

U.S. Department of Energy
Energy Efficiency and Renewable Energy

flexible CAR & vehicle technology program

State Departments of Transportation Biodiesel Utilization Workshop

Boise, ID
September 9, 2004

State & Fuel Provider Fleets

Linda Bluestein, USDOE

U.S. Department of Energy
Energy Efficiency and Renewable Energy

Outline of Discussion

- Understanding how the fleet regulations work
- Statistical overview of ST&FP Program
- Outreach Efforts
- Program Successes
- Examples of Strong State Programs
- Ways to Maximize Fuel Use
- Resources and Contact Information

U.S. Department of Energy
Energy Efficiency and Renewable Energy

EPAct Definition of Alternative Fuel

Alternative Fuel

Methanol, denatured ethanol, and other alcohols containing 85% or more by volume of alcohol with gasoline or other fuels; natural gas (including liquid fuels domestically produced from natural gas); liquefied petroleum gas; hydrogen; coal-derived liquid fuels, fuels (other than alcohol) derived from biological materials; and electricity

Additions (since passage of EPAct)

P-Series Fuels, B100
(Biodiesel blends are not alternative fuels but blends of 20 percent or higher biodiesel count toward EPAct compliance)

U.S. Department of Energy
Energy Efficiency and Renewable Energy

What Types of Fleets are Covered Under the S&FP Program?

- **State Government Entities, such as:**
 - Executive, legislative, or judicial branch entities
 - State universities and colleges
- **Alternative Fuel Provider Fleets, including:**
 - Electric utility companies
 - Natural gas utility companies
 - Propane providers
 - Municipal power utilities
 - Oil and natural gas producers, transporters, sellers, etc. (if they derive 30% of revenues from alternative fuel activities)

U.S. Department of Energy
Energy Efficiency and Renewable Energy

Coverage Based on Fleet Size & Location:

Fleets with:

- **50** or more light-duty vehicles* (LDV) in the U.S.
- **20** or more LDVs "used primarily" in a single MSA/CMSA
 - MSA is metro area with 1980 Census population of **250,000** or more (125 exist in the U.S.)
 - **20** or more vehicles in MSA must be "capable of being centrally fueled"

*LDV means an on-road vehicle with a gross vehicle weight rating of 8,500 pounds or less, including passenger cars and light duty trucks.

U.S. Department of Energy
Energy Efficiency and Renewable Energy

Excluded Vehicles*

- Law enforcement
- Emergency motor vehicles
- Non-road vehicles
- Motor vehicles normally parked at a personal residence when not in use
- Vehicles used for university or laboratory research or testing

*These vehicles do not count for determining coverage (i.e., 50/20 LDVs) or when determining AFV requirements.

Complying with AFV Acquisition Requirements

- Acquire a LDV that is capable of operating on alternative fuels
 - Dedicated vehicles
 - Dual-fuel vehicles
 - Flexible-fuel vehicles
- Convert a new LDV to operate on alternative fuels (*within 4 months of the vehicle entering fleet*)
- Use banked credits or purchase credits from another fleet or third party (*S&FP fleets only*)

Complying with AFV Acquisition Requirements (cont.)

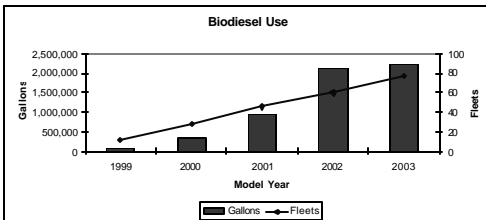
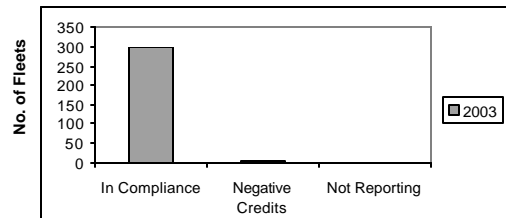
- Purchase Biodiesel – earn 1 credit for every 450 gallons of neat biodiesel purchased for use in blends of 20% or more
 - Fuel must be used in medium or heavy-duty on-road vehicles (i.e., 8,501 lbs GVWR & up)
 - Can satisfy up to 50% of AFV requirements
- Acquire alternative fuel medium- and heavy-duty vehicles (which only earn credits after LDV acquisition requirements are satisfied)

