

# Alternative Fuels and Advanced Vehicles: Resources for Fleet Managers

April 12, 2011

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National Renewable Energy Laboratory  
Golden, CO

## Resources for implementing alternative fuels & advanced vehicles

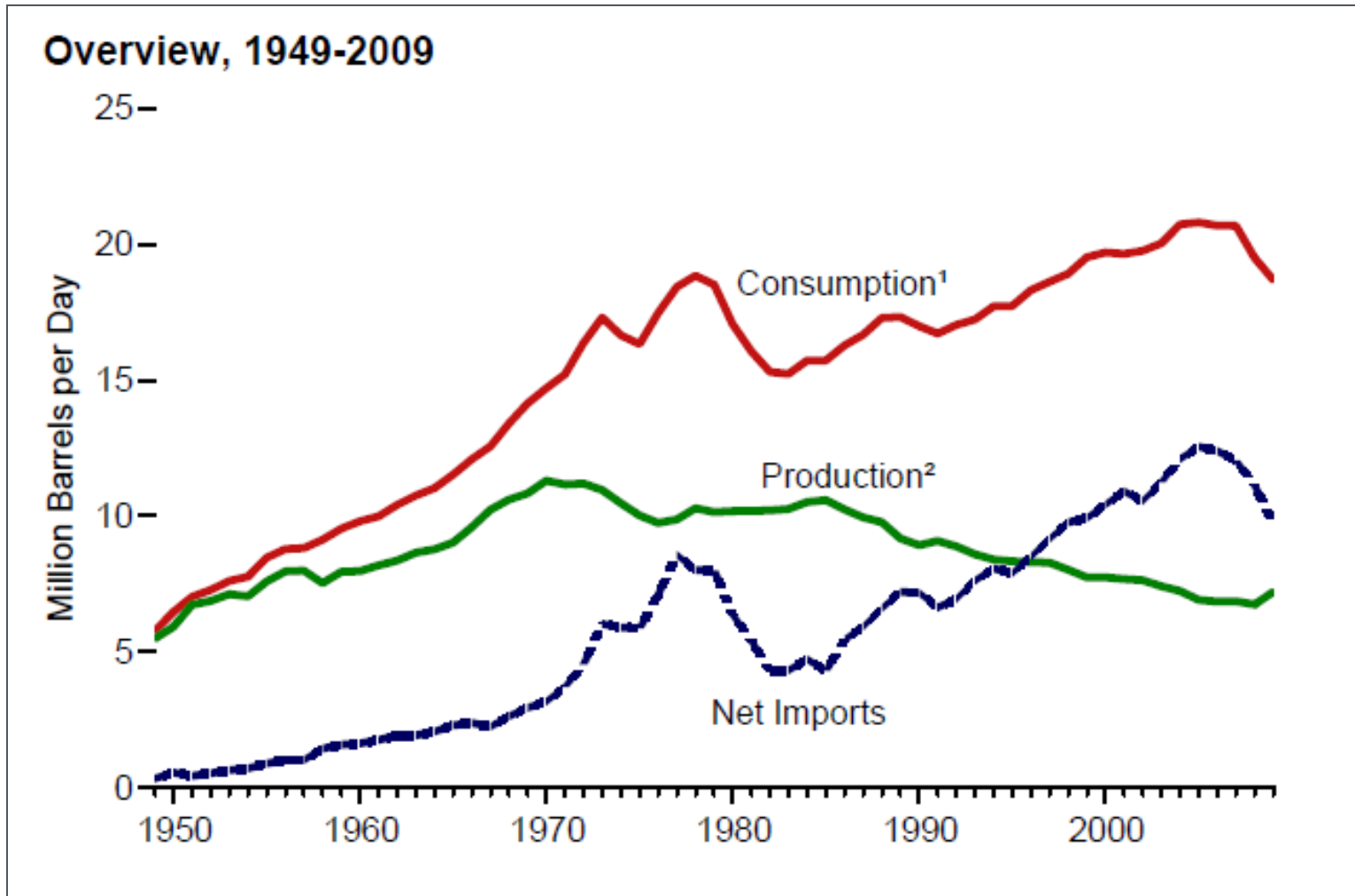
- Context and motivations
- Step 1: Learn about the options
- Step 2: See what others have done
- Step 3: Are there regulations or incentives that affect you?
- Step 4: Set baseline and goal
- Step 5: Explore options for your fleet
- Step 6: Get help
- Feedback & Discussion

## Clean Cities Mission

To advance the energy, economic, and environmental security of the U.S. by supporting local decisions to adopt practices that contribute to the reduction of petroleum consumption in the transportation sector.

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- Sponsored by the DOE's Office of Energy Efficiency and Renewable Energy's Vehicle Technologies Program
- Provides a framework for businesses and governments to work together as a coalition to enhance local markets
- Provides a way to coordinate activities, identify mutual interests, develop regional economic opportunities, and improve air quality



Source: [Annual Energy Review 2009](#). Energy Information Administration.

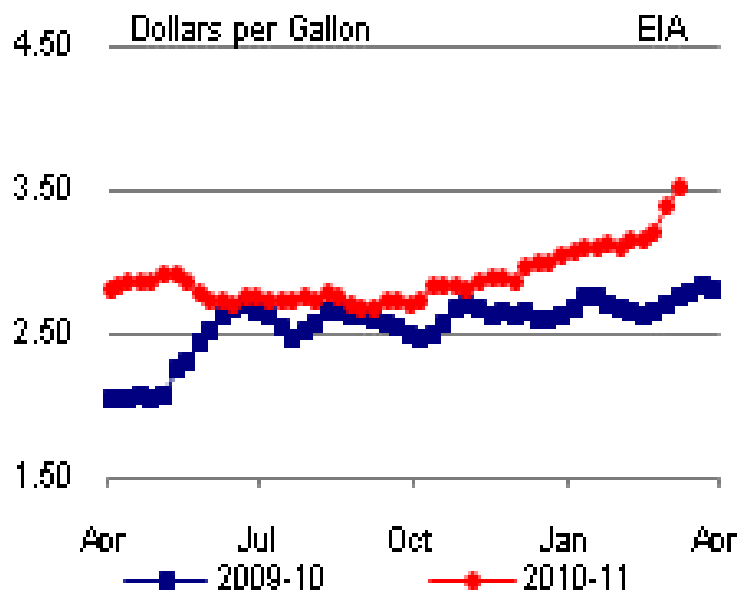
- 87 active coalitions in 45 states
- Coalitions cover 75% of U.S. population
- 8,400+ public, private stakeholders
- Coalitions generate 18:1 leveraging of Federal investment<sup>1</sup>



