

# Energy 2002 - Palm Springs, CA

Please be courteous to our  
speakers



*Turn off all cell phones  
and  
Set pagers to vibrate*

# **Energy 2002 - Palm Springs, CA**

## **Alternative Fuel Vehicles – The Push is On!**

### **The Information Highway: What's Out There For You?**

**Kevin O'Connor**

**National Renewable Energy Laboratory**

**June 3, 2002**

# **Alternative Fuels and AF Vehicles: Why Should We Care?**

- **Energy Independence**
- **Cleaner Air**
- **U.S. Economic Benefits –  
We need to care?**

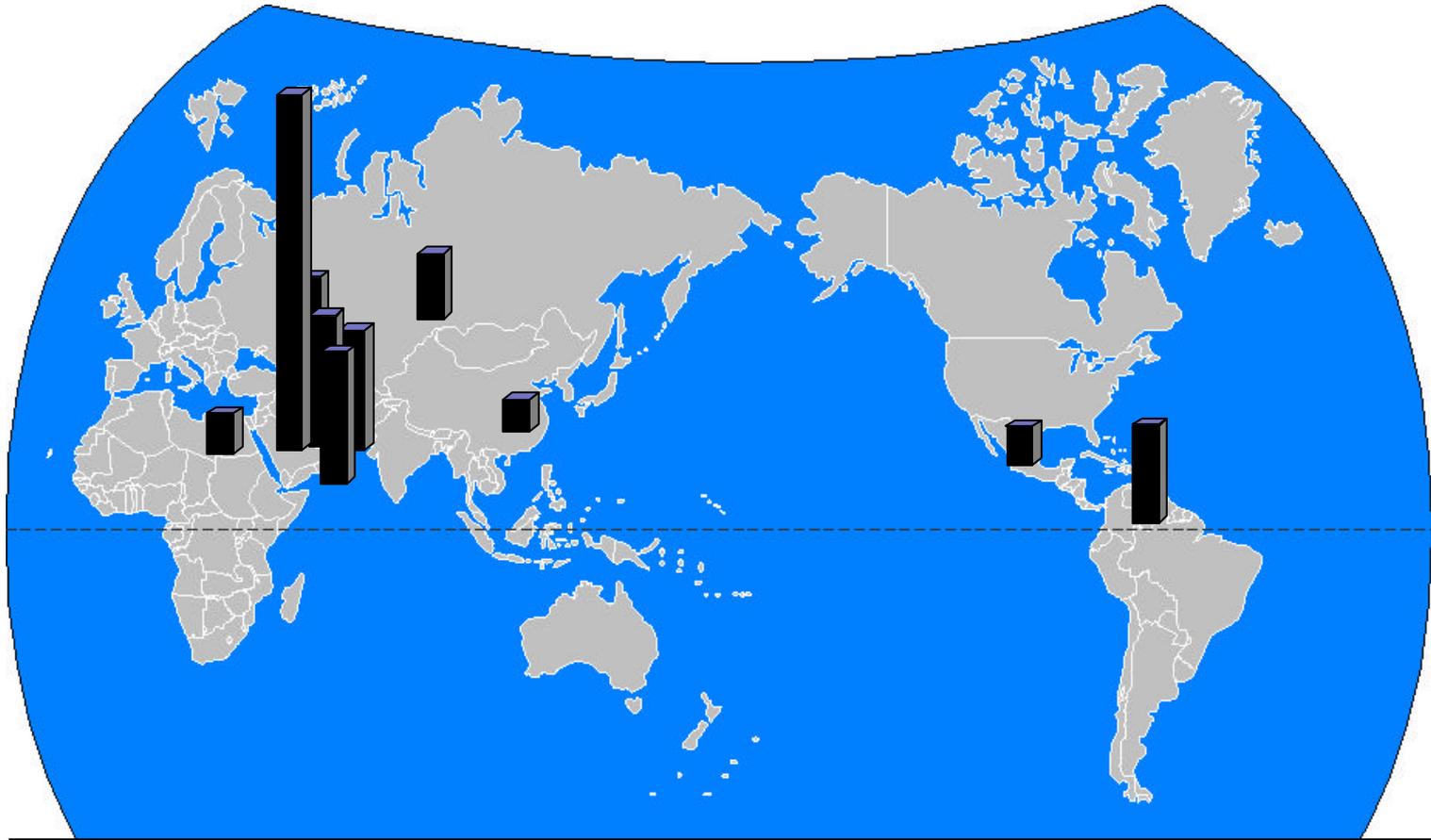
# Propane One



Photo by AP

“It’s good for our air, it’s good for our economy  
and it’s good for our national security.”

- President Bush on public policy supporting alternative fuel



**Where are all the oil reserves?**

# U.S. Oil Supply & Demand



Crude Oil Production  
5.8 million bbl/day 9% of  
world total

Oil Reserves  
21.8 billion bbl  
2% of world total



Oil Imports  
10.5 million bbl/day  
53% of U.S. oil  
consumption



Oil Consumption  
19.7 million bbl/day  
26% of world total

## International Oil Use – Industrialized Countries

	1999 (Quad. Btu)	2020 (Quad. Btu)
North America	45.8	66.2
Western Europe	28.7	32.5
Industrialized Asia	13.9	16.8
<b>Total Industrialized</b>	<b>88.4</b>	<b>115.6</b>
Eastern Europe/ Former Soviet Union	10.8	21.1

## International Oil Use – Developing Countries

	<b>1999</b>	<b>2020</b>
	<b>(Quad. Btu)</b>	<b>(Quad. Btu)</b>
Developing Asia	27.7	59.9
Middle East	10.5	16.4
Africa	5.2	10.9
Central & South America	9.5	18.1
<b>Total Developing</b>	<b>52.9</b>	<b>105.2</b>
<b>Total World</b>	<b>152.2</b>	<b>241.8</b>

