Online Clean Air Vehicle Decision Tools for Fleets

100 Best Fleets Workshop - June 10, 2013

Richard Battersby, CAFM, CPFP

UC Davis Fleet & East Bay Clean Cities Coalition
Clean Cities Background

- Started in 1993 by US Department of Energy
- Mission: Reduce petroleum consumption
- Energy, Economic, and Environmental Security
- Almost 100 Coalitions - geographically based

Presentation at:  www.cleancitieseastbay.org
Clean Cities Goals

[Bar chart showing billions of gallons of petroleum saved from 1994 to 2011, with annotations indicating 'Reduce', 'Replace', and 'Eliminate'].

Billions of gallons of petroleum saved
Clean Cities Technologies

- Alternative fuels and vehicles
- Hybrid electric vehicles
- Idle reduction technologies
- Fuel economy measures
- Trip reduction
- Low-level fuel blends
In 2009, Clean Cities saved 446 million gallons of petroleum, with alternative fuel vehicles making the largest contribution, at 220 million gallons. Source: 2009 Clean Cities Annual Metrics Report
Why Alternative Fuel Vehicles?

- Avoid petroleum consumption
- Likely produced in US
- Cleaner burning/less pollution
- Can have lower cost of operation
- Mandated
- Intangibles: HOV, image, political
Current Alternative Fuels

- Biodiesel
- Electricity
- Ethanol
- Hydrogen
- Natural gas
- Propane
Future Technology?
Alternative Fuel Pricing

Average Retail Fuel Prices in the U.S.

- Gasoline
- E85
- CNG
- Propane
- Diesel
- B20
- B2/B5
- B99/B100

Dollars per GGE

Date of Report

Oct-9-2000
Propane: 1.76
Alternative Fuel Use

Estimated Consumption of Alternative Fuels by AFVs

- Liquefied Petroleum Gas (LPG)
- Compressed Natural Gas (CNG)
- Liquefied Natural Gas (LNG)
- 85% Methanol (M85)
- Neat Methanol (M100)
- 85% Ethanol (E85)
- 95% Ethanol (E95)
- Electric

Millions of GGEs

Alternative Fuel Stations

U.S. Alternative Fueling Stations by Fuel Type

Number of Stations

- Electric*
- Propane
- Methanol (M85)
- LNG
- Hydrogen
- Biodiesel**
- CNG
- E85

Timeline:
- 1992
- 1995
- 1998
- 2001
- 2004
- 2007
- 2010

Graph showing the increase in the number of alternative fueling stations over time.
Data??? Options???
Alternative Fuels Data Center

- Information about alternative fuels, vehicles, and fueling infrastructure
- Laws and incentives
- Interactive online tools
- Maps and data
- Deployment case studies
- Searchable publications database

http://www.afdc.energy.gov/
Clean Cities 2013 
Vehicle Buyer’s Guide
AFDC Tools

The Alternative Fuels Data Center offers a large collection of helpful tools. These calculators, interactive maps, and data searches can assist fleets, fuel providers, and other transportation decision makers in their efforts to reduce petroleum use.

**Calculators**
- Vehicle Cost Calculator
  - Compare cost of ownership and emissions for most vehicle models.
- Petroleum Reduction Planning Tool
  - Create a plan for your fleet to reduce petroleum consumption and emissions.
- GREET Fleet Footprint Calculator
  - Calculate your fleet's petroleum use and greenhouse gas emissions footprint.

**Interactive Maps**
- Alternative Fueling Station Locator
  - Locate alternative fueling stations and get maps and driving directions.
- TransAtlas
  - Analyze vehicle densities and locations of fueling stations and production facilities.
- BioFuels Atlas
  - Compare feedstocks and analyze biofuel production by location.

**Data Searches**
- Light-Duty Vehicle Search
  - Compare light-duty alternative fuel vehicles, electric vehicles, and hybrid vehicles.
- Heavy-Duty Vehicle and Engine Search
  - Find medium- and heavy-duty alternative fuel vehicles, engines, and hybrid systems.
- Fuel Properties Comparison
  - Compare alternative fuel properties and characteristics.
- Laws and Incentives Search
  - Search for laws and incentives related to alternative fuels and advanced vehicles.
- PEV Readiness Scorecard
  - Assess your community's readiness for the arrival of plug-in electric vehicles.
- Truck Stop Electrification Sites
  - Locate truck stops with electrification sites to reduce the need for idling.

**Tools**
- Search for tools related to alternative fuels and advanced vehicles.
**Light-Duty Vehicle Search**

Search our light-duty alternative fuel vehicle database to find and compare alternative fuel vehicles and generate printable reports to aid in decision-making. These vehicles might not qualify for vehicle-acquisition credits under the U.S. Department of Energy’s [EPAct State and Fuel Provider](https://www.afdc.energy.gov) or [Federal Fleet Management](https://www.afdc.energy.gov) programs. Contact these programs if you have questions about eligible vehicles.

### Fuel Type

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>Manufacturer</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plug-in Hybrid Electric (4)</td>
<td>All</td>
<td>All</td>
</tr>
</tbody>
</table>

### Compare

- **Chevrolet - Volt (2013)**
- **Ford - C-MAX ENERGI (2013)**
- **Ford - Fusion ENERGI (2013)**
- **Toyota - Prius Plug-In (2013)**
AFDC Alt Fuel Station Locator

Alternative Fuels Data Center

Alternative Fuels Data Center

LOCATE STATIONS

Find alternative fueling stations near an address or ZIP code or along a route in the United States. Enter a state to see a station count.

Find Stations

Plan a Route

1400 J St, Sacramento

More search options

Alternative fuel stations near 1400 J St
Sacramento, CA 95814
Excluding private stations

Esquire Plaza Garage
1215 K St
Sacramento, CA 95814
Phone: 888-758-4389
Fuel: Electric
Electric charging types: Level 2
Distance: 0.1 mi

Ace Parking
901-949 13th St
Sacramento, CA 95814
Phone: 888-758-4389
Fuel: Electric

Data Download

Developer Tools
Maps and Data

Find maps and charts showing transportation data and trends related to alternative fuels and vehicles.

Average Retail Fuel Prices in the U.S.

Source: Clean Cities Alternative Fuel Price Reports

Notes: Fuel volumes are measured in gasoline-gallon equivalents (GGEs), representing a quantity of fuel with the same amount of energy contained in a gallon of gasoline.