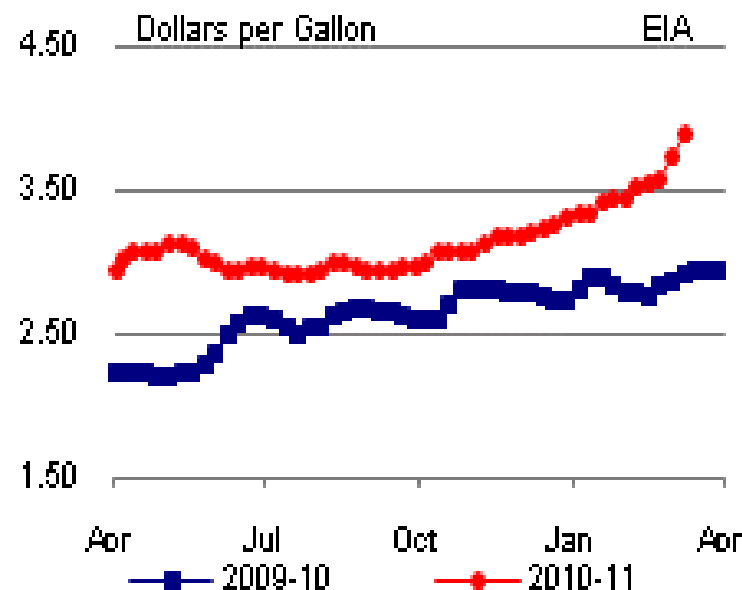
<sup>1</sup><http://www1.eere.energy.gov/cleancities/pdfs/49389.pdf>

## U.S. Gasoline and Diesel Fuel Prices, 03/07/11

### U.S. Regular Gasoline Prices



### U.S. On-Highway Diesel Fuel Prices

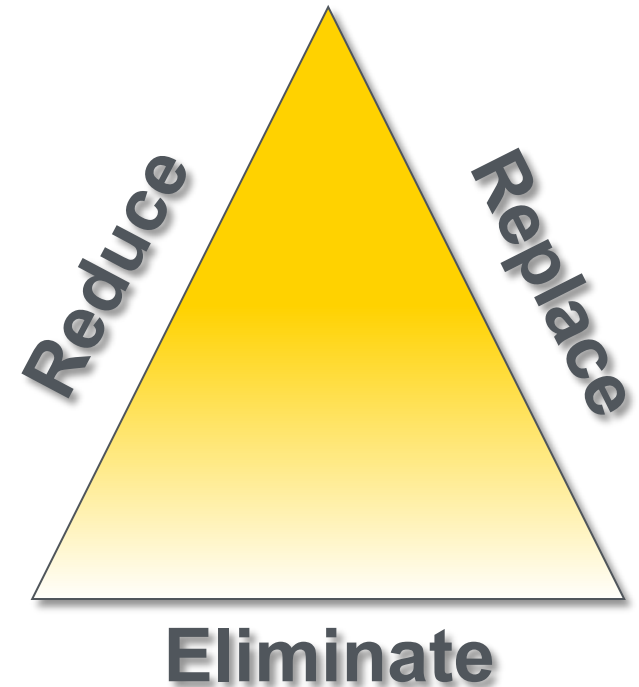


Source: <http://www.eia.doe.gov/oog/info/gdu/gasdiesel.asp>

- Besides cost, motivators include:
  - Reducing emissions of air pollutants or greenhouse gases
  - Meeting Federal or state mandates
  - Responding to corporate goals
  - Supporting regional economy
  - Promoting green image



- **Reduce** by promoting energy efficiency in vehicles through advanced technologies and more fuel efficient vehicles.
- **Replace** petroleum with alternative fuels and low-level blends.
- **Eliminate** by promoting idle reduction, combining or eliminating trips, and other mileage reduction measures.





## Alternative Fuels and Vehicles

- Biodiesel (B100)
- Electricity
- Ethanol (E85)
- Hydrogen
- Natural gas
- Propane

## Fuel Blends

- Biodiesel/diesel blends (B2, B5, B20)
- Ethanol/gasoline blends (E10)
- Hydrogen/natural gas blends (HCNG)

## Fuel Economy

- Fuel efficiency
- Behavior changes
- Vehicle maintenance initiatives
- Reducing vehicle miles traveled (VMT)

## Hybrids

- Light- and heavy-duty HEVs
- PHEVs

## Idle Reduction

- Medium and heavy-duty trucks
- School buses
- Truck stop electrification

# Step 1: Learn About the Options



*cleancities.energy.gov*  
*afdc.energy.gov*  
*fueleconomy.gov*

# Learn About Fuel Options

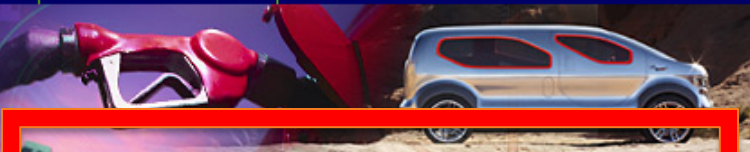



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## Alternative Fuels & Advanced Vehicles Data Center

[About the AFDC](#)[Fuels](#)[Vehicles](#)[Fleets](#)[Incentives & Laws](#)[Data, Analysis & Trends](#)[Information Resources](#)




The Alternative Fuels and Advanced Vehicles Data Center (AFDC, formerly known as the Alternative Fuels Data Center) provides a wide range of information and resources to enable the use of alternative fuels (as defined by the [Energy Policy Act of 1992](#)), in addition to other petroleum reduction options such as advanced vehicles, fuel blends, idle reduction, and fuel economy.

This site is sponsored by the U.S. Department of Energy's [Clean Cities](#) initiative.



### Data, Analysis, and Trends


Our [Data, Analysis, and Trends](#) section provides industry trends and facts based on data analysis.



### Alternative Fuel Portals

- [Biodiesel](#)
- [Electricity](#)
- [Ethanol](#)
- [Hydrogen](#)
- [Natural Gas](#)
- [Propane](#)


**More Fuels Information** ▶



### Vehicle Information

- [Conversions](#)
- [Electric Drive Vehicles](#)
- [Emissions](#)
- [Fuel Economy](#)
- [Idle Reduction](#)

**More Vehicle Information** ▶



### AFDC Tools

- [Light-Duty Vehicle Search](#)
- [Heavy-Duty Vehicle Search](#)
- [Alternative Fueling Station Locator](#)
- [Incentives & Laws Search](#)
- [Publications Search](#)

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March 30, 2011

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▶

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Alternative & Advanced Fuels

Biodiesel

Electricity

Ethanol

Hydrogen

Methanol

Natural Gas

Propane

Ultra-low Sulfur Diesel

Emerging Fuels

Stations

Fuel Properties

Fuel Blends

Fuel Prices

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More than a dozen alternative and advanced fuels are in production or use today. Although government-regulated and voluntary private fleets are the primary users of these fuels, consumers are increasingly more interest in them. Using these fuels is critical to reduce U.S. dependence on foreign oil and improve air quality.

Alternative Fuels

Alternative fuels defined by the Energy Policy Act of 1992 that are or have been commercially available for vehicles include:

- [Biodiesel](#)
- [Electricity](#)
- [Ethanol](#)
- [Hydrogen](#)
- [Methanol](#)
- [Natural Gas](#)
- [Propane](#)

Other Fuels

Several emerging fuels are currently under development. Many of these fuels are also considered alternative fuels and may have other benefits such as reduced emissions or increased energy security.

- [Biobutanol](#)
- [Biogas](#)
- [Biomass to Liquids](#) (BTL)
- [Coal to Liquids](#) (CTL)
- [Fischer-Tropsch Diesel](#)
- [Gas to Liquids](#) (GTL)
- [Hydrogenation-Derived Renewable Diesel](#) (HDRD)
- [P-Series](#)
- [Ultra-Low Sulfur Diesel](#)

Fuel Topics

Learn about these additional alternative and advanced fuel topics:

Search

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Plug-in Ready?

