 requires that 75 percent of all covered light-duty vehicles acquired for Federal fleets in FY 1999 and beyond must be AFVs (where the fleets have 20 or more light duty vehicles, are capable of being centrally fueled, and are operated in a metropolitan statistical area with a population of more than 250,000 based on the 1980 census). Certain emergency, law enforcement, and national defense vehicles are exempt from these requirements. EPAAct also sets a goal of using replacement fuels to displace at least 30 percent of the projected consumption of motor fuel in the United States annually by the year 2010. The Energy Conservation and Reauthorization Act of 1998 amended P.L. 102-486 to allow one alternative fuel vehicle acquisition credit for every 450 gallons of pure biodiesel fuel consumed in vehicles over 8,500 pounds gross vehicle weight rating. "Biodiesel credits" may fulfill up to 50 percent of an agency's EPAAct requirements.

The head of each Federal agency must also prepare and submit an annual report to Congress outlining the agency's AFV acquisitions and future plans. Executive Order 13149 directs Federal agencies operating a fleet of 20 or more vehicles within the United States to reduce their annual petroleum consumption by at least 20 percent by the end of FY 2005 (compared to FY 1999 levels) by using alternative fuels in AFVs more than 50 percent of the time, improving the average fuel economy of new light-duty petroleum-fueled vehicle acquisitions by 1 mpg by FY 2002 and 3 mpg by FY 2005, and using other fleet efficiency measures.

### **Department of Commerce Fleet Compliance for FY 2003**

Figure 1 is a graphical depiction of AFV acquisitions by the Department of Commerce's fleet in FY 2003 and projections for FY 2004 and FY 2005. The Department of Commerce acquired 173 covered light-duty vehicles (LDVs) in FY 2003, of which 46 were AFVs. Attachment A provides detailed information on the number and types of light-duty vehicles leased or purchased by the Department of Commerce fleet in FY 2003.

**DATA FOR ILLUSTRATIVE PURPOSES ONLY**



**Figure 1. Summary of the Department of Commerce's FY 2003 AFV Acquisitions**

The DOC fleet in FY 2003, did not achieve the AFV 75 percent acquisition requirements set forth in Public Law 102-486. We continue to experience difficulty in the acquisition and use of AFVs. These issues include the following: lack of available alternative fuel use data, limited access to alternative fuel infrastructure and service in certain areas, changes in data collection and reporting procedures, and the need for education of all fleet users on AFV fueling requirements.

To remediate the reporting limitations addressed here, DOC has instituted new data collection and mandatory reporting requirements for all its bureaus. Additionally, DOC has issued mandatory replacement standards for light duty vehicles. All covered GSA leased vehicles will be replaced with AFVs.

**Alternative Fuel Use by the Department of Commerce Fleet in FY 2003**

Table 2 represents alternative fuel use data for the Department of Commerce fleet in FY 2003. The majority of vehicles acquired by the Department of Commerce are leased from GSA, and the leasing contract folds in the maintenance and fuel costs for the vehicles. This is accomplished by the use of a GSA credit card that the fleets use to purchase alternative fuel. However, since product code standards are not uniform among suppliers of alternative fuels (e.g., ethanol or E-85), it is impossible for credit vendors to accurately track the purchase of alternative fuels with this credit card. The exception may be natural gas, which is usually purchased at a local utility refueling site, allowing the fleets to contact the utility for an accurate accounting of purchased fuel.

**Table 2. The Department of Commerce Fuel Use in FY 2003**

Fuel Type	Quantity	Unit
Biodiesel – B100		Gallons
CNG	10*	Gallons @ 2,400 psi, 70°F
+62CNG		Hundred cu. ft.
Diesel	40,602*	Gallons
E-85	955*	Gallons
Gasoline	919,232*	Gallons
Methanol		Gallons
Propane		Gallons

\* Estimate based on incomplete data

## Department of Commerce's Fleet AFV Acquisitions for FY 2004 and FY 2005

Attachments B and C provide detailed information on projected vehicle acquisitions and inventory for the Department of Commerce's fleets for FY 2004 and FY 2005. The data provided for FY 2004 and FY 2005 is low because subordinate fleets did not report all of their vehicles into the Federal Automotive Statistical Tool (FAST) system.

