

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

Celebrating

Clean Energy

for the

21st Century



Inside:
The Sky's
the Limit for
Airport AFVs



Dear Clean Cities Stakeholders:

The leaves are falling and autumn is here, and although it's cooling down outside, the alternative fuel industry is heating up. It's a very exciting time to be in the energy business, especially when it comes to transportation. We're celebrating the milestone 75th Clean Cities coalition. We're kicking off the new Federal Alternative Fuel Vehicle (AFV) USER Program in cities across the country. We're rolling out the new and improved Fuel Economy Guide. We're gearing up for the new model year, which will include the availability of highly anticipated advanced technology vehicles, like the hybrid electrics from Honda and Toyota. That's just in the month of October! And October is, appropriately, Energy Awareness Month, and marks the start to DOE's Clean Energy for the 21st Century Campaign. This theme will link all of DOE's Energy Efficiency and Renewable Energy activities through Earth Day 2000. You can read all about Clean Energy for the 21st Century and the events that are happening during Energy Awareness Month in this issue's cover story.

But that's not all we have for you in this issue of *AFN*. Airports are fast becoming one of the hottest niche markets for AFVs. In our spotlight on niche markets, you will see how several airports across the country are successfully incorporating alternative fuels into their daily routines. We have also provided you with updates on the new Executive Order for Bioenergy and the efforts on Capitol Hill to promote AFV-friendly legislation. In our article on the Clean Cities Hotline, you will learn about the new information products and services available to help promote "the AFV choice." And we also show you how in the Clean Cities Program, it's not just the big city coalitions that are making it big. In our Focus On article, you'll see how the Norwich Clean Cities stakeholders are taking big steps in AFV market development with a little help from their friend, Smogzilla.

As usual, enjoy the issue.

Shelley Launey, Director

National Clean Cities Program
Office of Transportation Technologies
Energy Efficiency and Renewable Energy

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Cover Photos:

Counterclockwise from left: Alternative fuel ground vehicle at Dallas/Ft. Worth airport; Ford Crown Victoria Compressed Natural Gas (CNG) taxis/PIX 06213; CNG fuel pump at the U.S. Air Force Academy/PIX 03830; Ford's Th!nk electric city vehicle/PIX 07368; Corn stalks in Northern Colorado/PIX 04080



Last year at this time, the *AFN* discussed the 25th anniversary of the oil embargo and the energy crisis of the 1970s. We reflected how the disruption in our nation's petroleum supply upset the lives of many Americans. Now we look forward to our nation's progress as we face a new year, a new century, a new millennium, and the bright promise that clean energy technologies hold for our future.



Celebrating Clean Energy for the 21st Century

The U.S. Department of Energy's (DOE's) Office of Energy Efficiency and Renewable Energy (EERE) leads the research, development, and deployment of clean, efficient, and renewable energy technologies. These technologies play a big role in meeting our nation's energy needs, enhancing our natural environment, and strengthening our national competitiveness in the production of sustainable energy. The results of this leadership are dramatic; the United States now has a more efficient industrial base, a robust energy technology industry, and significant energy savings in our homes, vehicles, offices, and government buildings. Clean energy also requires clean vehicles and clean alternative fuels, such as those being promoted by the nationwide Clean Cities network. Clean fuels provide lower emissions, use less petroleum, and are often renewable, paving the way to a sustainable transportation future. As we enter the new millennium, the clean energy technologies supported and promoted by DOE will continue to play a key role in providing Clean Energy for the 21st Century.



"Clean Energy for the 21st Century" is the theme EERE has adopted to promote events and activities leading up to Earth Day 2000. This theme describes the goals and objectives of EERE programs, like Clean Cities, Building America, and Million Solar Roofs, and also coincides with the Earth Day Network's Earth Day 2000 theme of "New Energy for a New Era." The Earth Day Network, a non-profit organization established by Earth Day founding father Denis Hayes, is planning a series of events leading to Earth Day 2000, the 30th anniversary of the first Earth Day. The network hopes to raise awareness of global warming and climate change issues, and promote a "rapid transition from outdated, polluting, wasteful energy systems to efficient systems built on clean, safe, renewable energy sources."

For more information about the Earth Day Network, check out <http://www.earthday.net>. For more information about DOE's energy efficiency programs, including Building America, Million Solar Roofs, and others, go to <http://www.eren.doe.gov/millionroofs>.

DOE's "Clean Energy for the 21st Century" campaign kicks off during October, which has traditionally been celebrated as Energy Awareness Month, and will culminate on Earth Day 2000. Many transportation-related activities and events are planned throughout October. The Model Year 2000 Fuel Economy Guide, although not available in hard copy until late in November, was also posted on the Web.

The guide is an interagency effort between DOE and the Environmental Protection Agency (EPA). It will help consumers compare the fuel economy of Model Year (MY) 2000 vehicles, including cars, light trucks, minivans, sport utility vehicles, and alternative fuel vehicles (AFVs).

"Our goal was to make the 2000 guide more readable and used by more people," said David Rodgers, Director of DOE's Office of Technology Utilization. "We're also proud of the dramatically redesigned Web site that showcases alternative fuel and advanced technologies, allows side-by-side comparison of vehicles, and highlights other environmental attributes of MY2000 vehicles," he said. To view the MY2000 Fuel Economy Guide online, or to search the database of previous model year Fuel Economy Guides, check out: <http://www.fueleconomy.gov/feg>.



There is much anticipation about the new model year. The table below lists some of the growing number of AFVs and advanced technology vehicles that are expected to be available in the new millennium.

