EPAct Program Update

EPAct State and Alternative Fuel Provider Fleet Program

Ted Sears
NASEO – Transportation Committee Meeting
Savannah, GA
September 9, 2014
Agenda

- State and Alt Fuel Provider Fleet Requirements Under EPAct
- Program Status and Data
- Available Tools to Accomplish Program Goals
- Program Initiatives
- Discussion
State Fleet Requirements Under EPAct
Fleet Requirements – SFP

- Energy Policy Act of 1992 (EPAct 92) requires certain State and Alternative Fuel Provider (SFP) fleets to acquire alternative fuel vehicles (AFV) if:
  - Fleet has 50 non-excluded light-duty vehicles (LDVs) total
  - Fleet has > 20 non-excluded LDVs in a single Metropolitan Statistical Area (MSA) or consolidated MSA (CMSA) with > 250,000 population in 1980

- Current annual AFV acquisition requirements:
  - States – 75% of annual non-excluded LDV acquisitions
  - Alternative Fuel Providers – 90% of annual non-excluded LDV acquisitions

- Alternative Fuel (AF) use requirement
  - Alternative Fuel Providers must use AF when AFV operating in area in which AF is available
Fleet Compliance Options – SFP

• Initially, fleets could only comply by acquiring AFVs
  - AFVs (think FFVs, CNG, or Propane dedicated or bi-fuel vehicles, and EVs) and Conversions
  - Exemptions available if no appropriate AFV model or AF available
  - Fleets may earn and bank/trade credits for excess acquisitions

• Congress later allowed fleets to meet up to 50% of annual AFV acquisition requirements through purchase for use of biodiesel, if blend >20% biodiesel (B20)
  - One acquisition credit for every 450 gallons of B100

• This (AFV acquisition and biodiesel) is termed Standard Compliance (SC)
  • EISA 2007 authorized DOE to allot credit levels for Electric Drive Vehicles (hybrids, PHEVs, MD/HD EVs, NEVs) and investments in alternative fuel infrastructure and certain other electric drive technologies
## Credit Allocations Under the 133 Final Rule

<table>
<thead>
<tr>
<th>Credit Category</th>
<th>Credit Allotment</th>
<th>Limitations/Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEV</td>
<td>½ credit</td>
<td></td>
</tr>
<tr>
<td>PHEV</td>
<td>½ credit</td>
<td></td>
</tr>
<tr>
<td>FCEV</td>
<td>½ credit</td>
<td></td>
</tr>
<tr>
<td>NEV</td>
<td>¼ credit</td>
<td>Not included in covered LDV count</td>
</tr>
<tr>
<td>Medium- or heavy-duty HEV</td>
<td>½ credit</td>
<td>Not included in covered LDV count</td>
</tr>
<tr>
<td>Alternative Fuel Infrastructure</td>
<td>1 credit per $25,000 invested*</td>
<td>Maximum of 5 credits if private infrastructure, 10 credits if publicly accessible infrastructure; credit allocated in model year placed into operation</td>
</tr>
<tr>
<td>Alternative Fuel Non-Road Equipment</td>
<td>1 credit per $25,000 invested*</td>
<td>Maximum of 5 credits per fleet per model year</td>
</tr>
<tr>
<td>Emerging Technology</td>
<td>2 credits for initial $50,000 invested and 1 credit per $25,000 thereafter, or 1 credit per pre-production vehicle*</td>
<td>Maximum of 5 credits if counting based on amount invested, per fleet per model year</td>
</tr>
</tbody>
</table>

*Aggregation of dollar amounts allowed
Under EPAct 2005, **Alternative Compliance (AC) Option Added**

- Instead of earning credits for AFV acquisitions or biodiesel use, fleet opts to demonstrate *petroleum reductions* (think AF use) equal to amount of AF that would have been used if all of fleet’s AFVs ran on AF 100% of the time
- Adds *petroleum reduction options* (e.g., increased efficiency, idle reduction, vehicle miles traveled reductions)
- Increases *flexibility* for some options
  - For example, biodiesel may be used to achieve >50% of requirements and be in blends <B20
State-Specific Fleet Requirements

- Many are aligned with federal EPAct requirements, some go further, and some require a different approach
- There is no preemption of or release from the federal EPAct requirements for covered fleets

* Exceptions apply to many of these requirements
SFP Program Status and Data
SFP Fleet Overall Status

- ~300 fleets submit an annual report each year
- 10-20,000 AFVs acquired annually, most now are FFVs (a few hundred NGVs/year)
  - Since program began in MY97, 60% FFVs, ~25% NGVs, ~10% LPGVs
- 5 to 6M gallons of B100 used annually, several times the amount for which fleets receive credit
- 100% Fleet Compliance
  - Handful of fleets do require some handholding to come into compliance
- Relatively few fleets in newer AC option (~12)
# SFP Program Data