# Cost to the Nation

## Economy



\$90.5 billion spent in 2001 for oil imports

## Health

- Asthma
- Bronchitis
- Shortness of breath
- Lost work days

## Environment

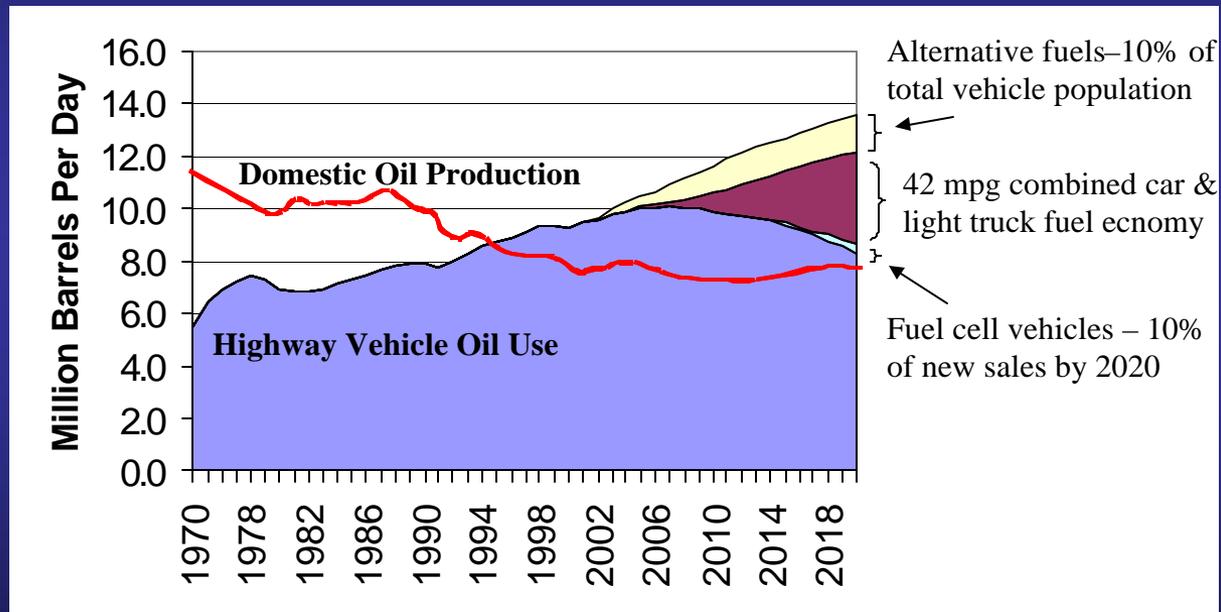


- Air pollution
- Global warming
- Water pollution

## Defense

\$8.9 trillion spent on defense over past 30 years, some to defend “oil allies”

# Alternative Fuels and Improved Fuel Economy Can Reduce Oil Dependence



# Clean Cities and AFVs

- ✓ **Public Private Partnerships**
- ✓ **Voluntary Program**
- ✓ **80 Designated Clean Cities in U.S.**
- ✓ **4,800 Stakeholders**
- ✓ **CC is 10 years old**
- ✓ **Established in Response to EPA Act**



# Clean Cities Coalitions





## **Clean Cities and AFVs: Program Goals**

- 1 million AFVs by 2010**
- 1 billion gallons fuel displacement annually by 2010**
- 75% of coalitions self-sustaining by 2005**

# **AFV Web Tools and Information**

- **What Tools Are Available?**
- **Why Should You Use Them?**
- **Where Can the Tools be Found?**
- **How Easy Are They To Use?**

# What Tools Are Available?

- **Vehicle Buyer's Guide**  
[www.ccities.doe.gov/vbg](http://www.ccities.doe.gov/vbg)
- **Clean Cities Web Site**  
[www.ccities.doe.gov](http://www.ccities.doe.gov)
- **Alternative Fuels Data Center**  
[www.afdc.doe.gov](http://www.afdc.doe.gov)

# **The Clean Cities Web Site**

**([www.ccities.doe.gov](http://www.ccities.doe.gov))**

- **Map and Contact Information**
- **What is CC – Roadmap and Success Stories**
- **Support & Funding**
- **CC International**
- **AFV Info. (LDV, HDV, Refueling)**
- **Emissions**
- **EPAct and GSA Ordering Information**



**On the Road to Clean Cities**

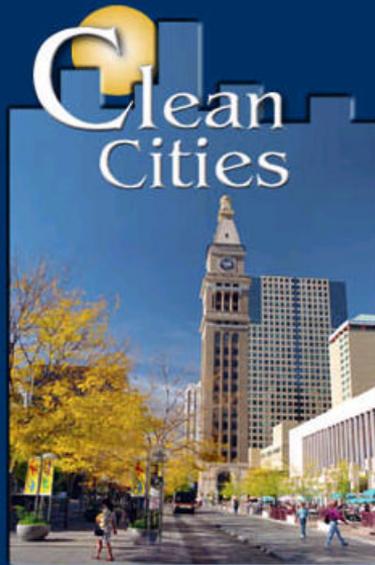
- What is Clean Cities?
- Road Map to Getting Started
- Success Stories
- Alternative Fuel Vehicle Info
- Advancing the AFV Choice

**Information and Contacts**

- Clean Cities Coalitions
- Contact Information
- Support and Funding
- Clean Cities International
- Related Links
- Alternative Fuels Data Center

**News and Events**

- What's New?
- Upcoming Events
- Clean Cities Conference



U.S. Department of Energy

**Search**

**ALTERNATIVE FUEL NEWS**

The official publication of the Clean Cities Program



Coordinator  
Toolbox

The U.S. Department of Energy's Clean Cities Program supports public-private partnerships that deploy alternative fuel vehicles and build supporting alternative fuel infrastructure. Our site features information about local coalitions and clean corridors, alternative fuel news and events, fleet success stories, support and funding, tips for starting a coalition in your area, available alternative fuel vehicles, related links and more.

[Security and Privacy Notices](#)

[\[DOE\]](#) [\[OTT\]](#) [\[Webmaster\]](#) [\[Feedback\]](#)

# **Example: “AFV Information”**

- **Light-Duty AFVs**
- **Heavy-Duty AFVs**
- **AFV Resale Information**
- **GSA Fleet, AFV Sales**
- **AFDC Refueling Stations**
- **EPAct Fleet Information & Regulations**
- **Federal AFV USER Program**
- **Emissions Data and Air Quality**
- **Legislative Information**

**My GSA** [Login](#)  
[Register](#)

**GSA** [Find an AFV](#)

**GSA** [Anticipated AFV Sales](#)

**GSA** [Frequently Asked AFV Questions](#)

**GSA** [Auction Locations](#)

**GSA** [Sales Terms and Conditions](#)

**FSS News**

[News](#)

[Hot Items](#)

**FSS Events**

**Links**

[About FSS](#)  
[Contact Us](#)  
[Customer Service](#)  
[Privacy/Security](#)

Home > GSA AFV VEHICLE SALES

\* The General Public and Dealers are Welcome! \*



*Not all vehicles available at all locations.*

# GSA Fleet

## AFV Sales



**GSA FLEET** operates over 23,000 alternative fuel vehicles (AFVs), one of the largest AFV fleets in the United States. Each year GSA Fleet sells two to four thousand used AFVs as they are replaced by new vehicles. All the information you need to purchase AFV vehicles at one of our public auctions is available on this site. You can learn about AFVs, view vehicles expected to be available in 2002, look for specific vehicles now for sale, search for auction locations in your area and more.

Typical Vehicles	
 Chevrolet	Lumina, Pickup
 Dodge	Ram Vans, Caravan, Pickup
 Ford	Taurus, Contour, Econoline Vans, Pickup

**Find an AFV**

Select A Fuel Type

# Emissions Estimation Tools

(<http://www.afdc.doe.gov/afv/emissions.shtml>)

- **AirCRED Tool (Argonne National Laboratory)**
- **Green Vehicle Guide (EPA)**
- **REET Model (Argonne National Laboratory)**
- **Emissions Testing Lab Tour**
- **Other resources**

http://www.fleets.doe.gov/fleet\_tool.cgi

Address: http://www.fleets.doe.gov/fleet\_tool.cgi?\$\$emis,1



# Alternative Fuel Vehicle Fleet Buyer's Guide

## Alternative Fuels Data Center **AFDC**

Alternative Fuel Vehicles



### Emissions Data and Air Quality Issues

This page presents links to a variety of information and resources useful for estimating the emissions benefits of using alternative fuels.

[The Environmental Protection Agency \(EPA\) Vehicle Emissions Guide](#): Use this guide to help you choose the cleanest new vehicle model that meets your needs.

[AirCRED Online Tool](#): Developed for the Clean Cities Program by Argonne National Laboratory, this tool helps you calculate ozone emission reduction credits for your *Clean Cities* AFVs.