This chart shows average monthly retail fuel prices in the United States from 2000 to 2012. The price of petroleum fuels (gasoline and diesel fuel) is the primary driver of overall fuel prices. As petroleum prices rise, so does demand for alternative fuels, thereby pushing their prices upward as well. However, natural gas prices have been buffered from this driver, because its primary market is utilities, and due to recent increases in domestic natural gas production.
Mobile Alt Fuel Station Locator

Alternative Fueling Station Locator

Fuel Type
Biodiesel (820 and above)

Location
Enter a city, postal code, or address
Cleveland, OH

Include private stations
Not all stations are open to the public. Choose this option to also search private.

Search

Caution: The AFDC recommends that users verify that station code area instead of the actual location.

If you're having difficulty, please contact the technical response.

Station Locator Full Site
Clean Cities Home
EERE Home
Tools

The Alternative Fuels Data Center offers a large collection of helpful tools. These calculators, interactive maps, and data searches can assist fleets, fuel providers, and other transportation decision makers in their efforts to reduce petroleum use.

Calculators
- **Vehicle Cost Calculator**
  Compare cost of ownership and emissions for most vehicle models.
  [mobile]

- **Petroleum Reduction Planning Tool**
  Create a plan for your fleet to reduce petroleum consumption and emissions.

Interactive Maps
- **Alternative Fueling Station Locator**
  Locate alternative fueling stations and get maps and driving directions.
  [mobile]

- **TransAtlas**
  Analyze vehicle densities and locations of fueling stations and production facilities.

Data Searches
- **Light-Duty Vehicle Search**
  Compare light-duty alternative fuel vehicles, electric vehicles, and hybrids.

- **Heavy-Duty Vehicle and Engine Search**
  Find medium- and heavy-duty alternative fuel vehicles, engines, and hybrid systems.

- **BioFuels Atlas**
  Compare feedstocks and analyze biofuel production by location.

- **Fuel Properties Comparison**
  Compare alternative fuel properties and characteristics.

- **Laws and Incentives Search**
  Search for laws and incentives related to alternative fuels and advanced vehicles.

- **PEV Readiness Scorecard**
  Assess your community's readiness for the arrival of plug-in electric vehicles.

- **Truck Stop Electrification Sites**
  Locate truck stops with electrification sites to reduce the need for idling.
  [mobile]
Petroleum Reduction Planning Tool

This planning tool helps your vehicle fleet reduce petroleum consumption and greenhouse gas (GHG) emissions. Create a comprehensive plan for your fleet by using several savings methods. If your fleet includes multiple vehicle types, add more vehicles to each method.

My Current Plan

<table>
<thead>
<tr>
<th>Savings Methods</th>
<th>Petroleum Reduction gal/yr</th>
<th>GHG Reduction tons CO₂/yr</th>
<th>Fuel Cost Savings $/yr</th>
<th>Impact on Plan percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace Vehicles</td>
<td>3.220</td>
<td>18</td>
<td>$500</td>
<td>100%</td>
</tr>
<tr>
<td>Replace 10 midsize gas cars with 8 midsize cars using ethanol (E85) 80% of the time</td>
<td>3.220</td>
<td>18</td>
<td>$500</td>
<td>100%</td>
</tr>
<tr>
<td>Use Alternative Fuel in Existing Vehicles</td>
<td>ADD TO PLAN 0.00</td>
<td>0.00</td>
<td>$0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Reduce Idling</td>
<td>ADD TO PLAN 0.00</td>
<td>0.00</td>
<td>$0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Reduce Mileage</td>
<td>ADD TO PLAN 0.00</td>
<td>0.00</td>
<td>$0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Drive Efficiently</td>
<td>ADD TO PLAN 0.00</td>
<td>0.00</td>
<td>$0.00</td>
<td>0%</td>
</tr>
</tbody>
</table>

Total savings from plan per year
- 3,220 gallons
- 18 tons of CO₂
- $500
- 100%
Total Cost of Ownership

Vehicle Purchase Price
- Funding/Incentives
+ Operating Expense (fuel, repairs, insurance)
- Residual Value (resale)

= Total Cost of Ownership

Infrastructure?
# Total Cost of Ownership, Based on Actuals circa 2007

<table>
<thead>
<tr>
<th>Vehicle</th>
<th>Acquisition Cost</th>
<th>Clean Air Vehicle Rebate</th>
<th>Estimated Resale Value (KBB trade-in GOOD cond, 80,000 miles)</th>
<th>HOV Lane Access Decal Premium</th>
<th>Estimated Lifetime Net Capital Cost</th>
<th>Estimated Lifetime Fuel, Maintenance &amp; Repairs (Total CPM x 80,000 miles)</th>
<th>Estimated Lifetime Net Capital + Lifetime Operating Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001 Toyota Camry CNG*</td>
<td>$25,029.00</td>
<td>($2,000.00)</td>
<td>($5,220.00)</td>
<td>$0.00</td>
<td>$17,809.00</td>
<td>$13,520.00</td>
<td>$31,329.00</td>
</tr>
<tr>
<td>2001 Honda Civic CNG</td>
<td>$19,981.00</td>
<td>($2,000.00)</td>
<td>($6,220.00)</td>
<td>$0.00</td>
<td>$11,761.00</td>
<td>$14,720.00</td>
<td>$26,481.00</td>
</tr>
<tr>
<td>2001 Chevrolet Cavalier</td>
<td>$13,248.00</td>
<td>$0.00</td>
<td>($2,335.00)</td>
<td>$0.00</td>
<td>$10,913.00</td>
<td>$24,320.00</td>
<td>$35,233.00</td>
</tr>
<tr>
<td>2002 Toyota Prius Hybrid</td>
<td>$21,587.00</td>
<td>($2,000.00)</td>
<td>($9,315.00)</td>
<td>($1,000.00)</td>
<td>$9,272.00</td>
<td>$11,680.00</td>
<td>$20,952.00</td>
</tr>
<tr>
<td>2002 Ford Taurus SE</td>
<td>$16,027.00</td>
<td>$0.00</td>
<td>($3,670.00)</td>
<td>$0.00</td>
<td>$12,357.00</td>
<td>$18,800.00</td>
<td>$31,157.00</td>
</tr>
<tr>
<td>2003 Chevrolet Cavalier</td>
<td>$12,413.00</td>
<td>$0.00</td>
<td>($2,450.00)</td>
<td>$0.00</td>
<td>$9,963.00</td>
<td>$15,920.00</td>
<td>$25,883.00</td>
</tr>
<tr>
<td>2003 Ford Taurus SE</td>
<td>$16,038.00</td>
<td>$0.00</td>
<td>($4,020.00)</td>
<td>$0.00</td>
<td>$12,018.00</td>
<td>$15,920.00</td>
<td>$27,938.00</td>
</tr>
<tr>
<td>2003 Toyota Prius Hybrid</td>
<td>$21,324.00</td>
<td>($2,000.00)</td>
<td>($10,035.00)</td>
<td>($1,000.00)</td>
<td>$8,289.00</td>
<td>$10,480.00</td>
<td>$18,769.00</td>
</tr>
<tr>
<td>2004 Chevrolet Cavalier</td>
<td>$12,339.00</td>
<td>$0.00</td>
<td>($3,725.00)</td>
<td>$0.00</td>
<td>$8,614.00</td>
<td>$23,600.00</td>
<td>$32,214.00</td>
</tr>
<tr>
<td>2004 Ford Taurus SE</td>
<td>$16,134.00</td>
<td>$0.00</td>
<td>($4,325.00)</td>
<td>$0.00</td>
<td>$11,809.00</td>
<td>$14,880.00</td>
<td>$26,689.00</td>
</tr>
</tbody>
</table>
AFDC TCO Calculator

