

U.S. DEPARTMENT of ENERGY

ALTERNATIVE FUEL NEWS

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

From the Office of Energy Efficiency and Renewable Energy

The **AFV** Resale Market

*Gearing up to
put cleaner vehicles
on the road*

PLUS

E85 Grows in Popularity

A success story from Minnesota



INSIDE:

**Up Close
with Ford**

*Interview with Beryl Stajich,
Fleet/AFV Brand Team Manager*



Dear Readers,

The Clean Cities network is growing, and more fleets are considering alternative fuels. "Industry old-timers" that have been using alternative fuels since the passage of Energy Policy Act of 1992 are beginning to replace their used alternative fuel vehicles (AFVs) with new ones. Many of the used vehicles, however, still have a lot of life left in them. Used AFVs can offer fleets a less expensive way to test the alternative fuel waters. Our cover story for this issue examines the current used AFV market and describes a few local AFV resale efforts.

Clean Cities not only promotes AFVs, but also—and perhaps more importantly—encourages the increased use of alternative fuel in AFVs. Flexible fuel vehicles (FFVs), with no incremental cost, were once considered the solution to the notorious chicken and egg problem of the alternative fuel industry. FFVs are an attractive option for fleets, but if drivers do not fuel their vehicles with E85, FFVs contribute nothing to our clean air and petroleum displacement goals. To help

connect FFV drivers with the fuel, the Minnesota E85 Team, which recently celebrated the opening of the 50th public access E85 station in the Twin Cities region, has come up with some creative ways to promote E85 use. You can learn more about the Minnesota effort—which has built the largest E85 refueling network in the country—in our feature story.

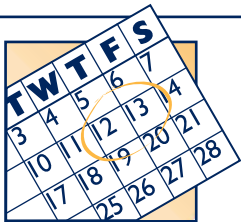
As we say good-bye to the first year of the new millennium, we must also say good-bye to two of our Department of Energy (DOE) colleagues. DOE's Ernie Rios, Clean Cities Regional Program Manager for California, will take on new challenges in the Department. We will surely miss his energy, his dedication to alternative fuels—and of course—his style. But we are not without Clean Cities support in California, as DOE's Julia Oliver has picked up where Ernie left off. We also say farewell to DOE's David Godfrey, Clean Cities Program Manager for the Atlanta region. David will soon leave Clean Cities to focus his efforts on bioenergy projects. But as we lose one David, we gain another. David Dunagan is the new DOE Clean Cities contact for the Atlanta region. We wish both Ernie and David Godfrey the best of luck in their new positions, and welcome Julia and David Dunagan to the Clean Cities team.

We have much to look forward to in the new year. First and foremost, we will be welcoming a new Administration and a new Secretary of Energy. We will also celebrate the addition of three new Clean Cities coalitions this spring—Triangle Clean Cities, based in Raleigh, North Carolina; the Twin Cities Clean Cities Coalition in Minnesota; and the state of Vermont. And of course, we look forward to greeting everyone in Philadelphia for the Seventh National Clean Cities Conference, May 13–16.

Best wishes for 2001, and as usual, enjoy the issue.

Shelley Launey, Director

Clean Cities Program
U.S. Department of Energy



Upcoming Conferences and Events

Clean Heavy-Duty Vehicles for the 21st Century: Exploring Trends in Advanced Technologies and Fuels

March 21–23, 2001

Sheraton San Marcos Resort and Conference Center
Chandler, Arizona

Contact: Susan Romeo @ 626-744-5600

7th National Clean Cities Conference and Exposition

May 13–16, 2001

Pennsylvania Convention Center
Philadelphia, Pennsylvania

Contact: Clean Cities Hotline @ 800-224-8437

FutureTruck 2001 Competition

June 4–13, 2001

General Motors Proving Ground
Milford, Michigan

Contact: Kristen De La Rosa @ 512-481-8876, or
512-481-9043

17th Annual International Fuel Ethanol Workshop and Trade Show

"Where Practical Application and Research Meet to Improve Grain and Cellulose Ethanol Production"

June 19–22, 2001

Radisson Hotel Riverfront
St. Paul, Minnesota

Contact: Bryan & Bryan Inc. @ 719-942-4353

Contents



Page 6

Warren Gretz,NREL/PIX 07133



U.S. Department of Energy



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ALTERNATIVE FUEL NEWS

Volume 4 Number 4

February 2001

Cover Story • 4

The AFV Resale Market

An emerging opportunity for a growing market

Page 4



Barwood Transportation/PIX 06213

Feature Story • 6

E85 Grows in Popularity

Minnesota team helps increase the use of ethanol

Departments

Clean Cities International News • 9

Spanning the globe

From the Automakers • 10

Up close with Ford Motor Company—
Interview with Beryl Stajich,
Fleet/AFV Brand Team Manager

Page 10



Weick Photo Database

Clean Cities Roundup • 12

Kudos to Clean Cities—Atlanta

Kansas City opens two new natural
gas refueling stations

Austin steps up as AFV leader

Rhode Island receives CMAQ funds
National Clean Cities Conference

Focus On • 13

San Francisco coalition beautifies
city—Innovative legislation helps
reduce the use of petroleum-based
and imported fuels

Page 13



Photodisc

Federal News • 14

Tiger Teams offer technical
assistance to Clean Cities

Private and local rulemaking
stakeholder workshops

Hot Off the Press • 15

Airport shuttle tool kit for
Clean Cities

Expanding the use of alternative
fuel vehicles at airports

On the Web • 16

A FAST system for federal fleets

Fuel economy guide online

The AFV Resale Market

Gearing Up to Put Cleaner Vehicles on the Road

Today's high tech automotive superstores promising low prices and no-hassle policies have lured many consumers away from new car purchases. The popularity of leasing, where lessees return their vehicles to dealers after a few years of use, has greatly increased the availability of clean, late-model vehicles in excellent condition—providing used car buyers with new car options. Internet sites and on-line brokerage services have also made it easier for consumers to research their choices and have facilitated used car purchases. The used car business is booming... at least for conventionally fueled vehicles.

Alternative fuel vehicles (AFVs) are clearly not as prevalent as gasoline and diesel vehicles, but the numbers are growing steadily and fleets that entered the AFV market a few years ago are now beginning to replace their older AFVs with new ones. So what happens to the used vehicles?

Many owners are preparing to retire their first generation of original equipment manufactured (OEM) AFVs.