Projected AFV acquisitions for FY 2004 and FY 2005 are assumed to be 75 percent of non-exempt new vehicle acquisitions for all fleet locations. DOC entered into the GSA Surcharge Program. This program would allow GSA to assess a nominal fee on all DOC existing GSA vehicle leases. The funds accrued in this reserve would then be used to pay for the incremental costs incurred in purchasing alternative fuel vehicles (AFV) for the DOC fleet. GSA agreed to provide AFVs as replacement vehicles for GSA-leased vehicles based on replacement standards in FY 2004 and FY 2005. Mandatory guidelines have been issued to all DOC bureaus to ensure alternative fuel is used in flex-fuel and bi-fuel AFVs whenever possible. Reasons for using petroleum in these AFVs will have to be justified.

All DOC fleet managers have been instructed to substitute more energy efficient vehicles for their current fleet when replacements are made. Due to the importance of this element, and to achieving some equity among DOC fleets in sharing the burden of the compliance strategy, it is planned that all DOC fleet locations will be required to meet the higher fuel economy standards from FY 2004 to FY 2005. Included in the mandatory guidelines are replacement standards for petroleum-fueled vehicles including:

- Substituting smaller vehicles
- Substituting fuel efficient models
- Replace 4x4 vehicles with 4x2 vehicles
- Replace 8-cylinder vehicles with 6-cylinder vehicles
- Quarterly reporting by vehicle on miles traveled and fuel used

### Petroleum Savings

The annual per vehicle fuel consumption rates for the new LDVs were calculated from an average per-vehicle fuel consumption rate for FY 2002 (584 GGE consumption assumed for the nonexempt fleet), the increased fleet average fuel economy for the given fiscal year (e.g., 18.0 mpg in FY 2002), and the original FY 1999 fleet average fuel economy (17.0 mpg), as follows:

Annual Savings for FY 2002 vs FY 1999 =  $152 * (584 - (584 * (17/18))) = 4,932$  GGE

Annual Savings for FY 2003 vs FY 1999 =  $4,932 + 183 * (584 - (584 * (17/18))) = 10,869$  GGE

Annual Savings for FY 2004 vs FY 1999 =  $10,869 + 204 * (584 - (584 * (17/19))) = 23,410$  GGE

Annual Savings for FY 2005 vs FY 1999 =  $23,410 + 120 * (584 - (584 * (17/20))) = 33,922$  GGE

## **Summary**

As detailed in this report and the attachments, the Department did not achieve the AFV acquisition requirements of Public Law 102-486 in FY 2003. The Department entered into the GSA Surcharge Program in FY 2004. This program will allow GSA to assess a nominal fee on all DOC existing GSA vehicle leases. The funds accrued in this reserve would be used to pay for the incremental costs incurred in purchasing alternative fuel vehicles (AFV) for the DOC fleet. Participation in the GSA Surcharge Program will reflect a marked increase in AFV acquisitions in FY 2004 and FY 2005.