## Standard Compliance Methods

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Annual AFV-Acquisition Requirement</th>
<th>Exemptions Granted</th>
<th>Applied &amp; Purchased Credits*</th>
<th>Biodiesel Credits</th>
<th>Light-Duty AFVs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>15,000</td>
<td>2,000</td>
<td>5,000</td>
<td>1,000</td>
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<td>2001</td>
<td>16,000</td>
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<td>13,000</td>
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<td>2005</td>
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<td>2009</td>
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<td>23,000</td>
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<td>2010</td>
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<td>2011</td>
<td>36,000</td>
<td>7,500</td>
<td>27,000</td>
<td>6,500</td>
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<td>2012</td>
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<td>2013</td>
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<td>8,500</td>
<td>31,000</td>
<td>7,500</td>
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</tbody>
</table>

*Purchased credits can be banked for future use.
SFP Program Data

Light-Duty AFV Acquisitions

- Total Annual Light-Duty AFV Acquisitions
- State Fleets
- Alternative Fuel Provider Fleets
**Annual Biodiesel (B100) Use and Biodiesel Credits Earned**

*Includes only all gallons reported*
MY2012 AC efforts = over 2.6m GGE of petroleum reduced from 12 fleets

MY2011 = over 2.6m GGE
MY2010 = over 3.4m GGE
MY2009 = over 2.4m GGE
Available Tools to Accomplish Program Goals
EPAct Website & Outreach/Compliance Assistance

http://www1.eere.energy.gov/vehiclesandfuels/epact/resources.html
Alternative Fuels Data Center

http://www.afdc.energy.gov/tools
Program Initiatives

• FleetDASH – Fleet Sustainability
• Enhancements to AC Option
• EPAAct Stakeholder Workshops
Introduction to FleetDASH

What:
Management tool to track participating Federal agencies’ fleet fuel consumption, greenhouse gas emissions, and vehicle inventories.

Identifies instances where alternative fuel is well used and opportunities for improvement.

How:
Use available datasets in a standard platform to provide Actionable Business Intelligence.

Why:
DOE provides services, tools, and expertise to help covered fleets meet and exceed EPAct requirements.
NREL maintains Alt. Fuel Station database; expertise in database development/management, automated analyses, GIS, and innovative web development.
Why FleetDASH for the States?

Leverages DOE/NREL Capabilities
• NREL maintains national alternative fuel station database
• Expertise in database management, automated analyses, GIS, and innovative web development

Streamlines Managing and Reporting Alternative Fuel Use
• Automated analysis of fleet fueling behavior and missed opportunities
• Scalable from entire fleet to individual vehicles

Presents Opportunities for Additional Analysis
• Inform acquisition assistance for AFVs
• Optimal ways to meet EPAct regulatory compliance, deploy alternative fuels, and place
• Uses credit card transaction data to track fuel consumption in vehicles

• Identifies successes as well as “missed opportunities” for dual-fuel vehicles to use alternative fuel when it was available nearby

• Empowers fleet managers to identify and address sources of missed opportunities to use alternative fuel

• Built for Federal fleets -- FleetDASH currently contains data for GSA-leased vehicles of 16 agencies
FleetDASH Tour

Track fuel consumption throughout the year.

Sample Department Leased Fleet Fuel Use
FleetDASH Tour

Quickly identify trends in the behavior fleets want to address

Sample Department Leased Fleet Fuel Use
Scope of Missed Opportunities

Denver, Colorado: FFV Fuel Purchases

Stations where Federal FFV Purchased Fuel: 2011
- Stations Within 5 Miles of E85 Station
- Stations Farther than 5 Miles from E85 Station

E85 Stations
- Public/WEX Accepted

5 Miles around E85 Stations

Denver City Limits

This map was produced by the National Renewable Energy Laboratory for the Department of Energy.
May 2013
FleetDASH: New Features

• Vehicle/Transaction level detail reveals precisely WHO and WHERE
Forthcoming Program Initiatives

- Improvements to AC Option
AC Under the AFTP

• AC in Practice
  o Since inception in MY 2008, rate of fleet participation in AC has been disappointing
  o With emphasis on petroleum reduction, DOE would like to see an increase in the number of fleets opting for AC
  o DOE now contemplating a number of revisions to enhance interest and involvement in AC
EPAct Stakeholder Workshops
**State Fleets:**
agencies, DOTs, universities/colleges

**Alternative Fuel Providers:**
gas/electric utilities; municipal power generators; electric cooperatives

**Federal Fleets:**
Civilian/military agency fleets, GSA
EPAct and Infrastructure Discussion Topics

• What is on your *WISH LIST*?
• Obstacles to implementation?
• What is the state of your fleet?
  • Internal thoughts/opinions on Alt Fuels
• What mandates/goals need to be met?
  • Internally or externally imposed: petrol use, cost, etc??
• Do you need tools or analytic support?
• Interested in partnerships w/ other fleets?
Contact:

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