Over the past 10 years, however, AFV technology has improved significantly and automakers now offer customers a wider variety of vehicles from which to choose. Many are preparing to retire the first batch of their original equipment manufactured (OEM) AFV purchases—a move that can strengthen and broaden the used AFV inventory. As high gasoline prices and growing air quality concerns encourage more people to turn to AFVs, many may welcome the chance to test the waters by purchasing a used vehicle. Unfortunately, interested buyers have limited options for finding resale information. Some are able to find what they need using one of the few Web sites that lists used vehicles; others must rely on word of mouth.

Ford Motor Company offers a used vehicle electronic auction service to its dealers, and several other AFV proponents have initiated small-scale independent efforts for specific fuels to better connect used vehicles with potential AFV buyers. The Electric Vehicle Association of Greater Washington, D.C., for example, advertises used electric vehicles (EVs) on its Web site, www.evadc.org/forsale.html. The vehicles listed are older conversions, and appropriate for individual EV enthusiasts and hobbyists.

The Natural Gas Vehicle Coalition (NGVC) lists used natural gas vehicles, in addition to natural gas equipment,

in a special section of its Web site. NGVC's market exchange, located at www.ngvc.org/mktxch.html, typically features seven to ten vehicles at one time. "People have found the site to be a viable medium for selling vehicles," said NGVC's David Steele, Director of Communications and Member Services.

The U.S. General Services Administration (GSA) advertises natural gas vehicles recently retired from the nation's largest AFV fleet, the federal fleet, on the NGVC site. Most federal agencies lease or purchase their AFVs through GSA, which also sells the vehicles at public auctions when an agency is ready to replace them. According to GSA, most federal fleet vehicles are retired after four or five years of use—meaning the AFVs bought or leased as part of the federal fleet's initial Energy Policy Act (EPAct) compliance strategy are now approaching retirement. The addition of these vehicles to the resale inventory will greatly boost the resale market. Since it began advertising on the NGVC market exchange, GSA has heard from several hundred people interested in purchasing used federal AFVs. According to GSA staff, 75% of the respondents were not fleet personnel but individual consumers encouraged by local alternative fuel incentives and high occupancy vehicle (HOV) lane privileges for AFVs. GSA has also experienced resale success at regional auctions. In the Dallas-Fort Worth region, for example, GSA recently sold 10 of its natural gas vans to a shuttle company in New Mexico. According to Dallas-Fort Worth Clean Cities Coordinator, Nan Miller, "Auto auctions are becoming a popular place for people who are looking to purchase AFVs, but there is still a strong need for public education." Miller, who bought her personal AFV at a local GSA auction, said the southwest regional GSA office holds as many as 10 automobile auctions each year, some of which feature used AFVs.

The City of Dallas, in cooperation with a local auction house, also sells its used natural gas vehicles at auctions several times a year. Buyers can learn what vehicles will be available at future auctions on the Web, at www.lonestarauctioneers.com, or by calling Lone Star Auctioneers, Inc., at 817-740-9400 or the City of Dallas Sales and Auction Services Division at 214-670-3071. The City of Fort Worth also holds an annual auction to sell its used light- and heavy-duty vehicles, some of which operate on



The AFV resale market is an emerging opportunity for both fleet purchases and private individuals.

propane. Interested buyers can call 817-870-5101 for more information on available vehicles.

Used AFVs, particularly those serving niche markets such as taxis and delivery vehicles, are gaining modest attention in other parts of the country as well. Fleets have been successful buying and selling used AFVs in Clean Cities regions, including Long Island, NY; the Washington D.C. area; Salt Lake City; and Denver.

Growing interest and regional successes point to the need for a concentrated national AFV resale effort. “We need to establish a framework for a national program that gives fleets a convenient place to locate and purchase used AFVs,” said Ira Dorfman, President of Dorfman & O’Neal, Inc. With funding from a U.S. Department of Energy Broad Based Solicitation grant, Dorfman & O’Neal has studied the AFV resale market to determine current industry practices and the best strategies for developing a viable secondary AFV market. “Taxi, rental car, and other large AFV fleets that purchased AFVs in the mid 1990s are now ready to replace their vehicles with new ones. But these used AFVs still have lots of useful life in them and are not ready to be taken out of service,” he said. “Fleets interested in AFVs—smaller companies without big budgets for vehicles—can look to used AFVs as a less expensive way to jump into the world of alternative fuels.”

But there are barriers. Lack of awareness of available opportunities and inadequate notification of these opportunities hinder market growth. The short notice given to potential AFV buyers limits the amount of time they have to research the vehicle, evaluate refueling options, ensure it meets their fleets’ needs, and pull together the required financing.

Another problem, according to Dorfman, is the misperception that the resale value of AFVs is lower than comparable gasoline vehicles. Currently, there is no standard for setting the values of used AFVs. AFVs offered at auction frequently sell for less than comparable gasoline vehicles—dealers familiar with the AFV industry purchase these under-priced vehicles and quickly turn around and sell them at much higher prices. Since the initial resale price is

the one most frequently reported, a false impression is given that AFV residual values are lower than comparably equipped gasoline vehicles, when in fact, AFV resale values can be as high or higher than gasoline vehicles as long as AFV customers are aware of their availability.

“The entrepreneurs who have recognized these financial opportunities have taken advantage of them. While you can’t fault their success, these windfall profits are made at the expense of alternative fuel stakeholders,” said Dorfman. “The whole key to a healthy AFV resale marketplace is to eliminate the middleman and sell AFVs directly to end users at prices comparable to gasoline vehicles,” he said.

Higher residual values will encourage more new AFV purchases, which will eventually build the inventory of used AFVs, giving used vehicle buyers more options. Also, higher residual values will help lower leasing costs by assuring dealers and other leasing agents that the used vehicles will sell once the lease agreement has expired. “It’s in everybody’s best interest to maximize the value of used AFVs,” said Dorfman. “A dynamic AFV resale market will increase the residual value of AFVs, helping to ensure that new AFV buyers see a return on their investment when they sell their vehicles,” he said.

But building a national AFV resale market is a long-term process, and the Clean Cities Program is working to determine exactly what role it can play in the development of a larger scale national AFV resale effort. “It is important that there is a reliable mechanism for interested buyers to locate used AFVs and to provide assurance that the vehicles are operating properly,” said Clean Cities Director Shelley Launey. “We don’t have all the answers yet for this fledgling market, but it is a subject we will be examining more closely at the Seventh National Clean Cities Conference in May,” she said.

Small-scale and regional successes indicate a growing interest in AFV resale. With the collaboration of Clean Cities and alternative fuel stakeholders, as more used AFVs come to the market, a national AFV resale effort will follow. For more information about the role for used AFVs at the Seventh National Clean Cities Conference, look for a conference agenda soon to be posted on the Clean Cities Web site at www.ccities.doe.gov/conference.html.