[The GREET Model](#): The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model calculates fuel-cycle energy consumption and emissions of greenhouse gases and 5 criteria pollutants for a given transportation fuel/technology combination.

[A Guide to the Emissions Certification Procedures for Aftermarket Conversions](#)  
A guide produced by the National Renewable Energy Laboratory (NREL) for the Department of Energy in January 1998.

[Take a Tour of an Emissions Testing Laboratory!](#)  
A virtual tour to show you how automotive emissions are measured and analyzed at a research-grade emissions laboratory.

[Photo Gallery of Emission Testing and Laboratories](#)  
Photos courtesy of NREL, West Virginia University, and ManTech of

Internet zone

**Fleet Interactive Tools**

- How Can You Buy an AFV?
- Federal Requirements

**Fleet Information**

- LD/HD AF Vehicles
- Refuel/Recharge Sites
- AFV Dealers
- Incentives and Laws
- Contacts
- Advanced Technology Vehicles (non-EPAAct)
- Emissions Information**
- AFV Publications
- Related Links
- Ask an AFV Expert
- Glossary

**Alternative Fuels**

- Alternative Fuel Vehicles
- Refueling Sites
- Fleet Information
- Frequently Asked Questions
- Resources and Documents
- What's New?
- Upcoming Events
- Periodicals
- National Alternative Fuels Hotline
- Related Web Sites

# Alternative Fuels Data Center

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

**A major source for alternative fuel and AFV information, for example:**

- Information and Documents
- Alt fuels and vehicles
- Refueling Sites
- Fleet Information
- Frequently Asked Questions – Hotline
- Alternative Fuel News
- Upcoming Events
- Related Web Sites
- Emissions information
- Technical Assistance – Tiger Teams
- What's New?



## Alternative Fuels Data Center

# AFDC



- Alternative Fuels
- Alternative Fuel Vehicles
- Refueling Sites
- Fleet Information
- Frequently Asked Questions
- Resources and Documents
- What's New?
- Upcoming Events
- Periodicals
- Related Web Sites
- National Alternative Fuels Hotline

The Alternative Fuels Data Center is a one-stop shop for all your alternative fuel and vehicle information needs. This site has more than 3,000 documents in its database, an interactive fuel station mapping system, listings of available alternative fuel vehicles, links to related Web sites, and much more.



- Search
- Site Index

U.S. Department of Energy

[Security and Privacy Notices](#)

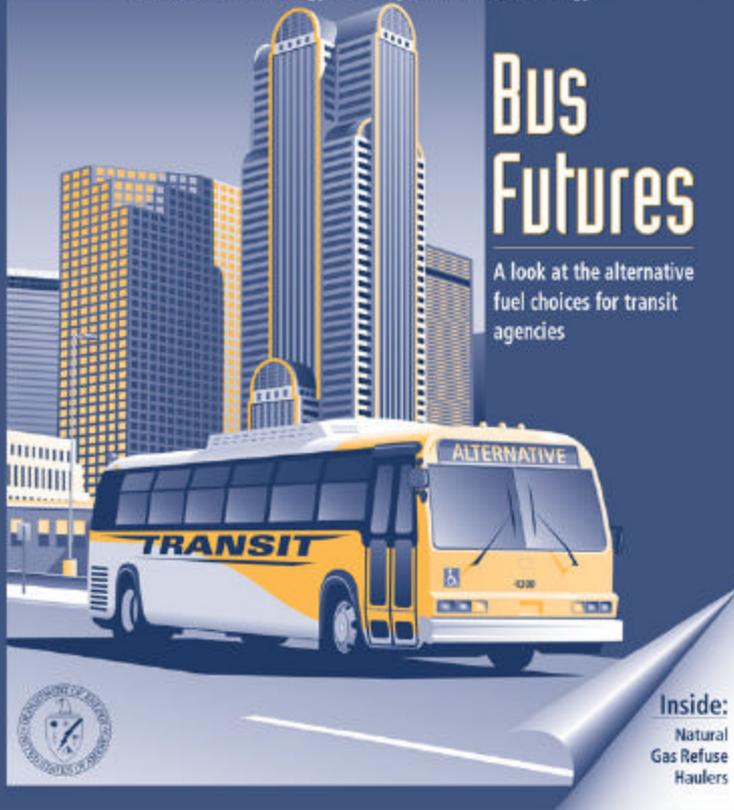
[\[EREN\]](#) [\[DOE\]](#) [\[OTT\]](#) [\[Webmaster\]](#)

U.S. DEPARTMENT OF ENERGY

# ALTERNATIVE FUEL NEWS

Vol. 4 - No. 2

An Official Publication of the Clean Cities Network and the Alternative Fuels Data Center  
From the Office of Energy Efficiency and Renewable Energy



## Bus Futures

A look at the alternative fuel choices for transit agencies



Inside:  
Natural Gas Refuse Haulers



## SuperShuttle CNG Fleet Study Summary

### Introduction

In March of 1999, the Office of Technology Utilization's Field Operations Program began a fleet evaluation of CNG vans in the SuperShuttle fleet in Boulder, Colorado. The results for the evaluation were positive, and the fleet is considering adding more alternative fuel vehicles (AFVs) in the future. This Case Study summarizes the details of the study.

### Background

SuperShuttle, which was started in Los Angeles in 1983, is a shuttle service providing shared-ride door-to-door airport passenger service. It now serves 23 airports, with 1,000 vehicles transporting more than 20,000 passengers each day. The company began using AFVs in 1990 when they added several propane-powered vehicles to the fleet. The first compressed natural gas (CNG) vehicles were added in 1994. SuperShuttle operates approximately 200 CNG vehicles in seven locations including Washington, DC; Phoenix, AZ; Boulder/ Denver, CO; and Sacramento, San Francisco, Los Angeles, and Orange County, CA.

SuperShuttle began operating in Colorado in mid-1996, serving the local community and Denver International Airport (DIA). Their fleet of 85 vehicles includes 18 AFVs fueled by both liquefied petroleum gas (LPG) and CNG. SuperShuttle managers decided to add CNG vans to the Boulder fleet after hearing a presentation spelling out the potential cost savings of using natural gas vehicles.

The vans are operated in two types of service: in-town shuttle around Boulder, which is mostly stop-and-go driving, and in-air-city highway service between



Boulder and DIA. Boulder is approximately 45 miles from DIA, and the vans typically accumulate about 60,000 miles per year.

SuperShuttle operates a service shop at their Boulder facility for all scheduled maintenance and some unscheduled maintenance. Scheduled maintenance includes oil and air filter changes and tire rotations, as well as preventative maintenance checks. The local dealership provides any necessary warranty work.

The managers of SuperShuttle in Colorado were open to providing records and other information for an evaluation of the AFVs in their fleet. SuperShuttle Boulder was an excellent study fleet because it provided the chance to evaluate different CNG technologies side-by-side with gasoline models in a high mileage application.