Reporting Options

1. **Single Report***
 - all covered agencies and entities
2. **Agency by agency or entity by entity**
 - filed by single state entity
3. **Agency by agency or entity by entity**
 - filed separately by individual state entities
4. **Combination of the above**
 - one centralized report plus several individual reports

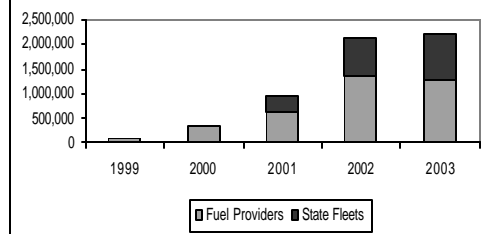
*25 states and DC currently file single report.

S&FP Fleet Compliance – Model Year 2003

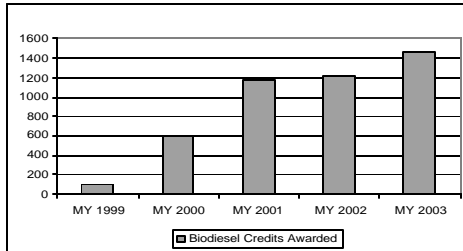


Model Year	Gallons	Fleets
1999	83,653	12
2000	358,247	28
2001	939,552	46
2002	2,113,788	60
2003	2,214,806	77

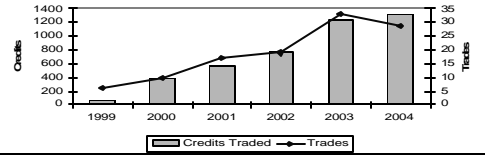
Biodiesel Fuel Use by Fleet Type



Biodiesel Credits Awarded

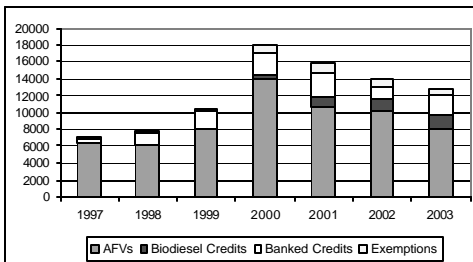


Credit Trading Activity



	Trades	Credits Traded
1999	6	64
2000	10	376
2001	17	583
2002	19	779
2003	33	1237
2004 (to date)	29	1312

Compliance Methods



Biodiesel Fuel Use Impact

- 5.7 million gallons of petroleum displaced in the S&FP program since 1999
- 77 covered fleets or nearly one-fourth of fleets in the S&FP program are now using biodiesel
- Biodiesel credits equaled ~14% of total acquisition requirements in 2003
- Biodiesel fuel use has grown from under 84,000 in MY1999 to over 2,200,000 gallons in MY2003, a 126% annual growth rate over the period

State Trends

- Increased biodiesel purchase for use – states now represent >40% of biodiesel in program, vs. ~8% in 2000
- States acquiring fewer covered vehicles, and thus fewer AFVs
- Some states moving toward leadership positions

State Outreach Efforts

- Educate state agencies/entities on requirements, including coverage
- Identify additional covered fleets
- Assist new fleets in developing compliance strategies
- Already evaluated a dozen or so states, and added 1-2 fleets per state (on average)
- Continuing efforts, with additional focus on state universities/colleges
- Requesting E-85 fuel use data from states to assist in maximizing AF utilization

Overall S&FP Program Successes

- Covered fleets' installation of fueling outlets
- Substantial reduction in vehicles exempted
- ~10,000 new AFVs acquired per year
- Growth in biodiesel fuel use (to over 2 million gallons per year)
- Exemption requests declining
- Compliance levels in S&FP Program at virtually 100%

State AFV Leadership

- **Missouri** –
 - Biodiesel Fuel Revolving Fund
 - Funds generated by the sale of EPAAct credits
 - Off-sets incremental costs associated with the purchase of biodiesel fuel (B20 or higher blends) for use by state fleet vehicles
 - Missouri Department of Transportation (MoDOT) was directed to develop a biodiesel (B20 or higher blends) program.
 - By July 1, 2004, at least 50% of MoDOT's fleet and heavy equipment that use diesel fuel must be fueled with biodiesel, if commercially available.
 - by July 1, 2005, at least 75% of MoDOT's fleet and heavy equipment that use diesel fuel must be fueled with biodiesel, if commercially available.
 - 30% of the fuel purchased annually for use in state fleet vehicles must be alternative fuels.