OEM*	Model	Fuel Type	Emission Class
Honda	Civic GX	CNG Dedicated	ULEV and ILEV
	¹ Insight (Targeted for U.S. market in December 1999)	Hybrid EV (NiMH)	CA ULEV
Daimler-Chrysler	Dodge Ram Wagon	CNG Dedicated	ULEV and ILEV (CA - SULEV)
	Dodge Ram Van	CNG Dedicated	ULEV and ILEV (CA - SULEV)
	Dodge Caravan EPIC (CA, NY – lease only)	Electric (PbA or NiMH)	ZEV
	Town & Country, Dodge Caravan, and Plymouth Voyager minivans	E85 FFV	TBD
Ford	Contour	CNG Bi-fuel	Tier 1 (CA - TLEV)
	F-150 (4x2 & 4x4)	CNG Bi-fuel	ULEV
	F-150 (4x2)	CNG Dedicated	ULEV and ILEV (CA-SULEV)
	E-250, E-350 and Club Wagon	CNG Dedicated	ULEV and ILEV (CA - SULEV)
	Crown Victoria (Extended range optional)	CNG Dedicated	ULEV and ILEV
	Th!nk (Select markets)	Electric (Nickel Cadmium)	ZEV
	Ranger (4x2)	Electric (PbA or NiMH)	ZEV
	Ranger (4x2 & 4x4)	E85 FFV	TLEV
	Taurus	E85 FFV	TLEV
	F-250 (4x2 & 4x4)	LPG Bi-fuel	ULEV
GM	Chevrolet Cavalier	CNG Bi-fuel	TBD
	EV1(CA, AZ only)	Electric (PbA or NiMH)	ZEV
	Chevrolet S-10 (4x2)	Electric (PbA or NiMH)	ILEV and ZEV
	Chevrolet S-10 (4x2 & 4x4)	E85 FFV	LEV
Mazda	B3000 Pickup (4x2 & 4x4)	E85 FFV	LEV and TLEV
Nissan	Altra EV (select fleets in CA)	Electric (Lithium-ion)	ZEV
Solectria	Flash	Electric (PbA)	ZEV
	Force	Electric (PbA or NiMH)	ZEV
Toyota	Camry (Select markets)	CNG Dedicated	TBD
	RAV4-EV (Select markets)	Electric (PbA or NiMH)	ZEV
	¹ Prius (Targeted for U.S. market in July 2000)	Hybrid EV	Targeted for CA - SULEV

¹The Insight and Prius are currently considered advanced technology vehicles, not AFVs.

***Original Equipment Manufacturers contact information**

American Honda	888-CCHONDA	http://www.honda.com
DaimlerChrysler	800-999-FLEET	http://www.chrysler.com
Ford	877-ALTFUEL	http://www.fleet.ford.com/get_started
General Motors	800-25ELECT/ 1-888-462-3848	http://www.gmaltfuel.com
Mazda	800-222-5500	http://www.mazdausa.com
Nissan	800-NISSAN1	http://www.nissan-na.com
Solectria	508-658-2231	http://www.solectria.com
Toyota	800-468-6968	http://www.toyota.com/vehicles
Clean Cities AFV Fleet Buyer's Guide		http://www.fleets.doe.gov

Glossary of Terms

CNG = compressed natural gas
 E85 = 85% ethanol, 15% gasoline
 EV = electric vehicle
 FFV = flexible-fuel vehicle
 ILEV = inherently low emission vehicle

LPG = liquefied petroleum gas (propane)
 Mi = miles
 NiCd = nickel cadmium
 NiMH = nickel metal hydride
 PbA = lead acid

SULEV = super-ultra-low-emission vehicle
 TBD = to be determined
 TLEV = transitionally low emission vehicle
 ULEV = ultra-low-emission vehicle
 ZEV = zero emission vehicle

Electric and Hybrid Electric Vehicles Among MY 2000 Offerings

In the upcoming year, automakers plan to introduce three new, highly anticipated vehicles in the United States. The vehicles include two hybrid electric vehicles (HEVs)—the Honda Insight and Toyota Prius—and Ford's electric vehicle (EV), the TH!NK.

Honda's Insight and Toyota's Prius will be the first HEVs ever available to U.S. consumers. The introduction of the HEVs will help spur competition among all automakers in pursuit of early market entry for advanced, highly efficient vehicles. To increase fuel economy and lower emissions, HEVs employ both a gasoline-powered engine and an electric motor to power the vehicle. The battery pack for the motor is recharged by the engine, which acts as a generator, and also from the electricity generated by braking. This hybrid technology, which results in better fuel economy, means the batteries never have to be recharged from an outside source.

Honda's Insight will go on sale this December. The Insight will be certified to meet California's ultra-low emission vehicle (ULEV) standards, and is powered by Honda's Integrated Motor Assist (IMA) hybrid system. The hybrid technology, along with a lightweight aluminum body structure and aerodynamic design, enables the two-passenger Insight to average more than 70 miles per gallon on the highway, according to Honda.

Honda showcased the Insight at a reception in Washington, D.C., September 23-24, 1999. The event, held for White House, DOE, EPA staff, and the press at the Ronald Reagan International Trade Center, included a ride-and-drive opportunity for attendees. A one-hour briefing was also held at DOE the next day to promote staff exposure to the new technology. Following this briefing, five Insights were available to test drive.

Although Toyota's four-door sedan, the Prius, will arrive in the United States after Honda's HEV, it won't be far behind, with an expected entrance in early 2000. The Prius has the distinction of being the world's first production HEV, demonstrating impressive sales and getting great reviews in Japan since it was introduced there in December 1997.

The Toyota Hybrid System (THS) also employs advanced technology, making use of both an electric motor and a gasoline engine to increase fuel economy and lower emissions. The Prius, a four-door sedan, uses a 1.5-liter, 4-cylinder gasoline engine and a permanent magnet motor powered by a sealed nickel-metal hydride battery to give it an estimated fuel economy of 66 miles per gallon (based on actual city test driving in Japan).

The all-electric TH!NK, a two-seater measuring only 10 feet in length, is manufactured by Pivco Industries Ltd., a Norwegian subsidiary of Ford Motor Company. Ford plans to market vehicles in the U.S. next year, after its introduction in Norway. TH!NK is constructed with a



American Honda Motor Company/PIX 07326



American Honda Motor Company/PIX 07325



Wieck Photo Database



Wieck Photo Database

Pictured top to bottom: A look under the hood of the Honda Insight hybrid electric vehicle; Honda Insight; Ford Th!nk electric city vehicle; Toyota Prius hybrid vehicle

combination of aluminum and thermoplastics, providing body strength and light weight. According to Ford, the battery pack gives the vehicle a "real world" range of about 50 miles between charges, and its 27 kW alternating current (AC) induction motor gives it a top speed of 55 mph. The plant in Oslo, Norway, is scheduled to produce 1,500 vehicles in 2000.

The Insight, Prius, and TH!NK offer exciting glimpses into the automotive technologies of the near future. Although electric vehicles are already in production in the United States, the TH!NK shows that automakers are dedicated to developing and promoting EVs. The advanced vehicle technology that has been the "talk of the industry" is almost here!