Read case studies featuring metro areas preparing for electric vehicles.

BioFuels Atlas

Compare biofuels and feedstocks by location

Clean Cities MotorWeek Videos

TransAtlas

Explore alternative fuel and vehicle data

Mobile Fueling Station Locator

Petroleum Reduction Planning Tool

Alternative Fueling Station Locator

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# Learn About Vehicle Options



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**Alternative Fuel Portals**

- [Biodiesel](#)
- [Electricity](#)
- [Ethanol](#)
- [Hydrogen](#)
- [Natural Gas](#)
- [Propane](#)


[More Fuels Information >](#)



**Vehicle Information**

- [Conversions](#)
- [Electric Drive Vehicles](#)
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- [Fuel Economy](#)
- [Idle Reduction](#)

[More Vehicle Information >](#)



**AFDC Tools**

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March 30, 2011

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# Electric Drive Vehicle Section



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Heavy-Duty Vehicle Search

Flexible Fuel Vehicles

Natural Gas Vehicles

Propane Vehicles

Hybrid, Plug-in Hybrid, & All-Electric Vehicles

Basics

Benefits

Availability

Emissions

Charging

Batteries

Maintenance & Safety

Deployment

Research & Development

Related Links

Fuel Cell Vehicles

Diesel Vehicles

Conversions

Resale

Technician Training

Idle Reduction

Fuel Economy

Emissions

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**Hybrid, Plug-in Hybrid, and All-Electric Vehicles**

Hybrid electric vehicles (HEVs), plug-in hybrid electric vehicles (PHEVs), and all-electric vehicles (EVs)—also called electric drive vehicles collectively—use electricity either as their primary fuel or to improve the efficiency of conventional vehicle designs.

**Basics**

Learn how electric drive vehicles work.

**Benefits**

Explore the benefits of electric drive vehicles.

**Availability**

Discover which electric drive vehicles are available commercially.

**Emissions**

Learn how emissions and fuel costs are calculated for electric drive vehicles.

**Charging**

Explore ways to charge electric drive vehicles at home and in public.

**Batteries**

Learn about energy-storage devices and recycling.

**Maintenance and Safety**

Learn about maintaining electric drive vehicles and their batteries.

**Deployment**

Learn about deployment and demonstration projects to commercialize electric drive vehicles.

**Research and Development**

Read about electric drive vehicle studies and trends.

**Related Links**

**Plug-in Hybrid Electric Vehicle Basics**

**Tax Credits and Incentives**

Plug-in hybrids and all-electric vehicles qualify for a [\\$2,500 to \\$7,500 federal tax credit](#).

Some hybrid electric vehicles qualify for a [light-duty HEV federal tax credit](#).

[Find tax credits and incentives](#) in your state.

# AFDC Light- and Heavy-Duty Vehicle Search



## Alternative & Advanced Vehicles

Search Help > More Search Options >

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### 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.

Cars and Trucks Low Speed

Fuel Type: Natural Gas (1) Manufacturer: All Class: All

Year: ☒ 2010 (0) ☒ 2009 (1) ☐ 2008 (1) ☐ 2007 (1) ☐ 2006 (4)  
[More Years](#)

Compare


☐ [Honda Civic GX \(2009\)](#)

Detail

**Honda Civic GX (2009)**  
**Fuel:** Natural Gas (Dedicated)  
**Class:** Sedan  
**Fuel Economy:** 24 mpg city, 36 mpg highway  
**Emission Certification:** California SULEV, Tier 2 Bin 2  
**Engine:** 4-cyl, 1.8L, SOHC 16-Valve i-VTEC  
**Transmission:** 5-speed automatic  
**GVWR:** 2904 lbs  
**Dealers:** [Locate a dealer](#) or 888-CC-HONDA  
**Ordering:** Orders for the Honda GX are taken anytime during the model year. Honda builds vehicles in advance for anticipated sales. The GX is available in 60-90 days, or 30 days if in current stock.  
[Cost Analysis](#)

Select  
[All](#) | [None](#)

Side-by-Side Comparison



## Alternative & Advanced Vehicles

Search Help > More Search Options >

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### Heavy-Duty Vehicle and Engine Search

Use this tool to get specification and purchasing details on specific vehicles (chassis) or engines. You can also compare selections and generate printable reports to aid in the decision making process.

Vehicles Engines Hybrid Propulsion Systems

Manufacturer: Autocar LLC Fuel Type: LNG Application: All

Compare


☐ [Autocar LLC - Xpeditor](#)

Detail

**Model:** Xpeditor  
**Manufacturer:** [Autocar LLC](#)  
**Manufacturer Phone:** 877-973-3486  
**Application:** Refuse  
**Fuel Type Options:** CNG, LNG  
**GVWR:** 66000 lbs  
**Maximum Seating Capacity:** 2  
**Transmission Make:** Allison MD-HD  
**Transmission Type:** Auto  
**Description:** Class 8 trucks built for the refuse business. The Xpeditor includes ergonomically redesigned cabs with dashboard-integrated body switches and controls.

Select  
[All](#) | [None](#)

Side-by-Side Comparison



**Compatible Engines:**  
[B Gas Plus - BG 195](#)



# Find Alt Fuel Stations Near You



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## Alternative Fuels & Advanced Vehicles Data Center

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### Alternative & Advanced Fuels



Search Help > More Search Options >

**Biodiesel**  
**Electricity**  
**Ethanol**  
**Hydrogen**  
**Methanol**  
**Natural Gas**  
**Propane**  
**Ultra-low Sulfur Diesel**

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### Alternative Fueling Stations

Alternative fueling stations are located throughout the United States and their availability continues to grow. This page allows you to [find alternative fuels stations](#) near you or on a [route](#), obtain [counts of alternative fuels stations by state](#), view [U.S. maps](#), and more.

The following alternative fuels are included in the mapping application: compressed natural gas (CNG), E85 (85% ethanol, 15% gasoline), propane/liquefied petroleum gas (LPG), biodiesel, electricity, hydrogen, and liquefied natural gas (LNG).

### Alternative Fueling Station Mapping Resources

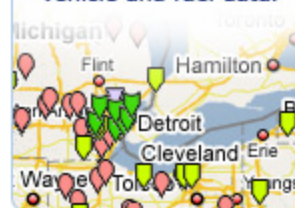
#### Alternative Fueling Station Locator >

Find alternative fuel stations near a specific location or along a route.



#### U.S. Maps >

Explore maps displaying alternative vehicle and fuel data.



#### Total Station Counts >

Obtain total station counts by state and fuel type.



#### Custom Database Query >

Search the stations database for specific fuel types in specific states or throughout the U.S.