As a rule, most fleet vehicles are well maintained and have a lot of useful life left in them.



The resale market gives fleet operators the opportunity to gain first hand experience in the benefits of operating AFVs.



E85 Grows in Popularity

Minnesota Team Helps Increase the Use of Ethanol

The AFV industry has long been puzzled by the so-called chicken and egg problem—what comes first, the vehicles or the stations? At first, flexible fuel vehicles (FFVs), which can operate on both ethanol and gasoline and do not burden the customer with an incremental cost, seemed a perfect solution to the problem. There are more than 1 million of FFVs on the road today—more than all other alternative fuel vehicles (AFVs) combined. FFVs have penetrated the consumer retail market as well as the fleet market and are now the highest volume type of AFV sold. The problem? Most FFV drivers continue to refuel with gasoline and not ethanol. In fact, most FFV owners don't even know about the ethanol fueling capability.

Several groups across the country are hard at work to change the FFV situation. With fifty refueling stations offering E85, a blend of 85% ethanol and 15% gasoline, the Twin Cities region of Minnesota boasts one of the most successful efforts to date. As one of DOE's E85 pilot project cities and an AFV USER region, it's no wonder that a strong team of E85 proponents has emerged in the Twin Cities region (for more information on DOE's AFV USER Program, check out www.ott.doe.gov/afvuser/). Directed through the American Lung Association of Minnesota (ALAMN) and the Clean Air Fuels Education (CAFE) Alliance, the Minnesota (MN) E85 team is a true public-private partnership. It includes Ford Motor Company, Minnesota Coalition for Ethanol, Minnesota Corn Growers Association, Minnesota Department of Commerce, Minnesota Department of Agriculture, National Ethanol Vehicle Coalition, and U.S. DOE. In September, the team received the Minnesota Governor's Award for Excellence in Waste and Pollution Prevention.



TC4 Coordinator Tim Gerlach refuels his FFV with E85—for free—thanks to a giveaway sponsored by Holiday Stationstores and the Minnesota E85 Team.

The team's two priorities are to increase E85 availability and to increase the number of FFV drivers who use the fuel. Like many AFV efforts, the team has focused some of its attention on outreach to local public and private fleets. In addition to the state fleet, which includes nearly 800 FFVs, the MN E85 team is working with federal fleets in the area, such as the U.S. Postal Service, to encourage FFV procurement and, more importantly, to use the growing E85 refueling station network.

With more than 5,500 registered commuter programs in the area, carpools and vanpools stand out as an important element of the region's FFV market. The MN E85 team's fuel rebate trial has been particularly well received—carpools and vanpools that bought 85 gallons of E85 received a check in the mail for \$15, partially funded by Metro Commuter Services, the region's government planning council.

But what makes the Minnesota E85 program stand out from many others is not its fleet outreach activities, but its effort to increase E85 use by general consumers. "There are 45,000 FFVs registered in Minnesota," said ALAMN's Tim Gerlach, Director of Outdoor Programs and Clean Cities Coordinator. "We just need to connect the drivers with the fuel. The marketplace is changing, and consumers are starting to consider the environment an important factor in their purchase decisions. We're asking them to make the Clean Air Choice," he said.

All of the region's 50 E85 stations are publicly accessible—and convenient for the public to use. Holiday Stationstores, the third largest chain of stations in the Twin Cities

Model Year 2001 Flexible Fuel Vehicles

Manufacturer	Model	Vehicle Type
DaimlerChrysler	Chrysler Town and Country, Chrysler Voyager, Grand Voyager, Dodge Caravan, Grand Caravan	Minivan
Ford	Taurus LX, LE, SES	Sedan
	Explorer Sport, (selected 2-door); Explorer Sport Trac	Sport Utility Vehicle
	Ranger, 2WD	Light-duty Pickup
General Motors	Chevrolet S-10, 2WD; GMC Sonoma, 2WD	Light-duty Pickup



region, operates 17 locations with E85 pumps. Holiday recognizes the important benefits of cleaner fuels—it was first fuel provider outside the state of California to offer only low-sulfur gasoline at all of its Twin Cities region outlets. Holiday's E85 pumps are located on the same island as the gasoline dispensers so drivers don't need to go out of their way to refuel with the cleaner alternative. They just need to know they have the choice. "Our biggest problem is that people don't even realize they have a vehicle capable of running on something other than gasoline," said Gerlach.

To help educate consumers and raise awareness of the benefits of E85, MN E85 team partners have organized a series of public refueling site promotions. They are literally giving the fuel away (for a limited period of time). Ford, which has helped fund some of the marketing activities, advertises the events at its dealerships, along with the participating fuel station. The E85 team also distributes "free fuel" post cards, which include a list of vehicles capable of using E85. With today's higher oil prices forcing consumers to dig deeper into their pockets at each trip to the gas station, the free fuel invitation has attracted a lot of attention. "These events have really helped increase awareness, and because it's a giveaway, we've received a lot of free media coverage," said Gerlach. "The first time we did it, 98% of the people who came were first time users who didn't even know the E85 pump was there," he said.

With 42 stations open in September 2000, E85 sales reached 40,000 gallons, but the team would like to double that over the next six months by building a larger public outreach campaign. "So far, since we have a limited bud-

get, we've only been testing the water to see which promotional strategies are most effective," said Gerlach. "We are trying to raise additional funds so we can launch a larger education and marketing campaign in early 2001 to coincide with new model year vehicle availability."

The team hopes to establish a major public presence through popular magazine advertising, and negotiations are underway to secure the help of very recognizable spokespeople. It also plans to partner with local dealer associations on commercial advertising projects, and to ensure Minnesota's future drivers are fully aware of all of their fuel options, the team is developing an E85 lesson plan to distribute to schools located within the region's infrastructure network.

The Minnesota E85 team would like to expand the number of E85 stations to 400 by the end of 2002. Impossible? Maybe not, according to Gerlach. The vehicles are already on the road so the stations could easily follow. "We've surpassed all of our initial goals—we'd hoped to have 50 stations in place by the end of 2000 and we've already done that," said Gerlach. "It's amazing how things have changed now that people realize what's happening. I recently approached a woman at a local gas station, asked her if she knew she could fill her vehicle with E85, and she gave me a 10-minute lecture on the benefits of using the fuel. If we can get a few more folks like her choosing E85, our job will be done."

Where Do Minnesotans Get Their Ethanol?

In Minnesota, FFV drivers who use E85 can be assured their fuel is home grown. The Land of 10,000 Lakes now has 14 ethanol production facilities, and all but two of the plants are farmer-owned cooperatives. Most of the state's ethanol is produced from corn-starch, although some is made from a byproduct of cheese production at a local Kraft Foods plant. Minnesotans have a long, successful history with fuel ethanol. Through a statewide oxygenated fuel program, 97% of Minnesota gasoline is blended with 8-10% ethanol.

