Alternative Fuel and Advanced Vehicle Incentives

Clean Cities Webinar
Monday, March 18, 2013

Alexis Schayowitz
ICF International
Clean Cities Technical Response Service
Overview

- Alternative Fuels Data Center (AFDC) Laws & Incentives Database
- Federal Incentives
- State Incentive Trends and Examples
- Questions
AFDC Laws & Incentives Database

http://www.afdc.energy.gov/laws/

- Searchable, online database of state and federal laws, incentives, and regulations
  - Utility and private incentives included at the state level
- Topics covered: alternative fuels, advanced vehicles, air quality, vehicle efficiency, idle reduction
- Additional features:
  - Summaries of key federal legislation (e.g., Energy Policy Acts)
  - Tables of laws and incentives sorted by technology or fuel, incentive or regulation, and user type
  - Examples of notable or common local laws and incentives
• Maintained by NREL and ICF International
• State information
  – Updated annually after each state’s legislative session ends and on an *ad hoc* basis
  – Sources:
    • State legislative and executive office website searches
    • Points of contact, including Clean Cities, state energy office, industry association, industry, and utility staff
    • Industry newsletters and other publications
• Federal information
  – Updated on an *ad hoc* basis when legislation is signed into law or when agency rules are issued, and on an annual basis
  – Quarterly legislative searches
<table>
<thead>
<tr>
<th>Technology and Fuel Types</th>
<th>Incentive Types</th>
<th>Law and Regulation Types</th>
<th>User Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodiesel</td>
<td>Grants</td>
<td>Acquisition or fuel use</td>
<td>Vehicle owner or driver</td>
</tr>
<tr>
<td>Ethanol (E85, E10) or flexible fuel vehicles</td>
<td>Tax incentives (credits, deductions)</td>
<td>Driving or idling</td>
<td>Fleet purchaser or manager</td>
</tr>
<tr>
<td>Natural gas (CNG, LNG)</td>
<td>Loans or leases</td>
<td>Registration or licensing</td>
<td>Fueling or TSE infrastructure owner</td>
</tr>
<tr>
<td>Propane (LPG)</td>
<td>Rebates</td>
<td>Fuel taxes</td>
<td>Alternative fuel producer</td>
</tr>
<tr>
<td>Hydrogen or fuel cell vehicles</td>
<td>Exemptions</td>
<td>Fuel production or quality</td>
<td>Alternative fuel dealer</td>
</tr>
<tr>
<td>Electricity, PEVs, HEVs, or NEVs</td>
<td>Other (e.g., technical assistance)</td>
<td>Renewable fuel standard or mandate</td>
<td>Alternative fuel purchaser</td>
</tr>
<tr>
<td>Aftermarket conversions</td>
<td></td>
<td>Air quality or emissions</td>
<td>AFV manufacturer or retrofitter</td>
</tr>
<tr>
<td>Fuel economy or efficiency</td>
<td></td>
<td>Climate change or energy initiatives</td>
<td></td>
</tr>
<tr>
<td>Idle reduction</td>
<td></td>
<td>Other (e.g., definitions)</td>
<td></td>
</tr>
</tbody>
</table>
**Example Description**

*Hybrid Electric Vehicle (HEV) High Occupancy Vehicle (HOV) Lane Exemption*

The Colorado Department of Transportation (CDOT) allows HEVs to travel in HOV and high occupancy toll (HOT) lanes. Qualifying vehicles must obtain a permit and display an HOV exemption decal or holder. As of April 2012, CDOT reached its quota of 2000 permits and will place new applicants on a waiting list. 

*References*

- [Colorado Revised Statutes 42-4-1012](http://www.coloradodot.info/programs/hybrids)

*Point of Contact*

Teresa Carrillo  
Commercial Vehicle Operations Manager  
Colorado Department of Transportation  
Phone: (303) 757-9716  
Fax: (303) 757-9719  
teresa.carrillo@dot.state.co.us  
http://www.coloradodot.info/programs/hybrids  

*Website for More Info*

[Hybrid Vehicle Use in the HOT/HOV Lanes](http://www.coloradodot.info/programs/hybrids)
• Fact sheets outlining trends and updates
• Case studies on specific incentives and programs
• Additional content?
H.R. 8, the American Taxpayer Relief Act of 2012
- Retroactively extended several fuel and infrastructure tax credits
- Expanded the definition of second generation biofuel and extended two incentives related to these fuels
- Introduced a credit for eligible two- and three-wheeled plug-in electric drive vehicles
- Extended discretionary funding for U.S. Department of Agriculture programs
# Federal Tax Credits – Fuel