Emerging Fuels

**Stations**

[U.S. Maps](#)  
[Total Counts](#)  
[Custom Query](#)  
[Add/Delete a Station](#)

**Fuel Properties**

**Fuel Blends**

# Find Alt Fuel Stations Near You (example)



[Help](#) >

**Basic Station Search**

**Map a Route**

**Stations by State**

**First: Select one or more fuels.**

- ☐ Biodiesel (B20 and above)
- ☒ Compressed Natural Gas (CNG)
- ☐ Electric
- ☐ Ethanol (E85)
- ☐ Hydrogen
- ☐ Liquefied Natural Gas (LNG)
- ☐ Liquefied Petroleum Gas (Propane)

**Second: Enter a complete address or zip code.**

charlotte, nc

Show stations within a  mile radius.

[Advanced Options](#)

**Get Results**

**Print**

Results 1 to 5 of 5



**[Piedmont Natural Gas - Charlotte](#)**

Compressed Natural Gas  
112 B Verbena St  
Charlotte NC 28217  
Phone: 704-309-7536   
Distance: 3.7 Miles  
Access: Public - credit card at all times

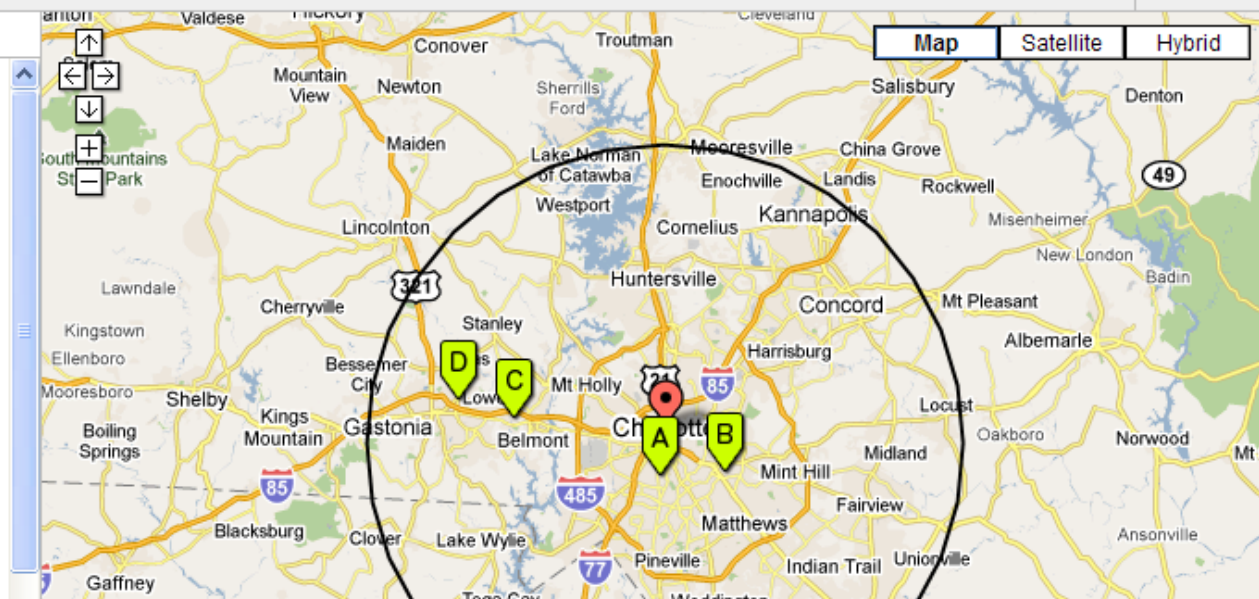


**[Charlotte-Mecklenburg School Bus](#)**

Compressed Natural Gas  
3901 Craig Ave  
Charlotte NC 28211  
Distance: 4.3 Miles  
Access: Private access only




**[PSCNC Energy](#)**



# Find Fuel On-the-Go



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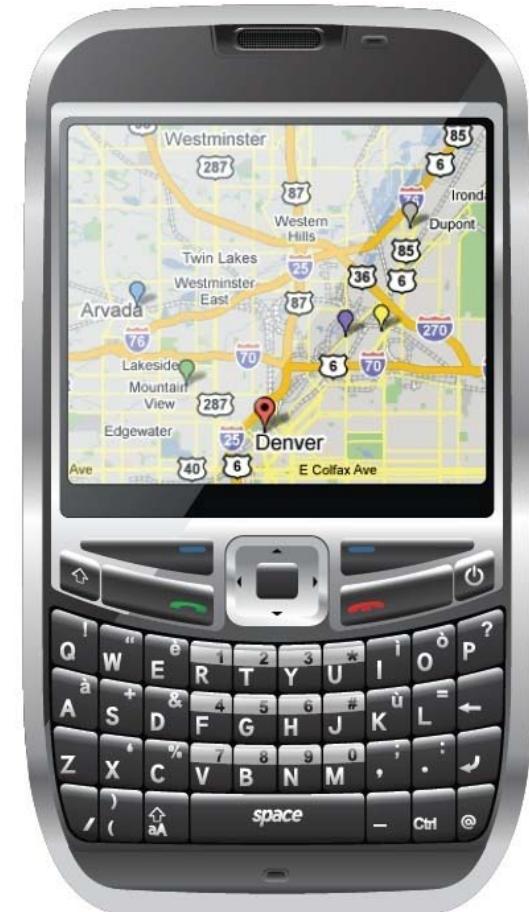
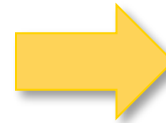
 **Alternative Fueling Station Locator**

**Fuel Type**  
Ethanol (E85) ▼

**Location**  
Enter a city, postal code, or address

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

Caution: The AFDC recommends that users verify that stations are open, available to the public, and have the fuel prior to making a trip to that location. Some stations in our database have addresses that could not be located by the Station Locator application. This may result in the station appearing in the center of the zip code area instead of the actual location.

