

U. S. DEPARTMENT of ENERGY

ALTERNATIVE FUEL NEWS

The Official Publication of the Clean Cities Network and the Alternative Fuels Data Center

1998 Alternative Fuel Vehicle Review . . . *The Market Heats Up*



Six New Coalitions Join Clean Cities Program

**DOE Testing Reports Improved EV Performance
Number of Ethanol Refueling Stations Growing Rapidly
EPA "Raises the Bar" with Tougher Conversion Guidelines**



I

f you've ever attended a Clean Cities designation ceremony, then you'll know why this month's feature on Clean Cities activity is so rewarding. Here at DOE, we're convinced that the real heart of the transition to alternative fuels is found locally: people with a common interest in owning and operating alternative fuel vehicles (AFVs)...people in the Clean Cities. During the review of these articles, we were reminded just how true this is. The ceremony is a reflection of all the hard work that stands behind each new name on the Clean Cities map. The certificates for each stakeholder recognize the choice they have made to use alternatives to conventional fuels and the commitment they are making to their partners and their cities. And as most of you know, the most important thing about having commitment is that we can eliminate the market uncertainty that has held this industry back for so long. If we have each other's commitments, as evidenced in the Clean Cities plans, we can make confident purchases and we can make confident investments.

And speaking of commitment, automakers are critical partners in the Clean Cities process and they've really stepped up their alternative fuel product offerings for the 1998 model year. In our cover story, you'll see that Ford Motor Company is leading the way with a record 11 vehicle types and five fuels. Honda is now taking orders for the much-anticipated natural gas Civic, Chrysler has re-entered the AFV business with its flexible-fuel E85 minivan, and General Motors is really carving out a niche with its electric vehicles. The story is full of photos, vehicle lists and specifications, and phone numbers and World Wide Web sites for more information. Most importantly, we want you to recognize that the automakers are making good on their commitment to build AFVs. With vehicles available and refueling sites becoming more and more prevalent, it's time for us to step up to the plate and order AFVs—now more than ever we need to support our partners and hold up our end of the bargain.

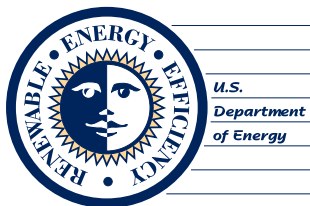
As always, we've attempted (we think successfully) to fill *Alternative Fuel News* with the most up-to-date happenings and information from Clean Cities and the alternative fuels industry. But we need to hear from you so we can investigate your key issues and write stories you find interesting. So let us know what's on your mind and what's happening in your Clean City . . . **Enjoy!**

Jeff Hardy —
National Clean Cities
Program Director

Lee Slezak —
Manager — AFDC

CONTENTS

Cover Story:	1998 AFV Choices Expand as Market Heats Up	3
Feature Story:	Clean Cities in 1997—A Hotbed of Activity	8
Departments:	At the Pump.	6
	Hot off the Press.	11
	Federal News	12
	From the States	14
	On the Web	15
	Clean Cities Roundup	15
	Upcoming Conferences and Events.	16



On the cover - Clockwise from top: Honda's natural gas Civic; Ford's natural gas Contour; Chrysler flexible-fuel E85 minivan; Chevrolet's C2500 natural gas pickup; Toyota's electric RAV4 sports utility vehicle.





1998 AFV Choices Expand as Market Heats Up

In response to public demand, the automobile manufacturers are expanding consumer vehicle options, and these vehicles are now available for you to purchase! As more fleet managers become interested in voluntary programs, alternative fuel vehicle (AFV) light-duty choices continue to increase. To help you narrow your choices, we've decided to review all the new models in this month's cover story. We've also included the vehicle manufacturer World Wide Web site addresses so you can do your own vehicle research. And the National Alternative Fuels Hotline is always available at 800-423-1DOE (800-423-1363) should you need help finding information.

For 1998 model year, here are the highlights:

- ❶ Ford introduces its new bi-fuel F-Series propane and natural gas pickups and E-Series vans/club wagons.
- ❷ Ford introduces the electric Ranger pickup.
- ❸ Chrysler launches the 3.3-L flexible-fuel E85 minivan.
- ❹ General Motors (GM) will make the Chevrolet Cavalier bi-fuel compressed natural gas sedan available sometime this model year.
- ❺ American Honda will make its dedicated natural gas Civic GX available for delivery in Spring 1998.
- ❻ American Honda has made its EV-Plus 1998 electric vehicle available at a new, reduced monthly lease rate as a result of tax changes in the Taxpayer Relief Act of 1997.

Upcoming Vehicles for the 1999 Model Year and Beyond

- In Fall 1998, Ford will equip 3.0-L Ford Rangers with E85 flexible-fuel systems
- Ford is currently testing 15 E85 Ford Windstar minivans in the Midwest with much success (no announcement has been made as to the availability or model year when the minivans would be available to the public)
- Chrysler will announce a new natural gas vehicle program sometime in early 1998
- Toyota is currently offering a hybrid electric vehicle (HEV) in Japan, with possible future sales for the U.S. market.



Ford plans to invest more than \$1 billion in the next 5 years for AFV and emission research and development. In the 1998 model year (MY), Ford leads the automakers in AFV production, offering a total of 11 products fueled by natural gas, propane, ethanol, methanol, or electricity.

Photo courtesy of Ford Motor Company/PIX 05556



Ford's F-250 Bi-fuel Pickup

Among the five new Ford products are two natural gas and two propane bi-fuel vehicles. Production of the 1998 Ranger electric pickup will begin in late December 1997. The Ranger features a high-efficiency three-phase alternating current (AC) induction motor, payload capacity of 700 pounds, sealed lead-acid battery, and a range of 50–58 miles at 72°F.

The new CNG and propane bi-fuel vehicles all meet target federal and California Low Emission Vehicle (LEV) emissions standards. The propane bi-fuel F-Series has a range of more than 450 miles with a standard option of one large fuel cylinder, and an alternate option with a range of at least 300 miles with two smaller fuel cylinders.

"Ford has shown by far the industry's greatest commitment to AFVs despite the enormous challenges involved in developing and sustaining viable markets for these vehicles. We continue to believe that AFVs can play an important role in the future of the automotive industry."

Bob Rewey, group vice president of Ford Marketing, Sales and Service

Vehicles Offered before MY 1998 and Being Continued	Vehicles Offered Beginning in MY 1998
Dedicated natural gas F-Series pickup	Bi-fuel natural gas F-Series pickup
Dedicated natural gas Econoline van/club wagon	Bi-fuel propane F-Series pickup
Bi-fuel natural gas Contour sedan	Bi-fuel natural gas Econoline van/club wagon
Dedicated natural gas Crown Victoria sedan	Bi-fuel propane Econoline van/club wagon
Flexible-fuel E85 Taurus	Ranger electric vehicle
Flexible-fuel M85 Taurus	E85 Ranger (MY 1999)

For more details including prices, vehicle specifications, range, payload, and fuel tank capacity, or to find out about Ford dealers that sell AFVs, call 800-ALT-FUEL (800-258-3835), or visit Ford's web site at www.ford.com.