For more information on the Minnesota E85 Project, the Twin Cities Clean Cities Coalition (TC4) and other ALAMN CAFE Alliance activities, please access www.cleanairchoice.org.



American Lung Association of Minnesota/PIX 03790

Drivers in the Twin Cities can now refuel FFVs at any of 50 public access E85 Stations in the area, thanks in part to the Minnesota E85 Team, shown here standing in front of an FFV. DOE is proud to be a part of the team.

Governor Declares Ethanol North Carolina's State Fuel

On September 27, 2000, North Carolina Governor Jim Hunt signed a proclamation requiring all state FFVs to use ethanol whenever possible. Governor Hunt also used the proclamation to publicly offer his support to the Triangle Clean Cities Coalition, which serves the Raleigh-Durham-Chapel Hill region and is one of the state's most active E85 proponents. In addition to requiring E85 use in state FFVs, the proclamation requires the creation of a common



accounting system allowing federal, state, and local government fleets in North Carolina to share E85 refueling facilities. It also encourages private companies to add ethanol pumps to existing gasoline stations, enabling public access to the fuel. Triangle Clean Cities is among the newest coalitions to join the National Clean Cities Program. Plans are underway for a designation ceremony in Raleigh in March 2001.

Clean Cities are Building Local Energy Security

by DOE's David Rodgers, Director, Office of Technology Utilization

For seven years, the Clean Cities Program has promoted the use of alternative fuel vehicles (AFVs) to enhance national energy security and improve air quality. Along the way, we have learned that many communities find the local air quality benefits sufficient by themselves to expand the use of AFVs. We have also learned that putting "national energy security" issues on a local agenda is very difficult. The recent run-up in oil prices and shortages of heating oil in some regions of the country have reminded us that the lack of "local energy security" can lead to adverse impacts on consumers, fleets, businesses and local economies. Electricity shortages and high prices in California and other states only serve to drive the point home.

Perhaps without realizing it, Clean Cities coalitions are enhancing "local energy security" by increasing the use of alternative fuels in their communities. By using clean alternative fuels to power local services, such as school buses, city services, trash collection, mail delivery, and grocery delivery, Clean Cities coalitions are strengthening their resiliency to an energy or environmental emergency. If conditions produce locally high air pollution or oil prices, the city can still get its job done because critical services can operate on clean alternative fuels. A community with a strong and diverse transportation fuel system can advertise for economic development with a clear commitment to deliver mission-critical services because it has a clean, alternative, domestic fuel powering the economy. Short supplies of conventional fuels can be saved for our transportation systems that are not ready to adopt alternative fuels, such as jet aircraft.

Investing in alternative fuels to enhance diversity and resiliency pays off in the short-term through clean air

and cost savings (using natural gas and other low-cost alternative fuels). It pays off in a crisis when gasoline or diesel fuel costs go through the roof or when supplies are disrupted. And it pays off in the long term as petroleum resources are supplanted by alternative and renewable fuels. We have several examples both in and out of the transportation arena—

- Harris Ranch, one of the largest agribusinesses in California, converted some its heavy-duty trucks to LNG last year. During the diesel price hike in 2000, the company saved more than 5 cents per mile delivering produce.
- Local U.S. Postal Service fleets in Huntington Beach, California and El Paso, Texas—which are 100% alternatively fueled—continue to deliver mail using natural gas vehicles regardless of the availability and price of gasoline.
- In New York City, a local apartment co-op installed high-efficiency lights last year expecting payback in 3-5 years. With last summer's price increase in electric costs, residents enjoyed a pay back after just 8 months.

This could be a new paradigm of "local energy security." Of course, it's not really new—communities that build self-sufficient, sustainable economies have always been attractive places to live and work. As local Clean Cities coalitions continue to pursue market development for alternative fuels, they should be aware of and prioritize areas that enhance local energy security. If you have a personal success story in this area or would like to suggest ways Clean Cities can strengthen local energy security, please call us at 800-CCITIES, or visit our success stories Web page located at www.ccities.doe.gov/success.shtml.



Clean Cities International News

Spanning the Globe

Although DOE's Clean Cities Program concentrates its attention and resources on national activities and coalitions residing on U.S. soil, recent efforts have begun to help foster alternative fuel markets in neighboring countries and even overseas. More than 1.1 billion city-dwellers, regardless of income, live with air pollution levels exceeding World Health Organization standards, according to the World Bank Report 1999-2000. The same report suggests that most children living in urban centers of developing countries are breathing air that may be as harmful as smoking two packs of cigarettes a day. Furthermore, transportation is one of the most rapidly rising sources of greenhouse gas emissions. Cities such as Santiago, Chile; New Delhi, India; and Sao Paulo, Brazil face air quality problems far worse than anywhere in the U.S., and government officials are turning to alternative fuels and AFVs for help.

Also, many nations are concerned about the rising demand for petroleum from consumers wanting to fuel their vehicles with gasoline and diesel. Increasing population and economic growth in China and India will more than double the oil consumption in those countries over the next 20 years. And India, for example, already imports 60% of its petroleum. Similarly, oil demand is expected to double in Central and South American countries by 2020, with Brazil accounting for much of that growth. And although world oil supplies are projected to grow over the next two decades, according to DOE's Transportation 2050 Paper, it will be at a rate less than the growth in demand. Moreover, world motorization contributes significantly to oil demand. The total number of light-duty vehicles is forecast to increase by a factor of 3 to 5 over the next fifty years, bringing the worldwide total to 2 to 3 billion.

While Clean Cities cannot attempt to solve all of the world's air quality and oil dependency problems, it can focus on a few key regions to help ensure that successful AFV markets evolve. Clean Cities has already helped the government in Santiago, Chile, which is developing a natural gas taxi and transit bus program. In fiscal year 2000, DOE awarded a grant to the Gas Technology Institute to coordinate six reverse trade missions, allowing for foreign delegations to visit American transit authorities using alternative fuels, as well as equipment manufacturing plants, fueling stations, and local AFV fleets.

After a July DOE scoping mission took Marcy Rood, Clean Cities Deputy Director to India, DOE began working with local government officials in New Delhi to assist with a natural gas program. Indian officials must comply with a mandate issued by the India Supreme Court requiring that more than 7,000 transit buses and 2,000 school buses in

New Delhi operate on natural gas by March 2001. DOE has asked international organizations, such as the U.S. Agency for International Development, to fund efforts such as training programs for technicians and drivers.