Vehicle Cost Calculator
This tool uses basic information about your driving habits to calculate total cost of ownership and emissions for makes and models of most vehicles, including alternative fuel and advanced technology vehicles. Also see the cost calculator widgets.

Choose vehicles to compare
Select up to eight vehicles to compare from the makes and models below or create your own custom vehicle.

Create Custom Vehicle

Tell us how you use your car
Because vehicle efficiencies vary depending on how you use your car, this information allows the tool to more accurately calculate fuel usage.

Normal Daily Use
Average daily driving distance: 34 miles
Days per week: 5
Weeks per year: 49
Percent highway: 45

Other Trips
Annual mileage: 3596 miles
Percent highway: 80

Annual Driving Distance
City Distance: 5301 miles
Highway Distance: 6625 miles
AFDC TCO Calculator Variables

Fuel Prices
- Gasoline: $4.25/gal
- E85: $3.76/gal

Tell us how you use your car

Normal Daily Use
- Average daily driving distance: 34 miles
- Days per week: 5
- Weeks per year: 49
- Percent highway: 45

Other Trips
- Annual mileage: 3596 miles
- Percent highway: 80

Annual Driving Distance
- City Distance: 5301 miles
- Highway Distance: 6625 miles

Electricity Use
- ZIP Code: 95616

E85 Ethanol Use
- Percent E85 use: 100%

# AFDC TCO Calculator

**Choose vehicles to compare**

Select up to eight vehicles to compare from the makes and models below or [create your own custom vehicle](#).

<table>
<thead>
<tr>
<th>Vehicle</th>
<th>Price</th>
<th>Fuel Economy (City/Hwy)</th>
<th>Fuel Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 Ford Focus BEV FWD Automatic (variable gear ratios) EV</td>
<td>$39,200</td>
<td>31/34 kWh/100m</td>
<td>Electric</td>
</tr>
<tr>
<td>2012 Ford Focus FWD 4cyl 2.0L Auto(AM6) Gasoline</td>
<td>$16,500</td>
<td>28/38 mpg</td>
<td>Gasoline</td>
</tr>
</tbody>
</table>

**Fuel Prices**

- **Gasoline**
  - $4.25 /gal

---

**Create Custom Vehicle**
### AFDC TCO Calculator

#### Choose vehicles to compare

Select up to eight vehicles to compare from the makes and models below or [create your own custom vehicle](#).

<table>
<thead>
<tr>
<th>Year</th>
<th>Make</th>
<th>Model</th>
<th>Price</th>
<th>Fuel Economy (City/Hwy)</th>
<th>Fuel Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Ford</td>
<td>Focus FWD 4cvl 2.0L Auto(AM6)</td>
<td>$29,200</td>
<td>31/34 kWh/100m</td>
<td>Electric</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2012 Ford Focus BEV FWD Automatic (variable gear ratios) EV</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2012 Ford Focus FWD 4cyl 2.0L Auto(AM6) Gasoline</td>
<td>$16,500</td>
<td>28/38 mpg</td>
<td>Gasoline</td>
</tr>
</tbody>
</table>

#### Clear all

Fuel Prices

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline</td>
<td>$4.25/gal</td>
</tr>
</tbody>
</table>
## Results

<table>
<thead>
<tr>
<th>Vehicle</th>
<th>Annual Fuel Use</th>
<th>Annual Electricity Use</th>
<th>Annual Fuel/Elec Cost</th>
<th>Annual Operating Cost</th>
<th>Cost Per Mile</th>
<th>Annual Emissions (lbs CO2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 Ford Focus BEV FWD EV</td>
<td>0 gal</td>
<td>3,896 kWh</td>
<td>$515</td>
<td>$2,620</td>
<td>$0.22</td>
<td>3,339</td>
</tr>
<tr>
<td>2012 Ford Focus FWD Gasoline</td>
<td>364 gal</td>
<td>0 kWh</td>
<td>$1,546</td>
<td>$3,803</td>
<td>$0.32</td>
<td>9,004</td>
</tr>
</tbody>
</table>

### Annual Fuel Cost (Dollars)

- **2012 Ford Focus BEV FWD EV**: 0 to 2,000
- **2012 Ford Focus FWD Gasoline**: 0 to 2,000

### Annual Operating Cost (Dollars)

- **2012 Ford Focus BEV FWD EV**: 0 to 4,000
- **2012 Ford Focus FWD Gasoline**: 0 to 4,000
AFDC TCO Calculator Graph

Cumulative Cost of Ownership by Year (Dollars)

Notes:
- 5 year loan, 90% financed
- Resale value not included
- Local grants not included
AFDC TCO Calculator Notes

- Good for quick “ballparking”
- Purchase price allows for funding/incentives
- Compares purchase and operating costs well (fuel maintenance, tires, insurance, license, and registration)
- Based on five year, 90% financed purchase
- Fuel costs are key

- Does not include resale value
- Does not include value of emission reduction
- Verify emissions calculations for electricity
- Infrastructure costs?
# CNG/Diesel Cost Calculator

## Calculate Your Natural Gas Savings

The Freightliner Cascadia 113 Day Cab tractor runs on the cleanest technology available: natural gas. Natural gas vehicles help fleets go green and add green to the bottom line. While the cost of diesel continues to rise, the cost of natural gas remains steady and significantly cheaper. Use the calculator below to find out how much money you can save by choosing Freightliner's natural gas lineup.