HONDA

American Honda is already taking orders for its dedicated CNG Honda Civic GX sedan, which will be available for delivery next April. The Civic has a range of 260–290 miles and offers emissions well below California's Ultra-Low Emission Vehicle standard.

Additionally, the 1998

Honda EV Plus is currently being leased to customers in Southern California and Sacramento. It features advanced nickel-metal-hydride batteries, with an estimated range of 100 city miles and 84 highway miles at 80% of battery charge. The vehicle also has a high-efficiency permanent magnet motor and regenerative braking. Honda has reduced the cost of its lease to reflect savings from the luxury tax exemption that was passed

Photo courtesy of American Honda Motor Company/PIX 05554



Honda's Natural Gas Civic GX

under the Taxpayer Relief Act of 1997.

The 3-year leases were reduced from \$499/month to \$455.

"Regardless of Honda's emission advancements with gasoline, we remain committed to America's energy security goals by offering the cleanest, energy-efficient AFVs. The EV Plus and Civic GX exemplify that commitment."

Stephen Ellis, manager of Alternative Fuel Vehicles

For more information on Honda's AFVs or Civic GX dealers, call the Clean Car Honda Hotline at 888-CC-HONDA (888-224-6632), or visit Honda's web site at www.honda.com or www.honda.com/cars.



GM will continue to offer its three models it introduced in 1997 (EV1, S-10, and the C-series pickup truck line) for its 1998 AFV lineup, according to a company spokesman. With one exception, the Chevrolet S-10 EV, the only changes to these models in 1998 are cosmetic. The S-10 is now equipped with dual airbags, an airbag deactivation switch, and a redesigned instrument panel.

Photo courtesy of General Motors/PIX 05473



GM's Chevrolet C-2500 Natural Gas Pickup Truck

In a sign of things to come, GM is showing the Chevrolet Cavalier bi-fuel natural gas sedan at trade shows. The Cavalier will likely become available during the 1998 model year, according to GM. The sedan has a maximum payload of 842 pounds, including passengers and cargo.

All GM AFVs are available through select dealerships, and all models will be offered through April 1998. Natural gas bi-fuel vehicles are certified to meet California LEV standards on natural gas.

"No car company will be able to thrive in the future with 100% dependency on internal combustion engines. But there is still no single alternative to current technology. All the technologies are still evolving. So our strategy is to develop a portfolio of options."

John F. Smith, Jr., chairman, General Motors

For more details including prices, vehicle specifications, range, payload, and fuel tank capacity, or to find out about

GM dealers that sell AFVs, call 888-GM-AFV4U (888-462-3848), or visit the GM web site at www.generalmotors.com.

Vehicles Offered before MY 1998 and Being Continued	Vehicles to Be Offered Beginning in MY 1998
Bi-fuel natural gas Chevrolet C2500 and GMC Sierra full-size pickups	Bi-fuel CNG Chevrolet Cavalier sedan (pending announcement)
S-10 electric pickup	
GM EV1	



Chrysler re-emerges into the AFV marketplace by announcing the addition of flexible-fuel E85 minivans to its 1998 fleet—all 150,000 of the Chrysler Town & Country, Plymouth Voyager, and Dodge Caravans with 3.3-L V-6 engines will be capable of running on E85. The E85 minivans are now available in 46 states (California, New York, Massachusetts and Connecticut are excluded). These vehicles are certified to meet the federal Tier 1 emissions standard, but not California's specifications.

Photo courtesy of Chrysler Corporation/PIX 05467



Chrysler's E85 Minivan

"The introduction of our flexible-fuel minivan provides an incentive for the growth of the ethanol infrastructure and is another example of the versatility of our world-class minivans. We recognize the importance of using alternative fuels and their contribution to our country's energy independence."

Mike Clement, manager of Alternative Fuel Vehicle Sales and Marketing

The 1998 and 1999 models of Chrysler's EPIC electric minivan will be produced during the 1998 calendar year to meet state sales requirements in New York. This new product has a range of 60 miles, has seating for five passengers, and can carry a payload of 800 pounds. It also features a 100-horsepower AC motor and is powered by advanced lead-acid batteries. No dates have been specified for this vehicle's availability for purchase and delivery; it will be available for purchase in New York only.

Also in early 1998, Chrysler expects to announce the introduction of at least one natural gas vehicle.

For more information, contact a local Chrysler/Plymouth or Dodge dealer, or call Chrysler Fleet Operations Hotline at 800-999-FLEET (800-999-3533), or visit Chrysler's web site at www.chrysler.com.



Photo courtesy of Toyota Motor Sales/PIX 05558

In 1996, Toyota began selling its popular RAV4 sports utility vehicle in an electric model in Japan. This fall, Toyota began leasing it to U.S. fleet customers. The vehicle features sealed nickel-metal-hydride batteries, an on-board charger, and a city range of 130 miles, a highway range of 106 miles, and a combined range of 118 miles. Acceleration from 0 to 60 mph is achieved in 17 seconds, and the vehicle has a top speed of 79 mph.



Toyota's RAV4 Electric Vehicle

On October 14, 1997, Toyota announced it will be selling the world's first hybrid gasoline-electric vehicle, the Prius. The hybrid vehicle will be sold to Japanese markets for approximately \$17,300 (2.15 million yen). Toyota Motor Corporation has announced that it has already reached its initial sales goal of 1,000 cars per month. The new Prius has improved fuel efficiency at 66 miles per gallon, and emits half the carbon dioxide of standard engines. The hybrid vehicle will be available to Japanese dealers on December 10, 1997. Toyota hopes to offer this product to other markets (including the United States) in the near future.

For more information on Toyota's AFVs or the new Prius, visit the web site at www.toyota.com.



Nissan North America, Inc., plans to produce an electric vehicle (EV) for the U.S. market. The Altra EV is a four-passenger compact van equipped with leading-edge lithium-ion (Li-ion) battery technology. The Altra uses the Delco inductive charging system, also used in GM EVs. The 120-mile driving range and acceleration performance are comparable

to similar-size gasoline-powered vehicles, according to reports.

The vehicle also has a 220-pound payload capacity. Thirty Altra EVs will be sold in California in 1998. Plans are for 90 more to be sold during the 1999 and 2000 model years.

For more information on Nissan's AFVs, or the new Altra, visit Nissan's web site at www.nissanmotors.com. *



At the Pump

More Ethanol Refueling Stations Planned

To help further strengthen the market for the large number of E85 vehicles available from Ford and Chrysler in 1998, the number of ethanol stations is expected to grow rapidly, according to the National Ethanol Vehicle Coalition (NEVC). Stakeholders and DOE have drafted an action plan to promote the development and use of E85 refueling infrastructures. Copies are available for comment from the Clean Cities home page (www.cities.doe.gov).

