National Aeronautics and Space Administration
Fleet AFV Program Report for Fiscal Year 2000
November 26, 2002

This National Aeronautics and Space Administration (NASA) Fleet AFV Program Report for Fiscal Year (FY) 2000 presents the Agency's data on the number of AFVs acquired during FY 2000. Forecast for acquisitions in 2001 and 2002 are not provided in this report, since actual data is provided in follow-on reports. This report has been developed in accordance with the Energy Policy Act of 1992 (EPAct) (42 U.S.C. 13211-13219) as amended by the Energy Conservation Reauthorization Act of 1998 (Public Law 105-388) (ECRA), and Executive Order 13149.

Prior to April 2002, NASA's contractor vehicles were not included as part of the NASA inventory or acquisitions for EPAct or E.O. 13149. When NASA determined that contractor vehicles were reportable and should be included, NASA's compliance with EPAct changed. NASA has since mandated compliance with the EPAct and E.O. 13149 to its contractors

NASA originally calculated that their AFV acquisitions at 61 percent in FY 2000. However, NASA recalculated the percentages to include contractor-operated vehicles. Thereby correcting the AFV acquisitions for FY 2000 to 25 percent.

Legislative Requirements

The EPAct 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 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. EPAct 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 ECRA amended EPAct to allow one alternative fuel vehicle acquisition credit for every 450 gallons of 100 percent, 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 EPAct requirements. The head of each Federal agency must also prepare and submit a report to Congress outlining the agency's AFV acquisitions and future plans by November 13th each year. 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 one mpg by FY 2002 and 3 mpg by FY 2005, and using other fleet efficiency measures.

NASA Approach to Compliance with EPAct and E.O. 13149

To achieve compliance with the legislative mandates of EPAct and E.O. 13149, NASA is planning to acquire 75 percent of new light-duty vehicles as AFVs, and use alternative fuel in these vehicles a majority of the time. As part of NASA's AFV strategy, consideration is being given to a new surcharge program that will add $10 monthly to the cost of every vehicle leased through the General Services Administration (GSA) to help cover the higher incremental cost of many AFV models (compared to conventional vehicles). NASA will also continue to acquire light duty vehicles with a higher fuel economy, and further reduce petroleum consumption by using biodiesel fuel in most diesel vehicles.

NASA Fleet Compliance for FY 2000

Figure 1 is a graphical depiction of AFV acquisitions by NASA's fleet in FY 2000. NASA acquired 249 covered light-duty vehicles (LDVs), including contractor vehicles, in fiscal year 2000, of which 62 were AFVs. This represents a 25 percent compliance rate. Attachment A provides detailed information on the number and types of light-duty vehicles leased or purchased by NASA in FY 2000.

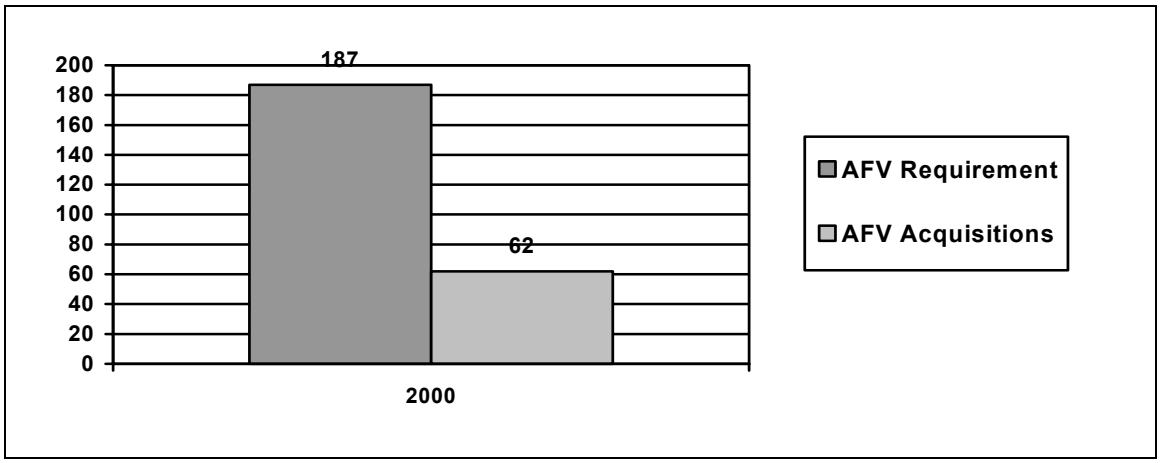

Figure 1. Summary of NASA's FY 2000 AFV Acquisitions

Alternative Fuel Use by NASA Fleets in FY 2000

Table 2 presents alternative fuel use data for NASA's fleets in FY 2000. The majority of vehicles acquired by NASA and other Federal fleets are leased from GSA, and the leasing contract includes maintenance and fuel costs for the vehicles. This is accomplished by the use of a GSA credit card used 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. NASA Fuel Use in FY 2000