### SAVINGS CALCULATOR:

<table>
<thead>
<tr>
<th>Natural Gas Application:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressed Natural Gas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid Natural Gas</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fleet Size: 10 Trucks</th>
<th>Average Miles Per Year: 50,000 Miles</th>
<th>Average Diesel MPG: 6 MPG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Diesel Cost: $4.5</td>
</tr>
<tr>
<td>Natural Gas Cost: $1.75</td>
<td></td>
<td>Incremental NG Truck Cost: $50,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Government Incentives: $32,000</td>
</tr>
</tbody>
</table>

### Results

- Natural Gas Cost: $183,102
- Diesel Cost: $375,000
- Payback on Incremental Truck Cost: 0.94 Years
- Annual Fuel Savings: $191,898

[http://www.freightlinergreen.com/calculator](http://www.freightlinergreen.com/calculator)
Need More? FuelEconomy.gov

Fuel economy information
✓ Side-by-side comparisons
✓ Fuel economy ratings
✓ Energy impact
✓ Smog score
✓ GHG emissions
✓ Fuel costs
<table>
<thead>
<tr>
<th>Model</th>
<th>Mileage per Gallon</th>
<th>Electric Mileage</th>
<th>Fuel Economy</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013 Honda Civic Natural Gas</td>
<td>31 Combined</td>
<td>118 Combined</td>
<td>132 City 105 Highway</td>
</tr>
<tr>
<td>2013 Honda Fit EV Electric Vehicle</td>
<td>27 City 38 Highway</td>
<td>29 kW-hrs/100 mi</td>
<td></td>
</tr>
<tr>
<td>2013 Ford C-Max Energi Plug-in Hybrid</td>
<td>31 Combined</td>
<td>100 Combined .0 gal/100 mi of gas plus 34 kW-hrs/100 mi</td>
<td></td>
</tr>
<tr>
<td>2013 Toyota Prius Hybrid Vehicle</td>
<td>43 Combined</td>
<td>50 Combined</td>
<td>44 City 41 Highway</td>
</tr>
<tr>
<td></td>
<td>43 Combined</td>
<td>48 Combined</td>
<td>44 City 41 Highway</td>
</tr>
<tr>
<td></td>
<td>2.3 gallons/100 mi</td>
<td>2.0 gallons/100 mi</td>
<td></td>
</tr>
</tbody>
</table>

Unofficial MPG Estimates from Vehicle Owners:

- **Your MPG**: Learn more about "Your MPG" [Disclaimer]
- **EPA fuel economy**: Not comparable to EPA fuel economy because these estimates do not include electricity use.

Fuel Economics:

- **You save or spend**: Note: The average 2013 vehicle gets 23 MPG
  - **You save $6,750**: in fuel costs over 5 years compared to the average new vehicle
  - **You save $9,250**: in fuel costs over 5 years compared to the average new vehicle
  - **You save $7,000**: in fuel costs over 5 years compared to the average new vehicle
  - **You save $6,250**: in fuel costs over 5 years compared to the average new vehicle

- **Annual Fuel Cost**
  - **CNG**: $1,000
  - **Elec**: $500
  - **Electricity + Gasoline**: $950
  - **Gas**: $1,100

Note: The average 2013 vehicle gets 23 MPG.
<table>
<thead>
<tr>
<th>2013 Honda Civic Natural Gas</th>
<th>2013 Honda Fit EV</th>
<th>2013 Ford C-Max Energi Plug-in Hybrid</th>
<th>2013 Toyota Prius</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas Vehicle</td>
<td>Electric Vehicle</td>
<td>Plug-in Hybrid</td>
<td>Hybrid Vehicle</td>
</tr>
<tr>
<td>1.8 L, 4 cyl, Automatic 5-spd</td>
<td>Automatic (A1)</td>
<td>2.0 L, 4 cyl, Automatic (variable gear ratios)</td>
<td>1.8 L, 4 cyl, Automatic (variable gear ratios)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MSRP: $36,625</td>
<td>MSRP: $24,200 - $30,005</td>
</tr>
</tbody>
</table>

**Fuel Economics**

<table>
<thead>
<tr>
<th>You save or spend*</th>
<th>You SAVE $6,750 in fuel costs over 5 years compared to the average new vehicle</th>
<th>You SAVE $9,250 in fuel costs over 5 years compared to the average new vehicle</th>
<th>You SAVE $7,000 in fuel costs over 5 years compared to the average new vehicle</th>
<th>You SAVE $6,250 in fuel costs over 5 years compared to the average new vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note: The average 2013 vehicle gets 23 MPG.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Fuel Cost*</td>
<td>CNG: $1,000</td>
<td>Elec: $500</td>
<td>Electricity + Gasoline: $950</td>
<td>Gas: $1,100</td>
</tr>
<tr>
<td>Driving Range (miles)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NATURAL GAS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELECTRICITY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELECTRICITY + GASOLINE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REGULAR GASOLINE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost to Drive 25 Miles</td>
<td>$1.59</td>
<td>$0.87</td>
<td>$1.19 (Cost to drive 25 miles on a single charge)</td>
<td>$1.80</td>
</tr>
<tr>
<td>Fuel to Drive 25 Miles</td>
<td>0.6 gallons</td>
<td>7.25 kW-hrs</td>
<td>7.1 kW-hrs of electricity and 0.1 gallons of gas</td>
<td>0.5 gallons</td>
</tr>
<tr>
<td>Cost to Fill the Tank</td>
<td></td>
<td></td>
<td></td>
<td>$39</td>
</tr>
<tr>
<td>Miles on a Tank</td>
<td></td>
<td></td>
<td></td>
<td>536 miles</td>
</tr>
<tr>
<td>Tank Size</td>
<td></td>
<td></td>
<td></td>
<td>11.9 miles</td>
</tr>
<tr>
<td>REGULAR GASOLINE ONLY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost to Drive 25 Miles</td>
<td></td>
<td></td>
<td></td>
<td>$2.10</td>
</tr>
<tr>
<td>Fuel to Drive 25 Miles</td>
<td></td>
<td></td>
<td></td>
<td>0.5 gallons</td>
</tr>
<tr>
<td>Cost to Fill the Tank</td>
<td></td>
<td></td>
<td></td>
<td>$45</td>
</tr>
<tr>
<td>Tank Size</td>
<td></td>
<td></td>
<td></td>
<td>14.0 gallons</td>
</tr>
</tbody>
</table>

*Based on 45% highway, 55% city driving, 15,000 annual miles and current fuel prices. [Personalize](#).
MSRP and tank size data provided by Edmunds.com, Inc.
Miles on a tank and refueling costs assume 90% of fuel in tank will be used before refueling.
### Energy Impact Score