Currently, 38 public and 29 private E85 stations are open and publicly accessible; seven more are under construction. Sixteen sites are under negotiation and 14 more are expected to

open by the end of 1997. Another 81 are scheduled to open in 1998 and 1999 in the United States and Canada.

Although refueling sites have all traditionally opened in the Midwest, stations are planned on the West Coast and along the Eastern Seaboard. New sites cost \$2,000-\$55,000 depending on whether equipment is available or the site is a new installation, according to NEVC.

The map indicates the location of current, new, and pending E85 refueling sites. For information about current public access refueling sites, visit the Alternative Fuels Data Center web site at www.afdc.doe.gov. *

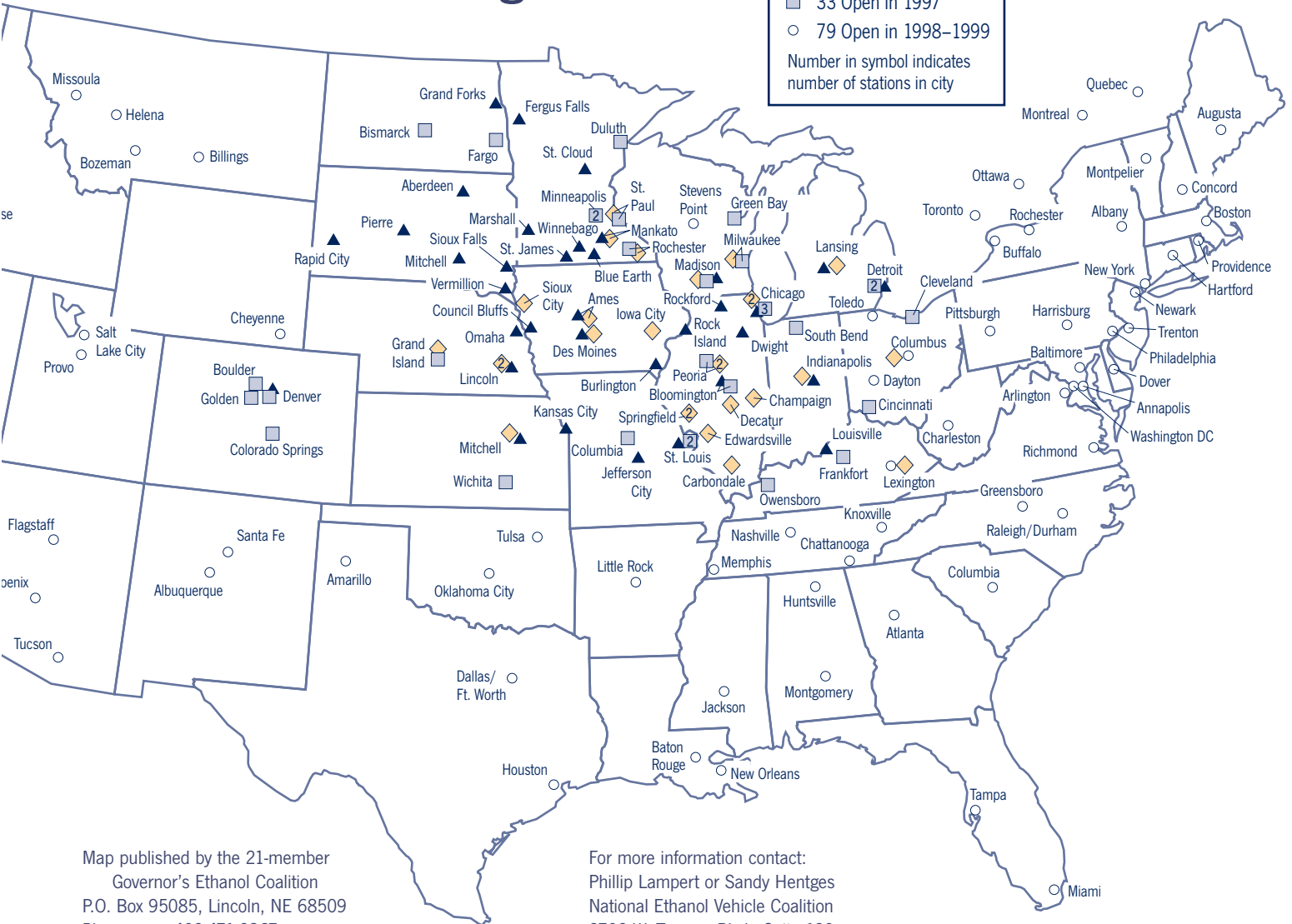
“Get on the Bus”



On October 30, the **New York City Department of Transportation** celebrated the grand opening of a new fueling station and maintenance facility that can support more than 200 compressed natural gas (CNG) buses. The \$66 million facility is the third in the department’s network, but the first to be built from the ground up and owned by the City of New York. Located in College Point, Queens, and five minutes from LaGuardia airport, the 17-acre site boasts one of the nation’s largest super fast-fill CNG fueling stations. The City has also ordered 174 CNG buses to arrive this Spring.

E85 Fueling Stations

- ▲ 38 Public Open
 - ◆ 29 Limited Access
 - 33 Open in 1997
 - 79 Open in 1998–1999
- Number in symbol indicates number of stations in city



Map published by the 21-member
 Governor’s Ethanol Coalition
 P.O. Box 95085, Lincoln, NE 68509
 Phone: . . . 402-471-2867
 Email: . . . energy@mail.state.ne.us
 Internet: . . . <http://www.ethanol-gec.org>

For more information contact:
 Phillip Lampert or Sandy Hentges
 National Ethanol Vehicle Coalition
 3702 W. Truman Blvd., Suite 120
 Jefferson City, MO 65109
 Phone: . . . 573-635-8445
 Fax: 573-635-5466
 Email: nevc@sockets.net

Clean Cities in 1997— A Hotbed of Activity

For those who keep track, at the time of the Third National Clean Cities Conference, there were 54 Clean Cities, with Evansville, Indiana, becoming the fifty-fourth on January 30, 1997. Some people say that spring is the season for all things to go forth and multiply, but not until September did the number of Clean Cities start growing. And growing in full force—six new coalitions in six states joined the program during a 2-month period.

In the meantime, coalitions were actively engaged in myriad activities to develop the alternative fuel vehicle (AFV) industry. Among the efforts were market development workshops, preparing for the Clean Cities conference in Long Beach, recruiting new stakeholders, working with the media, and celebrating new station openings. Coalitions also pursued 501(c)(3) status, held meetings and workshops, and planned vehicle rollouts.

Perhaps the revamping of the “Road to Clean Cities” guidebook helped clarify the designation process. The new, more prescriptive Roadmap is now available to help with program plan development. Perhaps the Clean Cities Conference in Long Beach filled emerging coalitions with such inspiration and enthusiasm that they went the extra mile. Before this surge of activity, the last membership boom occurred in the wake of excitement after the Second National Clean Cities Conference in Atlanta in 1996.