### Fleet Facts

Fleet Type:	Vans in airport shuttle service
Fleet Size:	85 vans and shuttle buses, of which 28 are AFVs
Alternative Fuel:	CNG and LPG
Study Vehicles:	15 Passenger vans: 5 dedicated CNG, 5 14-foot CNG, and 5 gasoline
Service Area:	Boulder, CO to DIA
Mileage Accumulation:	~60,000 miles annually

# **Vehicle Buyer's Guide**

**([www.ccities.doe.gov/vbg](http://www.ccities.doe.gov/vbg))**

- **General Information on AFVs**
- **Vehicle Buyer's Guide for Consumers**
- **Vehicle Buyer's Guide for Fleets**



## Vehicle Buyer's Guide

Site Map

Search

### Need Some Basic Information?

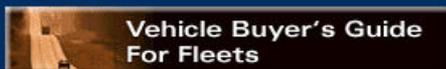
- [What are Alternative Fuel Vehicles?](#)
- [Are Alternative Fuels Available Commercially?](#)
- [What are Some Other Clean and Fuel Efficient Vehicle Choices?](#)
- [What is the Energy Policy Act of 1992 \(EPAAct\)?](#)

Let's face it. Americans love their vehicles. But the U.S. spends about \$2 billion a week on oil imports, mostly for transportation fuel. This need for oil affects our national security. Also, vehicle emissions are the leading source of U.S. air pollution, which jeopardizes our health. Fortunately, there are solutions to these problems. Vehicles powered by domestically produced, clean alternative fuels and other energy efficient, advanced technology vehicles can help reduce our dependence on imported oil and improve air quality.

Using the Vehicle Buyer's Guide, you can learn about different technologies, view vehicle lists with pricing and technical specifications, locate nearby alternative fuel stations, contact a dealer or industry expert, learn about financial incentives, and more.

### What type of buyer are you . . . a consumer or a fleet manager?

These audiences have different needs, so we have developed two separate sites. Select the site that is right for you.





## Vehicle Buyer's Guide for Consumers

[Site Map](#)

[Search](#)

What Are Your Choices?

Product Information

Information Resources

Fleet Buyer's Guide

Vehicle Buyer's Guide

The Vehicle Buyer's Guide for Consumers can help you learn about the alternative fuel and advanced technology vehicles—including hybrid and neighborhood electric vehicles—available today. You can use this site to learn more about the vehicle technologies, obtain pricing and technical specifications, locate your nearest alternative fuel station, contact a dealer, industry expert, or manufacturer, research financial incentives and laws in your state, and much more.

[Vehicle Buyer's Guide](#) | [Consumer Buyer's Guide](#) | [Fleet Buyer's Guide](#)

[\[DOE\]](#) [\[OTT\]](#) [\[Webmaster\]](#) [\[Feedback\]](#)

# Using the AFV Fleet Buyer's Guide Tool

([www.fleets.doe.gov](http://www.fleets.doe.gov))

- Tell us about yourself
- Do regulations apply?
- If you must or want to, how do you buy an AFV?



#### Fleet Information

[LD/HD AF Vehicles](#)

[Refuel/Recharge Sites](#)

[AFV Dealers](#)

[Incentives and Laws](#)

[Contacts](#)

[EPAct Web Site](#)

#### Other Resources

[Advanced Technology Vehicles \(non-EPAct\)](#)

[Emissions Information](#)

[AFV Publications](#)

[Related Links](#)

[Ask an AFV Expert](#)



Office of Transportation Technologies

## Alternative Fuel Vehicle Fleet Buyer's Guide

Welcome to the Clean Cities Alternative Fuel Vehicle Fleet Buyer's Guide

This Web site is designed to help you understand and acquire AFVs.

*First*

To customize  
your session, please provide  
some information

Now choose one of two interactive tools:

How can you buy  
an AFV?

- View the details for **Light- and Heavy-Duty** AFVs
- Determine the incentives that apply to you and conduct a cost analysis
- Find the nearest dealerships and refuel/recharge sites

Do Federal Requirements  
apply to you?

- Do you have to acquire AFVs to meet Energy Policy Act (EPAct) requirements?
- If so, how many AFVs must you buy?

[Security and Privacy Notices](#)

[\[DOE\]](#) [\[OTT\]](#) [\[AFDC\]](#) [\[Clean Cities\]](#) [\[Feedback\]](#) [\[Webmaster\]](#)



## Alternative Fuel Vehicle Fleet Buyer's Guide

### User Information

Please supply us with the minimum of information; zip and fleet type. The Guide uses this information to determine your location and help determine Federal EPA Act requirements and possible incentives in the interactive portion of the program. If you need to change fleet type or zip code, you must change it here. The fields marked: \* are required fields.

FLEET TYPE \* :

[Fleet Type Definitions](#)

Fleet location's ZIP code \* :

[Zip Location Definitions](#)

[US Postal Service Zip Code Locator](#)

You are not required to fill out the rest of the fields; however, we will use this information to notify you of future changes and new products. We will keep this information strictly confidential.

COMPANY NAME:

ADDRESS Line 1:

ADDRESS Line 2:

CONTACT FIRST NAME:

CONTACT LAST NAME:

CONTACT PHONE:

CONTACT EMAIL:

#### Fleet Interactive Tools

[How Can You Buy an AFV?](#)

[Federal Requirements](#)

#### Fleet Information

[AF Vehicles](#)

[Refuel/Recharge Sites](#)

[AFV Dealers](#)

[Incentives and Laws](#)

[Contacts](#)

#### Other Resources

[AFV Publications](#)

[Related Links](#)

[Ask an AFV Expert](#)

**Now Here's What We Know  
About You...**



**Fleet Interactive Tools**

- How Can You Buy an AFV?
- Federal Requirements

**Fleet Information**

- AF Vehicles
- Refuel/Recharge Sites
- AFV Dealers
- Incentives and Laws
- Contacts

**Other Resources**

- AFV Publications
- Related Links
- Ask an AFV Expert

## Alternative Fuel Vehicle Fleet Buyer's Guide

### Thank You!

From the zip code you entered, we have determined that you are in an EPA regulated area. Your zip code, county, city, state, and MSA/CMSA are:

**Zip Code:** 80903  
**County:** El Paso  
**City:** Colorado Springs  
**State:** CO

**MSA\_CMSA:** Colorado Springs, CO MSA [CMSA MSA Definition](#)

If you know this information to be incorrect contact us [webmaster.fleet@nrel.gov](mailto:webmaster.fleet@nrel.gov)

Now you are ready to use one of the interactive tools.

[How can you buy an AFV?](#) [Do Federal Requirements apply to you?](#)

[\[Home\]](#) [\[AFDC\]](#) [\[Clean Cities\]](#) [\[Webmaster\]](#) [\[Feedback\]](#) [\[Change User Info\]](#) [\[FAQ\]](#)

ADMINISTRATION

# Do Federal Requirements Apply to You?

- **Must you comply with EPA Act? If so, how many AFVs must you buy?**
- **What about the Clean Air Act?**



Fleet Interactive Tools

How Can You Buy an AFV?

Federal Requirements

Fleet Information

AF Vehicles

Refuel/Recharge Sites

AFV Dealers

Incentives and Laws

Contacts

Other Resources

AFV Publications

Related Links

Ask an AFV Expert

## Alternative Fuel Vehicle Fleet Buyer's Guide

### Do Federal Requirements Apply to You?

There are two federal laws that may require fleet operators to acquire vehicles that operate on certain designated fuels. The Energy Policy of 1992 (EPAct) targets alternative fuel use, and is the focus of this Guide.