<table>
<thead>
<tr>
<th>Natural Gas</th>
<th>Electricity</th>
<th>Electricity + Gasoline</th>
<th>Regular Gasoline</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 barrels</td>
<td>0.2 barrels</td>
<td>4.2 barrels</td>
<td>6.6 barrels</td>
</tr>
</tbody>
</table>

### Greenhouse Gas Emissions

<table>
<thead>
<tr>
<th>Units: Metric tons per year</th>
<th>Natural Gas</th>
<th>Electricity</th>
<th>Electricity + Gasoline</th>
<th>Regular Gasoline</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3 metric tons per year</td>
<td>0.0 metric tons per year</td>
<td>1.6 metric tons per year</td>
<td>2.7 metric tons per year</td>
<td></td>
</tr>
</tbody>
</table>

### EPA Smog Rating

<table>
<thead>
<tr>
<th>State of purchase: California</th>
<th>ZEV DHNXV00.0SET</th>
<th>PZEV DFMXV02.0VZP</th>
<th>PZEV DTYXV01.8HC3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Available</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
Questions?
Funding Strategies 101

- Clean air vehicles cost more

- Internal funding mechanisms
  (you pay for it)

- External funding sources
  (somebody else pays for it!)
Funding Strategies 101

- Grants
- Vouchers/Incentives
- Rebates/tax credits
- Leasing?
THE FUNDING PYRAMID
THE INVERTED FUNDING PYRAMID

$$$
Threshold
Effort
Paperwork

Federal
State
Local
FUNDING SOURCES
**FEDERAL**

- **Department of Energy (DOE)**
  - EERE, VTP, SEP, Clean Cities

- **Environmental Protection Agency (EPA)**
  - National and Regional, NCDC and DERA clean diesel
    http://www.epa.gov/otaq/diesel/index.htm

- **Department of Transportation (DOT)**
  - FTA, FHWA, TCSP, FAA (VALE), etc.

- **Department of Agriculture (USDA)**
  - REAP, Flex Fuel dispensers, biofuel production
FEDERAL GRANT SOURCES (test)

DOE  EPA  DOT  USDA  IRS
CA Energy Commission
http://www.energy.ca.gov/contracts/transportation.html

CA Air Resources Board
http://www.arb.ca.gov/ba/fininfo.htm
STATE (CA Energy Commission)

Solicitations for Transportation Area Programs

- Vehicle Incentives
- Fueling Infrastructure
- Fuel Production
- Manufacturing
- Market and Program Development
- Innovative Technologies, Advanced Fuels, and Federal Cost Sharing
- Partner Agency Solicitations

American Recovery and Reinvestment Act (ARRA)

http://www.energy.ca.gov/contracts/transportation.html
CEC AB 118

Annual program budget of approximately $100 million to support projects that:

• Develop and improve alternative and renewable low-carbon fuels.
• Optimize alternative and renewable fuels for existing and developing engine technologies.
• Produce alternative and renewable low-carbon fuels in California.
• Decrease, on a full fuel cycle basis, the overall impact and carbon footprint of alternative and renewable fuels and increase sustainability.
• Expand fuel infrastructure, fueling stations, and equipment.
• Improve light-, medium-, and heavy-duty vehicle technologies.
• Retrofit medium- and heavy-duty on-road and non-road vehicle fleets.
• Expand infrastructure connected with existing fleets, public transit, and transportation corridors.
• Establish workforce training programs, conduct public education and promotion, and create technology centers.
## AB 118 GASEOUS VEHICLE INCENTIVE

### Natural Gas and Propane Vehicles

<table>
<thead>
<tr>
<th>GVW (lbs)</th>
<th>Incentive Amounts</th>
<th>Natural Gas</th>
<th>Propane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 8,500</td>
<td></td>
<td>$3,000</td>
<td>$3,000</td>
</tr>
<tr>
<td>8,501 – 14,000</td>
<td></td>
<td>$8,000</td>
<td>$6,000</td>
</tr>
<tr>
<td>14,001 – 26,000</td>
<td></td>
<td>$20,000</td>
<td>$10,000</td>
</tr>
<tr>
<td>26,001 &amp; greater</td>
<td></td>
<td>$32,000</td>
<td></td>
</tr>
</tbody>
</table>

### Propane School Buses

<table>
<thead>
<tr>
<th>GVW (lbs)</th>
<th>Incentive Amounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 14,000</td>
<td>$15,000</td>
</tr>
<tr>
<td>Greater than 14,000</td>
<td>$20,000</td>
</tr>
</tbody>
</table>