Whether it’s the new Roadmap or conference exhilaration, the Clean Cities network is now 60 cities strong!

Clean Cities Double Header

On September 4, at two separate ceremonies held at opposite ends of the United States, two places as different as Texas chili and New England clam chowder joined the national network of Clean Cities.

The Lone Star State’s Fourth Designation Becomes the Fifty-Fifth Clean City

The premier Wortham Theater Center served as the site of the Greater Houston Clean Cities designation ceremony to celebrate the fourth Clean City in Texas, which is now second only to California in the number of Clean Cities coalitions.

Hometown favorite Kyle Simpson, senior policy advisor to the Secretary of Energy, joined Houston Mayor Robert C. Lanier and Texas General Land Office Commissioner Garry Mauro in signing a Memorandum of Understanding with 29 public and private partners, officially designating the fifty-fifth member of the Clean Cities Program.

The Greater Houston Clean Cities Program currently boasts more than 2,000 AFVs, with more than 100 propane, 17 natural gas, and 6 electric refueling sites. This accomplishment is

largely due to the sup-

port of the Texas General Land Office, which has

been a leader in aggressively promoting alternative energy sources throughout the state, including making

low-cost natural gas available to school districts as an alternative fuel. The biggest city in

Texas has big plans for vehicle acquisition—using \$6.6 million in authorized Congestion Mitigation and Air Quality (CMAQ) funding. The coalition plans to add an additional 579 AFVs by the year 2000, with an emphasis on compressed natural gas (CNG) and electric vehicles (EVs) (see box below). Infrastructure plans call for six new CNG and 21 electric recharging stations to be installed as well. “It was very gratifying to receive designation from DOE. I think our ceremony represented the Greater Houston Region well and reflected the diversity that makes this a challenging area in which to promote Clean Cities. I look forward to building our program into one of the best in the country,” said Wade Thomason, Greater Houston Clean Cities coordinator.

largely due to the support of the Texas General Land Office, which has been a leader in aggressively promoting alternative energy sources throughout the state, including making low-cost natural gas available to school districts as an alternative fuel. The biggest city in Texas has big plans for vehicle acquisition—using \$6.6 million in authorized Congestion Mitigation and Air Quality (CMAQ) funding. The coalition plans to add an additional 579 AFVs by the year 2000, with an emphasis on compressed natural gas (CNG) and electric vehicles (EVs) (see box below). Infrastructure plans call for six new CNG and 21 electric recharging stations to be installed as well. “It was very gratifying to receive designation from DOE. I think our ceremony represented the Greater Houston Region well and reflected the diversity that makes this a challenging area in which to promote Clean Cities. I look forward to building our program into one of the best in the country,” said Wade Thomason, Greater Houston Clean Cities coordinator.



To learn more about

how you can acquire CMAQ funding, call the Clean Cities hotline for a copy of **Applying for and Using CMAQ Funds**. Call 800-CCITIES (800-224-8437) today!

A First for Maine

That same afternoon, miles away to the north, more than 200 people gathered at the Cumberland County Civic Center to witness the designation of the fifty-sixth member, and first of the Maine Clean Cities, Greater Portland.

DOE's Associate Deputy Assistant Secretary for Transportation Technologies, Richard Moorer, officiated the designation ceremony, which also included Portland City Counselor and former Portland Mayor John McDonough, as well as the Commissioners of Maine's Departments of Environmental Protection and Transportation.

Planned in conjunction with the National Conference of State Fleet Administrators (NCSFA), the designation clearly illustrated the parallel between Clean Cities and the State Fleet rule, and served as a shining example of how Clean Cities can bring all the players to the table. During breaks in the NCSFA meeting, state fleet administrators ventured across the street to the Civic Center to find a host of automakers, vendors, state and local government representatives, and private industry leaders celebrating their partnership and commitment to developing the area's alternative fuel market.

More importantly, Portland Clean Cities stakeholders were eager to offer NCSFA attendees a firsthand look at the latest in AFV technologies available for their fleet vehicles. The fleet administrators could ask questions of experts on the benefits of AFV use for fleets to learn that the Clean Cities network is available to help them comply with the State Fleet Rule. "The designation ceremony helped state fleet administrators who are faced with AFV requirements realize that people and fleets have successfully made the transition to AFV use," said Ken Katz, DOE's program manager for EPAct Rulemaking and Compliance Assurance. "Having the designation ceremony in concert with the NCSFA Conference will, hopefully, enable more states to become actively involved with the Clean Cities Program. The participation of many states in Clean Cities coalitions has created a great knowledge base for sharing information related to the use of alternative fuels and AFVs. Involvement in new coalitions will only serve to further this information exchange and result in the proliferation of AFVs in these states and Clean Cities."

One More for the Heartland

Two weeks later, in Oklahoma, a third group of AFV enthusiasts gathered to commemorate the coming of age of yet another Clean City. On September 22, the Tulsa Area Clean Cities coalition was designated the fifty-seventh member of the program. Like Portland, Tulsa strategically planned its designation to coincide with another large event, the President's Council on



Sustainable Development (PCSD). This meeting, also held at Tulsa's Adam's Mark Hotel, drew high-level attention to the National Clean Cities Program, as well as the local commitment to alternative fuels. By coordinating the two events, the Tulsa coalition showcased the National Clean Cities Program as a potential model for implementing President Clinton's Climate Change strategy. Following a live television interview on one of the most popular morning news shows in the area, DOE's Acting Assistant Secretary for Energy Efficiency and Renewable Energy, Joe Romm, presented Tulsa Mayor Susan Savage with the official Clean Cities plaque in front of the notable PCSD audience.

Working with its neighbor, Central Oklahoma Clean Cities, the Tulsa Clean Cities Program has strived to make Oklahoma a powerhouse in the world of alternative fuels. Substantial state incentives and a revolving, low-interest loan fund have helped place more than 2,000 AFVs on

Tulsa's roadways. This includes the Tulsa Public School District fleet, one of the largest school bus fleets in the nation. Tulsa's Ozone Alert! program has received national recognition as a voluntary effort to curb automobile emissions. Ozone Alert! measures include an alternative fuel vanpool program, school poster contests, workshops to encourage local employers to participate in clean air activities, and free bus rides, and express route bus service to encourage public transportation use on Ozone Alert! Days. In 1995, express route users reduced pollutant emissions by more than 75%.



Three new cities in the month of September alone . . . but the program kept growing. October was another exceptional month with three additional cities.

Arizona's First

On October 8, the Maricopa Association of Governments (MAG) joined the program as the fifty-eighth Clean City. Brian Castelli, DOE's Chief of Staff to the Assistant Secretary for Energy Efficiency and Renewable Energy, joined Arizona Secretary of State Betsey Bayless in officially recognizing the Maricopa Association of Governments as Arizona's first official member of the Clean Cities Program.