<table>
<thead>
<tr>
<th>Tax Credit</th>
<th>Amount</th>
<th>Fuel Types Included</th>
<th>IRS Publications/ Forms</th>
<th>Expires</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative Fuel and Mixture Excise</td>
<td>$0.50/gallon</td>
<td>CNG, LNG, propane (including fuel used in mixtures)</td>
<td>Publication 510; Forms 637, 720, 4136, and 8849</td>
<td>December 31, 2013</td>
</tr>
<tr>
<td>Biodiesel Income</td>
<td>$1.00/gallon</td>
<td>B100 (biodiesel, agri-biodiesel, renewable diesel)</td>
<td>Publication 510; Forms 637 and 8864</td>
<td>December 31, 2013</td>
</tr>
<tr>
<td>Biodiesel Mixture Excise</td>
<td>$1.00/gallon</td>
<td>Biodiesel, agri-biodiesel, and renewable diesel used in mixtures</td>
<td>Publication 510; Forms 637, 720, 4136, 8849, and 8864</td>
<td>December 31, 2013</td>
</tr>
<tr>
<td>Tax Credit</td>
<td>Amount</td>
<td>Fuel Types Included</td>
<td>IRS Publications/ Forms</td>
<td>Expires</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>------------------------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Hydrogen Fuel Excise</td>
<td>$0.50/gallon</td>
<td>Liquefied hydrogen (including fuel used in mixtures)</td>
<td>Publication 510; Forms 637, 720, 4136, and 8849</td>
<td>September 30, 2014</td>
</tr>
<tr>
<td>Second Generation Biofuel Producer</td>
<td>$1.01/gallon</td>
<td>Liquid fuel produced from any lignocellulosic or hemicellulosic matter that is available on a renewable basis or any cultivated algae, cyanobacteria, or lemna</td>
<td>Publication 510; Forms 637 and 6478</td>
<td>December 31, 2013</td>
</tr>
</tbody>
</table>
### Federal Tax Credit – Infrastructure

<table>
<thead>
<tr>
<th>Tax Credit</th>
<th>Amount</th>
<th>Fuel Types Included</th>
<th>IRS Publications/ Forms</th>
<th>Expires</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative Fuel Infrastructure</td>
<td>30% of the cost, not to exceed $30,000</td>
<td>CNG, LNG, propane, electricity (EVSE), E85, B20+</td>
<td>Form 8911</td>
<td>December 31, 2013</td>
</tr>
<tr>
<td>Residential: Up to $1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Federal Tax Credits – Vehicles

<table>
<thead>
<tr>
<th>Tax Credit</th>
<th>Amount</th>
<th>Fuel Types/ Vehciles Included</th>
<th>IRS Publications/ Forms</th>
<th>Expires</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plug-In Electric Drive</td>
<td>$2,500 - $7,500, based on battery capacity and GVWR</td>
<td>Up to 14,000 lbs GVWR (Light-duty and medium-duty) PEVs</td>
<td>Form 8936</td>
<td>Phased out when manufacturer sells 200,000 PEVs</td>
</tr>
<tr>
<td>Two- and Three-Wheeled Plug-In Electric Drive</td>
<td>10% of the cost, up to $2,500</td>
<td>Up to 14,000 lbs GVWR (Light-duty and medium-duty) PEVs</td>
<td>Form 8936</td>
<td>December 31, 2013</td>
</tr>
<tr>
<td>Fuel Cell</td>
<td>Up to $4,000</td>
<td>Light-duty, medium-duty, and heavy-duty FCVs</td>
<td>Notice 2008-33; Form 8910</td>
<td>December 31, 2014</td>
</tr>
</tbody>
</table>
Other Federal Incentives

- U.S. Department of Transportation
  - Congestion Mitigation and Air Quality (CMAQ) Improvement
  - Airport programs

- U.S. Department of Agriculture
  - Advanced biofuel production
  - Education; research & development programs
  - Ethanol infrastructure program in rural areas

- U.S. Environmental Protection Agency
  - National Clean Diesel Campaign

- U.S. Department of Energy
  - Clean Cities
2012 State-Level Trends

PEV/EVSE rebates, utility rate reduction, technical assistance, tax incentives, grants
State-Level Maps and Graphs

http://www.afdc.energy.gov/data/

PEV Incentives & Laws by State

Ethanol Incentives & Laws by State
State Incentive Examples

- **Vehicle/infrastructure tax Incentives**
  - **Credits** (NY – $0.15/gallon biofuel production credit)
  - **Exemptions** (NJ – ZEV sales and use tax exemption)
  - **Refunds** (NE – natural gas/propane tax refund for buses)
  - **Deductions** (IA - $2,000 fuel cell vehicle deduction)

- **Exemptions**
  - **Idle reduction equipment weight** (AL – up to 400 lbs)
  - **Parking** (AZ – AFVs may park in carpool areas)
  - **HOV lane** (CA – AFVs may drive in HOV/HOT lanes)
  - **Registration fee** (DC – reduced fee for fuel-efficient vehicles)
  - **Emissions testing requirements** (MI – AFVs exempt)
State Incentive Examples

• **Grants**
  – **Vehicle Purchases** (CO – 80% of the cost of PEVs for agencies/non-profits)
  – **Vehicle Research and Development** (IN – AFV and fuel-efficient vehicle production projects)
  – **Infrastructure** (IL – up to $30,000 per facility for E85 fueling)
  – **Education** (KY – up to $2,000 for biodiesel education programs at schools)
  – **Production** (MN – up to $500,000 for research, technical assistance, or equipment at a cellulosic ethanol production facility)

• **Rebates**
  – **Vehicle** (CA – up to $2,500 for light-duty ZEV or PEV)
  – **Infrastructure** (IL – up to $7,500 for Level 2 EVSE)
State Incentive Examples

• Loans & Leases
  – **Idle Reduction** (AR – up to $45,000 at 80% of prime for large businesses)
  – **Vehicle/Infrastructure** (OK – 0% interest loans for government fleets)
  – **Production** (IA – forgivable and low-interest loans for businesses)

• Other
  – **Utility Rate Incentives** (VA – Virginia Dominion PEV rate pricing plans)
  – **Technical Assistance** (NY – vehicle and infrastructure assistance for fleets)
  – **Training** (TX – propane safety and maintenance training)
Questions, updates, or suggestions for the database?

Contact: TechnicalResponse@icfi.com
800-254-6735

Alexis Schayowitz
alexis.schayowitz@icfi.com
617-250-4281