## AB 118 Previous Year Awards

### Table ES-1: Funding Awarded to Date (in Millions)

<table>
<thead>
<tr>
<th>Category</th>
<th>Funded Activity</th>
<th>Initial Awards 2008-09 / 2009-10 (First Investment Plan)</th>
<th>Augmented Awards 2010-11 (Second Investment Plan)</th>
<th>Total Award</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ARRA</strong></td>
<td>Cost-Sharing for Federal Projects</td>
<td>$36.5</td>
<td>$2.4</td>
<td>$38.9</td>
</tr>
<tr>
<td><strong>Electric Drive</strong></td>
<td>Charging Infrastructure</td>
<td>$3.2</td>
<td>$2.4</td>
<td>$5.6</td>
</tr>
<tr>
<td></td>
<td>Convert State Vehicles to Plug-in Hybrid Vehicles</td>
<td>$6.6</td>
<td>-</td>
<td>$6.6</td>
</tr>
<tr>
<td></td>
<td>Light-Duty Vehicle Rebates</td>
<td>$2.0</td>
<td>-</td>
<td>$2.0</td>
</tr>
<tr>
<td></td>
<td>Medium- and Heavy-Duty Vehicle Rebates</td>
<td>$4.0</td>
<td>-</td>
<td>$4.0</td>
</tr>
<tr>
<td></td>
<td>Medium- and Heavy-Duty Advance Vehicle Demonstrations</td>
<td>$10.0</td>
<td>$2.0</td>
<td>$12.0</td>
</tr>
<tr>
<td></td>
<td>Manufacturing Facilities and Equipment</td>
<td>$19.0</td>
<td>$5.9</td>
<td>$24.9</td>
</tr>
<tr>
<td><strong>Hydrogen</strong></td>
<td>Public Fueling Stations</td>
<td>$15.7</td>
<td>-</td>
<td>$15.7</td>
</tr>
<tr>
<td></td>
<td>Transit Project</td>
<td>$3.0</td>
<td>-</td>
<td>$3.0</td>
</tr>
<tr>
<td></td>
<td>Fuel Standards Development</td>
<td>$4.0</td>
<td>-</td>
<td>$4.0</td>
</tr>
<tr>
<td><strong>Natural Gas</strong></td>
<td>Fueling Infrastructure</td>
<td>$5.1</td>
<td>-</td>
<td>$5.1</td>
</tr>
<tr>
<td><strong>Propane</strong></td>
<td>School Bus Incentives*</td>
<td>$2.0</td>
<td>-</td>
<td>$2.0</td>
</tr>
<tr>
<td><strong>Biofuels</strong></td>
<td>Biomethane Production</td>
<td>$35.1</td>
<td>$0.2</td>
<td>$35.3</td>
</tr>
<tr>
<td></td>
<td>Diesel Substitutes Production</td>
<td>$2.8</td>
<td>$1.5</td>
<td>$4.3</td>
</tr>
<tr>
<td></td>
<td>Advanced Ethanol and Gasoline Substitutes Production</td>
<td>$3.5</td>
<td>$1.9</td>
<td>$5.4</td>
</tr>
<tr>
<td></td>
<td>California Ethanol Producers Incentive Program</td>
<td>$6.0</td>
<td>-</td>
<td>$6.0</td>
</tr>
<tr>
<td></td>
<td>E85 Fueling Stations</td>
<td>$1.0</td>
<td>-</td>
<td>$1.0</td>
</tr>
<tr>
<td></td>
<td>Upstream Biodiesel Infrastructure</td>
<td>$3.9</td>
<td>-</td>
<td>$3.9</td>
</tr>
<tr>
<td><strong>Workforce</strong></td>
<td>Workforce Training and Development</td>
<td>$15.0</td>
<td>$0.8</td>
<td>$15.8</td>
</tr>
<tr>
<td><strong>Agreements</strong></td>
<td>Sustainability Research</td>
<td>$1.5</td>
<td>-</td>
<td>$1.5</td>
</tr>
<tr>
<td></td>
<td>Technical Assistance and Analysis</td>
<td>$1.6</td>
<td>-</td>
<td>$1.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>$175.5</td>
<td>$14.6</td>
<td>$190.2</td>
</tr>
</tbody>
</table>

Source: California Energy Commission

* Solicitation is currently underway.
## AB 118 PLANNED INVESTMENTS

Table ES-2: Future Funding Solicitations and Agreements (in Millions)

<table>
<thead>
<tr>
<th>Category</th>
<th>Funded Activity</th>
<th>Funds Remaining From Second Investment Plan 2010-11</th>
<th>Proposed Allocations From Third Investment Plan 2011-12</th>
<th>Total Future Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electric Drive</strong></td>
<td>Plug-in Electric Vehicle Regional Readiness Plans*</td>
<td>$1.0</td>
<td>$1.0</td>
<td>$2.0</td>
</tr>
<tr>
<td></td>
<td>Charging Infrastructure</td>
<td>-</td>
<td>$7.0</td>
<td>$7.0</td>
</tr>
<tr>
<td></td>
<td>Medium- and Heavy-Duty Advance Vehicle Demonstrations**</td>
<td>$8.9</td>
<td>$8.0</td>
<td>$16.9</td>
</tr>
<tr>
<td></td>
<td>Manufacturing Facilities and Equipment**</td>
<td>-</td>
<td>$10.0</td>
<td>$10.0</td>
</tr>
<tr>
<td><strong>Hydrogen</strong></td>
<td>Fueling Infrastructure</td>
<td>$10.2</td>
<td>$8.5</td>
<td>$18.7</td>
</tr>
<tr>
<td><strong>Natural Gas</strong></td>
<td>Fueling Infrastructure</td>
<td>$1.6</td>
<td>$8.0</td>
<td>$9.6</td>
</tr>
<tr>
<td></td>
<td>Light-, Medium- and Heavy-Duty Vehicles*</td>
<td>$10.2</td>
<td>$12.0</td>
<td>$22.2</td>
</tr>
<tr>
<td><strong>Propane</strong></td>
<td>Light- and Medium-Duty Vehicles*</td>
<td>$2.4</td>
<td>-</td>
<td>$2.4</td>
</tr>
<tr>
<td></td>
<td>Light-Duty Vehicles</td>
<td>-</td>
<td>$1.0</td>
<td>$1.0</td>
</tr>
<tr>
<td></td>
<td>Medium- and Heavy-Duty Vehicles</td>
<td>-</td>
<td>$3.0</td>
<td>$3.0</td>
</tr>
<tr>
<td></td>
<td>Fueling Infrastructure</td>
<td>-</td>
<td>$0.5</td>
<td>$0.5</td>
</tr>
<tr>
<td><strong>Biofuels</strong></td>
<td>Biomethane Production</td>
<td>$5.3</td>
<td>$8.0</td>
<td>$13.3</td>
</tr>
<tr>
<td></td>
<td>Diesel Substitutes Production</td>
<td>$3.9</td>
<td>$8.0</td>
<td>$11.9</td>
</tr>
<tr>
<td></td>
<td>Advanced Ethanol and Gasoline Substitutes Production</td>
<td>$4.5</td>
<td>$8.0</td>
<td>$12.5</td>
</tr>
<tr>
<td></td>
<td>E85 Fueling Stations</td>
<td>$5.1</td>
<td>$5.0</td>
<td>$10.1</td>
</tr>
<tr>
<td></td>
<td>Upstream Biodiesel Infrastructure</td>
<td>$3.1</td>
<td>-</td>
<td>$3.1</td>
</tr>
<tr>
<td><strong>Innovative Technologies</strong></td>
<td>Innovative Technologies, Advanced Fuels and Federal Cost-Sharing</td>
<td>$6.3</td>
<td>$3.0</td>
<td>$9.3</td>
</tr>
<tr>
<td><strong>Workforce Agreements</strong></td>
<td>Workforce Training and Development</td>
<td>-</td>
<td>$6.5</td>
<td>$6.5</td>
</tr>
<tr>
<td><strong>Other Agreements</strong></td>
<td>Sustainability Studies</td>
<td>$2.0</td>
<td>$0.5</td>
<td>$2.5</td>
</tr>
<tr>
<td></td>
<td>Marketing, Education and Outreach</td>
<td>$2.0</td>
<td>-</td>
<td>$2.0</td>
</tr>
<tr>
<td></td>
<td>Technical Assistance and Analysis</td>
<td>$3.7</td>
<td>$2.0</td>
<td>$5.7</td>
</tr>
<tr>
<td></td>
<td>Measurement, Verification and Evaluation</td>
<td>$1.7</td>
<td>-</td>
<td>$1.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>$71.8</td>
<td>$100.0</td>
<td>$171.8</td>
</tr>
</tbody>
</table>

Source: California Energy Commission.