Keen public awareness and strong support from the State House are two key elements that define Maricopa Clean Cities and have helped Arizona make leaps and bounds in passing alternative fuel legislation—including a State Senate bill establishing Arizona’s Clean Air Fund. In FY 1998–1999 the Arizona Clean Air Fund will provide an astonishing \$6.5 million to alternative fuel projects. Although federal programs (such as CMAQ) provide grants similar in scale, the Arizona Clean Air Fund provides an unprecedented amount of money for a state program (see Houston designation story for CMAQ grant information). Other legislative successes include special license plates and AFV stickers, high-occupancy vehicle (HOV) lane access for AFVs, tax incentives, and other appropriated grant monies for AFV acquisitions and infrastructure.

Maricopa stakeholders already have nearly 2,100 vehicles on the road and have major plans for future acquisitions. By the year 2005, the coalition estimates more than 10,000 AFVs will cruise the streets of Maricopa County. The MAG Coalition clearly illustrates the Clean Cities concept of public/private partnerships, as it works closely with the Electric Transportation Coalition to aggressively promote the use of EVs in the area. Before long, driving your EV to school or work will be the routine in Arizona. In this EV-ready community, EVs play a key role in the region’s AFV strategy, particularly with the availability of GM’s EV1 in the Phoenix/Tucson area.

Number 12 for California

The Clean Cities wave rolled westward as Riverside became the fifty-ninth Clean City on October 24. Richard Moorer, Associate Deputy Assistant Secretary for

Transportation Technologies, joined Riverside Mayor Ronald O. Loveridge to officially welcome California’s twelfth Clean City. A few familiar faces from neighboring California Clean Cities were also present to welcome the newest member of the state’s growing network of coalitions. The proximity of Riverside to the Coachella Valley, Long Beach, Los Angeles and Southern California Association of Governments coalitions presents an excellent opportunity for the coalitions to work together to strengthen and develop the AFV market in Southern California.

The Riverside coalition clearly illustrates how the Clean Cities Program brings all the key players to the table. Clean air is a very high-profile issue in Riverside, and the city has a strong history of supporting clean air efforts. In fact, in 1988, the voters of Riverside County initiated and passed “Measure A,” a \$0.05 sales tax that helps fund measures such as new HOV lanes and alternative commuting programs. The local government, state agencies, area businesses, and community groups had worked



independently for several years to promote alternative fuel use and help clean the air. Under Mayor Loveridge’s guidance and wholehearted support, these groups united under the Clean Cities Program and now work together to develop the local AFV market. “We’ve had many groups working to promote alternative fuels for some time. Now, working together as a Clean Cities coalition, I think we’ll have a much greater impact,” said Ruthanne Taylor Berger, Riverside Clean Cities coordinator.

Some of the important successes and achievements of the coalitions include the “Inland Empire Clean Fuels Corridor,” which features publicly accessible alternative refueling stations. Two electric and one CNG stations are currently in operation, with up to 17 more planned to open. Riverside’s “QuickCharge” program was established to accelerate the introduction of EVs and to construct recharging stations in Riverside County.

The University of California at Riverside’s College of Engineering, Center for Environmental Research and Technology (CE-CERT), a stakeholder in the Riverside coalition, also adds a unique dimension to the program too. As a leading agency for researching environmental problems, 75% of its work deals with mobile source air pollution. CE-CERT can play a key role in determining strategies for improving air quality and in developing and deploying alternative fuel technologies. In fact, CE-CERT was recently awarded \$80,000 from a Hydrogen Technology Special Projects grant in conjunction with DOE’s Office of Utility Technologies to evaluate and test hydrogen-powered vehicles. Plans include partnering with local transit agencies to test hydrogen as a heavy-duty engine fuel.

North Jersey Becomes the Sixtieth Clean City

One week later at Liberty State Park in Jersey City, New Jersey, DOE’s Clean Cities Program celebrated its hallmark sixtieth city. The Manhattan skyline and Statue of Liberty provided a picturesque backdrop as DOE’s Deputy Assistant Secretary for Transportation Technologies, Thomas J. Gross, officially recognized the North Jersey Clean Cities coalition as the sixtieth member of the program. Other speakers included Jersey City Mayor Bret Schundler, New Jersey Board of Public Utilities Commissioner Carmen J. Armenti, and Robert C. Shinn, the Department of Environmental Protection Commissioner, who drove to the ceremony in a propane-powered Ford Bronco.

New Jersey’s first Clean Cities coalition has already begun to work in partnership with the network of designated Clean Cities coalitions along the East Coast’s I-95 corridor. Together with the Greater Philadelphia and Delaware Clean Cities Programs, the coalition has



secured \$200,000 in a 1997 DOE State Energy Program Special Projects grant to develop a rebate program for private sector AFV purchases. North Jersey Clean Cities has also secured \$500,000 in CMAQ funding to stimulate AFV activity throughout the state of New Jersey—specifically for AFV acquisition and infrastructure development. North Jersey stakeholders already operate more than 1,200 AFVs in the area, including 296 CNG and five propane-powered U.S. Postal Service (USPS) vehicles. The conversion to propane is a first for the USPS. Stakeholders are also working on an EV station car project, which will eventually involve as many as 30 EVs, at three train stations in New Jersey. “The North Jersey Clean Cities Program is especially important to us



AFV Count
Within the six new coalitions, there are 9,960 AFVs that have access to 455 refueling stations.

because it’s aimed at the densely populated northeastern metropolitan area of the state,” said Commissioner Shinn. “Clean Cities provides tremendous opportunities for the public and private sectors to work together to make these fuels successful.” *



Hot off the Press

DOE Conversion Guide "Clears the Smoke" on New EPA standards

This past spring during a government/industry meeting at the U.S. Environmental Protection Agency (EPA) headquarters to discuss vehicle conversions, DOE was asked to develop a document to help people more easily understand the complex process of emissions certification. Now that the EPA has issued its addendum to Memorandum 1A (see EPA...page 13) and the certification picture is even foggier, DOE’s Office of Technology Utilization and the National Renewable Energy Laboratory have cleared this up by publishing *A Guide to the Emissions Certification Procedures for Alternative Fuel Aftermarket Conversions*. The guide is designed to help manufacturers, distributors, installers, and customers understand the process of EPA certifying aftermarket conversion kits. The guide is a step-by-step compliance tool for EPA and California Air Resources Board emission certifications. The guide presents a historical overview of aftermarket conversions, frequently asked questions, a glossary of terms, a detailed table of emission standards (broken down by vehicle weight), valuable industry contacts, problem-solving flowcharts, and a list of emissions-related documents. The guide is a must-have for everyone involved in the aftermarket conversion industry. It will be available in late January. For copies, call the National Alternative Fuels Hotline at 800-423-1DOE.

DOE Wants Your Input!

