Fleet Track Introduction

Greater Yellowstone Interagency Climate Action Plan Working Session
April 19-22, 2010

Kristin L. Day
Ryan Daley
National Renewable Energy Laboratory
Introduction

Welcome to Bozeman!

– Greater Yellowstone Coordinating Council (GYCC)

– National Renewable Energy Laboratory (NREL)

– Working together
Objective

Fleet Track Objective

– Increase knowledge of mobile source GHG emissions and reduction methods

– Identify resources and potential partnerships

– Create unit-level GHG Emissions Reduction Action Plans

– Identify clear “next steps”
Fleet Track Agenda – Day 2

9:00 AM – 9:45 AM  Fleet Track Introduction
Kristin Day & Ryan Daley, NREL

9:45 AM – 10:15 AM  Review of Past GYA Inventory Data & Results
Kristin Day, NREL

10:15 AM – 10:30 AM  Break

Kristin Day, NREL

11:15 AM – 12:30 PM  Identifying Resources and Potential Partnerships
Andrew Hudgins, NREL
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:30PM – 1:30 PM</td>
<td>Lunch</td>
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<tr>
<td>1:30 PM – 2:15 PM</td>
<td>Behavior and Cultural Changes</td>
<td>Heather Davis, USFS</td>
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<tr>
<td>2:15 PM – 3:00 PM</td>
<td>Emerging Fleet Technologies</td>
<td>Ryan Daley, NREL</td>
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<td>3:00 PM – 4:45 PM</td>
<td>Eco Auto Inc. Introduction &amp; Demonstration</td>
<td>Kristin Day &amp; Andrew Hudgins, NREL</td>
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<tr>
<td>4:45 PM – 5:15 PM</td>
<td>Fleet Track Day 1 Wrap-Up</td>
<td>All</td>
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<tr>
<td>Time</td>
<td>Event</td>
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</table>
| 9:00 AM – 10:15 AM | Fleet Optimization Tools  
*Heather Davis, USFS & Ryan Daley, NREL* |
| 10:15 AM – 10:30 AM | Break                                     |
| 10:30 AM – 11:30 AM | GSA Fleet Vehicle  
*Speaker TBD* |
| 11:30 AM – 12:30 PM | Alternative Fuels & Infrastructure  
*Kristin Day, NREL* |
| 12:30 PM – 1:30 PM | Lunch                                     |
| 1:30 PM – 5:30 PM | Compiling an Action Plan for GYA Fleets    |
Federal Guidance & Legislation

• **EPAct 1992:**
  - 75% of light-duty vehicle acquisitions must be Alternative Fuel Vehicles (AFVs)
  - OEM vehicles & credits for biodiesel use
  - Applies to Federal fleets of 20 or more LDVs that are centrally fueled and operated primarily in a single MSA/CMSA (There are 21 ‘covered’ Federal Agencies)
  - Excluded Vehicles: Law Enforcement, Emergency Response, Military Tactical, non-road vehicles (e.g. NEVs)

• **EPAct 2005**
  - AFVs must use AF unless they receive a waiver from DOE (*AF unavailable or too expensive*)
  - 54 percent of Federal duel-fueled AFVs waived in FY 2010!
  - **OMB:** Reduce the number of waivers received annually from DOE
Federal Guidance & Legislation

- E.O. 13423
  - 2% annual petroleum reduction
  - 10% annual Alternative Fuel use increase

  - Added Alternative Fuel Vehicle definitions: advanced lean burn vehicles, qualified hybrid vehicles, any other vehicle that demonstrates significant petroleum reduction

- Energy Independence & Security Act (EISA) of 2007
  - Section 141: Feds must acquire only low Green House Gas (GHG) emitting vehicles (EPA finalizing guidance)
  - Section 142: Petroleum consumption and AF use goals for 2015 (DOE finalizing guidance)
  - Section 246: Agencies must install renewable fuel pump at each Federal fueling center in the U.S. by January 1, 2010
Federal Guidance & Legislation

NEW!!

• E.O. 13514
  • Extends 2% annual petroleum reduction to 2020 and requires agency Greenhouse Gas reductions
  • Required Development of Master Fleet Guidance Document
  • Comprehensive Fleet Management Handbook to accompany official guidance

• Forthcoming Legislation??
  • Numerous bills impacting Federal Fleet introduced during current session of Congress.
  • Nothing has moved forward
  • Busy agenda coupled with election year means we are not likely to see comprehensive Climate Change Legislation during 111th Congress
Federal Fleet Overall Status – Acquisitions

Feds acquired more than twice as many AFVs as required, but...

...over 74,000 Federal AFVs received waivers for AF use

Biodiesel credits
Federal Fleet Overall Status – Acquisitions & Inventory

Total FY 2009 AFV Acquisitions by covered Federal Agencies

- **E-85**: 27,291 Vehicles
- **Hybrid**: 3,940 Vehicles
- **CNG**: 75 Vehicles
- **LPG**: 23 Vehicles
- **Electric**: 7 Vehicles
- **Hydrogen**: 1 Vehicle
- **LNG**: 20 Vehicles
- **Hydrogen**: 4 Vehicles
- **LPG**: 181 Vehicles

Total FY 2009 AFV Inventory of covered Federal Agencies

- **E-85**: 141,505 Vehicles
- **Hybrid**: 5,522 Vehicles
- **CNG**: 6,472 Vehicles
- **LPG**: 181 Vehicles
- **Electric**: 56 Vehicles
- **LNG**: 20 Vehicles
- **Hydrogen**: 4 Vehicles
66,000 Federal Diesel Vehicles Nationwide

2009 Diesel Use:
• over 55M GGE (35% increase from ’08)
• just 4M GGE biodiesel (decreased 53 % since ’07)

Use of Biodiesel (B20 and up) can be a cheap alternative for acquisition credits.
Federal Fleet Overall Status – Petroleum Reduction

Total Covered Petroleum

E.O. 13423 Requirement

Thousands of GGE

Covered Petroleum Consumption*
2009 (GGE)

Interior: 16,146,264 (6%)
USDA: 16,961,743 (6%)
Defense: 77,114,938 (27%)
USPS: 146,516,560 (50%)
All others: 33,056,371 (11%)

*Excludes military tactical, law enforcement, and emergency vehicles.
**Includes all alternative fuels: Biodiesel portion of B20, B100, E85, CNG, LNG, LPG, Hydrogen, and Electricity.
Federal Fleet Overall Status – Alternative Fuel Increase

**Excludes military tactical, law enforcement, and emergency vehicles.**

**Includes all alternative fuels: Biodiesel portion of B20, B100, E85, CNG, LNG, LPG, Hydrogen, and Electricity.

*Alternative Fuel Increase*

<table>
<thead>
<tr>
<th>Year</th>
<th>LNG</th>
<th>Electric</th>
<th>M-85</th>
<th>Hydrogen</th>
<th>Total Alternative Fuel Use</th>
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<tbody>
<tr>
<td>2009</td>
<td>6,257</td>
<td>10,029</td>
<td>7,803</td>
<td>8,738</td>
<td>9,612</td>
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**Total Alternative Fuel Use**

- **2009 (GGE)**
  - **Defense:** 3,988,652 (40%)
  - **DOE:** 1,307,721 (13%)
  - **USPS:** 1,136,192 (11%)
  - **Interior:** 740,202 (8%)
  - **VA:** 728,946 (7%)
  - **All Others:** 2,127,241 (21%)

*Fiscal Year*
Visioning Exercise 1

Where do you see your fleet in 10 years?