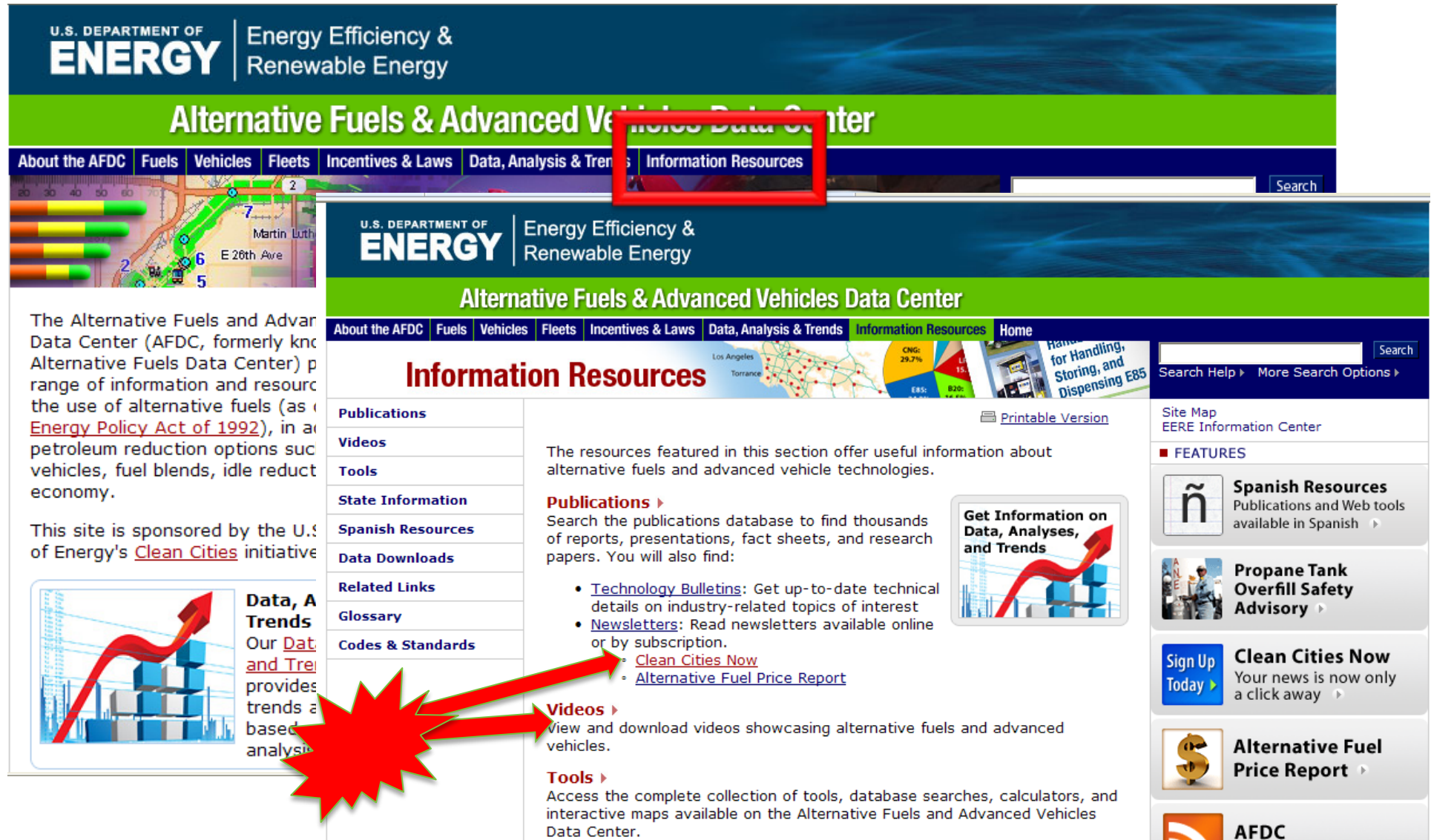


<http://www.afdc.energy.gov/cleancities/m/>



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# Step 2: See What Others Have Done (part 2)



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Publications and Web tools available in Spanish

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**Alternative Fuel Price Report**

**AFDC**

The Alternative Fuels and Advanced Vehicles Data Center (AFDC, formerly known as the Alternative Fuels Data Center) provides a range of information and resources to support the use of alternative fuels (as required by the [Energy Policy Act of 1992](#)), in addition to petroleum reduction options such as vehicle fleets, fuel blends, idle reduction, and carpooling.

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**Data, Analysis, and Trends**  
Our Data, Analysis, and Trends section provides a range of information and resources to support the use of alternative fuels (as required by the [Energy Policy Act of 1992](#)), in addition to petroleum reduction options such as vehicle fleets, fuel blends, idle reduction, and carpooling.

**Publications**  
The resources featured in this section offer useful information about alternative fuels and advanced vehicle technologies.

**Publications**

- Search the publications database to find thousands of reports, presentations, fact sheets, and research papers. You will also find:
- [Technology Bulletins](#): Get up-to-date technical details on industry-related topics of interest
- [Newsletters](#): Read newsletters available online or by subscription.
- [Clean Cities Now](#)
- [Alternative Fuel Price Report](#)

**Videos**  
View and download videos showcasing alternative fuels and advanced vehicles.

**Tools**  
Access the complete collection of tools, database searches, calculators, and interactive maps available on the Alternative Fuels and Advanced Vehicles Data Center.

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**Get Information on Data, Analyses, and Trends**

# Step 3: Are There Regulations or Incentives That Affect You?



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**Federal & State Incentives & Laws**

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Federal

State

Advanced Search

All Incentives & Laws  
Sorted by Type

This section allows you to browse and search a database of federal and state laws and incentives related to alternative fuels and vehicles, air quality, fuel efficiency, and other transportation-related topics.

Federal  
Incentives and Laws

State  
Incentives and Laws

Search All Incentives & Laws

Use an advanced search

View Tables of Incentives & Laws

View tables of incentives and laws

Read Key Legislation

Read selected federal legislation related to transportation

## Federal Incentives and Laws

Listed below are federal incentives, laws and regulations, funding opportunities related to alternative fuels and vehicles, advanced technologies, or air quality that may be available through Clean Cities [Financial Opportunities](#). For more information, see the [FAQ](#) section or refer to:

- [Key Federal Legislation Summaries](#)
- [Recent Federal Actions](#)

## Incentives, Laws, and Programs

The information in this list is updated after legislation is enacted.

Sort by: ☒ Category ☐ Agency

### Incentives

- [Advanced Energy Research Project Grants](#)
- [Advanced Technology Vehicle \(ATV\) Manufacturing Incentives](#)
- [Alternative Fuel Infrastructure Tax Credit](#)
- [Alternative Fuel Tax Exemption](#)
- [Biomass Research and Development Initiative](#)
- [Cellulosic Biofuel Producer Tax Credit](#)
- [Fuel Cell Motor Vehicle Tax Credit](#)
- [Hydrogen Fuel Excise Tax Credit](#)
- [Hydrogen Fuel Mixture Excise Tax Credit](#)
- [Idle Reduction Equipment Excise Tax Exemption](#)
- [Improved Energy Technology Loans](#)

## State Incentives and Laws

To view a state's incentives and laws related to alternative fuels and advanced vehicles, select a state from the map or menu below.

Select a State  Go

Advanced Search

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# Are There Regulations or Incentives That Affect You?



## Federal Fleets

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### Federal Fleet Management

FEMP provides guidance and assistance to help implement Federal legislative and regulatory requirements mandating reduced petroleum consumption and increased alternative fuel use. FEMP's efforts include assisting agencies with implementing and managing energy-efficient and alternative fuel vehicles and facilitating a coordinated effort to reduce petroleum consumption and increase alternative fuel use annually.

FEMP provides the following information and resources:

- Federal requirements:** List of current Federal legislation and regulatory requirements for Federal fleets, including related FEMP guidance documents, executive order implementation instructions, and resources.
- Technology resources:** Information on the latest alternative fuel and advanced vehicle technologies to help Federal agencies meet Federal fleet management requirements.
- Infrastructure development:** Resources and event information to help Federal agencies locate and use alternative fueling stations, develop onsite fueling capabilities, and/or partner with other entities to leverage the development of retail fueling infrastructure.
- Data, analysis, and trends:** Alternative Fuels and Advanced Vehicle Data Center (AFDC) Web site page featuring Federal fleet management resources, data, and reports.

**Federal Fleet Guidance and Handbook**

New [fleet management guidance for Executive Order 13514](#) is now available. FEMP also released an accompanying [Federal Fleet Management Handbook](#) to help Federal agencies plan and implement strategies to meet Federal fleet requirements.