Similar opportunities for natural gas transit buses exist in Sao Paulo and Rio de Janeiro, Brazil. There are a total of about 125,000 buses in Brazil, and 30,000 are located in Sao Paulo (for comparison, there are a total of 50,000 transit buses operating in the U.S.). Similar to India, new, tougher emissions standards have forced Sao Paulo officials to take action and mandate that all buses must be powered by natural gas by 2005.

Efforts are also underway in Monterrey, Mexico, through an agreement with Clean Cities consultants at Gladstein and Associates, to conduct a reverse trade mission, provide outreach materials, and build a Clean Cities initiative. Home to 10,000 industrial and service businesses, Monterrey is an important trucking center, as almost all of the goods transported to the Laredo, Texas border originate or terminate in Monterrey. In 1999 alone, nearly 2.8 million truck crossings occurred at the Mexico and Laredo border.

"Clean Cities International is exploring international markets because climate change is a global problem with no boundaries. Many developing countries have the opportunity to build transportation systems that have low greenhouse gas emissions, while improving local air quality," said Rood. "U.S. alternative fuel technologies are proven and can deliver emission reductions, allowing developing countries to 'leap-frog' to much more efficient and clean vehicles and avoid some of the growing pains of the U.S. experience."

Clean Cities International plays an equally important role in boosting the domestic economy. Assisting international cities to implement cleaner vehicle technologies creates new markets for U.S. manufacturers. Selling more AFV products abroad creates greater economies of scale, helping drive down the cost of vehicles and stations.

International cities are also eager to learn more about the Clean Cities approach and look to DOE for guidance on lessons learned, in establishing similar programs. DOE plans for the future include a new round of grant funding; a solicitation released in November, 2000 seeks proposals to facilitate Clean Cities-like programs in selected markets, for train-the-trainer programs, and for outreach programs. For more information check the newly redesigned Clean Cities International Web site at www.hemis-ccities.doe.gov.



From the Automakers

Up Close with Ford Motor Company



Beryl Stajich, Fleet/
AFV Brand Team
Manager

Ford Motor Company has long been one of the strongest voices in the alternative fuels market. With 13 vehicles in its 2001 line-up, Ford offers more alternative fuel models than all of the other auto manufacturers combined and remains a proven leader in the alternative fuel vehicle (AFV) market. *Alternative Fuel News* (AFN) staff recently had a unique opportunity to talk one-on-one with Ford's Beryl Stajich, Fleet/AFV Brand Team Manager.

He shared his thoughts on the current state of the AFV market, where it's headed, and what Ford is doing to help ensure a sustainable energy and transportation future.

AFN: How would you characterize today's AFV market?

Stajich: The current challenge for the market and for marketing entities is to break the chicken and egg syndrome. Our ability to put vehicles on the road depends on the appropriate infrastructure, while the infrastructure waits for us to get the vehicles on the road. What comes first? Our position at Ford Motor Company is to create partnerships with industry and work together to create a critical mass of vehicles on the road.

For example, in California, we're partnering with Southern California Gas and Pickens Fuel. These companies know we're merchandising compressed natural gas (CNG) Econoline vans and wagons and Crown Victorias to area fleets so they're putting in the alternative fuel stations to service them. We're also working closely with British Columbia Gas (BCG) E-fuels. BCG E-fuels is unique in that they're also putting their own service and sales people in the field to help us sell the vehicles. This partnership addresses the chicken and egg problem in which vehicle critical mass is necessary for infrastructure, but infrastructure is needed for critical mass. We have high hopes that this will work—it's already working in places like Vancouver. But the bottom line is that the market is still evolving; it's still immature.

AFN: What kind of progress do you think we need before we no longer consider alternative fuels "alternative?"

Stajich: First, there has to be a dramatic step up in the development of an infrastructure network so people don't have to go out of their way to get alternative fuel. Right now, the question is not "when will I arrive?" it's "will I arrive?" The main thing that will drive this business is the retail customer and when retail customers put these vehi-

cles in their driveways. Right now, 80% of our business is Federal, state, and local governments. For us to create a vehicle critical mass, we need to create retail markets. States need to "incentivize" the purchase of these vehicles so people—individuals—will buy them and have a favorable experience. That will drive the infrastructure, and we'll be off and running.

AFN: What are Ford's plans to educate and train dealers selling AFVs? What about technicians to maintain the vehicles and support their use?

Stajich: That's what sets us apart from other manufacturers. We offer a bumper-to-bumper, 36-month warranty including all AFV upfit parts, whether they're electric, natural gas, propane, or ethanol. And it's a seamless operation to get your vehicle serviced. We have special training programs for dealers, who must be certified to sell the vehicles. Ford Motor Company provides the special tools and the dealer must dedicate two technicians to take our training class and get certified.

Last year we sold more than 8,000 CNG and propane vehicles. This year we expect to sell 17,000—that's largely due to the Arizona incentives, and almost all of the Arizona volume is retail. It may not be the end count but that's the official forecast based on the orders we've received so far.

AFN: Speaking of the events in Arizona, many stakeholders outside of Arizona are worried that the state's incentives and the massive demand they've created for AFVs in Arizona will deplete stocks so that vehicles won't be available to customers elsewhere who need them. How is Ford addressing this problem?

Stajich: It's true that we would have run out of vehicles. Ford subsequently doubled its capacity, specifically for F-Series pickups and chassis cabs. We can meet the demand that we think will be there.

As far as what's happened in Arizona, there are always people that will take advantage of what's offered, without respect to clean air pursuits. And despite what's happened in Arizona, incentives can work. States like Texas and Kansas are working to develop programs, and there are lots of incentives already available. In California, the South Coast Air Quality Management District, for example, offers \$3,000 for every ULEV [ultra low emission vehicle] and \$5,000 for every ZEV [zero emission vehicle]. The money is taken directly off the sticker price so customers get a fully warranted vehicle and see the difference right away, without any extra effort on their part—the process is seamless.

AFN: There is a growing competition among the automakers to introduce new, advanced technology vehi-

cles, specifically hybrids, to the market. What are Ford's plans and how will the introduction of these new vehicles affect your AFV lineup?

Stajich: We have three efforts in regard to advanced technology vehicles. The one coming forward now is Th!nk Mobility. It covers the electric vehicles (EVs) that Ford will be adding to its EV Ranger offering—they're just coming to market. There are two Th!nk electric bikes: the Traveler, which folds up like an accordion and can fit in the back of your car, and the Fun. The Th!nk Neighbor, available in early spring, is a low speed vehicle that resembles a golf car. But it's more than a golf car in that its top speed is 25 miles per hour (mph) and it's highway certified on roads with a speed limit up to 35 mph—great for getting around gated communities or a club. It comes in two- and four-seat versions. The Th!nk City will be available in 2002. It's not new technology—these are lead acid battery powered vehicles—but we're expanding and enhancing the market reach for battery-powered technology.