For more information on the Insight, Prius, and TH!NK, please visit the following Web sites: <http://www.hondahybrid.com>, <http://www.toyota.com/prius>, <http://www.think.no>



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Clean Cities Designations in Energy Awareness Month

#75 – Florida Space Coast

On Friday, October 1st, the Clean Cities Program celebrated the designation of its 75th coalition. DOE's Dan Reicher, Assistant Secretary for Energy Efficiency and Renewable Energy, welcomed the Florida Space Coast Clean Cities Coalition in a ceremony held at the Florida Solar Energy Center in Cocoa, Florida. The designation kicked off Energy Awareness Month, and also provided an opportunity to inaugurate the Melbourne-Titusville-Kennedy Space Center area as one of the six selected locations for the new Federal AFV USER Program (see p. 10 for more on the USER program).

The Florida Space Coast Clean Cities Coalition serves a nine county area in east-central Florida, including Brevard, Indian River, Lake, Seminole, St. Lucie, Osceola, Orange, Okeechobee, and Volusia Counties. Prominent stakeholders include the Florida Solar Energy Center, NASA-Kennedy Space Center, Walt Disney World, City Gas Company, People's Gas, and the United States Postal Service.

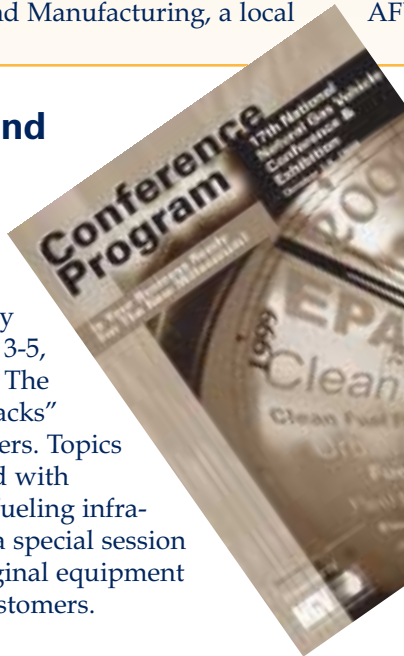
#76 – Manhattan, Kansas

On October 4, the "Little Apple" was officially designated into the Clean Cities Program. DOE's Richard Moorner, Associate Deputy Assistant Secretary for Transportation Technologies, joined Manhattan Mayor Roger Reitz to celebrate Manhattan as the 76th Clean Cities Coalition. The ceremony, which was held outside the downtown shopping mall, included a vehicle display and vendor booths, and was held at 5:00 p.m. to maximize public attendance. Earlier that day, the Manhattan coalition celebrated the opening of a publicly accessible natural gas refueling station. Manhattan stakeholders include the city of Manhattan, Kansas; Kansas State University; Fort Riley; and Transportation Design and Manufacturing, a local AFV conversion company.



NGV Conference and Exhibition

The 17th National Natural Gas Vehicle Conference and Exhibition was also held during Energy Awareness Month, October 3-5, in Minneapolis, Minnesota. The agenda featured special "tracks" tailor-made for fleet managers. Topics included: how to get started with NGVs, emissions issues, refueling infrastructure, regulations, and a special session on partnerships among original equipment manufacturers and their customers.



The 2nd Annual Riverside Clean Cities/ICTC Fleet Operator Workshop

The Northwest Riverside County Clean Cities Coalition will celebrate its second anniversary as a designated member of the Clean Cities Program on October 27th. Similar to the coalition's anniversary celebration last year, the event will be held in conjunction with the Interstate Clean Transportation Corridor (ICTC) Fleet Operator Workshop. The focus will be on heavy-duty vehicle use in California, Nevada, and Arizona, and will include panel presentations and table talk sessions with alternative fuel fleet operators.

Ford Excursion to Roam the Rockies

Kids at the Boys and Girls Club in Denver now have a new, spacious, CLEAN ride ready to transport them to



their next outdoor adventure. On October 14th, after announcing the availability of its dedicated propane-powered Excursion in MY2000, representatives from Ford Motor Company presented the keys to one of the new propane, super-ultra-low emission vehicles to Denver's Mayor Wellington Webb. Mayor Webb then passed the keys, along with camping gear also donated by Ford, to the local Boys and Girls Club.

Now they had the vehicle to get to the campsite and the gear to camp, but what about the fuel? That's when Amerigas stepped in. In addition to announcing the development of a new public propane station in Denver, Amerigas donated 500 gallons of the fuel to the Boys and Girls Club to help them power their new Ford Excursion.

Ford Motor Company/PIX 07369

Spotlight on Niche Markets

The Sky's the Limit for Airport AFVs

When most people think of the airport, airplanes—obviously—come to mind. But what about all the ground services that transport people, baggage, airline equipment, and food service to make everything run smoothly? Airports across the nation have been looking at the pollution caused by these ground transportation services as a perfect opportunity to use alternative fuels and vehicles to improve the air quality in and around the airports.

Los Angeles, California

Serving 61.2 million passengers each year provides Los Angeles International Airport (LAX) with a great opportunity to expose travelers to AFVs. LAX leads the introduction of AFVs into airports by working with local agencies, which include the city of Los Angeles Department of Water and Power (DWP) and the Southern California Gas Company. More than 300 airline, hotel, motel, and rental car operators experience AFVs firsthand, and many are considering them for their own fleets.

Currently, LAX is scheduled to have 35% of its fleet running on alternative fuels by the end of this year, with the goal of a 50% alternative fuel fleet by the year 2003. LAX has demonstrated its early commitment to the AFV program by actively pursuing the use of AFVs since 1993. The airport's alternative fuel infrastructure consists of LNG, CNG, and electric refueling/charging stations.

LAX operates 43 LNG transit buses, each able to transport 45 passengers. Six additional LNG buses have been ordered; delivery is expected in 2000. LAX's vehicle replacement program will continue to substitute diesel buses with LNG buses until the entire fleet of 52 is converted to natural gas, which is expected by the year 2001. CNG vehicles, including a street sweeper and recycling collection vehicle, are used primarily by the LAX daily maintenance crews in and around the airport. Los Angeles World Airports (LAWA) also has CNG dedicated and bi-fuel vehicles, which are used by airport police, airfield operations, landside operations, and other bureaus. LAX has ordered CNG sedans and pickups, and has gotten approval to purchase more CNG vehicles for fiscal year 1999–2000. LAWA has partnered with DWP to introduce 10 public electric vehicle charging stations, and 20 more are on the way.



LNG transit bus in use at LAX

And now you can rent an AFV...