The 1990 Clean Air Act Amendments (CAAA) target the use of EPA-designated clean fuels for certain fleets operating in ozone and carbon monoxide non-attainment areas. For information on CAAA requirements, visit EPA's website at <http://www.epa.gov/OMSWWW/cif.htm>

### Is Your Fleet Required by EPAct to Buy AFVs?

You have told us you are a fuel provider. Only those Fuel Providers sufficiently involved in alternative fuels are covered by EPAct. The information you provide below will allow us to see if you are covered under EPAct as an Alternative Fuel Provider. If you are, we will next ask for fleet information before advising you of your EPAct requirements. [List of Alternative Fuels](#)

Please check the box that best describes your business:

1. Your "principal business" (i.e., the sales-related activity that produces the greatest revenue) is that of
  - a) producing, storing, refining, processing, transporting, distributing, importing or selling (at wholesale or retail) any alternative fuel (other than electricity), OR
  - b) generating, transmitting, importing, or selling (at wholesale or retail) electricity.
2. Your "principal business" is that of:
  - a) transforming alternative fuels into products that are NOT alternative fuels OR
  - b) consuming alternative fuels as a feedstock or fuel in the manufacture of products that are not alternative fuels. [Examples](#)
3. Your business produces, imports, or produces and imports (in combination) an average of 50,000 barrels per day of petroleum AND a "substantial portion" (at least 30%) of your gross annual revenues are derived from the sale of alternative fuels.
4. None of the above.

SUBMIT

ADMINISTRATION

**Now Tell Me More About  
Your Fleet Characteristics**



Fleet Interactive Tools

How Can You Buy an AFV?

Federal Requirements

Fleet Information

AF Vehicles

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AFV Dealers

Incentives and Laws

Contacts

Other Resources

AFV Publications

Related Links

Ask an AFV Expert

## Alternative Fuel Vehicle Fleet Buyer's Guide

### Do Federal Requirements Apply to You?

#### Is Your Fleet Required by EPAct to Buy an AFV?

We need to know the number of non-excluded vehicles in the fleet located in the MSA/CMSA we determined from the zip code you entered, and the number of non-excluded vehicles in **All** your US fleets.

Several types of vehicles are excluded from the regulations, and should not be counted in answering the following questions.

[Definition of Excluded Vehicles](#)

Do you have 20 or more non-excluded vehicles in the local fleet?  Yes  No [Example](#)

Do you have 50 or more non-excluded vehicles in All U.S. fleets?  Yes  No

#### Alternate Vehicle-Counting Options:

- **State governments** may count non-excluded vehicles as a whole State or separately as individual agencies. [More Information](#)
- A holding Company that is an **Alternative Fuel Provider** may count non-excluded vehicles as a whole or separately as individual affiliates. [More Information](#)

SUBMIT

[\[Home\]](#) [\[AFDC\]](#) [\[Clean Cities\]](#) [\[Webmaster\]](#) [\[Feedback\]](#) [\[Change User Info\]](#) [\[FAQ\]](#)

ADMINISTRATION


**Fleet  
Interactive Tools**
[How Can You  
Buy an AFV?](#)
[Federal  
Requirements](#)
**Fleet Information**
[AF Vehicles](#)
[Refuel/Recharge  
Sites](#)
[AFV Dealers](#)
[Incentives  
and Laws](#)
[Contacts](#)
**Other Resources**
[AFV Publications](#)
[Related Links](#)
[Ask an  
AFV Expert](#)

## Alternative Fuel Vehicle Fleet Buyer's Guide

### Do Federal Requirements Apply to You?

**Company Name:** CO Springs Gas Utilities **Zip Code:** 80903

**Fleet Type:** Fuel Provider **MSA/CMSA:** Colorado Springs, CO MSA [CMSA MSA Definition](#)

Based on the fleet type, fleet location, and number of vehicles you control, it appears you **are required** by the EPAct regulations to acquire AFVs as a percentage of your new car acquisitions. The following table presents the schedule of percentages to which you should adhere:

EPAct-FUEL PROVIDER	
YEAR	% of AFV Purchase Requirements
1997	30 %
1998	50 %
1999	70 %
2000	90 %
2001	90 %
2002	90 %
2003	90 %
2004	90 %
2005	90 %
2006	90 %

[Exemptions from Requirements for States and Alternative Fuel Providers.](#)

For information on getting an official ruling on whether or not you are required to buy AFVs: [Request For Official DOE Ruling](#)

Use the navigation aids in the sidebar to get information on AFV models that are available, to find the incentives for buying AFVs, to locate dealers and refueling/recharging sites, and more!

## ADDITIONAL IMPORTANT CONSIDERATIONS

### Guidelines on Acquisitions that Satisfy Requirements

[List of Alternative Fuels](#)

[Forms of Acquisition – purchase/lease, new/used, dedicated/converted vehicle](#)

[Acquiring Excluded Vehicle \(including Medium and Heavy-Duty Vehicles\)](#)

[Alternative Fueled Vehicle Credit Program](#)

# **OK, You Need To Comply... What Vehicles Are Available?**

**Select 'Product Information' from the Fleet  
Buyer's Guide left selection bar.**

Netscape  
File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Shop Stop

Location: http://www.fleets.doe.gov/fleet\_tool.cgi?\$\$,prod,1

Instant Message Members WebMail Connections BizJournal SmartUpdate Mktplace

## Clean Cities

**Fleet Interactive Tools**

- How Can You Buy an AFV?
- Federal Requirements

**Fleet Information**

- LD/HD AF Vehicles
- Refuel/Recharge Sites
- AFV Dealers
- Incentives and Laws
- Contacts
- Advanced Technology Vehicles (non-EPAct)
- Emissions Information
- AFV Publications
- Related Links
- Ask an AFV Expert
- Glossary
- Production Information

# Alternative Fuel Vehicle Fleet Buyer's Guide

## Light Duty Alternative Fuel Vehicles

Search our light duty AFV database for details about vehicle ordering windows and production schedules. We maintain and update the database in direct cooperation with the original equipment manufacturers (OEMs).

Please note that the delivery time frame information the database provides refers to the time it takes to receive the vehicle once the dealer and the OEM have resolved the ordering logistics.

You have two options. Option 1 takes precedence over Option 2; Option 1 must be blank in order to use Option 2

**Option 1:**

Select a vehicle from the following list. [Click on the Select button](#) to see the vehicle production information.

Select

**Option 2:**

If you would like to see production information for all vehicles in a given class or fuel type, [click on the "Search" button](#) for a list of all that apply. You may select from either or both menus.

Vehicle Fuel Type

Automobile CNG

Search

Document: Done

Start

12:27 PM

Netscape  
File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Shop Stop

Location: http://www.fleets.doe.gov/fleet\_tool.cgi?1505\_cost,2,285441

Instant Message Members WebMail Connections BizJournal SmartUpdate Mktplace

## Clean Cities

Fleet Interactive Tools

How Can You Buy an AFV?

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- AFV Dealers
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- Glossary
- Production Information

## How Can You Buy a Light Duty AFV?

[Interested in Heavy Duty AFVs? Click here:](#)



Find out in 3 easy steps:

Step 1: Select a Light Duty AFV you would like to evaluate.  
Step 2: Determine the incentives that apply to you and conduct a cost analysis. Be aware that Federal and State incentives may vary.  
Step 3: Find the dealerships and refuel or re-charge sites closest to you.

### Step 1.

Select an AFV - You have two options, option 1 takes precedence over option 2. Option 1 should have the blank field selected if you wish to use option 2.