A draft of DOE’s “Replacement Fuel and Alternative Fuel Vehicle Technical and Policy Analysis” on is now available for public review and comment (see side box).

The report, required by the Energy Policy Act (EPAct) Section 506, addresses the U.S. transportation sector’s dependence, both current and projected, on imported oil.



To obtain a copy of the draft “Replacement Fuel and Alternative Fuel Vehicle Technical and Policy Analysis,” check out DOE’s Office of Transportation Technologies’ web site under the Rules and Legislation section at www.ott.doe.gov/office.rules.html. For a hard copy, call the National Alternative Fuels Hotline at 800-423-1DOE.



More importantly, it establishes a basis for discussion of EPAct’s fuel displacement goals and whether alternative fuel vehicle (AFV) mandates or incentives will be more effective.

All comments received will be considered in the upcoming rulemaking that may require AFV acquisitions for private and municipal fleets, as well as the development of DOE’s Replacement Fuel Supply and Demand Program, required by Section 502 of EPAct. *

Your comments are strongly encouraged because we want your input—don’t miss this opportunity to voice your opinion on the Replacement Fuel and Alternative Fuel Vehicle Technical and Policy Analysis! Please send written comments (5 copies) by January 26, 1998, to:

U.S. Department of Energy
Office of Transportation Technologies, EE-34
Docket No. EE-NOA-97-506
1000 Independence Ave., SW
Washington, DC 20585
phone: 202-586-3012



Federal News

DOE's Field Testing Shows Significant Improvements in EV Performance

Electric vehicle (EV) performance has improved significantly during the past 4 years, according to testing results reported by the DOE's Field Operations Program, which is sponsored by the Office of Technology Utilization. The Field Operations Program encourages the use of EVs by increasing public awareness and acceptance through vehicle performance testing.

The program tests a wide range of vehicle models, from pickup trucks to coupes, including an early version of Toyota's RAV4 EV, General Motors' electric S-10 pickup truck designed for utility work, and the EV1, according to Dana O'Hara, DOE's Field Operations program manager. "We're pleased to see a steady improvement in vehicle performance," said O'Hara, "the purpose of Field Operations testing is to show that these vehicles can deliver performance. No one will buy EVs unless they see that the vehicles work."

The vehicles undergo tests for range, acceleration, braking, handling, and charging. "This comparative analysis will help EV buyers make more informed purchasing decisions in the future," said O'Hara. "No one wants to buy a vehicle in a vacuum. Comparative data will help buyers make intelligent purchasing decisions according to their needs." The Qualified Vehicle Testers are led by Electric Transportation Applications of Phoenix and Southern California Edison. New vehicles are baseline tested and then tested in fleet operations and in accelerated mileage tests. Descriptions of the results of these tests are available on the Idaho National Engineering and Environmental Laboratory's web site at ev.inel.gov/sop.

DOE's Findings on EV Performance

- Since 1994, the average charging time has been reduced from 8 hours to 5 hours.
- Overall, vehicle range has increased.
- In 1997, acceleration has improved (from 0-50 mph in 24 seconds in 1994) to 0-50 mph in 10 seconds.

DOE Helps AFV Technician Training Programs Become ASE Certified

DOE's Certification of Higher Learning in Alternative Motorfuels Program (CHAMP) is providing training program assistance to alternative fuel vehicle (AFV) technicians to help them achieve certification under the Automotive Service Excellence (ASE) program.

DOE, through the National Automotive Technicians Education Foundation, Inc., will provide various levels of funding and assistance depending on the level of certification required.



For more information about the AFV Program Standards, the CHAMP Assistance Program, or the CHAMP Scholarship, contact the National Automotive Teacher's Education Foundation, Inc., at 703-713-0100.

DOE Partners with GRI to Develop Lighter, Less Expensive CNG Cylinders

DOE and the Gas Research Institute (GRI) have joined forces to develop advanced compressed natural gas (CNG) cylinders.

On-board CNG storage cylinders have long been the stumbling block to production of competitively priced and efficient natural gas vehicles (NGVs). As much as 70% of the incremental cost of current NGVs is associated with cylinder cost. Weight is also a barrier, especially with medium- and heavy-duty vehicles, which require multiple tanks to achieve range requirements.

GRI and DOE have set aggressive new goals for the cost and weight of cylinders. The new cylinders will be 25% less expensive and 20% lighter than those currently available. The less expensive cylinders will be well received by purchasers because of incremental cost reduction per vehicle. The lighter cylinder weight will recover some of the payload capacity loss.

The new cylinders will be commercially available in Summer 1998. Several cylinder sizes are being developed for light- and medium-duty applications. The designers are also following international and national safety standards and will meet stringent vehicle manufacturer requirements. For more information, call Christopher F. Blazek, Institute of Gas Technology, at 847-768-0552, or e:mail him at blazekc@igt.org.

EPA “Raises the Bar” with Tougher Conversion Guidelines

The U.S. Environmental Protection Agency (EPA) has issued its long-awaited addendum to Mobile Enforcement Memorandum 1A, “Tampering Enforcement Policy for Alternative Fuel Aftermarket Conversions.” The addendum, released September 4, 1997, requires each conversion component designer, producer, or installer to comply with a revised tampering enforcement policy, effective immediately.

The EPA took this action to address concerns raised during the past several years that some conversions have resulted in increased vehicle emissions over standards. These concerns were reinforced with the June 1996 publication of a DOE report by the National Renewable Energy Laboratory (NREL) that documented emissions performance of several types of converted vehicles.

Compliance with these new guidelines will require additional testing of components, and kit suppliers will have to keep records of component sales and installations. The results of the addendum will likely be that conversion kit manufacturers will re-evaluate kit production plans, work more closely with original equipment manufacturers (OEMs), and provide kits for fewer models and types of vehicles.

Historically, many fleets have relied on conversion kits in order to meet AFV purchasing goals and to comply with Energy Policy Act (EPA) and State alternative fuel mandates. Many large federal agencies such as the Department of Defense and the U.S. Postal Service have significant numbers of converted vehicles in their fleets. Although the EPA’s intent was to ensure emissions performance, the new addendum may also accelerate the

evolution of the natural gas and propane vehicle market toward OEM products. The near-term impact will most likely be a reduction in the availability of conversion kits, as kit manufacturers evaluate which vehicles make the best candidates for conversion.

Covered fleets that use alternative fuel conversion kits to meet EPA requirements should take steps to ensure that future converted vehicles meet the EPA’s emissions standards. Fleet managers should request documentation from conversion kit suppliers and installers to verify that the components meet the new standards so as not to be liable for tampering under the Clean Air Act. The DOE, in consultation with the EPA and as a service to the industry, has prepared a helpful “how-to” guide, oriented for kit manufacturers and large kit installers, on the certification process.

For more information on the certification requirements and compliance responsibilities of manufacturers and installers, please see the addendum by visiting the EPA’s Office of Mobile Sources web site at www.epa.gov/omswww/whatsnew.htm, or call the National Alternative Fuels Hotline at 800-423-1DOE. (See page 11 for guide information.)