Planes are not the only vehicles taking off at airports in California. The popularity of alternative fuel rental cars is soaring. Budget EV Rental Cars offers EVs for rent at LAX, and has recently expanded its selection to include the dedicated CNG Honda Civic GX. The electric vehicles available include the Honda EV Plus, Ford Ranger, GM EV1, Toyota RAV-4, DaimlerChrysler EPIC minivan, and the Nissan Altra. Electric recharging stations are available to EV renters through a partnership with the Los Angeles Department of Water and Power, and natural gas vehicle renters receive fueling cards from Pickens Fuel and Southern California Gas Company that give them access to the many natural gas refueling stations in the Los Angeles area.

Budget EV Rental Cars is also expanding its service locations. An EV Rental Center is now open at the Sacramento airport. The rental fleet includes 20 EVs, which are being offered for rental at rates as low as \$44 per day, and charging is free at the 100 electric charging stations in the Sacramento area. With the support of Senators Diane Feinstein (D-CA) and Barbara Boxer (D-CA) and Congressman Ron Packard (R-CA), plans are underway to add additional centers at the airports in Burbank, Orange County, and Ontario. For more information, call 1-877-EV RENTAL, or check out <http://www.evrental.com>. For a fun story about a consumer's first experience with a rental EV, visit the Web site at: <http://www.altfuels.org/rental.html>

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To top off this innovative airport program, LAX is mandating the three Share Ride Operators (SuperShuttle, Prime Time Shuttle, and Express Shuttle) to convert 50% of their fleets to CNG within 18 months; 75% within 36 months; and 100% within 42 months. For more details about LAX and LAWA, contact Tom Winfrey at the city of Los Angeles (oversight of airport), 310-646-5260.

Sacramento, California

In northern California, the capital city of Sacramento has actively reduced total air emissions by 15% since 1985, while doubling their passenger activities. Among the many partnerships with local, state, and federal agencies, Sacramento International Airport (SMF) has developed a comprehensive program to reduce air pollutant emissions from ground transportation sources.

Sacramento County's Department of Airports has heavily invested in low emission AFVs and the associated fueling infrastructure. The airport fleet of CNG shuttle buses, trucks, and vans rely on a public access CNG refueling station built at the airport. SuperShuttle uses the CNG station every day to refuel its growing fleet of CNG-powered vans. In addition, special electric vehicle recharging stations have been installed in the parking lots. And finally, AFV rental vehicles are also available at the airport.

In addition to alternative fuels, the Sacramento airport supports other efforts to reduce emissions from ground transportation by offering public transit, trip reduction, rideshare matches, incentive programs, and improved parking facilities.

Dallas/Ft. Worth, Texas

Dallas has taken big steps toward reducing air pollution emissions from the Dallas/Ft. Worth (DFW) airport. The DFW Airport Board has a long-term goal of converting 50% of its fleet to operate on alternative fuels. Efforts to support the Airport Board's commitment have been boosted by the North Central Texas Council of Governments, which is developing an implementation plan to incorporate alternative fuels at the airport. This process will entail surveying fleets near airport facilities, conducting cost evaluations, and creating public outreach materials. DFW has also adopted a policy requiring half of all taxis and shuttle service vans to run on clean-burning fuels within 5 years.

Most of the funding for the new AFVs will come from a \$632,000 state grant. Jim Crites, DFW Deputy Executive Director of Airport Operations, said "the goals of DFW include plans to have 289 AFVs by 2005 and 344 by 2010." In an attempt to meet these goals, the board recently agreed to purchase 54 CNG vehicles, which will include buses, alternative fuel police patrol sedans, and pickups.

American Airlines, one of DFW's major tenants, committed \$20 million for the purchase of more than 300 electric-powered baggage tractors and belt loaders for use in airside operations. To aid American's effort, DFW approved the installation of electric power recharging stations at airport gates. American Airlines has replaced

Nan Miller,
DFW Clean Cities



American Airlines uses electric powered baggage tractors and belt loaders at DFW

approximately 200 gasoline-powered vehicles at the airport in the past year, and plans to replace another 100. According to Greg Rivera, Ground Equipment Specialist, "American Airlines is committed to purchasing all electric baggage tractors and belt loaders."

In conjunction with state and regional officials, DFW is close to completing a study on the potential government uses for AFVs, which will show different ways for governments to blend their buying power and encourage research. The study should be completed this fall. Also, a new state plan developed by the Texas Natural Resource Conservation Commission will assess where emissions can be reduced, which may include airports. This study is expected out in early 2000.

Denver, Colorado

Denver International Airport (DIA) in Colorado serves as an environmental model for other airports across the country. Among the many environmental initiatives the airport has undertaken to reduce pollution since it opened in 1995, one of the most exciting and visible is its AFV program. According to Terry Henry, DIA's Assistant Deputy Manager of Aviation for Fleet Maintenance, the airport and its tenants (including the airlines and concessionaires) have about 1,000 electric and natural gas vehicles in their combined fleet.

The AFVs at the airport include baggage tractors, police sedans, pickup trucks, cargo and passenger vans, transit buses, and rental cars. Paul Nelson, Vice President of Natural Fuels Company, noted that the forklifts and engine-lifts in the airplane hangars run on natural gas. "Three-and-a-half years ago [when the airport opened], there were fewer than 400 [natural gas] vehicles; now there are over 500. So in that time more than 100 [natural gas] vehicles have been added," explains Nelson, who has been involved with DIA's alternative fuels program since it began.

Most of the AFVs at the airport run on natural gas. According to Nelson, the city and county of Denver (owner of the airport) has the largest natural gas vehicle (NGV) fleet with 220 vehicles. United Airlines, which uses DIA as a major hub, has 120 NGVs in their large alternative fuel fleet.

To keep these DIA-based AFVs fueled and charged, the airport has eight natural gas refueling stations, several electric recharging facilities, and one liquefied-petroleum gas (LPG) station on the premises. Six of the natural gas stations are "airside," meaning they are in a secure area for



Denver International Airport



Above; Denver's Aviation Department uses CNG refueling. Right; CNG tug used by United Airlines.

tarmac vehicles only. Two natural gas refueling stations have been placed "landside," meaning they are accessible by rental cars, passenger vans, transit buses, and the public.

According to Denver's Clean Cities Coordinator Deborah Kielian, "Denver Clean Cities is looking to initiate the 'Clean Tents Program,' which will help provide information to airport passengers regarding the great strides that DIA is making with AFVs." The Clean Tents name was created to reflect the architecture of the airport terminal. Denver has been a leader in the use of AFVs in airport fleets to combat air pollution for several years.