**Option 1:**

If you already know the AFV you want to evaluate, pick from the list and click on the select button.

2002 Dodge Caravan CHRYS Ethanol/Gasoline [189]

Select and go to Step 2

**Or Option 2:**

If you would like to see a list of vehicles that could meet your needs use these lists to specify your criteria. Click on the Search button to view the vehicles.

Document: Done

Start

12:39 PM



- Interactive Tools
- How Can You Buy an AFV?
- Federal Requirements
- Get Information
- Light Duty AF Vehicles
- Fuel/Recharge
- EV Dealers
- Regulations and Laws
- Contacts
- Advanced Technology Vehicles (non-EPAAct)
- Emissions Information
- EV Publications
- Related Links
- EV Expert
- Glossary
- Production Information

## Alternative Fuel Vehicle Fleet Buyer's Guide

### Alternative Fuel Vehicles

Click on [Vehicle Picture](#) for more detailed Specifications.  
 Selected on Search Criteria: Sedan and Natural Gas

	Crown Victoria	2002	FORD	CNG
<b>Vehicle Type</b>	<b>Fuel Configuration</b>	<b>Sticker Price</b>	<b>Fuel Economy City</b>	<b>Fuel Economy Highway</b>
AUTO2	DED		15	22
Models include Crown Victoria, Police Interceptor, and Heavy Duty Commercial Use version of this vehicle.				
	Civic GX	2002	HONDA	CNG
<b>Vehicle Type</b>	<b>Fuel Configuration</b>	<b>Sticker Price</b>	<b>Fuel Economy City</b>	<b>Fuel Economy Highway</b>
AUTO2	DED	20600	30	34
4-door compact sedan, dual air bags				

# **Now, Perform the Vehicle Fuel Cost Savings Payback Analysis**

**(From “How Can You Buy an AFV’ on the Fleet  
Buyer’s Guide left selection bar.)**



Fleet Interactive Tools  
[How Can You Buy an AFV?](#)  
 Federal Requirements

Fleet Information  
 LD/HD AF Vehicles  
 Refuel/Recharge Sites  
 AFV Dealers  
 Incentives and Laws  
 Contacts  
 Advanced Technology Vehicles (non-EPAAct)  
 Emissions Information  
 AFV Publications  
 Related Links  
 Ask an AFV Expert  
 Glossary  
 Production Information

## How Can You Buy an AFV?

### Step 2:

Determine the incentives that apply to you and conduct a cost analysis.



Civic GX HONDA AUTO 4-door compact sedan, dual air bags [Vehicle Specs.](#)

The Cost Analysis is conducted in 3 parts to determine:

- Part 1:** Net differential cost to acquire an AFV compared to a gasoline fueled vehicle. Note: All Federal and State Incentive may not apply.
- Part 2:** Net differential cost to operate an AFV compared to a gasoline fueled vehicle.
- Part 3:** Simple payback in miles and years, if net differential cost to acquire > 0.

### Part 1: Net Incremental Cost to Acquire an AFV

#### Vehicle cost provided by Manufacturer

Hit "compute" button to calculate at any time while you are working in this section.  
 (tab between fields)

Compute Clear Fields Load Calculator

Initial Cost of AFV Minus Mfg. Rebates		Cost of Comp. Gasoline Veh.		Incremental Cost
<input type="text" value="18600"/>	-	<input type="text" value="15730"/>	=	<input type="text" value="2870"/>



**Fleet Interactive Tools**

- [How Can You Buy an AFV?](#)
- [Federal Requirements](#)
- Fleet Information**
- [AF Vehicles](#)
- [Refuel/Recharge Sites](#)
- [AFV Dealers](#)
- [Incentives and Laws](#)
- [Contacts](#)
- Other Resources**
- [AFV Publications](#)
- [Related Links](#)
- [Ask an AFV Expert](#)

<b>Federal Incentives</b>	<b>Tax Rate</b>	<input type="text" value="28%"/>	-	<input type="text" value="560"/>
Enter your Federal Tax Rate to allow calculation of your AFV Federal Tax Deduction (default = 28%).				
\$2,000 * TAX Rate for vehicles < 10,000 lbs (off-road vehicles excluded)				
<b>State Utilities/Private Incentives for Colorado</b>	Entire State, All values may not apply		-	<input type="text" value="2215.5"/>
Rebate of 70% of incremental cost for ULEV certified vehicles, up to \$15,000 for GVWR<8501 lbs or \$40,000 for GVWR>8500 lbs.		<input type="text" value="2215.5"/>		
Office of Energy Conservation Tom Brotherton (303) 620-4292				
<b>Other</b>	<input type="text"/>		-	<input type="text"/>
<b>Net Incremental Cost to Acquire</b>			=	<input type="text" value="389.5"/>

**Part 2: Net Incremental Cost to Operate an AFV**  
**Fuel Cost are estimates, may vary in your area.**  
 Hit "compute" button to calculate at any time while you are working in this section.  
 (tab between fields)  
 Gasoline and Alt Fuel prices are default values. If you have better fuel price information, please enter in the appropriate field(s) and compute. Vehicle MPG and MPGGE was provided by the OEM of the vehicle you selected.

Gasoline	<input type="text" value=".94"/>	Divided by	<input type="text" value="16"/>	=	<input type="text" value="0.059"/>
	\$/gallon		Vehicle MPG		\$/mile
Alt Fuel	<input type="text" value=".75"/>	Divided by	<input type="text" value="15"/>	=	<input type="text" value="0.05"/>
	\$/gge		Vehicle MPGGE		\$/mile
Dollar Savings Per Mile					= <input type="text" value="0.009"/>
					\$/mile



**Fleet Interactive Tools**  
[How Can You Buy an AFV?](#)  
[Federal Requirements](#)

**Fleet Information**  
[AF Vehicles](#)  
[Refuel/Recharge Sites](#)  
[AFV Dealers](#)  
[Incentives and Laws](#)  
[Contacts](#)

**Other Resources**  
[AFV Publications](#)  
[Related Links](#)  
[Ask an AFV Expert](#)

### Part 3: Simple Payback in Miles and Years

Hit "compute" button to calculate at any time while you are working in this section.  
(tab between fields)

Divided by  =

**Cost to Acquire**                      **Savings per mile**      **Payback in Miles**

Divided by  =

**Payback in Miles**                      **Miles per year**      **Payback in Years**

---

### Step 3

(this section under construction )

[Check out Refueling Sites Nearest You](#)

[Check out AFV Dealers Nearest You](#)

---

[\[Home\]](#) [\[AFDC\]](#) [\[Clean Cities\]](#) [\[Webmaster\]](#) [\[Feedback\]](#) [\[Change User Info\]](#) [\[FAQ\]](#)

# Are there other Advanced Technology Vehicles that you could look at?

Yes – check out the Buyers Guide for Consumers, ‘Product Information’ selection. Then, select the class of vehicle in which you are interested or choose a variety of other tools related to product information. Remember, gasoline hybrid vehicles are not EPA Act compliant.