Alternative Fuel Industry Unites in Support of Transportation Legislation

In an effort to ensure that a portion of funding from the Intermodal Surface Transportation Efficiency Act (ISTEA) is rededicated to improving air quality and related issues, four leading alternative fuel industry trade associations united in support of the Congestion Mitigation and Air Quality Improvement (CMAQ) program. Senate Bill 1173, referred to as ISTEA 2,

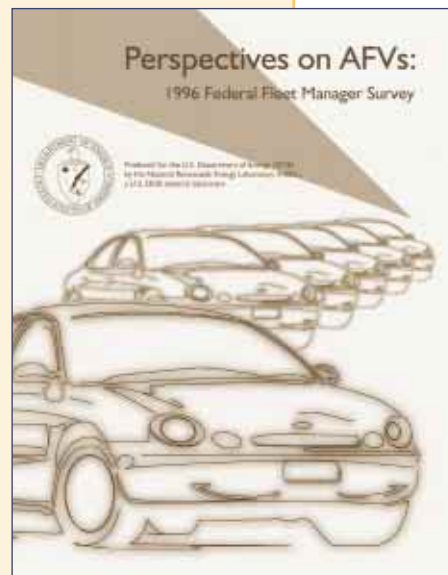
Federal Fleet Manager Survey Provides Real-World Perspectives on AFVs

Because of ongoing government regulatory changes, improved vehicle technology, and greater OEM vehicle numbers, fleet managers are buying more AFVs. A random survey of federal government fleet managers with almost 4,000 AFVs in their fleets provided favorable feedback on AFV use and operation, according to a new NREL report, “Perspectives on AFVs.”

The fleet managers reported very few specific performance-related complaints about their AFVs. In addition, most fleets reported the same overall number of vehicle complaints about AFVs as about gasoline vehicles.

Those who operated flexible-fuel E85 vehicles as their primary vehicle type indicated drivers were the most enthusiastic about driving AFVs. However, lack of fueling stations and available alternative fuel are still problems for drivers who fuel with E85. The survey revealed that only 58% of fleet managers with E85 vehicles indicate that the alternative fuel is available nearby and that they fuel primarily with E85. For respondents whose fleets operate CNG vehicles as their primary AFV type, alternative fuel use was somewhat higher, with more than 75% of the fleet managers indicating their AFVs are primarily fueled with CNG. For those with flexible-fuel M85 vehicles as their primary AFV type, only about 31% of the fleet managers indicated M85 is used most of the time.

The fleet manager report, which contains additional AFV use, acceptability, and performance results, is available on the Alternative Fuels Data Center web site (www.afdc.doe.gov). For a hard copy, call the National Alternative Fuels Hotline at 800-423-1DOE.



reinforces the need for CMAQ funds to help communities improve air quality. The associations sent a letter recommending three actions for members of Congress to embrace in the reauthorization process.

The letter, signed by the Natural Gas Vehicle Coalition, the Electric Transportation Coalition, the American Methanol Institute, and the Clean Fuels Development Coalition, called for dedicated funding that will allow CMAQ to remain a separate component of ISTEA. The letter further recommends that dedicated funding should not be transferred to other highway programs, and should remain focused on projects that improve air quality. Finally, CMAQ language must be codified so that AFVs and alternative fuel uses are included as a primary air quality control strategy.

Tommy Foltz, president of Clean Fuels Strategies and a leader of alternative fuel groups said, "CMAQ provides a fuel-neutral opportunity to get funding for projects that provide for better public health. It's great to see these groups unite in support of something that is a win-win for the energy, environmental and transportation sectors."

For an update on CMAQ status, call Tommy Foltz at 703-243-3292.

DOE's Savannah River Site Meets EPA Act Compliance with E85 Vehicles

DOE's Savannah River Site plans to purchase 10 E85 vehicles in 1998, and 160 E85 vehicles for its fleet in the 1999 calendar year, according to Savannah River's asset manager Tom Walker.

Like many federal fleets, Savannah was faced with the challenge of meeting EPA Act requirements within current budget levels. "This is clearly the case of a fleet manager doing his homework and making the best choice for his fleet," says Lee Slezak, manager, DOE Federal Fleet Alternative Fuel Vehicle Program. Savannah's AFV choice was ethanol-powered flexible-fuel vehicles (FFVs).

Walker decided on E85 after comparing the costs of other options. With a \$10,000 investment he can upgrade an on-site gasoline refueling site to E85. He need only replace some gaskets, tubing, and hoses so the equipment is compatible with the mixture of 85% ethanol and 15% unleaded gasoline. In addition, the vehicle lease costs through the General Services Administration will be close to or the same as comparable conventionally fueled vehicles. Furthermore, FFVs such as the E85 Ford Ranger meet the fleet's mission requirements.

If he decides to continue the E85 program, by 2001 Savannah River may have four E85 refueling stations open to service more than half the facility's 1,500 vehicles. Walker is already negotiating with an ethanol supplier that is eager to provide him fuel either by truck or rail.

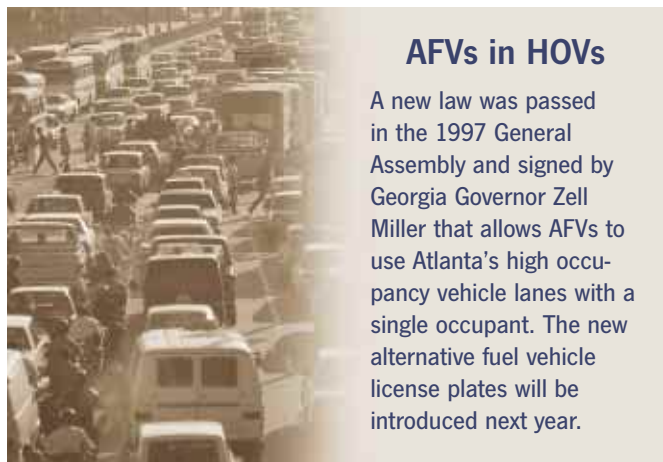
The average vehicle operates primarily on site, is centrally refueled, and travels about 500 miles per month, said Walker. "We are looking forward to buying AFVs that are optimized for their fuels from the automakers," he said. *



From the States

Healthier Buses Head for New York

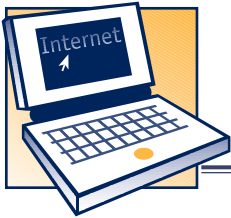
Have you ever stood on a busy street corner in New York City and been bombarded with a big cloud of black smoke from a bus pulling into the street? If so, you may have also seen the clean air advertisements on the backs of many of those buses that read, "Standing behind this bus could be more dangerous than standing in front of it." Soon that will no longer be the case. On August 1, New York Governor George Pataki announced that the State of New York will purchase 39 clean fuel buses using funds authorized by the Clean Water/Clean Air Bond Act. Under the Act, and the Clean Fuel Bus Program, the New York Transit Authority will receive \$1.9 million for 10 hybrid-electric buses operating in Manhattan. The Central New York Transportation



AFVs in HOVs

A new law was passed in the 1997 General Assembly and signed by Georgia Governor Zell Miller that allows AFVs to use Atlanta's high occupancy vehicle lanes with a single occupant. The new alternative fuel vehicle license plates will be introduced next year.