The outlook is bright for DIA fleets to incorporate more AFVs. Nelson said that United Airlines just put 40 dedicated natural gas baggage tractors into service last summer, and added that "the AFV effort at the airport is strongly supported by the airlines, the city of Denver, and the concessionaires, so it will continue to grow."

Salt Lake City, Utah

The "Green Airport Initiative" (GAI) is well under way at the Salt Lake International Airport (SLA). Earlier this year, the Clean Airport Partnership, the Salt Lake City Clean Cities Coalition, and the Airport Authority met to strategize on expanding the use of AFVs at the airport. They discussed many opportunities for illustrating how innovative technology, energy efficient design and planning, and alternative fuels can work together to breed smart growth and development, and the GAI was born.

Why is Salt Lake City the ideal place to implement the GAI? With the 2002 Winter Olympics approaching, the eyes of the world will be on Salt Lake, giving the city and the airport maximum exposure. Salt Lake City is also a fast

growing area with air quality concerns. Finally, the airport and community have demonstrated their strong commitment to energy efficiency and environmental programs, which includes an active alternative fuels industry.

Future plans are expansive and include incorporating maximum energy efficiency into the new airport buildings and AFVs. GAI stakeholders conducted five working group meetings, which included participants from the U.S. Department of Energy (DOE), Environmental Protection Agency (EPA), state agencies, Salt Lake City Mayor Corradini's office, the Airport Authority, the Olympic Committee, and others.

The AFV working group was successful, in part due to Delta Airlines' interest in making the new airport capable of providing electric power to support charging facilities for electric airside vehicles. Other ideas that took shape include refinements to the existing state AFV incentive legislation, exploring AFV mandates for city-owned fleets, and concessionaire agreements with airport tenants to increase the use of AFVs. Potential advanced technology vehicles (ATVs) and AFV use at the airport may include:

- Shuttle buses and transit vehicles
- Baggage tractors and belt loaders
- Rental cars
- Refueling and recharging stations
- Retrofitting existing engines.

Many federal programs can indirectly support the GAI. For example, the Clean Cities Program often provides financial support to offset the capital costs of AFVs and their infrastructure. State and local governments can also play an important role in supporting the GAI through tax waivers, loan programs incentives, and more.

Individuals can help, too. Programs are available to provide products at discounted rates in exchange for promotional opportunities; innovative financing—such as that from fueling companies that defrays capital investments through long-term fuel contracts—can be had; low interest loan programs are obtainable for community projects through local financial institutions.

For more information on the GAI, please call Steve Howards, Director of the Clean Airport Partnership at 303-462-1647, or e-mail CairportP@aol.com.

Clean Cities Program Awards Rebates to Coalition Stakeholders

Over the past two years, the Clean Cities Program has targeted efforts toward "Advancing the AFV Choice," or making it easier for fleets across the country to choose alternative fuels. The strategy behind Advancing the AFV Choice includes computer-based tools, such as the AFV Fleet Buyer's Guide and Preferred Fleets Database.

Another critical piece of the strategy is the AFV rebate program, which helps offset the incremental cost of coalition stakeholder AFV purchases. Last spring, many Clean Cities coalitions submitted proposals requesting

funds to help support stakeholder vehicle purchases—to facilitate their "AFV Choice." The rebates were recently awarded and have since contributed to the purchase of more than 530 AFVs in Clean Cities across the country.

In addition, many coalitions that received rebate funds integrated the money into their own established rebate programs. They plan to offer their stakeholder fleets rebates to buy down the cost of their AFVs with these funds. A second round of rebate funding is anticipated to be available by the end of calendar year 1999. Stay tuned to AFN for details.



Federal News

Clinton Clears the Way for Biomass

On August 12, 1999, President Clinton signed Executive Order 13134 that will help reduce our nation's dependence on foreign oil, improve air quality, and meet environmental challenges such as global warming. This comprehensive national strategy aims to triple the use of biomass products by 2010. The order, "Developing and Promoting Biobased Products and Bioenergy," will expand the production of clean fuels—such as ethanol—as well as other bioenergy products. According to the White House press release, bioenergy and bioproducts can dramatically reduce global

warming "by reducing annual greenhouse gas emissions by up to 100 million tons—the equivalent of taking more than 70 million cars off the road." Further, the tripling of bioproducts and bioenergy will allow the United States to reduce the almost 4 billion barrels of oil projected to be imported in 2010.

The memo released in conjunction with the Executive Order discusses the "potential to expand the use of biobased products and bioenergy by

federal agencies," which includes the use of biofuels in federal vehicles. The order specifies that federal efforts must be coordinated to speed the development of 21st century biobased industries that use trees, crops, agricultural, and forestry wastes to make fuels, chemicals, and electricity.

The Secretaries of Agriculture and Energy, along with other agencies, are directed to prepare a report within 120 days from issuance of the order that contains options for modifying existing agency programs to promote the order. Many factors should be considered, such as the impact of greenhouse gases, biobased products manufactured from fossil fuels, and emissions of criteria pollutants of biobased products. The report will describe outreach efforts to raise the nation's awareness of the useful applications, benefits, and costs of producing biobased products.

Federal leadership is required to aid in the progress of these technologies from the laboratory to the marketplace. The new "research management team," as referred to by the White House, will focus on the following goals:

- Establishing the Interagency Council on Biobased Products to develop a detailed biomass research program to be presented annually as part of the federal budget;

- Directing the Council to review major agency regulations, incentives, and programs to ensure that they effectively promote the use of bioproducts and bioenergy; and
- Creating an outside Advisory Committee on Biobased Products and Bioenergy with representatives from biobased industries, farm and forestry sectors, universities, and environmental groups.

Following the President's Executive Order on bioenergy, Secretary of Energy Bill Richardson announced more than \$13 million in funds will be dedicated to promoting the development of the biomass industry. DOE will fund 18 projects to further the development of technologies that can reduce the cost of using biomass to create new energy, fuels, and products.

How can this new national strategy be implemented most effectively? The National Renewable Energy Laboratory's John Sheehan presented his views to the Environmental Vehicle Conference last June. For a copy of his presentation, visit http://evworld.com/reports2/env99_sheehan.html. For more information on the Executive Order, visit the White House Web site at <http://www.pub.whitehouse.gov/retrieve-documents.html>

Federal Fleet Concentrates AFVs in Selected Cities

Why are the operators of many federal fleet vehicles that are built to use alternative fuels (flex-fuel or bi-fuel vehicles) opting to use conventional fuels instead? To all those frustrated with this situation, rest assured that federal operators will soon be filling tanks with alternative fuels, at least in six major metropolitan areas. In a proactive step to address the issue of low alternative fuel use in federal fleets, an interagency task force, led by the Department of Energy (DOE) and General Services Administration (GSA), has developed the Federal AFV USER Program (USER is actually an acronym that stands for Utilization Supporting Expansion of Refueling—try that in your next trivia game!).