*Solicitation is currently underway using funds from the second Investment Plan. Funds from the third Investment Plan may be used to supplement this solicitation.

**Funding eligibility for these activities has been expanded beyond strictly electric drive technologies.

STATE (CA Air Resources Board)

ARB Grant Programs for Clean On- and Off-Road Vehicles/Equipment

- Air Quality Improvement Program (AB 118)
- Carl Moyer Program
  - Voucher Incentive Program
- Enhanced Fleet Modernization Program (AB118)
- Goods Movement Emission Reduction Program
- Loan Incentives Program
- Lower-Emission School Bus Program / School Bus Retrofit and Replacement Account

http://www.arb.ca.gov/ba/fininfo.htm
ARB HVIP VOUCHER PROGRAM

ARB FY - 2011 Estimated Balance: $12,161,442.00

HVIP Voucher Funding (as of July 27, 2011)
ARB FY11 Voucher Funding Requested: $5,860,000 (277 vehicles)
ARB FY11 Voucher Funding Remaining: $12,226,442

CEC FY11 Voucher Funding: $3,800,000 (funding exhausted--155 vehicles)
SCAQMD FY10 Voucher Funding: $1,430,000 (funding exhausted--41 vehicles)
ARB FY10 Voucher Funding: $19,445,000 (funding exhausted--667 vehicles)

2011 HVIP Voucher Amounts
New HVIP voucher amounts are slightly lower than last year and can be seen in the table below. If you have any questions, please call the HVIP toll-free line.

| Gross Vehicle Weight in Pounds (lbs) | Base Incentive  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8,501 – 10,000 lbs</td>
<td>$10,000</td>
</tr>
<tr>
<td></td>
<td>$15,000</td>
</tr>
<tr>
<td>10,001 – 19,500 lbs</td>
<td>$15,000</td>
</tr>
<tr>
<td>19,501 – 33,000 lbs</td>
<td>$20,000</td>
</tr>
<tr>
<td>33,001 – 38,000 lbs</td>
<td>$25,000</td>
</tr>
<tr>
<td>&gt; 38,000 lbs</td>
<td>$30,000</td>
</tr>
</tbody>
</table>

1The first HVIP-eligible vehicle purchased by a fleet and ARB-certified hybrid vehicles above 14,000 lbs are eligible for an additional $5,000 voucher.
2This weight category includes plug-in hybrid and zero-emission vehicles only.
3Zero-emission commercial vehicles in this weight category are eligible for $20,000.

http://www.californiahvip.org/
The Clean Vehicle Rebate Project (CVRP) is funded by the California Environmental Protection Agency's Air Resources Board (ARB) and administered statewide by the California Center for Sustainable Energy (CCSE). A total of $11.1 million has been appropriated for FY 2009-2011 to promote the production and use of zero-emission vehicles (ZEV), including electric, plug-in hybrid electric, and fuel cell vehicles. Rebates of up to $2,500 per light-duty vehicle are available for individuals and business owners who purchase or lease new eligible zero-emission or plug-in hybrid electric vehicles.

Of this $11.1 million, $2 million was provided by the California Energy Commission on May 26, 2011. Funding from the Energy Commission is specifically dedicated to light-duty ZEVs capable of freeway operation and certified for four or more passengers. Click here to read a press release which provides more information about this funding announcement.

IMPORTANT MESSAGE: FY 2010-2011 funding for the CVRP has been distributed. We expect FY 2011-2012 funding to become available later this year. Please check back regularly for updated information. In the interim, CCSE will be accepting applications for eligible CVRP vehicles and putting these applicants on a waiting list until FY 2011-2012 funds are added.
ARB CLEAN VEHICLE REBATE PROJECT

Vehicle Eligibility

- New vehicles only
- Battery electric, plug-in hybrid electric, and fuel cell vehicles
- Vehicles must be purchased or leased on or after March 15, 2010
- Vehicles up to 8500lb in GVWR (cars, zero-emission motorcycles, and neighborhood electric vehicle)
- Only ARB-certified or approved zero-emission or plug-in hybrid electric vehicles
For your state energy office, look here:
http://www.naseo.org/members/states/default.aspx

Alternative Fuels and Advanced Vehicles Data Center
http://www.afdc.energy.gov/afdc/states/
NASEO STATE ENERGY OFFICE LOCATOR

NASEO
Transforming America's Energy Future

NASEO State & Territory Energy Office Members

Click on the map below for information about each state energy office:
NASEO STATE ENERGY OFFICE LOCATOR

NASEO State & Territory Members
California

California Energy Commission
1516 Ninth Street, MS #39
Sacramento, CA 95814-5512
916.654.4287 fax: 916.654.4423
www.energy.ca.gov

Staff Contacts

Susan Click
Executive Assistant
916-654-4996
sglick@energy.state.ca.us

Andrea Gough
916.654.4928
agough@energy.state.ca.us

Melissa Jones
Executive Director
916.654.4996
mjones@energy.state.ca.us
State Information

Click on the map below to obtain state-specific information on alternative fuel and advanced vehicle incentives and laws, locations of alternative fueling stations and truck stop electrification sites, area fuel prices, and much more.

http://www.afdc.energy.gov/afdc/states/
AFDC STATE RESOURCE DIRECTORY

Alternative Fuels & Advanced Vehicles Data Center

Information Resources

California Information
This state page compiles information related to alternative fuels and advanced vehicles in California and includes new incentives and laws, alternative fueling station locations, truck stop electrification sites, fuel prices, and local points of contact.

Incentives and Laws
Read about California’s Incentives and Laws, including the latest ones listed below.
- Employer Invested Emissions Reduction Funding - South Coast
- Air Quality Improvement Program Funding - Ventura County
- Low Emissions School Bus Grants
- High Occupancy Vehicle (HOV) Lane Exemption
To look up nationwide legislative activity, visit Incentives and Laws.

Locator Tools
Alternative Fueling Station Locator
Look up the locations of California's 1182 alternative refueling stations.
- Biodiesel (36)
- Ethanol (62)
- Electricity (604)
- Hydrogen (22)
- Natural Gas (221)
- Propane (237)
For a nationwide search, visit the Alternative Fueling Station Locator.

http://www.afdc.energy.gov/afdc/states/_ _
AFDC STATE RESOURCE DIRECTORY

California Incentives and Laws
Listed below are incentives, laws, and regulations related to alternative fuels and advanced vehicles for California. Your Clean Cities coordinator at your local coalition can provide you with information about grants and other opportunities. You can also access coordinator and other agency contact information in the points of contact section.

