

PURCHASE OF ALTERNATIVE FUEL VEHICLES

FOR

THE UNIVERSITY OF CALIFORNIA, DAVIS

- I. **TITLE:** Alternative Fuel Vehicle Purchase Program
- II. **PURPOSE:** Review Fleet Services vehicle purchase plan for alternative fuel equipment.
- III. **OBJECTIVES:** This report will...
 - Identify the Federal and State fleet mandates for the purchase of alternative fuel vehicles.
 - Identify UCD approach to meeting intent of program.
 - Identify future alternative fuel vehicle purchase plan.
- IV. **APPROACH:** The Clean Air Act of 1990 , the National Energy Policy of 1992, the State of California Executive Order No. W-100-94 and various other documents listed in the Appendix were analyzed to determine the exact requirements for which the University is obligated to purchase alternative fuel vehicles.
- V. **REVIEW/ANALYSIS:**
 - Definitions:
 - Clean Air Act Amendments 1990 (CAAA)
 - National Energy Policy Act of 1992 (EPACT)
 - Compressed Natural Gas (CNG)
 - Electric Vehicle (EV)
 - Light Duty Vehicle (LDV)
 - Heavy Duty Vehicle (HDV)
 - 85% Blends of Methanol (M85)
 - Inherently Low Emission Vehicle (ILEV)
 - Transitional Low Emission Vehicle (TLEV)
 - Ultra Low Emission Vehicle (ULEV)
 - Super Ultra Low Emission Vehicle (SULEV)
 - Zero Emission Vehicle (ZEV)
 - Original Equipment Manufacturer (OEM)
 - Two-Separate Fuel Systems (Bi-Fuel)
 - Alternative Fueled Vehicle (AFV)
 - According to the definition in United States' laws, alternative fuels include:
 - Alcohol fuels such as methanol
 - Compressed natural gas (CNG)
 - Electricity
 - Hydrogen
 - Liquefied natural gas (LNG)
 - Liquefied petroleum gas (LPG)
 - Coal-derived liquid fuels

- Bio-Diesel

- *The Clean Air Act Amendments of 1990 (CAAA)* amended the original Clean Air Act. The amendments call for fleets of 10 or more vehicles capable of being centrally fueled to use reformulated fuels and alternate fuel vehicles. The amendments require fleets to purchase alternate fuel vehicles as follows:
 - 1998 30%
 - 1999 50%
 - 2000 70%
 - 2001 100%

California Areas Covered in Clean Air Act Amendments of 1990:

- Los Angeles-Anaheim-Riverside
- Sacramento
- San Diego
- San Joaquin
- Southwest Desert
- Ventura County

Note: **University of California fleets are exempt.**

- *The National Energy Policy Act of 1992 (EPACT)* is Public Law 102-486. This is a broad-ranging act with several titles that deal with alternative fuels and accelerates the mandates for the purchase of **light-duty** alternative fuel vehicles.

* Fleets will be able to meet up to 50% per year of their EPACT vehicle acquisition requirements by using Bio-Diesel. A volume of 450 gallons bio-diesel or 2250 gallons of B20 (mixture of 80% diesel and 20% bio-diesel) equates to one credit. **UCD was the first fleet in California to test Bio-diesel.**

- The Alternative Fueled Vehicle Purchase requirements for states under EPACT are as follows:
 - 1996 10%
 - 1997 15%
 - 1998 25%
 - 1999 50%
 - 2000 75%

- The percentage of AFV's required by the State of California were increased by *Executive Order No. W-100-94, signed by Governor Wilson on August 15, 1994*. The Executive Order Requires:
 - 1996 25%
 - 1997 33%
 - 1998 50%
 - 1999 75%

The Executive Order also requires that 10 percent, inclusive, must be Ultra-Low Emission Vehicles or Zero-Emission Vehicles in 1996 and beyond.

VI. SUMMARY/CONCLUSIONS:

Fleet Services position is that while the University is in the process of registering with DOE we should comply as much as practical within budgetary constraints.

The 1992 Fleet Services Vehicle Replacement Plan called for a replacement projection of 12% of the fleet per year. The following reflects purchases by model year.

YEAR	PROJECTED PURCHASES	TOTAL PURCHASED	LIGHT DUTY	#/PERCENT of AFV's
1999	81	78	41	10/24%
2000	82	52	51	0/0 %
2001	84	59	49	0/0 %
2002	87	89	54	0/0%

Overall the fleet presently has 121 alternative fuel vehicles. These figures do not include the 5 electric vehicles rented from the State Garage or the 60 vehicles eligible to use bio-diesel.

1. The purchase plan for Model Year 2003 has been completed.

- Total planned vehicle purchase: 89 total/60 Light duty
- Alternate fuel vehicles: Based on availability
- Available funds: \$1.3 Million