Our advanced technology vehicles will hit the market in another couple of years. We have a hybrid built off of our subcompact sport utility vehicle called the Escape. It uses a gasoline engine, electric motor, and a battery to go about 40 miles per gallon. When accelerating from a stop, the battery power is the primary source of power up to 15 mph, and then the gasoline internal combustion engine kicks in. Range is greatly enhanced, and in my opinion, in terms of volume, this vehicle has the most potential because people are not tethered to a recharger.

In terms of fuel cells, we will have a demonstration program in the next couple of years.

Fuel cell vehicles are probably the best solution to our fuel shortage problem. Gasoline is going to dry up eventually, and some day, so will natural gas and propane. Something made from natural elements, like hydrogen, that can create electricity is our best bet. The fuel cell vehicle introduction will be slow and deliberate—the volume will be small at first—so it will not have an immediate impact on the AFV market. It will be another five to 10 years down the road before fuel cell vehicles have an impact on the market. In the near term, we're wedded to AFVs—natural gas, propane, electric, and ethanol.

Ethanol has the greatest near term potential, especially in terms of volume. Between Ford Motor Company, General Motors, and DaimlerChrysler, there are thousands and thousands of ethanol vehicles on the road. We've developed a partnership with the American Lung Association to get additional information out to drivers in three pilot cities. We're working with local providers to put in additional stations in the Twin Cities, Milwaukee, and Chicago,

and we'll soon be expanding the program to Denver. We have a merchandising agreement with the American Lung Association, which is helping with awareness and providing an unbiased, third party endorsement for these vehicles and the fuel. As a result of that association and our partnership with the corn growers, we can help fund additional refueling stations. Third party endorsements are important for creating awareness of alternative fuels and increasing the availability and convenience of alternative fuels. Ford Motor Company is always looking to partner with people who can help spread the word.

AFN: How does Ford plan to stay involved with the Clean Cities Program? Are there any specific activities, partnerships, or programs on the horizon?

Stajich: Ford Motor Company has been heavily involved with DOE. We always support the national conference in terms of sponsorship. We have also set aside marketing money for projects in 12 key non-attainment areas and we are partnering with the Clean Cities coordinators in each of these areas. We have seven regional AFV specialists with their ears to the ground, constantly working with Clean Cities coalitions and coordinators to maximize the potential of advancing awareness and the science of AFVs. It's very much a grass roots approach by Ford, and that's why Clean Cities involvement is so important to us.

AFN: What are the most effective strategies for Clean Cities to help build the AFV market?

Stajich: I think the single most important thing is to help raise awareness levels. We need to identify programs that will move the fastest, have the biggest impact, place the vehicles in volume, and drive the infrastructure in these locales. An example of this kind of work is in San Diego. The San Diego Clean Cities Coalition has been instrumental in helping us develop a Regional Transportation Center (RTC) dedicated to AFVs. The RTC will open its doors next fall and bring together AFV availability, service, refueling, and education/awareness. It will create an educational center for the next generation of drivers and teach the impact that AFVs can have on the environment. It's a robust program that includes Ford Motor Company, the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Energy (DOE), among others. It's the direct result of something that was started by a Clean Cities coordinator. It's something other coordinators can initiate. We're interested in expanding the concept to other locales, and there are people out there who are willing to contribute. Like HUD, for example. Who would have thought? But they got involved because the RTC was involved in a redevelopment zone—taking down old buildings to put up new ones. You just have to step outside of the box a little. AFVs are about new and different things and they take new and creative ideas to make them happen.

For more information about Ford Motor Company and its alternative fuels activities, check out www.fleet.ford.com/products_services/alternative_vehicles/default.asp or call 877-ALT-FUEL.



The hybrid-electric Ford Escape is designed to get 40 miles per gallon when it debuts in 2003.

Weick Photo Database



Clean Cities Roundup

Kudos to Clean Cities-Atlanta

Clean Cities-Atlanta stakeholder, Checker Cab Company, received a Merit Award from the U.S. Environmental Protection Agency on October 19, 2000. The award recognizes the company's leadership and dedication to environmental protection. Checker Cab started its alternative fuel vehicle (AFV) effort in 1996 with a fleet of 20 natural gas cabs. Since then the fleet has grown to more than 70 AFVs (40% of its fleet), including natural gas and electric vehicles. Checker Cab also houses two fueling locations that anchor the Atlanta FuelNet system, which allows access to anyone carrying a FuelNet card. A true Clean Cities champion, Checker Cab continues to work with its partners, Atlanta Gas Light, Ford Motor Company, and FuelMaker Corporation, to help establish an AFV market foundation in Atlanta.



Atlanta's Checker Cab Company has more than 70 AFVs, representing 40% of its fleet.

Clean Cities-Atlanta will be hosting a station car/shared car conference in April to promote this important alternative fuel niche market. Information will be posted on the Clean Cities Web site when available.

Kansas City Regional Clean Cities Connects with Natural Gas

On November 6, 2000, the Kansas City Regional Clean Cities Coalition, a bi-state coalition serving both Kansas and Missouri, celebrated the grand opening of two natural gas refueling stations. The stations, operated by Kansas Gas Service, are located in Topeka and Overland Park in Kansas and within a half mile of I-70 and I-35. A major step forward in clean corridor development, both stations are publicly accessible 24 hours a day and accept both Visa and MasterCard in addition to Fuelman Fleet cards.

Austin Steps Up as AFV Leader

The city of Austin recently announced its intention to operate a cleaner, more fuel-efficient fleet. On October 5, 2000, Austin Mayor Kirk Watson signed the "Fleet Efficiency and Pollution Prevention Resolution," directing

city officials to increase the number of alternative fuel vehicles (AFVs) in the Austin city fleet. The proclamation sets a gasoline and diesel consumption reduction goal of 5% by 2005 (based on 1999 fuel consumption levels), which the city will address through improved fleet efficiency and trip reduction in addition to increased AFV use. Dan Deaton, of DOE's Denver Regional Office, stated, "Based on the city of Austin's emissions inventory, mobile engines and fuels are major contributors towards the region's decreasing air quality. I applaud the city of Austin for its efforts to promote greater use of alternative fuels in its fleets."