State AFV Leadership (cont.)

- **Nevada** –
 - Since FY 2000, 90% of new vehicles acquired by covered fleets must be either AFVs or certified ULEVs.
- **New Jersey** –
 - Committed to exceeding Federal EPAAct AFV acquisition mandates by 5% per model year.
 - Since MY 2001, vehicles acquired to fulfill this enhanced commitment must meet or exceed CARB ULEV standards
- **New York** –
 - By 2005, at least 50% of all new LDV acquisitions must be AFVs (including hybrid electric vehicles)
 - By 2010, 100% of all new LDV acquisitions must be AFVs (including hybrid electric vehicles)

State AFV Leadership (cont.)

- **Maryland** –
 - 50% (average) of the fuel used by bi-fuel and flex -fuel vehicles in the state fleet shall be alternative fuel.
- **Minnesota** –
 - State agencies shall use clean fuels for use in state fleet vehicles
 - if the clean fuels are reasonably available at similar costs to other fuels; and
 - are compatible with the use to which the motor vehicles are put.

State Models for Success

- **Texas Department Of Transportation** –
 - TxDOT has over 7700 AFV credits
 - Biodiesel
 - Pursuing funding research to evaluate the impact of 20% biodiesel blended with 80% clean diesel on air quality and vehicle performance.
 - Entire diesel fleet has been transitioned to clean diesel
 - Maximizing AF use
 - TxDOT consumes about 5 million gals of AF (mostly NG and LPG) annually.
 - TxDOT also supports aftermarket conversions to maximize use of existing NG and LPG infrastructure.
 - Due to changing CNG and LPG AFV product availability, TxDOT has acquired more E-85 AFVs to remain compliant under EPAAct and create a market for E-85 in the state.

State Models for Success

- **Connecticut Department Of Transportation** –
 - Biodiesel
 - Since February 2000, ConnDOT has used over 326,000 gal of B20
 - ConnDOT uses virgin soy as the B20 base at 3 locations. With virgin soy as the base, ConnDOT has not experienced any cold temperature issues with both snow plow trucks and loaders.
 - No additional driver training, vehicle parts, or fuel modifications have been made since the transition to B20.
 - Maximizing AF use
 - ConnDOT's AF program has expanded from using solely biodiesel in its medium- and heavy-duty vehicles to now also using E-85 in its LDV fleet.
 - ConnDOT was one of the first fleets in New England to convert an existing gas tank to handle E-85, for use by many of its LD pickups and sedans.
 - ConnDOT also operates some of its LD pickup trucks on CNG, but lack of fueling infrastructure limits use of the fuel.

U.S. Department of Energy
Energy Efficiency and Renewable Energy

Ideas for Maximizing Fuel Use

- Work with fuel providers to locate infrastructure near fleet vehicles
- Educate drivers on the benefits of AFs
- Ensure drivers know which fleet vehicles are AFVs
- Train drivers on how and where to refuel
- Establish procedures to encourage AF use
- Institute incentive programs for personnel
- Tie performance reviews to AF use rates

U.S. Department of Energy
Energy Efficiency and Renewable Energy

Special Resources for States

- Self-Audit document (draft)
- Florida reporting survey
- Infrastructure toolkit (under development)

U.S. Department of Energy
Energy Efficiency and Renewable Energy

Information Resources

EPAct Fleet Information and Regulations website:
<http://www.eere.energy.gov/vehiclesandfuels/epact/>

Linda Bluestein: linda.bluestein@ee.doe.gov

Regulatory Information Line:
regulatory_info@afdc.nrel.gov or (202)586-9171

Literature (See EPAct website)

- AFV Reporting Guidance
- Final Regulations
- Compliance Guidelines for S&FP Fleets (Bluebook)
- Frequently Asked Questions
- Exemptions, biodiesel, and credit trading guidance
- DOE AFV Buyers Guide: <http://www.cities.doe.gov/vbg/fleets>