The USER Program's goal is to support the expansion of the alternative fuel infrastructure by concentrating large quantities of federal AFVs—and substantially increasing their use of alternative fuel—in six selected cities. All AFVs purchased through the program are required to operate on alternative fuel. By focusing efforts to build the federal AFV fleet in specific areas, the government encourages market development by increasing local alternative fuel station throughput and building a foundation for confident investments in additional refueling infrastructure

What exactly is a biobased product?

Executive Order 13031, passed in December 1996, defines it as a commercial or industrial product that utilizes biological products or renewable domestic agricultural or forestry materials.

development. The cities were selected according to specific criteria, including the number of leased GSA and U.S. Postal Service vehicles in the area, as well as the level of support and demonstrated commitment to AFV use from local GSA representatives, federal fleets, automobile manufacturers, and alternative fuel providers. The selected cities were announced at the program's national kick-off meeting held during the Fifth National Clean Cities Conference in May 1999 (see box for cities).

Local government and industry teams in each of the cities will be responsible for day-to-day management of the program, and will identify federal fleets in their area where AFV placement is appropriate. The teams will coordinate the vehicle purchases, and will also orchestrate the deployment of AFV refueling infrastructure, while ensuring service and maintenance for AFVs is readily available.

Now that the program is in place, the federal government's major contribution to the cities will be to provide financial assistance. GSA has committed \$4 million to the program—\$670,000 for each selected area—to help federal fleets cover the incremental costs associated with new AFV purchases. However, the money is not intended to cover the entire incremental cost of the vehicles; local fleets must contribute as well, as part of their demonstrated commit-

Federal AFV USER Program "Selected Cities"

Albuquerque, NM

Colorado Front Range

Melbourne/Titusville/Kennedy
Space Center, FL

Minneapolis/St. Paul, MN

Salt Lake City, UT

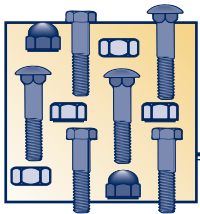
San Francisco Bay Area, CA

ment to AFV use. And to ensure these vehicles actually use alternative fuel, each fleet must sign a written commitment to use alternative fuel in the vehicles purchased with the program funds.

DOE is rounding up several million dollars to support refueling infrastructure development and the incremental cost of new AFV purchases in the six areas over the next two years. In addition to the funding, the federal government support for the program will include the

development of inventories and maps of federal fleets, refueling patterns, and existing alternative fuel stations. Troubleshooting and consulting in strategic refueling infrastructure development will also be available.

According to Lee Slezak, DOE's Federal Fleet AFV Program Manager, it is important to note that although the program focuses on the six cities, it is not meant to exclude other cities or restrict those with federal fleets interested in acquiring AFVs from doing so. "We welcome and strongly encourage AFV use in all federal fleets operating in cities all across the country," said Slezak. "Our plan is to build upon the successes experienced in the current six cities and expand to other metropolitan areas across the country. We expect the federal fleets to be leaders in the use of AFVs."



Nuts and Bolts

Have You Called the Clean Cities or Alternative Fuels Hotline Lately?

When was the last time you picked up the phone to dial 1-800-CCITIES or 1-800-423-1DOE? The Clean Cities and National Alternative Fuels Hotlines are anxious to talk to you! Averaging almost 700 requests per month, both Hotlines continue to serve as the national information resource for the Clean Cities and alternative fuels communities. At the other end of the line, information specialists are ready to answer your questions.

The Hotline receives calls from a wide audience, including fleet managers, Clean Cities' members, fuel associations, federal, state and local government officials, automakers, teachers, students, and the general public. Caller requests generally focus on funding opportunities, Energy Policy Act (EPA) requirements, vehicle availability, refueling locations, and emissions data. If a request cannot be answered immediately by an information specialist, the Hotline will either provide the caller with materials from their extensive document database or offer contact information to industry representatives.

Callers with Internet access are encouraged to visit the National Renewable Energy Lab's redesigned Alternative Fuels Data Center (AFDC) Web site (<http://www.afdc.doe.gov>), where links exist to alternative fuels, alternative fuel vehicles, refueling sites, fleet information, frequently asked questions, resources and documents, what's new, upcoming events, periodicals, and much more. A Web search function has also been added to make site navigation more efficient.

Callers interested in the Clean Cities Program should visit the Clean Cities Web site (<http://www.ccities.doe.gov>), which has links to popular Clean Cities documents, and more detailed information about how to get involved. In addition, the Hotline can provide a Clean Cities start-up packet for any caller interested in starting a Clean City or any other hard copy materials found on the Web site.

So the next time you have a question, don't hesitate to contact the Clean Cities or Alternative Fuels Hotlines! Hotline operating hours are Monday through Friday, 9 a.m. to 6 p.m. EST.



Focus On

Small Coalition Still Makes Big Splash – Spotlight on Norwich Clean Cities

It swarms the tallest of buildings. It preys upon the vulnerable in communities across the country. Suburban neighborhoods are no longer a safe haven, as it sweeps beyond city limits, wreaking havoc wherever it goes. It's not Godzilla...it's...it's...it's...SMOGZILLA!

Smogzilla is just one of the innovations developed by the Norwich Clean Cities Coalition to raise awareness of clean air issues in its community. "We knew grade school kids would need something a little more active and engaging to help them understand the importance of AFVs," said Norwich Clean Cities Consultant Carol Butler. That's what prompted the coalition to work with the National Children's Theater to develop a play about pollution, AFVs, and clean ecosystems, featuring the big smog monster. Smogzilla stomped its way through elementary schools in the Norwich community, teaching children about air pollution issues and how alternative fuel vehicles, like the natural gas buses they ride to school every day, can help clean the air they breathe. Two versions of the play were developed: one for fourth through sixth grade students, and a modified, simpler version for kids in kindergarten through third grade. Both were a big hit with the students. "The kids were enthralled...when it came time for audience participation, every hand went up," said Butler. It was also a hit with the press, as the effort was highlighted in the local newspaper. The coalition followed up its Smogzilla tour by making books and videos about AFVs and clean air available to the schools' libraries. Stakeholders are now looking into ways to bring the Smogzilla play to schools across the state.