[http://www1.eere.energy.gov/femp/program/fedfleet\\_management.html](http://www1.eere.energy.gov/femp/program/fedfleet_management.html)



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# EPAct Transportation Regulatory Activities

EPAct Transportation Regulatory Activities

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Fleet Coverage & Compliance

Alternative Fuel Petitions

Resources

The U.S. Department of Energy's (DOE) Vehicle Technologies Program manages several transportation regulatory activities established by the Energy Policy Act of 1992 (EPAct), as amended by the Energy Conservation Reauthorization Act of 1998, EPAct 2005, and the Energy Independence and Security Act of 2007 (EISA).

## ACTIVITY HIGHLIGHTS

The EPAct transportation regulatory activities seek to reduce U.S. dependence on imported oil primarily through the use of alternative fuels, alternative fuel vehicles (AFVs), and other petroleum-displacement methods.

Following EPAct 1992, DOE established the Alternative Fuel Transportation program and associated regulatory requirements. The program encompasses the State and Alternative Fuel Provider (SFP) program, which requires certain state government and alternative fuel provider fleets to acquire a specific percentage of AFVs annually through [Standard Compliance](#).

EPAct 1992 also established two related activities not covered by this site: the [Federal Fleet](#) and [Clean Cities](#) programs.

### KEY FEDERAL STATUTES

The documents linked below are excerpts from federal statutes that established key EPAct transportation regulatory activities. Other federal statutes and amendments have also shaped these activities.

[Energy Policy Act of 1992](#)

Defined [alternative fuels](#) and directed DOE to develop a regulatory program for certain fleets in [Metropolitan Statistical Areas](#) to serve as launching pads for alternative fuels and advanced vehicle technologies

[Energy Conservation Reauthorization Act of 1998](#)

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# Step 4: Set Baseline and Goal



- Inventory fleet: Types/classes of vehicles
  - Number of each type/class
  - Annual miles traveled
  - Annual fuel consumption
  - Annual CO<sub>2</sub> produced
    - 19.4 pounds per gallon gasoline\*
    - 22.2 pounds per gallon diesel\*
- Set goal for fuel reduction
  - No new vehicle purchases?
  - Next year's acquisitions?
  - 10 year reduction?

\* <http://www.epa.gov/oms/climate/420f05001.pdf>

# Step 5: Explore Options for Your Fleet



## AFDC Petroleum Reduction Planning Tool

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

Bringing you a prosperous future where energy is clean, abundant, reliable, and affordable

AFDC

EEFE Home

Alter... & Advanced Vehicles Data Center

About the AFDC | Fuels | Vehicles | **Fleets** | Incubators & Laws | Data, Analysis & Trends | Information Resources | Home

Help | Methodology

### Petroleum Reduction Planning Tool

The Petroleum Reduction Planning tool helps fleets, consumers, and business owners create a strategy to reduce conventional fuel use in fleet and personal vehicles. This interactive tool allows users to evaluate and calculate petroleum reductions by choosing one or a combination of the following methods:

- Alternative Fuels
- Hybrid Electric Vehicles
- Biodiesel Blends
- Fuel Economy
- Vehicle Miles Traveled Reduction
- Truck Stop Electrification
- Idling Time Reduction
- Onboard Idle Reduction

**Get Started**

**Guest Users:** No password is required. Full planning functionality is provided but scenarios cannot be saved.

**Registered Users:** Create and save one or more scenarios, which can be accessed for editing and analysis.

**Register Now:** Registering allows users to create, save, and edit scenarios for further analysis.

[Password Reminder](#)

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Content Last Updated: 02/04/2009



Help | Methodology | **Log In** | **Step 1**

### Petroleum Reduction Planning Tool

**Step 2: Create Your Petroleum Reduction Scenario**

Use the color-coded tabs below to choose a [method](#) you would like to explore. Your petroleum reduction scenario can consist of one method or a combination of them. After saving your inputs, switch methods by choosing another tab. To generate a printable version of your scenario, select the Generate Plan button below.

Alternative Fuels | **HEVs** | Biodiesel Blends | Fuel Economy | **VMT Reduction** | Truck Stop Electrification | Idling Time Reduction | Onboard IR

[Generate Plan](#)

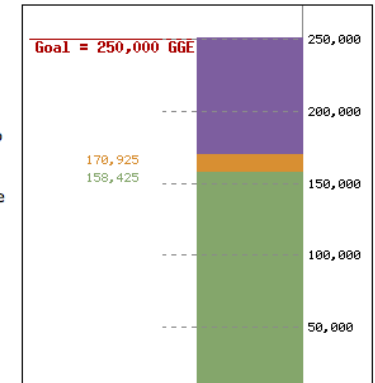


### Petroleum Reduction Plan

Scenario Name: Test2  
Annual Petroleum Reduction  
Goal: 250000 GGE

Based on your inputs, this is your petroleum reduction goal and associated plan. You may print the information on this page and use it to help you reach your goal. If you are a registered user, this scenario is saved in the system and you may make changes at a future time.

To alter your plan, return to [Step 2](#).



#### Alternative Fuels

AFV Type	AFV Fuel	Number of AFVs	Average VMT	Fuel Economy (mpg)	Fraction of Fuel Use	GGE Reduced
Large Pickup/Utility	LPG	50	10000	20	1	25000
Midsize Car	E85	100	15000	25	1	47400
HD Truck > 26k lb	CNG	25	15000	5	1	86025
TOTAL GGE						158425

#### Hybrid Electric Vehicles (HEVs)

Fuel Type	Number of Vehicles	Average VMT	Fuel Economy of new HEVs	Fuel Economy of Old Vehicles	GGE Reduced
Gasoline	75	15000	45	30	12500
TOTAL GGE					12500

#### Biodiesel Blends

Vehicle Type	Blend Type	Number of Vehicles	Average VMT	Fraction of Fuel Use	Fuel Economy	GGE Reduced
HD Truck > 26k lb	B50	50	15000	1	5	80777
TOTAL GGE						80777

<https://www.afdc.energy.gov/afdc/prep/index.php>

## FuelEconomy.gov Web Site

### Fuel economy information

- ✓ Side-by-side comparisons
- ✓ Fuel economy ratings
- ✓ Carbon footprint
- ✓ Average annual fuel cost
- ✓ Smart driving tips



# Compare GHG Impacts



U.S. DEPARTMENT OF **ENERGY** | Energy Efficiency & Renewable Energy

**Alternative Fuels & Advanced Vehicles Data Center**

Information Resources

Publications  
Videos  
Tools  
State Information  
Spanish Resources  
Data Downloads  
Related Links  
Glossary  
Codes & Standards

On this page you can access the complete collection of tools, database searches, calculators, and interactive maps available on the Alternative Fuels and Advanced Vehicles Data Center. For [mobile tools](#), go to [www.eere.energy.gov/m/cc](http://www.eere.energy.gov/m/cc) on your mobile device.