Fuel Type	Quantity	Unit
CNG	25,719	Gallons @ 2,400 psi, 70°F
Biodiesel – B-20	7,396	Gallons
E-85	6,284	Gallons
Propane	676	Gallons

- Estimate based on incomplete data

Petroleum Savings

Since it is difficult, to calculate petroleum savings for FY 2001 and FY 2002 based upon the estimated AFV acquisitions, improvements in fuel economy, and fleet efficiency, petroleum savings are reported for only FY 2000. This information is an approximation since it is acquired from GSA historical data and NASA's FAST report.

Attachment B provides the NASA Petroleum Consumption Report. In FY 1999 NASA's baseline petroleum consumption was 1,949,566 GGE, and FY 2000 petroleum consumption was 1,423,857 GGE. This represents a savings of 525,709 GGE in FY 2000 compared to the 1999 baseline (27 percent reduction).

Summary

NASA will continue to implement its strategy for complying with the requirements of E.O. 13149.

Attachment A - National Aeronautics and Space Administration
AFV Report 2000 - Actuals

Actual NASA FY 2000 Vehicle Acquisitions

Actual FY 2000 Light-Duty Vehicle Acquisitions

		Leased	Purchased	Total	Total Vehicle Inventory
Total number of Light-Duty (8,500 GVWR) - Vehicle Acquisitions		313	19	332	2756
Exemptions	Fleet Size	0	0	0	0
	Geographic	0	0	0	0
	Law Enforcement	15	0	15	51
	Non-MSA Operation	68	0	68	551
EPACT Covered Acquisitions		**230**	**19**	**249**	**2154**

Actual FY 2000 AFV Acquisitions

Vehicle		Leased	Purchased	Total	Total Vehicle Inventory
Sedan	CNG Bi-Fuel Subcompact	13	17	30	41
Sedan	E-85 Flex-Fuel Midsize	6	0	6	20
Pickup 4x2	CNG Bi-Fuel Full-size Reg Cab	7	1	8	88
Pickup 4x2	CNG Dedicated Full-Size Ext Cab	0	0	0	29
Pickup 4x2	CNG Dedicated Full-Size Ext Cab	0	0	0	19
Van 4x2	E-85 Flex-Fuel Compact Reg Cab	17	1	18	153
MD AFV Other 8,501-16,000 GVWR	CNG Dedicated	0	0	0	2
MD AFV Other 8,501-16,000 GVWR	CNG2	0	0	0	17
Emergency & Special Purpose HD 16,001 + GVWR	LPG Bi-Fuel	0	0	0	1
Total Number of AFV Acquisitions		**43**	**19**	**62**	**370**
Zero Emission Vehicle Credits		0	0	0	0
Dedicated Light-Duty AFV Credits		0	0	0	0
Dedicated Medium-Duty AFV Credits		0	0	0	0
Dedicated Heavy-Duty AFV Credits		0	0	0	0
Biodiesel Fuel Usage Credits		0	0	0	0
Total AFV Acquisitions with Credits		**43**	**19**	**62**	**370**
AFV Percentage of Light-Duty Vehicle Acquisition				**25%**	

Attachment B - National Aeronautics and Space Administration

Petroleum Consumption Report

Covered Petroleum Consumption in GGE							
	FY 1999 Baseline	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005
Gasoline	1,528,088	1,211,832					
Diesel	421,478	212,025					
Diesel B-20	0	7,396					
TOTAL	1,949,566	1,431,253					
Reduction*	N/A	27%					

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

Alternative Fuel Consumption (in GGE)						
	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005
CNG	25,719					
LNG	0					
LPG	676					
E-85	6,283					
Electric	0					
M-85	8,593					
BioDiesel (B20)	7,396					
TOTAL	48,667					
Estimated Total Fuel Used in AFVs	100%					
% of Alt Fuel Use in AFVs	** Unknown	** Unknown				

Average Fuel Economy of non-AFV Light Duty Vehicle Acquisitions (in mpg)							
	FY 1999 Baseline	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005
Fuel Economy	18.0	20.0					
Change Compared to Baseline		2.0					

** The majority of vehicles acquired by NASA are leased from GSA, and the leasing contract includes maintenance and fuel costs for the vehicles. This is accomplished by the use of a GSA credit card used 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.