The Smallest State Awards Big CMAQ Dollars for Alternative Fuels

The state of Rhode Island awarded \$4.5 million in Congestion Mitigation and Air Quality Improvement Plan (CMAQ) funds to the Ocean State Clean Cities Coalition for a comprehensive statewide alternative fuel market development project, which is already under way. The coalition expects to build or upgrade four of the state's CNG stations by this fall. Targeted stations are located in Providence; Cranston; Warwick, at T.F. Green Airport (one of the fastest growing airports in the country); and Middletown/Newport. The stations will support several of the region's niche fleets, including Rhode Island Public Transit Authority buses and state fleet AFVs. The Ocean State coalition will also use the CMAQ money to fund the incremental cost of 250 AFVs and to support training and public outreach activities.

Philadelphia Hosts Seventh National Clean Cities Conference



The U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy and the Greater Philadelphia Clean Cities Program invite you to join the alternative fuels revolution at the Seventh National Clean Cities Conference and Expo. The conference will be held in Philadelphia at the Pennsylvania Convention Center, May 13-16, 2001.

Highlights of the conference will include a motivational presentation by stand-up comedian Terry Braverman, a mummies strut lunch, an opening night reception at the Franklin Institute Science Museum, and an AFV ride and drive. For additional conference and registration information, please visit the Clean Cities Conference Web site at www.ccities.doe.gov/conference.shtml, or call the Clean Cities Hotline at 800-CCITIES.



Focus On

San Francisco Coalition Beautifies City

Working to make one of America's most beautiful cities cleaner, the San Francisco Clean Cities Coalition is successfully working toward reducing the use of petroleum-based and imported fuels. In addition to San Francisco's famous electric cable cars and trolley coaches, the city can now boast about its compressed natural gas (CNG) taxis, liquefied natural gas (LNG) refuse haulers, and innovative environmental legislation.

At the end of 1999, the San Francisco Clean Cities Coalition helped pass the Healthy Air and Smog Prevention Ordinance. This municipal legislation is designed to "develop infrastructures for alternative fuel vehicles (AFVs) and establish criteria for the city's procurement of zero-emission and ultra-low emission vehicles." It requires that all municipal fleet vehicle purchases be clean fuel vehicles, and that 10 percent of these purchases must be electric. To comply with this legislation, the city fleet now has approximately 300 natural gas vehicles (NGVs), including six street sweepers. The city of San Francisco is offering to share this legislation with other coalitions that wish to improve local air quality.

According to Clean Cities Coordinator Rick Ruvolo, the chair of the San Francisco Clean Cities Coalition, San Francisco is also working to improve the alternative-fueling infrastructure in San Francisco. Recent efforts have included the Presidio National Park CNG fueling station project (a joint project between the National Park Service, the City and County of San Francisco, Pacific Gas and Electric, and the Gas Technology Institute and the Charge! electric vehicle charging station program (a joint regional project of various Bay area Clean Cities coalitions, stakeholders, and partners). In addition, the city recently received funding for the final phase of a multiphase LNG project to replace the city's refuse haulers with cleaner alternatives. This funding will be used to subsidize the building of the first LNG fueling station in the Bay area to offer limited public access. The station will primarily be

used to fuel the city's refuse trucks and is scheduled to open in the spring of 2001.

In cooperation with the city's contracted waste hauler, NorCal, San Francisco is preparing to replace a portion of its refuse hauler fleet with AFVs. Earlier phases of this multiphase LNG refuse hauler project involved ordering one hybrid electric vehicle (HEV) and one curbside recycling natural gas vehicle (NGV), and ordering or converting approximately 45 LNG refuse transfer trucks. According to Ruvolo, the transfer trucks log up to 660 miles per day over several runs, making their conversion to LNG an exciting opportunity to positively impact air quality in the San Francisco Bay area. The coalition is studying a five-year plan to replace 100 percent of the waste hauler's transfer trucks with cleaner AFVs.

Additional coalition activities have helped to put dedicated CNG taxicabs on the streets of San Francisco. With the help of stakeholders, grant funding, incentives, and regulations, the San Francisco Clean Cities Coalition has assisted in putting approximately 30 dedicated CNG Crown Victoria taxis into operation in the Bay area and plans are underway to add approximately 25 additional

taxis. "This is an exciting opportunity to influence an industry that can be found everywhere—in all parts of the country," said Ruvolo.

In another project supported by the Clean Cities Program, Budget EV rental cars became the first company to rent NGVs and HEVs in the San Francisco Bay area. Budget EV, which rents exclusively environmental vehicles, is located at the San Francisco International Airport. In a recent press release, Mayor Willie Brown, Jr. stated, "These natural gas and hybrid-electric cars are good for the environment, reduce our dependence on foreign petroleum, and they now have access to High Occupancy Vehicle (HOV) lanes. If you need to rent a car, this is clearly the way to go."



In addition to San Francisco's famous electric cable cars, the city has many innovative programs that encourage greater use of AFVs.

Photodisc



Federal News

Clean Cities Tiger Teams Can Help Save the Day

Clean Cities coalitions across the nation are successfully introducing alternative fuel vehicles (AFVs) into local fleets and raising community awareness of the benefits of alternative fuels. The road to a sustainable AFV market, however, has its inevitable pitfalls. Some coalitions may

experience problems that impede their progress.



PhotoDisc

But new help is on the way. They don't wear capes or have superhuman powers, but DOE's new Tiger Teams do have the technical expertise to help coalitions surmount those seemingly insur-

mountable obstacles to deploy more AFVs and build more refueling stations. DOE has assembled teams of experts who are ready to provide local assistance to coalitions with specific, technical problems related to AFV deployment and refueling station operations.

What kind of help will be available?

To help with problem solving, DOE has selected a group of experts with specialized, hands-on experience in specific AFV niche market applications. Team members have expertise in compressed natural gas (CNG), liquefied natural gas (LNG), electric vehicles (EVs), propane, ethanol, and methanol as well as in light-, medium-, and heavy-duty vehicle applications (i.e. school buses, transit fleets, taxis, airport fleets, cargo delivery vehicles, local government fleets, etc.).

What types of projects will be eligible for assistance?

Tiger Teams will help coalitions solve difficult or complex technical problems that coalition stakeholders have not been able to work through on their own. DOE will also deploy teams to assist coalitions with chronic problems that may be common in numerous Clean Cities—the solution to which can help fleets across the country. The following types of projects will be considered for Tiger Team assistance:

1. Technical Problem Solving (Vehicle Operations)—problems related to vehicle performance or drivability, safety issues, maintenance, driver acceptance, lack of training, implementation of AFVs at specific sites, etc.

2. Technical Problem Solving (Infrastructure Operations)—problems related to fueling station design and site issues, interaction with alternative fuel providers and fire safety code officials, fueling station performance and maintenance requirements, user/operator training, etc.