Printable Version

Site Map  
EERE Information Center

FEATURES

Project Assistance

## Fuels and Stations



**Alternative Fueling Station Locator**  
Find alternative fueling station locations.



**Stations Custom Query**  
Search the U.S. alternative fueling station database.



**Total Stations Count**  
Find the number of fueling stations in the U.S. by fuel type.



**TransAtlas**  
Explore an interactive map displaying alternative fuel and vehicle data.



**BioFuels Atlas**  
Compare feedstocks and analyze biofuel production by location in this interactive map.



**Fuel Properties Search**  
Create custom charts comparing fuel properties.

## Fleets



**Fleet Experiences Search**  
Browse fleet experience stories by category.



**Petroleum Reduction Planning Tool**  
Forecast fleet petroleum reduction.



**GREET Fleet Footprint Calculator**  
Evaluate life-cycle petroleum use and GHG emissions.



**GREET Fleet Footprint Calculator**  
Evaluate life-cycle petroleum use and GHG emissions.

GREET\_fleet\_footprint\_calculator\_1\_1a[2].xls [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View

Cut Copy Paste Format Painter Clipboard Font Alignment Number Styles

Conditional Formatting

	Gasoline (gallons)	Diesel (gallons)	Diesel HEV (gallons)	B20 (gallons)	B100 (gallons)	E85 (gallons)	CNG (cubic feet)	LNG (gallons)	LPG (gallons)	Electricity (kilowatt-hours)	GH2 (cubic feet)	LH2 (gallons)
School Bus	0	0	0	0	0	0	0	0	0	0	0	0
Transit Bus	0	0	0	0	0	0	0	0	0	0	0	0
Shuttle/Paratransit Bus	0	0	0	0	0	0	0	0	0	0	0	0
Waste Hauler	0	0	0	0	0	0	0	0	0	0	0	0
Street Sweeper	0	0	0	0	0	0	0	0	0	0	0	0
Delivery Step Van	0	0	0	0	0	0	0	0	0	0	0	0
Transport/Drayage/Freight Truck	0	0	0	0	0	0	0	0	0	0	0	0
Medium/Heavy Duty Pickup Truck	0	0	0	0	0	0	0	0	0	0	0	0
Maintenance Utility Vehicle	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Gasoline Gallon Equivalent Total	0	0	0	0	0	0	0	0	0	0	0	0

6. Fuel Production Assumptions

Ethanol Feedstock Source	1	1 - Corn 2 - Switchgrass
CNG Feedstock Source	1	1 - North American NG 2 - Non-North American NG 3 - Landfill Gas
LNG Feedstock Source	1	1 - North American NG 2 - Non-North American NG 3 - Landfill Gas
LPG Feedstock Source	NG 60% Petroleum 40%	
Source of Electricity for On-Road Electric Vehicles and H2 Electrolysis	14	11 to 13 - EIA Regions 1 through 13 Mix (see map) 14 - Average U.S. Mix 15 - User Defined (go to 'Specs' sheet)
GH2 Production Process	1	1 - Refueling Station SMR (On-site) 2 - Central Plant SMR (Off-site) 3 - Refueling Station Electrolysis (On-site)
LH2 Production Process	1	1 - Refueling Station SMR (On-site) 2 - Central Plant SMR (Off-site) 3 - Refueling Station Electrolysis (On-site)

7. Results of On-Road Fleet's Petroleum Usage (barrels)

	Gasoline	Diesel	Diesel HEV	B20	B100	E85	CNG	LNG	LPG	Electricity	GH2	LH2	Vehicle Total
School Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

On-road fleet Off-road fleet Specs

Ready

start

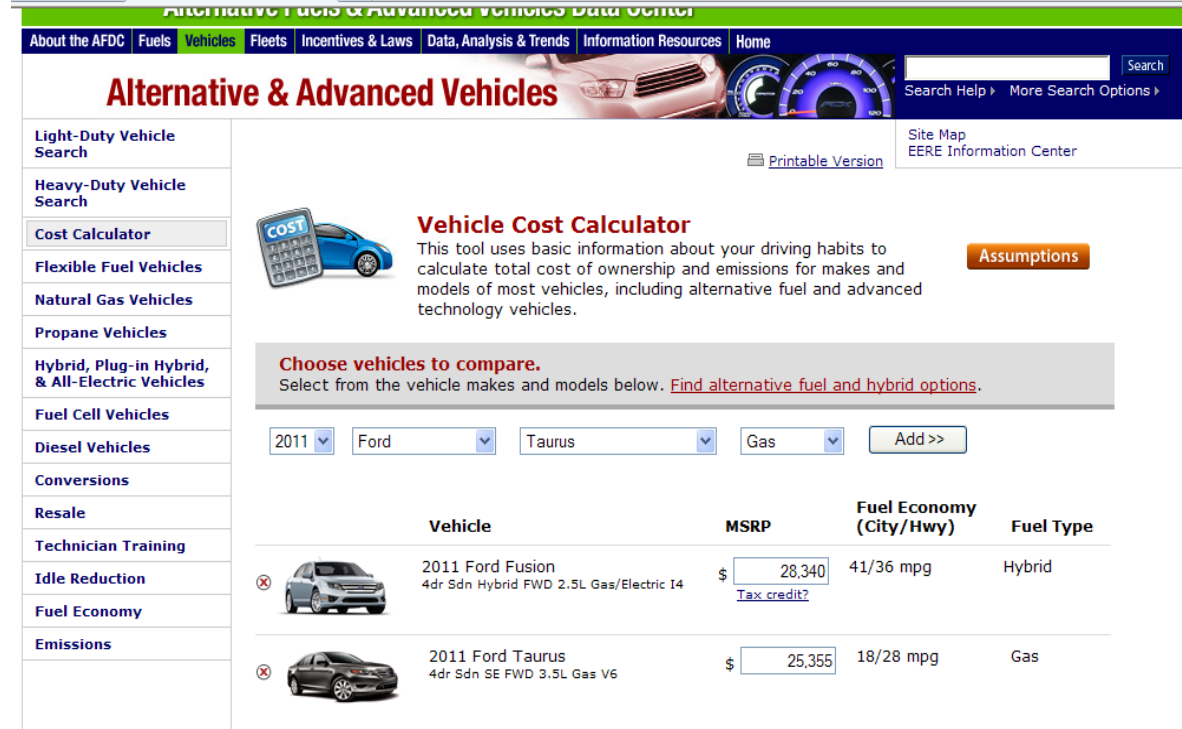
Search Desktop



## AFDC Cost Calculator

- ✓ Side-by-side cost comparisons
- ✓ Operating costs
- ✓ Fuel consumption & cost
- ✓ CO<sub>2</sub> emissions

In development—live April 2011





**Alternative & Advanced Vehicles**

Light-Duty Vehicle Search  
Heavy-Duty Vehicle Search  
**Cost Calculator**  
Flexible Fuel Vehicles  
Natural Gas Vehicles  
Propane Vehicles  
Hybrid, Plug-in Hybrid, & All-Electric Vehicles  
Fuel Cell Vehicles  
Diesel Vehicles  
Conversions  
Resale  
Technician Training  
Idle Reduction  
Fuel Economy  
Emissions

**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.

**Choose vehicles to compare.**  
Select from the vehicle makes and models below. [Find alternative fuel and hybrid options.](#)

2011 Ford Taurus Gas Add >>

	Vehicle	MSRP	Fuel Economy (City/Hwy)	Fuel Type
⊗	 2011 Ford Fusion 4dr Sdn Hybrid FWD 2.5L Gas/Electric I4 <a href="#">Tax credit?</a>	\$ 28,340	41/36 mpg	Hybrid
⊗	 2011 Ford Taurus 4dr Sdn SE FWD 3.5L Gas V6	\$ 25,355	18/28 mpg	Gas

# Step 6: Get Help!



## Clean Cities Web Site

- Financial opportunities
- Information resources
  - ✓ Newsletters
  - ✓ Technology bulletins
  - ✓ Technical assistance
- Local experts and resources



<http://www1.eere.energy.gov/cleancities/>



# Clean Cities Financial Opportunities



**U.S. DEPARTMENT OF ENERGY** | Energy Efficiency & Renewable Energy

## Clean Cities

[About the Program](#) | [Coalitions](#) | [Coordinator Toolbox](#) | **[Financial Opportunities](#)** | [Information Resources](#) | [Home](#)

### Financial Opportunities

**Solicitations**

**Government Sources**

Securing funding is critical to the success of every petroleum displacement program. To ensure stakeholders meet their goals, Clean Cities tracks financial opportunities specific to alternative fuels and advanced technologies.