## Actual Department of Commerce FY 2003 Vehicle Acquisitions

Actual FY 2003 Light-Duty Vehicle Acquisitions					Total Vehicle Inventory
	Leased	Purchased	Total		
Total number of Light-Duty (8,500 GVWR) - Vehicle Acquisitions					1,318
	207	9	216		
Fleet Size	0	0	0		53
Geographic	15	1	16		34
Law Enforcement	25	0	25		128
Non-MSA Operation (fleet)	2	0	2		22
Non-MSA Operation (vehicles)					
Exemptions <small>(From Section I[b])</small>	<i>(n/a)</i>	<i>(n/a)</i>	0		<i>(n/a)</i>
<b>EPACT Covered Acquisitions</b>	<b>165</b>	<b>8</b>	<b>173</b>		<b>1,081</b>
Actual FY 2003 AFV Acquisitions					Total Vehicle Inventory
Vehicle	Leased	Purchased	Total		
Sedan CNG Bi-Fuel Subcompact	0	0	0		3
Sedan CNG Bi-Fuel Compact	0	0	0		5
Sedan E-85 Flex-Fuel Compact	1	0	1		25
Sedan E-85 Flex-Fuel Midsize	4	0	4		18
Pickup 4x2 CNG Bi-Fuel	4	0	4		3
Pickup 4x2 CNG Dedicated	3	0	3		3
Pickup 4x2 E-85 Flex-Fuel	2	0	2		19
Pickup 4x4 E-85 Flex-Fuel	0	0	0		14
Pickup 4x4 LPG Bi-Fuel	1	0	1		1
SUV 4x4 E-85 Flex-Fuel	2	0	2		23
Minivan 4x2 (Passenger) CNG Bi-Fuel	0	0	0		1
Minivan 4x2 (Passenger) CNG Dedicated	16	0	16		5
Minivan 4x2 (Passenger) E-85 Flex-Fuel	12	0	12		154
Other 4x2 CNG Bi-Fuel	1	0	1		0
Pickup MD CNG Bi-Fuel	0	0	0		1
Van MD (Passenger) CNG Bi-Fuel	0	0	0		2
Van MD (Passenger) CNG Dedicated	0	0	0		10
<b>Total Number of AFV Acquisitions</b>	<b>46</b>	<b>0</b>	<b>46</b>		<b>287</b>
Zero Emission Vehicle Credits	0	0	0		
Dedicated Light-Duty AFV Credits	19	0	19		
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>65</b>	<b>0</b>	<b>65</b>		
<b>AFV Percentage of Covered Light-Duty Vehicle Acquisition</b>			<b>38%</b>		

## Planned Department of Commerce FY 2004 Vehicle Acquisitions

### Planned FY 2004 Light-Duty Vehicle Acquisitions

		Leased	Purchased	Total
Total number of Light-Duty (8,500 GVWR) - Vehicle Acquisitions		264	23	287
	Fleet Size	1	0	1
	Geographic	11	6	17
	Law Enforcement	74	0	74
	Non-MSA Operation (fleet)	12	0	12
	Non-MSA Operation (vehicles)			
Exemptions (From Section I[b])	<i>(n/a)</i>	<i>(n/a)</i>	0	
<b>EPACT Covered Acquisitions</b>		<b>166</b>	<b>17</b>	<b>183</b>

### Planned FY 2004 AFV Acquisitions

Vehicle		Leased	Purchased	Total
Sedan	E-85 Flex-Fuel Compact	8	0	8
Pickup 4x2	CNG Bi-Fuel	4	0	4
Pickup 4x2	CNG Dedicated	3	0	3
Pickup 4x2	E-85 Flex-Fuel	7	5	12
Pickup 4x4	E-85 Flex-Fuel	3	0	3
Pickup 4x4	LPG Bi-Fuel	1	0	1
SUV 4x2	E-85 Flex-Fuel	2	0	2
SUV 4x4	E-85 Flex-Fuel	8	4	12
Minivan 4x2 (Passenger)	CNG Dedicated	16	0	16
Minivan 4x2 (Passenger)	E-85 Flex-Fuel	21	3	24
Other 4x2	CNG Bi-Fuel	1	0	1
Van MD (Passenger)	CNG Bi-Fuel	2	0	2
<b>Total Number of AFV Acquisitions</b>		<b>76</b>	<b>12</b>	<b>88</b>
Zero Emission Vehicle Credits		0	0	0
Dedicated Light-Duty AFV Credits		19	0	19
Dedicated Medium-Duty AFV Credits		0	0	0
Dedicated Heavy-Duty AFV Credits		0	0	0
Biodiesel Fuel Usage Credits - Planned				0
<b>Total AFV Acquisitions with Credits</b>		<b>95</b>	<b>12</b>	<b>107</b>
<b>AFV Percentage of Covered Light-Duty Vehicle Acquisition</b>				<b>58%</b>