3. Evaluation of Potential Opportunities—Clean Cities Coalitions working to develop complex AFV projects (transit, airport, etc.) may request technical assistance from Tiger Teams if the specific expertise or resources are not available locally or regionally. The Tiger Team experts can help evaluate local market conditions pertinent to the project, conduct a technical assessment of infrastructure and stakeholder capabilities (or needs), and determine project feasibility. For viable projects, the Team would assist the coalition to develop an AFV action plan with specific implementation steps and stakeholder responsibilities.

In all cases, the Tiger Teams will work directly with Clean Cities coordinators and/or stakeholders to “help them help themselves.” Teams will not be deployed to simply perform general maintenance or repair services or to conduct sales calls.

Coalitions can request Tiger Team assistance through the Clean Cities Web site. DOE will review each request to determine if the problem warrants Tiger Team assistance or if the problem has common or national implications—coalitions must demonstrate that they have made a serious attempt to solve the problem themselves.

DOE will review requests monthly and work with coalitions through the Regional Offices to develop an action plan and send the appropriate Tiger Team to provide local assistance when warranted. Any necessary follow up steps, including additional site visits, will be included in the action plan. Requests that are not funded may be reviewed in following months and ranked with newly submitted requests, which not only helps identify patterns of common problems across the country, but also gives coalitions a second chance to receive technical help.

For more information on DOE's new Tiger Teams, call your DOE Regional Office Clean Cities manager or check out www.ccities.doe.gov/tiger.html.

Private and Local Rulemaking Stakeholder Workshops

The Energy Policy Act of 1992 [Section 507(g)] authorizes DOE to evaluate and, if deemed necessary, promulgate a rule to require private and local government fleets to acquire alternative fueled vehicles. DOE is currently evaluating several options for a new rulemaking activity, and during 2000, held three workshops to obtain com-

ments regarding this potential regulation. The following workshops were held during August and September.

- **Argonne National Laboratory (Argonne, Illinois), August 1.** (Restricted to state and local government representatives.) Most attendees were from Illinois, Wisconsin, and Indiana.
- **National Renewable Energy Laboratory (Golden, Colorado), August 22.** (Restricted to state and local government representatives.) Most were from Colorado, but there were also attendees from other southwestern states as well as from western and southern areas.
- **Washington, D.C., September 26.** (Open to anyone.) Attendees included representatives from state and local governments as well as from private industry.

The purpose of the workshops was to present the options available to DOE for the rulemaking, and to hear stakeholder opinions. Participation was good, and most stakeholders recognize the need to reduce petroleum consumption in automobiles. DOE is currently evaluating the comments to determine the next course of action.

A summary of comments from the workshops is available at www.ott.doe.gov/epact/private_fleets.html. This site also contains a copy of the presentation document used at the workshops (Alternative Transportation Programs Options for Local Government and Private Fleets) and a paper that explains these options in greater detail (Private and Local Rulemaking White Paper). In addition to the workshops, written comments were taken until October 16, 2000.



Hot Off the Press

Airport Shuttle Tool Kit for Clean Cities

In last year's niche market survey, Clean Cities coalitions selected airports as the top priority niche activity center for alternative fuel vehicles (AFVs). Airport shuttles are vital to airport operations. Airport shuttles are capable of central refueling, and as high-mileage, high fuel use vehicles, they are well suited to AFV use. To help Clean Cities develop this important niche market, the Clean Vehicle Education Foundation has created an Airport Shuttle Information Tool Kit. The kit, funded by the Department of Energy, will be distributed to each designated Clean Cities coordinator, and features an overview of airport shuttle characteristics, marketing strategies, examples and case studies, vehicle information, and contacts for additional information.

As a follow-up to the tool kit distribution, the Clean Vehicle Education Foundation and partner Edwards and Kelcey will conduct a series of meetings at selected airports to provide local, hands-on assistance. Meetings will be held at airports in the following cities: Atlanta; Baltimore; San Diego; Las Vegas; Washington, DC (both Dulles and Reagan National airports); Palm Springs, Boston/Manchester; New York City (LaGuardia); Cincinnati; Seattle; Cleveland (Hopkins); Oakland; Detroit; San Jose; Tucson; Albany; St. Louis; Newark; and Philadelphia.

For more information on the Airport Shuttle Tool Kit, contact Hank Seiff, NGVC, at 703-527-3022 or Tom King, Edwards and Kelcey, at 410-646-4505.

Expanding the Use of Alternative Fuel Vehicles at Airports

The National Renewable Energy Laboratory (NREL) recently released a fact sheet that details the many opportunities to expand the use of alternative fuel vehicles (AFVs) at airports. The publication, entitled "*Fact Sheet for Expanding the Use of Alternative Fuel Vehicles (AFVs) at Airports*," explains the benefits of AFV use and gives case study details for projects at three major airports.

According to the fact sheet, motor vehicles are the single largest source of pollution at airports—exceeding even aircraft. Because airports are required to comply with local air quality plans and airport fleets are uniquely suited to AFV use, airports offer attractive opportunities for the expanded use of AFVs. Airport case studies at Boston Logan International Airport, Denver International Airport, and Los Angeles International Airport provide details on experiences and lessons learned.



Airport shuttles make excellent candidates for AFVs because of the centralized nature of their operations.

Warren Grez, NREL/PIX 07339



On the Web

A FAST System for Federal Fleets

<http://fastweb.inel.gov>

The U.S. Department of Energy (DOE) recently debuted the Federal Automotive Statistical Tool, or FAST system, a Web-based fleet management tool for federal agencies. Federal fleet managers must report vehicle acquisition data to comply with Executive Order 13149 (see *AFN Vol. 4, No. 2*) and the Energy Policy Act of 1992 (EPAct), as well as General Services Administration fleet requirements (Standard Form 82). The FAST system simplifies the process as a single reporting system for all three mandates.

Fuel Economy Made Easy

www.fueleconomy.gov

When potential car buyers look at various makes and models, they often do research to determine how well particular cars meet their needs and desires in terms of performance, safety, reliability, etc. Now they can easily find out how cars stack up in terms of emissions and fuel economy.

Visit www.fueleconomy.gov and follow the three-step process under "Find a Car" to find specific vehicle information about annual fuel cost, greenhouse gas emissions, and much more. You can even search according to class, size, or miles per gallon. Or you can make side-by-side comparisons of models.

The Model Year 2001 Fuel Economy Guide, which will be available in hard copy in late January 2001, is now available at this site for downloading and printing. The site includes links to other resources as well.



This Web site gives consumers model-specific fuel economy data to use when considering the purchase of a vehicle.