There are many financial opportunities available. To explore them, choose the links below. When applying for funding, ask your local [Clean Cities coordinator](#) for help. Coordinators can offer sound advice on how to successfully navigate the process to obtain the funding needed to meet petroleum reduction goals.

**Solicitations** ▶  
View Clean Cities' and other transportation-related funding opportunities.

**Government Sources** ▶  
Look up funding opportunities available from other government agencies.

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Content Last Updated: 02/01/2011

**U.S. DEPARTMENT OF ENERGY** | Energy Efficiency & Renewable Energy

## Clean Cities

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### Financial Opportunities

**Solicitations**

**Government Sources**

**Grants.gov**  
Grants.gov allows organizations to electronically find and apply for competitive grant opportunities from Federal agencies. This site is the only access point for more than 900 grant programs offered by the 26 Federal grant-making agencies. To search for funding, use the [Find Grant Opportunities](#) feature on the Grants.gov Web site.

**Metropolitan Planning Organizations**  
The Metropolitan Planning Organization (MPO) is a transportation-planning cooperative effort between local government and transportation authorities. MPOs are responsible for planning, programming, and coordinating federal highway and transit investments. Visit the [MPQ](#) Web site for information on funding opportunities and potential project partners.

**Congestion Mitigation and Air Quality**  
Congestion Mitigation and Air Quality (CMAQ) funds are distributed locally through MPOs. The funds are administered by the Federal Highway Administration and the Federal Transit Administration. CMAQ funds projects and programs that reduce transportation-related emissions in nonattainment and maintenance areas. For more information, check their [CMAQ](#) Web site.

**Environmental Protection Agency**  
The Environmental Protection Agency (EPA) offers financial opportunities in several of its departments. For transportation-related funding, visit the following links on the EPA Web site:

[Printable Version](#)

Start working with the Clean Cities coalition in your area.



[http://www.afdc.energy.gov/cleancities/progs/coalition\\_locations.php](http://www.afdc.energy.gov/cleancities/progs/coalition_locations.php)



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& HEALTH

You are here: [DOE Home](#) > [Energy Blog](#) > Major Corporate Fleets Align to Reduce Oil Consumption

### ENERGYBLOG

#### Major Corporate Fleets Align to Reduce Oil Consumption

Submitted by [Dennis A. Smith](#) on April 1, 2011 - 1:07pm



Surrounded by cutting-edge vehicles, from all-electric trucks to hydraulic hybrids, President Obama today announced the [National Clean Fleets Partnership](#), an initiative of the Department's Clean Cities program, at a UPS fleet facility in Landover, Maryland. This public-private partnership will draw on the expertise of the Department of Energy to help large companies

#### Browse by category

Select a category...

#### Browse by state

Select a state...

#### DOE News

[Secretary Chu Announces Progress on International Initiatives to Promote Clean Energy](#)

[DOE Announces Nearly \\$170 Million in Available Funding to Advance Solar Energy Technologies](#)

[Department of Energy Implementation Activities in the Case of a Lapse of Appropriations](#)

[U.S. Department of Energy and Qatar Sign Agreement to Strengthen Cooperation on Clean Energy](#)

[Secretary Chu Announces Over \\$110 Million in SunShot Projects to Advance Solar Photovoltaic Manufacturing in the U.S.](#)

## Charter Members:

- AT&T
- FedEx
- PepsiCo
- UPS
- Verizon

[http://www1.eere.energy.gov/cleancities/national\\_partnership.html](http://www1.eere.energy.gov/cleancities/national_partnership.html)

Clean Cities Web site

[www.cleancities.energy.gov](http://www.cleancities.energy.gov)

Alternative Fuels & Advanced Vehicles Data Center Web site

[www.afdc.energy.gov](http://www.afdc.energy.gov)

FuelEconomy.gov

[www.fueleconomy.gov](http://www.fueleconomy.gov)

Clean Cities Coordinator Contact Information and Coalition Web sites

[http://www.afdc.energy.gov/cleancities/progs/coalition\\_locations.php](http://www.afdc.energy.gov/cleancities/progs/coalition_locations.php)

DOE EERE Information Center and Technical Response Service

Web Site: <http://www.eere.energy.gov/afdc/informationcenter.html>

Phone: 1-800-EERE-INF (1-877-337-3463)

E-mail: [technicalresponse@icfi.com](mailto:technicalresponse@icfi.com)

Hours: 9:00 a.m. – 6:00 p.m. EST

## Clean Cities Information Resources

[http://www1.eere.energy.gov/cleancities/info\\_resources.html](http://www1.eere.energy.gov/cleancities/info_resources.html)

## Data, Analysis & Trends

<http://www.afdc.energy.gov/afdc/data/index.html>

## Clean Cities Financial Opportunities

[http://www1.eere.energy.gov/cleancities/financial\\_opps.html](http://www1.eere.energy.gov/cleancities/financial_opps.html)

## AFDC PREP tool

<https://www.afdc.energy.gov/afdc/prep/index.php>

## Fleets

<http://www.afdc.energy.gov/afdc/fleets/index.html>

## Vehicle Search

[http://www.afdc.energy.gov/afdc/progs/vehicles\\_search.php](http://www.afdc.energy.gov/afdc/progs/vehicles_search.php)

## Publications Database

<http://www.afdc.energy.gov/afdc/publications.html>

## Alternative Fuel Station Locator

<http://www.afdc.energy.gov/afdc/locator/stations/>

## State and Federal Incentives & Laws

[http://www.afdc.energy.gov/afdc/incentives\\_laws.html](http://www.afdc.energy.gov/afdc/incentives_laws.html)

## TransAtlas

<http://www.afdc.energy.gov/afdc/data/geographic.html>

## Truck Stop Electrification Locator

[http://www.afdc.energy.gov/afdc/vehicles/idle\\_reduction\\_stations.html](http://www.afdc.energy.gov/afdc/vehicles/idle_reduction_stations.html)

## Conversions

<http://www.afdc.energy.gov/afdc/vehicles/conversions.html>

Energy Information Administration (EIA)

<http://www.eia.doe.gov>

U.S. Environmental Protection Agency (EPA)

<http://www.epa.gov>

Internal Revenue Service (IRS)

<http://www.irs.gov>