The city of Norwich was designated the 32nd member of DOE's Clean Cities Program on November 21, 1994. Serving a community of just 35,000 people in southeastern Connecticut, the coalition is one of the smallest in the country, but, despite its size, it has taken big steps to promote alternative fuels and AFVs. "The progress the coalition has made in advancing AFV technology throughout



City of Norwich Dept. of Public Utilities

DOE's Mike Scarpino visits with Smogzilla after a performance at a Norwich elementary school

the community is amazing," said DOE's Mike Scarpino, Clean Cities Program Manager for the Boston Region. According to Norwich Clean Cities Coordinator, Peter Polubiatko of the Norwich Department of Public Utilities, it's all a matter of getting the community involved. The coalition holds monthly meetings, and stakeholders are given responsibilities for management and coordination of coalition activities, including public outreach and education. "Their outreach program is the best in the region, hands down," said Scarpino.

The coalition has worked closely with the Board of Education and the Norwich Public School System to take every opportunity to incorporate AFVs into school activities. Kids who pre-registered for kindergarten last spring were treated to a ride in a CNG school bus (a preview of the excitement to come on their first official day of school), and the Norwich Planetarium, the only school planetarium in the state, also featured an AFV presentation. Coalition stakeholders made presentations to the Parent Teacher Organizations of every school in the district. With the help of the fire chief, they held training sessions on AFVs and their safety for both parents and students throughout the entire school system to allay fears over the decision to purchase CNG buses for the school system's fleet. "The educational component of our program is very important," said Polubiatko. "Having the fire chief as our advocate for CNG vehicles really helped increase public acceptance," he said.

And the fire chief stands behind his word. He not only promotes the safety of CNG vehicles, he also operates them in his fleet. In fact, in addition to the school district (see box below), the fire department, police department, and public works department all operate AFVs. According to Polubiatko, it's that kind of involvement that has been the key to Norwich Clean Cities success. "My best advice

John Kubesh/PIX 04152



Not only has the Norwich school system been a centerpiece for the coalition's public education effort, it is the first and only school system in Connecticut to operate alternative fuel buses. The coalition was awarded a 1999 DOE State Energy Program (SEP) grant to help cover the cost of its most recent CNG bus purchase and to help support a vehicle prototype project in partnership with John Deere. Norwich Schools had wanted to convert its entire small bus fleet to CNG, but learned that the conversions were not consistent with Connecticut's Department of Motor Vehicle (DMV) standards. In an attempt to tackle this problem head on, Norwich Clean Cities will be working with the local John Deere distributor and the DMV.

to coalitions in smaller cities is to keep all of the community involved," he said. "It's all a matter of community inclusion and involvement."

Essential to that level of community involvement and the driving force behind the Norwich Clean Cities effort is the Norwich Department of Public Utilities (NDPU), which was chosen by the city to coordinate the coalition, and hosts its monthly meetings. NDPU provides natural gas, electricity, water, and sewer services to the city, and in addition to operating a fleet of natural gas and electric vehicles (the largest electric utility fleet in the state), owns and operates the only public CNG station in southeastern Connecticut. "We're looking to add infrastructure," said



From the Hill

Congress Still Working Hard for Alternative Fuels

As predicted in the *Alternative Fuel News*, Vol. 3, No. 1, West Virginia's U.S. Senator John Rockefeller (D) officially introduced the Alternative Fuel Promotion Act (S1003). The bill was created to "level the playing field," for the various alternative fuels, as well as between alternative and conventional fuel vehicles. According to Rockefeller, "We can break this [chicken-and-egg] cycle by creating tax incentives that keep alternative fuels affordable and help develop the necessary infrastructure."

The bill allows for the full complement of alternative fuels to compete in the marketplace through limited federal tax incentives that would be available during the early, critical years of market development. Specifically, the legislation would:

- Extend the current electric vehicle (EV) tax credit and increase the credit for advanced technology electric vehicles. The current EV tax credit is 10% of the vehicle purchase price, up to \$4,000. This bill would extend the sunset date until 2010, and give an additional \$5,000 credit to any EV that would meet 100-mile range requirements. This should encourage technological innovation for advanced batteries.
- Give a tax deduction (not credit) for the cost of installation of alternative fueling stations, up to \$30,000.
- Offer a 50-cent a gasoline-gallon-equivalent tax credit to the sellers of clean burning alternative fuels used in alternative fuel vehicles, to help them compete with the price of traditional fuels. This would allow alternative fuels to become more economically favorable to the consumer. Clean burning alternative fuels include: compressed natural gas, liquefied natural gas, liquefied petroleum gas, hydrogen, and any liquid made of at least 85% methanol.
- Provide states the authority to allow single occupant,

Polubiatko. The coalition plans to work with the state to help bring state fleet vehicles to Norwich, a move which Polubiatko thinks will help drive further infrastructure development. "We work very closely with the state. State agencies have been a real asset to our program."

Looking ahead to its fifth anniversary and its renewal of the memorandum of understanding signed at its designation, the coalition plans to keep moving forward, maintaining the enthusiasm for AFVs. Strategic infrastructure development is a top priority, as are fleet recruitment and planning the coalition's Advancing the AFV Choice event. With all the AFV activity in Norwich, Smogzilla may soon be an endangered species.

alternative fuel vehicles in high occupancy vehicle (HOV) lanes.

Rockefeller stated, "Tax incentives have traditionally been very effective in developing new infrastructure, and encouraging consumers to try new things. While changing consumers' behavior is not easy, I am confident that if people begin to see that alternative fuels are available, they will soon begin to use them."

U.S. Representative Dave Camp (R-MI) introduced similar alternative fuel tax credit legislation (HR 2252). The bill is virtually identical to the Rockefeller legislation, except for the provision regarding alternative fuel vehicles in HOV lanes. Regarding the bill, Rep. Camp said, "It improves air quality, and by increasing the use of alternative fuels, it decreases our reliance on foreign oil." Currently, HR 2252 has 18 co-sponsors, which demonstrates support for alternative fuels tax measures.

Also, it is expected that Senator John Chafee (R-RI) will introduce another alternative fuel tax credit bill shortly. This proposal will provide a seller's fuel tax credit of 25 cents for each gasoline-gallon-equivalent of alternative fuel sold in non-attainment areas; and a purchaser's vehicle tax credit to defray the incremental cost of an alternative fuel vehicle. The vehicle credit, which will apply to light-, medium- and heavy-duty vehicles, is tiered; cleaner vehicles receive larger credits.