## Projected Department of Commerce FY 2005 Vehicle Acquisitions

### Projected FY 2005 Light-Duty Vehicle Acquisitions

		Leased	Purchased	Total
Total number of Light-Duty (8,500 GVWR) - Vehicle Acquisitions		181	13	194
	Fleet Size	1	0	1
	Geographic	7	0	7
	Law Enforcement	9	0	9
	Non-MSA Operation (fleet)	4	1	5
	Non-MSA Operation (vehicles)			
Exemptions <small>(From Section I[b])</small>	<i>(n/a)</i>	<i>(n/a)</i>	0	
<b>EPACT Covered Acquisitions</b>		<b>160</b>	<b>12</b>	<b>172</b>

### Projected FY 2005 AFV Acquisitions

Vehicle		Leased	Purchased	Total
Sedan	E-85 Flex-Fuel Compact	7	0	7
Pickup 4x2	CNG Bi-Fuel	4	0	4
Pickup 4x2	CNG Dedicated	3	0	3
Pickup 4x2	E-85 Flex-Fuel	7	2	9
Pickup 4x4	E-85 Flex-Fuel	2	0	2
Pickup 4x4	LPG Bi-Fuel	1	0	1
SUV 4x4	E-85 Flex-Fuel	5	2	7
Minivan 4x2 (Passenger)	CNG Dedicated	16	0	16
Minivan 4x2 (Passenger)	E-85 Flex-Fuel	28	0	28
Other 4x2	CNG Bi-Fuel	1	0	1
Van MD (Passenger)	CNG Bi-Fuel	1	0	1
<b>Total Number of AFV Acquisitions</b>		<b>75</b>	<b>4</b>	<b>79</b>
Zero Emission Vehicle Credits		0	0	0
Dedicated Light-Duty AFV Credits		19	0	19
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>94</b>	<b>4</b>	<b>98</b>
<b>AFV Percentage of Covered Light-Duty Vehicle Acquisition</b>				<b>57%</b>

**Department of Commerce**

**Petroleum Consumption Report**

Data from this report is comprised of the data submitted through the [Fuel Use and Economy](#) and [Input Fleet Data](#) screens current through FY 2003.

**EO 13149 Covered Petroleum Consumption in GGE**

	<b>FY 1999 Baseline</b>	<b>FY2000</b>	<b>FY2001</b>	<b>FY2002</b>	<b>FY2003</b>	<b>FY2004</b>	<b>FY2005</b>
<b>Gasoline</b>	1,063,047	1,086,565	1,883,730	849,193	919,232		
<b>Diesel</b>	69,744	133,218	50,767	154,690	40,602		
<b>Diesel component from biodiesel</b>		298	0	0			
<b>TOTAL</b>	1,132,791	1,219,783	1,934,497	1,003,883	959,834		
<b>Reduction*</b>	N/A	-7.7 %	-70.8 %	11.4 %	15.3%		

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

**Alternative Fuel Consumption (in GGE)**

	<b>FY2000</b>	<b>FY2001</b>	<b>FY2002</b>	<b>FY2003</b>	<b>FY2004</b>	<b>FY2005</b>
<b>CNG</b>	2,129	4,732	3,997	10		
<b>LNG</b>	0	0	0	0		
<b>LPG</b>	0	0	266	127		
<b>E-85</b>	0	116,686	94,667	941		
<b>Electric</b>	0	0	0	0		
<b>M-85</b>	0	0	0	14		
<b>Biodiesel (B100)*</b>	75	0	0	0		

<b>TOTAL</b>	2,204	121,418	98,930	1,092
<b>Estimated Total Fuel Used in AFVs</b>	*	*	142,000	171,108
<b>% of Alt Fuel Use in AFVs w/o biodiesel<sup>1</sup></b>			69.669 %	0.6382%

\*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*.

\* There is not enough data to generate results.

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

	<u>FY 1999</u>	<u>FY2000</u>	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	<u>FY2004</u>	<u>FY2005</u>
	<u>Baseline</u>						
<u>Fuel Economy</u>	17.0	0.0	0.0	18.0	18.0		
<u>Change Compared to Baseline</u>		*	*	1.0	1.0		

\* There is not enough data to generate results.