Incentives and Laws

Information in this list is updated annually after California’s legislative session ends.
Last Updated May 2011

State Incentives
- Hybrid Electric Vehicle Purchase Vouchers
- Plug-In Hybrid and Zero Emission Light-Duty Vehicle Rebates
- Alternative Fuel and Vehicle Research and Development Incentives
- High Occupancy Vehicle (HOV) Lane Exemption
- Alternative Fuel Vehicle (AFV) and Fueling Infrastructure Grants
- Emissions Reduction Grants
- Heavy-Duty Vehicle Emissions Reduction Grants
- Natural Gas Vehicle (NGV) Home Fueling Infrastructure Incentive - South Coast
- Low Emissions School Bus Grants
- Alternative Fuel and Advanced Technology Research and Development
- Advanced Transportation Financing
- Compressed Natural Gas (CNG) Tax Exemption for Transit Use
- Vehicle Emissions Reduction Grants - Sacramento
- Employer Invested Emissions Reduction Funding - South Coast
- Technology Advancement Funding - South Coast
- Low Emission Vehicle Incentives and Technical Training - San Joaquin Valley
- Air Quality Improvement Program Funding - Ventura County

Utility/Private Incentives
- Electric Vehicle Supply Equipment (EVSE) Incentive - Coulomb Technologies
- Electric Vehicle Supply Equipment (EVSE) Rebate - LADWP
- Electric Vehicle Supply Equipment (EVSE) Incentive - ECOnality
- Alternative Fuel Vehicle (AFV) and Hybrid Electric Vehicle (HEV) Insurance Discount
- Electric Vehicle (EV) Charging Rate Credit - SDG&E
- Electric Vehicle (EV) Charging Rate Reduction - LADWP
- Electric Vehicle (EV) Charging Rate Reduction - SCE
- Clean Vehicle Electricity and Natural Gas Rate Reduction - PG&E
- Electric Vehicle (EV) and Natural Gas Infrastructure Charging Rate Reduction - SDG&E
- Natural Gas Rate Reduction - SoCalGas
- Biofuel Volume Rebate Program - Propel Fuels
LOCAL

- Clean Cities
- Air Quality Management Districts
- Metropolitan Planning Organizations (MPO)
  *Congestion Mitigation & Air Quality (CMAQ) Funds*
- Transit/Transportation Authorities
- Utilities
- Cy pres, non-profits, and corporate philanthropy
- Carbon/pollution offsets and credits (?)
BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Carl Moyer Memorial Air Quality Standards Attainment Program

Approximately $14 million is available for emission reduction projects! The Air District will start accepting project applications for the Carl Moyer Program Year 13 funding cycle on August 8, 2011.

Grants are available for projects that:
- install verified emission control devices
- replace older heavy-duty engines with newer and cleaner engines
- replace older equipment with newer and cleaner equipment
- purchase new equipment that is cleaner than the law requires
- install electric idling-reduction equipment

Eligible Equipment Categories
- Agricultural Equipment
- Locomotives
- Trucks
- Off-Road Equipment
- Marine
- Shore power

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Mobile Source Incentive Fund

The Mobile Source Incentive Fund (MSIF) funding source was authorized by the Bay Area Air Quality Management District in December 2004, and is used for both public and private sector projects. MSIF revenues are collected from a $2 registration surcharge fee on vehicles registered with the Department of Motor Vehicles in the District’s jurisdiction. This surcharge generates about $11 million for the fund every year. MSIF revenues are used to finance vehicle scrap programs, agricultural assistance programs, and the purchasing of new lower-emission school buses.

Funding Sources
- Carl Moyer Program
- Mobile Source Incentive Fund
- Transportation Fund for Clean Air
- Other Funding Opportunities

Transportation Fund for Clean Air

The Transportation Fund for Clean (TFCA) is a grant program funded by a $4 surcharge on motor vehicles registered in the Bay Area. This generates approximately $22 million per year in revenues.

TFCA provides grants to projects that implement the most cost-effective projects in the Bay Area that will decrease motor vehicle emissions, and thereby improve air quality. Projects must be consistent with the 1988 California Clean Air Act and the Bay Area Ozone Strategy.

Funding Process

TFCA funds are available through two main channels: the Regional Fund and the County Program Manager Fund. The Regional Fund receives about 60% of the TFCA revenues and is administered directly by the Air District. The Program Manager Fund receives approximately 40% of the TFCA revenues and is administered in coordination with the Bay Area’s nine county congestion management agencies (CMAs).

Eligible Project Types

The TFCA program can fund a wide range of project types, including the purchase or lease of clean air vehicles; shuttle and feeder bus service to train stations; ridesharing programs to encourage carpool and transit use; bicycle facility improvements such as bike lanes, bicycle racks, and lockers; arterial management improvements to speed traffic flow on major arterials; smart growth projects; and transit information projects to enhance the availability of transit information. Projects must be conducted within the Air District’s jurisdiction.

Who Can Apply?

Metropolitan Planning Organizations

Metropolitan Planning Organizations are responsible for planning, programming and coordination of federal highway and transit investments in urbanized areas.

**Alabama**
- Birmingham MPO - Birmingham (AL)
- Dothan MPO - Dothan (AL)
- East Alabama Regional Planning and Development Commission - Anniston (AL)
- Gadsden-Etowah MPO - Gadsden (AL)
- Huntsville MPO - Huntsville (AL)
- Lee-Russell COG - Opelika (AL)
- Montgomery Division of PPT - Montgomery (AL)
- North Central Alabama Regional COG - Decatur (AL)
- Northwest Alabama COG - Mobile-Shelby (AL)
- South Alabama PRC - Mobile (AL)
- West Alabama PDC - Northport (AL)

**Alaska**
- Anchorage NATS - Anchorage (AK)

**Arizona**
- Flagstaff MPO - Flagstaff (AZ)
- Maricopa POA - Phoenix (AZ)
- Pima ARO - Tucson (AZ)

**Arkansas**
- Arkansas PRC - Fort Smith (AR)
- Metropolitan - Little Rock (AR)
- Northwest Arkansas PRC - Springdale (AR)
- Southeast Arkansas PRC - Pine Bluff (AR)
- West Memphis MPO - West Memphis (AR)

**California**
- ABAG - San Francisco (CA)
- Santa Clara Association of Governments - San Jose (CA)
- Council of Orange County Governments - Riverside (CA)
- Kern COG - Bakersfield (CA)
- Merced County Association of Governments - Merced (CA)

[http://www.bts.gov/external_links/government/metropolitan_planning_organizations]