Authority will receive \$334,000 for seven CNG buses to be operated in Onondaga County. The New York City Department of Transportation will receive \$334,000 for 11 CNG buses operating a Queens route, and \$334,000 for another 11 buses operating a Manhattan route. For more on New York City buses, see page 7. *



On the Web

ISTEA Reauthorization Web Site

www.istea.org

The ISTEA reauthorization web site (managed by the Surface Transportation Policy Project) provides daily updates on the Reauthorization of the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). ISTEA provides valuable funding to the alternative fuel industry, and reauthorization of the Act is an important issue.

GSA Office of Government Policy Web Site

www.policyworks.gov/org/main/mt/hompage/mtv/mtvhp.htm

If you're a fleet manager, definitely bookmark this site. It has valuable fleet vehicle information, such as alternative fuel vehicle (AFV) availability, service bulletins, mechanics training options, state emission standards, and federal fleet maintenance information. Take a look!

GSA's Vehicle Purchasing Web Site

scnedc.gsa.gov/auto.html

A well-crafted web site designed to help federal fleet managers with vehicle purchasing. Information includes access to GSA's Requisitioning Ordering and Documentation System, which allows federal fleet

NREL's Alternative Fuel Refueling Sites Page

www.afdc.doe.gov/refuel



NREL has revamped its refueling site page, which features upgrades such as on-demand local mapping, easy-to-use refueling site locator, refueling site statistics, and a customized query form. No more running out of alternative fuel. Just click on this customer-friendly site and the nation's alternative fuel locations are at your fingertips!

managers to order vehicles on line. This site also includes vehicle product availability, including an on-line light-duty guide and a comprehensive heavy vehicle purchasing guide (which can be downloaded or printed). This site makes vehicle acquisitions easy!

DOE's Alternative Fuel Vehicle Transportation Program

www.ott.doe.gov/credits/index.html

Welcome to the AFV Acquisitions and Credits Database! This web site has been developed by NREL for DOE to provide fleet managers and other responsible parties with a convenient way to electronically report their AFV acquisitions. The reporting of AFV acquisitions is required of fleets and certain fuel providers under the provisions of the final rule of March 14, 1996 (10 CFR 490) implemented by DOE's Alternative Fuels Transportation Program under the auspices of the Energy Policy Act of 1992. This web site will also provide fleets with an electronic means of establishing AFV acquisition credits. ✧



Clean Cities Roundup

- On October 7, Pennsylvania Governor Tom Ridge honored the Greater Philadelphia Regional Clean Cities Program (GPCCP) with the 1997 Governor's Award for Environmental Excellence. The award, sponsored by the Pennsylvania Department of Environmental Protection, recognized the pollution prevention and energy efficiency achievements of Pennsylvanians who have gone beyond the mandated compliance requirements. The GPCCP received the award for its active communications and outreach campaign and its documented success in enhancing the local alternative fuel vehicle market, as determined by an analysis conducted earlier this year by the University of Pennsylvania.
- On Thursday, October 16, more than 20 leading Clean Cities stakeholders from the Southern California area attended a 1-day Media Relations Workshop conducted by Rogue Valley Clean Cities Coordinator Scott Rayburn of Synthesis Business Communications.

The workshop was developed to help stakeholders build the special skills necessary for telling the Clean Cities story. The group learned everything from the basics of writing a press release to how media organizations function, and how stakeholders can gain access to them. Feedback from attendees has been extremely positive, and many participants have encouraged follow-up sessions. To learn more about the media relations workshop, call Roxanne Dempsey at 206-553-2155.

- There are big plans for electric vehicles (EVs) in the Los Angeles area. Under the Quick Charge L.A. program, the Los Angeles Department of Water and Power will install nearly 200 EV charging stations at 42 sites throughout the city, including 12 EV charging stations at the Los Angeles International Airport. Other EV activities, funded by the Los Angeles Department of Water and Power and General Motors,

**National Alternative Fuels and
Clean Cities Hotline**

9300 Lee Highway
Fairfax, VA 22031-1207

include installing another two stations at Century City Shopping Center, along with stations at Northridge Fashion Center and Sherman Oaks Fashion Square.

- DOE's own Dan Deaton was one of 10 recipients of the "Clean Air Texas Environmental Award," presented at the 8th Annual International Alternative

Fuels Conference and Trade Show in Dallas, Texas on Tuesday, November 18. Deaton was recognized for his support of Texas Clean Cities and his role in advancing the use of alternative fuels throughout the state. "We are lucky to have such a dedicated person as an advocate and as a friend," said Texas Land Commissioner Garry Mauro. ✱



Upcoming Conferences and Events

Automobiles and the Environment

December 30, Los Angeles, CA
Contact, VL Communications Group. . . 916-362-3485

Los Angeles Auto Show

January 2-11, 1998, Los Angeles, CA
Contact, Scott Webb 310-312-8262

Detroit Auto Show

January 10-19, 1998, Detroit, MI
Contact, John Hampson 301-907-8500

Chicago Auto Show

February 7-15, 1998, Chicago, IL
Contact, John Hampson 301-907-8500

Second Annual Propane Vehicle Conference & Exposition

February 9-11, 1998, San Antonio, TX
Contact, Mark Hahn 303-863-0521

Commodity Classic

February 22-24, 1998, Long Beach, CA
Contact, Kristi Burmeister 417-232-4999

For more information on events visit the Alternative Fuels Data Center web site at www.afdc.doe.gov

Washington, DC, Selected as the Location for the Fourth National Clean Cities Stakeholders' Conference and Expo

The DOE Clean Cities Program has selected Washington, DC, as the location for the next Clean Cities Conference. The Conference will be held May 31-June 3, 1998, at the newest federal government building in town, the Ronald Reagan Building. The hosting hotel will be the J.W. Marriott and the conference and special events will take place across Pennsylvania Avenue at the Ronald Reagan Building and in Freedom Plaza.

*For further information and to be included on the mailing list, contact the Clean Cities Hotline at **800-CCITIES (800-224-8437)**.*

A photograph of a statue of a man sitting in a chair, likely a historical figure. The statue is made of a light-colored material and is set on a dark base. The background is dark and out of focus.

Questions? Comments? Suggestions?

Call the National Alternative Fuels Hotline at 1-800-423-1DOE or the Clean Cities Hotline at 1-800-CCITIES
Also, check out the Alternative Fuels Data Center web site at www.afdc.doe.gov or the Clean Cities web site at www.cities.doe.gov