**Clean Cities**  
S. Department of Energy

Search by Fuel Type  
Search by Manufacturer  
Search by Vehicle Class

- Two-Seater
- Sedan
- Pickup Truck
- Van
- Sport Utility Vehicle
- Neighborhood Electric Vehicles
- Electric Bicycles

Dealers  
Fueling  
Maintenance  
Side-by-Side Comparison  
Financial Incentives and Laws



## Vehicle Buyer's Guide for Consumers

Home Glossary Site Map Search

What are Your Choices? Product Information Information Resources

### Search by Vehicle Class

Vehicle Class:

Two-Seater
Sedan
Electric Bicycle
Pickup Truck
Neighborhood Electric Vehicle
Van

SELECT RESET

Are There Incentives Available?

[Vehicle Buyer's Guide](#) | [Consumer Buyer's Guide](#) | [Fleet Buyer's Guide](#)

[\[DOE\]](#) [\[OTT\]](#) [\[Webmaster\]](#) [\[Feedback\]](#)

- Search by Manufacturer
- **Search by Vehicle Class**
- Two-Seater
- Sedan
- Pickup Truck
- Van
- Sport Utility Vehicle
- Neighborhood Electric Vehicles
- Electric Bicycles
- Dealers
- Fueling
- Maintenance
- Side-by-Side Comparison
- Financial Incentives and Laws

**Search by Vehicle Class**

	<b>City MPG</b>	<b>Hwy MPG</b>	<b>Transmission and Engine</b>
	Unavailable	Unavailable	
2002 Ford Motor Co. THINK City 1-866-GO-THINK	<b>Sticker Price</b>	<b>Gas Equivalent Price</b>	Three-phase AC induction
<b>Emissions Certification</b>	Unavailable	Unavailable	
ZEV	Electricity Electric		<input type="button" value="View Specifications"/>
<b>Dealer Locator URL:</b>			<input type="button" value="Cost Analysis"/>
<a href="http://www.thinkmobility.com/">http://www.thinkmobility.com/</a>			

	This gasoline-electric hybrid vehicle is not EPA-compliant, but does meet California ULEV standards. Combining an efficient 1.0 liter, 3-cylinder gasoline engine with an electric motor powered by advanced nickel-metal hydride batteries, the Insight can travel up to 700 miles before needing to be re-fueled. Available in a 5-speed manual transmission or continuously variable transmission (CVT) starting spring 2001.		
	<b>City MPG</b>	<b>Hwy MPG</b>	<b>Transmission and Engine</b>
	61	70	Manual 5-Speed or CVT

**All right, you know what you want and need. Are there any refueling sites for the fuel you have chosen?**



# Alternative Fuel Station Locator

The Alternative Fuel Station Locator can search our database of refueling stations for the entire country to find stations offering alternative fuels. To begin your search, simply follow these steps:

- Select a Fuel Type from the pull-down menu
- Insert a search radius (25 miles is the default)
- Select 'Search From' point: Address, City, or State
- Enter address, city and/or state
- Click the Search button

[Station Locator](#)  
[Instructions](#)

Compressed Natural Gas (CNG)	Stations Within Radius:	25	Miles
<b>Enter the search from location:</b>			
Search From:	City		
City:	Palm Springs		
State:	California		
<input type="button" value="Search"/>			

[Help](#)   [New Station Search](#)   [New Route](#)

 We recommend using Netscape 4 or higher OR Microsoft Internet Explorer 5 or higher, with java enabled. A minimum screen resolution of 800x600 pixels is also highly recommended. If you experience problems with this site, contact the [Webmaster](#).



# Alternative Fuel Station Locator

*(Scroll Down to see the list of found results)*

You should always call any station you plan to visit in advance to verify the type of access. Some stations in our database have addresses that are not in the Locator application. This may result in the station appearing in the map but not in the list.

**Stations Details - Microsoft Internet Explorer**

### Alternative Fuel Station Locator

**NAME:** SunGas at AM/PM Mini Mart  
**FUEL TYPE:** Compressed Natural Gas (CNG)  
**STREET ADDRESS:** 36-001 Date Palm Drive  
**CITY:** Cathedral City  
**STATE:** CA  
**ZIP:** 92234  
**PHONE:** null  
**TYPE OF ACCESS:** P  
**DIRECTIONS:** Gerald Ford & Date Palm Drive  
**HOURS OF OPERATION:** 24 hrs. Daily  
**CASH:** N  
**GAS CARD:** Y





[Help](#) [New Station Search](#) [New Route](#)

▲  
**6 Compressed Natural Gas (CNG) Refueling Station(s) Found**  
 Around: Palm Springs, CA  
 Within Radius: 25 Mile(s)

Print Table

	Miles	Id	Name	Phone	Address	City	State	Zip	Type of Access
	3	932	Palm Springs Airport/SunLine/PFC	888-732-6487	3400 E. Tahquitz Canyon Way	Palm Springs	CA	92262	<a href="#">PR</a>
	4	1227	SunGas at AM/PM Mini Mart		36-001 Date Palm Drive	Cathedral City	CA	92234	<a href="#">P</a>
	8	677	Sunline Transit Agency/PFC	888-732-6487	32505 Harry Oliver Trail	Thousand Palms	CA	92276	<a href="#">PR</a>
	10	1083	Waste Management of the Desert - PFC	888-732-6487	41575 Eclectic St.	Palm Desert	CA	92260	<a href="#">PR</a>
	16	913	Sunline Indio/PFC	888-732-6487	83255 Hwy. 111	Indio	CA	92201	<a href="#">PR</a>
	22	917	City of Banning		176 E. Lincoln St.	Banning	CA	92222	<a href="#">N</a>

[Help](#) [New Station Search](#) [New Route](#)

**You'd like to know more  
about Incentives and Laws -  
- Federal, State, and Local --  
that might apply to you.  
What do you do?**

**Select 'Laws and Incentives' from the left tool  
bar on the Buyer's Guide for Fleets.**



Fleet Interactive Tools

How Can You Buy an AFV?

Federal Requirements

Fleet Information

AF Vehicles

Refuel/Recharge Sites

AFV Dealers

Incentives and Laws

Contacts

Other Resources

AFV Publications

Related Links

Ask an AFV Expert

## Alternative Fuel Vehicle Fleet Buyer's Guide

### Incentives and Laws

Financing is a central issue in any effort to acquire and use AFVs. There are a wide variety of incentives offered at the Federal, State and local levels, to encourage the expanded use of AFVs. Use the information provided here to help determine the incentives and laws that apply to your unique situation. Use the buttons below to choose the information you are interested in. It is easy to navigate between the options.

All of the information is updated on an ongoing basis and every effort is made to provide a comprehensive and up-to-date guide to AFV incentives and laws. If your organization is not included, or if the information on your organization's programs has changed, please email [afv\\_inlaws@afdc.nrel.gov](mailto:afv_inlaws@afdc.nrel.gov) with the new or corrected information.

#### Federal Incentives and Laws

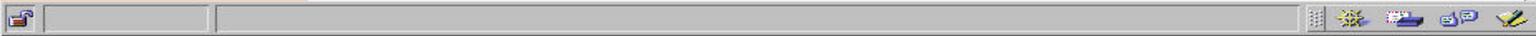
[Learn about Federal tax credits and deductions as well as AFV incentive programs sponsored by DOE, DOT and EPA.](#)

#### State Incentives and Laws

Learn about the current state, local and private incentives and state and local laws. For each incentive a contact name and phone number is included for you to follow up and get more details on the programs that apply to you.

Select a **State** from the list below, and hit the **Run State Query** button. (Select ALL STATES to print a copy of the Incentives and Laws for all states )

STATE:





**Fleet Interactive Tools**

[How Can You Buy an AFV?](#)

[Federal Requirements](#)

**Fleet Information**

[AF Vehicles](#)

[Refuel/Recharge Sites](#)

[AFV Dealers](#)

[Incentives and Laws](#)

[Contacts](#)

**Other Resources**

[AFV Publications](#)

[Related Links](#)

[Ask an AFV Expert](#)

## Alternative Fuel Vehicle Fleet Buyer's Guide

### State Incentives/Regulations Section

#### Rhode Island

#### Overview

The state of Rhode Island has formed a Senate Study Commission to consider the issue of providing incentives for AFVs. Providence Gas currently provides rebates for natural gas fuel vehicle projects on a case-by-case basis.

#### State Incentives

HB 6745A, the Alternative Fueled Vehicles Incentive Act of 1997, provides incentives to utilizers of domestically produced alternative fuels set forth in the federal Energy Policy Act of 1992. Taxpayers will receive a credit equal to fifty percent of the capital, labor and equipment costs incurred through the construction or improvement of any alternative fuel filling station or recharging station. Taxpayers will also receive a credit equal to fifty percent of the incremental costs incurred by the purchase of alternative fuel vehicles or the capital, labor and equipment cost of the conversion of motor vehicles so that they can use alternative fuels.

Rhode Island State Energy Office, beginning in January of 1999, will be loaning money interest free for a five-year period to state agencies and municipal governments to cover the incremental costs of OEM-AFVs. The loan will also cover conversions. For more information, contact Janice McClanaghan at (401) 222-3370, (401) 222-1260-Fax, e-mail her at [janicem@gw.doa.state.ri.us](mailto:janicem@gw.doa.state.ri.us), or look up their Web site at <http://www.riseo@state.ri.us>.

#### Utilities/Private Incentives

Providence Gas provides rebates and incentives for natural gas vehicle projects on a case-by-case basis through its Demand-Side Management Program. For more information, contact Dave Moniz at (401) 272-5040 extension 2228, (401) 331-1150-Fax, or try their Web site at <http://www.provenergy.com/provgas.html>.

#### Laws and Regulations

Senate Bill 1154 (1995) created a 13-member special legislative study commission to investigate alternative fuels.

An Alternative Transportation Fuel Study Committee was established in 1992 to conduct a study of clean alternative transportation fuels.

# **You still need to talk with someone. Any ideas?**

**Select 'Contacts' from the left tool bar on the Buyer's Guide for Fleets. You can get related federal and state contact information from this selection.**



**Fleet Interactive Tools**

[How Can You Buy an AFV?](#)

[Federal Requirements](#)

**Fleet Information**

[AF Vehicles](#)

[Refuel/Recharge Sites](#)

[AFV Dealers](#)

[Incentives and Laws](#)

[Contacts](#)

**Other Resources**

[AFV Publications](#)

[Related Links](#)

[Ask an AFV Expert](#)

## Alternative Fuel Vehicle Fleet Buyer's Guide

### Contacts

There are numerous people and organizations throughout the U.S. involved in the developing alternative fuels industry. We have assembled lists of contacts by region and area of interest to assist you.

#### DOE Contacts

Clean Cities Headquarters and Regional Contacts  
<http://www.ccities.doe.gov/phonelists/doescont.html>

#### Clean Cities Coordinators

<http://www.ccities.doe.gov/phonelists/ccoord.cgi>

#### State and Regional Contacts

Select a state from the list below and see the contacts knowledgeable of the regional, state and local laws, incentives and opportunities that apply. Individuals from DOE, DOT, EPA, GSA, Metropolitan Planning Organizations, State Energy Offices, alternative fuel organizations and coalitions, and utility companies are included.

Please Change State if different from default:

STATE:

[Run State Contacts Query](#)

#### Resource Guides

The guides listed below contain contact information specific to each subject area.

**PDF** The file below requires the Adobe Acrobat Reader to view it. Please read our [hints](#) on obtaining and using Acrobat before viewing this document.

[Natural Gas](#) **PDF** (file size 291K)

[Liquified Petroleum Gas \(LPG, Propane\)](#) **PDF** (file size 573K)

[Ethanol](#) **PDF** (file size 121K)

[Methanol](#) **PDF** (file size 19.5K)

Fleet  
Interactive Tools

[How Can You Buy an AFV?](#)

[Federal Requirements](#)

## Fleet Information

[AF Vehicles](#)

[Refuel/Recharge Sites](#)

[AFV Dealers](#)

[Incentives and Laws](#)

[Contacts](#)

## Other Resources

[AFV Publications](#)

[Related Links](#)

[Ask an AFV Expert](#)

## Points of Contact:

NAME	AGENCY	TITLE	PHONE	EMAIL
Luke Driver	Providence Clean Cities	Coordinator	(401) 421-2489	<a href="mailto:cqj102@uriacc.uri.edu">cqj102@uriacc.uri.edu</a>
Carol Butler	Providence Clean Cities	Coordinator	(203) 630-1856	<a href="mailto:carol.butler@snet.net">carol.butler@snet.net</a>
Janice McClanaghan	Rhode Island State Energy Office		(401) 222-3370	<a href="mailto:janicem@gw.doa.state.ri.us">janicem@gw.doa.state.ri.us</a>
Dave Moniz	Providence Gas		(401) 272-5040 x2228	—
John Brownell	State Division of Planning		401 222-6182	<a href="mailto:Transport@doa.state.ri.us">Transport@doa.state.ri.us</a>
Paul Silva	Rhode Island State Transportation Contact	Department of Transportation	(401) 222-4203 Extension 4231	—
Mark Mahoney	U.S. Environmental Protection Agency	Regional Pollution Prevention Coordinator Region 1	(617) 565-1155	—
	Rhode Island Statehouse	General Statehouse Number	(401) 222-2000	—
Max Vigil	U.S. Department of Transportation	Federal Transit Administration Region 1	(617) 494-2055	<a href="mailto:max.vigil@fta.dot.gov">max.vigil@fta.dot.gov</a>
Mike Scarpino	U.S. Department of Energy	Clean Cities Regional Contact	(617) 565-9716	<a href="mailto:michael.scarpino@hq.doe.gov">michael.scarpino@hq.doe.gov</a>
Regional Fleet Manager	General Service Administration	Brian Smith	(212) 264-3930	<a href="mailto:brian.smith@gsa.gov">brian.smith@gsa.gov</a>

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ADMINISTRATION

**What about dealers in your area selling AFVs? Can you receive help there?**

**YES - go to the left bar on the Buyer's Guide for Fleets and click on "AFV Dealers"**

*Additional Information:*

**Nat'l Alternative Fuels and  
Clean Cities Hotlines 800-  
423-1363 or 800-CCITIES**

*Primary Web Sites:*

**Clean Cities:** [www.ccities.doe.gov](http://www.ccities.doe.gov)

**Buyers Guides:** [www.ccities.doe.gov/vbg](http://www.ccities.doe.gov/vbg)

**AFDC:** [www.afdc.doe.gov](http://www.afdc.doe.gov)

**U.S. DOE:** [www.energy.gov](http://www.energy.gov)

**DOE/EREN:** [www.eren.doe.gov](http://www.eren.doe.gov)

**See you in  
Palm Springs  
for the 2003  
National  
Clean Cities  
Conference!**