During the Senate floor debate on the tax bill, a colloquy took place among Senators Chafee, Hatch (R-UT) and William Roth (R-DE). In the colloquy, Roth, Chairman of the Finance Committee, agreed to work with Senators Chafee and Hatch to include an alternative fuel tax credit measure in a future tax package. Prospects for a tax package in FY2000 are now dimming. Stay tuned for more information on the Chafee legislation and prospects for tax incentives next year.

For more information on the Rockefeller legislation, contact John Richards e-mail at john_richards@rockefeller.senate.gov. For more information on any of the mentioned federal legislation, visit <http://www.thomas.loc.gov>.

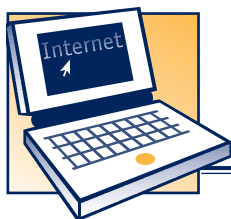


Clean Cities Roundup

Clean Cities Designations

#73 – Metropolitan Tucson

On Tuesday, August 24, metropolitan Tucson was designated the 73rd member of DOE's Clean Cities Program in a ceremony at the historic Manning House in downtown Tucson, Arizona. DOE's Brian Castelli, Chief of Staff for Energy Efficiency and Renewable Energy, joined Tucson Mayor George Miller in signing a coalition's Memorandum of Understanding, officially designating the coalition. Stakeholders currently operate more than 580 AFVs, including CNG, propane, and electric vehicles, and have committed to additional vehicle purchases over the next 4 years that will add nearly 1,000 AFVs to the road by 2003. The Tucson coalition is coordinated by the Pima Association of Governments, and serves Tucson, as well as



On the Web

<http://www.hondainsight.com>

Honda now has a Web site dedicated to its new hybrid gasoline-electric Insight, which is scheduled to be available in December. The site offers information on Honda's clean vehicle heritage, the environmental benefits of the Insight, and the technology behind it. You can also view press releases about the Insight and choose to be notified via e-mail when more information about the vehicle becomes available.

<http://www.ngsa.org/>

The Natural Gas Supply Association represents integrated and independent companies that produce and market

Pima County. The coalition maintains a diversity of stakeholders: utilities; local and federal governments (including an Air Force base); universities; and several niche market fleets, which encompass a transit bus company and local landscaping group.

#74 – Northeast Ohio

Northeast Ohio became the 74th member of the Clean Cities Program on Tuesday, September 14. DOE's David Leiter, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy, made his debut as a designating official at the ceremony, which was held at the Great Lakes Science Center in downtown Cleveland. The Northeast Ohio Clean Cities Coalition serves the city of Cleveland and the surrounding area, including Cuyahoga, Lorain, Summit, Medina, Portage, Geauga, Lake, and Ashtabula counties. More than 1,400 AFVs already operate throughout Northeast Ohio, and Clean Cities stakeholders plan to have more than 1,700 on the road by the year 2004.

domestic natural gas. Their Web site provides a wealth of information on the history of natural gas production in this country, facts about natural gas, and other issues related to the industry. The environmental issues section gives data on the environmental benefits of using natural gas in lieu of gasoline.

<http://www.gmaltfuel.com>

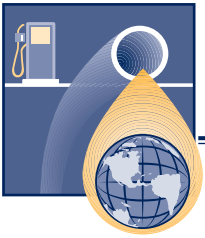
General Motors' Alternative Fuels division now has its own Web site with information about its vehicles. The Web site includes a product line-up, vehicle specifications, dealer/service locations, the latest news on GM alternative fuel technologies, and more. You can reach GM through this Web site, or by calling 1-888-GM-AFT-4U.

Alternative Fuels Turn Vogue

The New York Museum of Modern Art (MoMA) created an exhibition to examine a new generation of cars: alternative fuel vehicles. The intention of the exhibit "Different Roads: Automobiles for the Next Century," is to survey the current generation of automobiles and outline different paths to the future. The exhibit illustrates the scope and direction of the

rethinking in automotive design, and notes that AFVs "represent an important and growing aspect of the market that caters to a consumer who is more attentive to thrift, and thus more attracted to the improved economy of these vehicles."

The exhibit examines new power plants and fuels, such as electric and hybrid engines that allow for a more fuel-efficient car. The New Structures and New Materials covered by the exhibit include DaimlerChrysler's MCC Smart and CCV, Audi's AL2, Ford's Ka, and BMW/Rover Group Mini concept car. The Power Plants displayed include the Fiat Multipia, GM EV1, Honda VV (now called the Insight), and Toyota Prius. A forum created on the Web site allows the public to



At the Pump

Biodiesel "B20" Workshops Held Across the Country

In the wake of recently passed Energy Policy Act (EPAct) legislation, a series of biodiesel workshops were held across the country to increase awareness of biodiesel as a transportation fuel. More specifically, the workshops were geared toward educating people about biodiesel and the new option of using biodiesel to fulfill AFV acquisition requirements under EPAct.

"The original goal of the workshop was to expand the public's awareness of biodiesel through education and outreach. After the [EPAct] legislation passed, the National Biodiesel Board and NREL [National Renewable Energy Laboratory] agreed to join resources to expand the scope and number of workshops," said Shaine Tyson, NREL's Biodiesel Project Manager.

Sponsors of the workshops included the U.S. Department of Energy (DOE), NREL, the National Biodiesel Board, and various local partnerships. The workshops took place in five cities across the country from May to September this year. The cities included Bloomington, Minnesota; College Park, Maryland; Diamond Bar, California; Warwick, Rhode Island; and Chicago, Illinois.

"The target audience included all the groups that potentially have an impact on a fleet's decision to use alternative fuels. That can include federal, state, and local fleet managers and administrators, air quality regulators, city managers, etc.," Tyson explained.

The free workshops provided a wide array of information on biodiesel, such as characteristics and properties of the fuel, contracting and purchasing issues, and issues fleet managers should consider when evaluating it for their fleets. Tyson also noted that "the workshops have expanded competition in the biodiesel market as well."



NE Soybean Board/PIX 04230

Cincinnati, Ohio transit bus powered by soy diesel

"The workshops have been successful in airing issues regarding biodiesel. They have been a conduit for answering questions regarding biodiesel, which is important due to recent attention given to biodiesel blends regarding EPAct legislation," said Mike Voorhies, manager, Regional Biomass Energy Program, Department of Energy.

The EPAct regulation that has renewed attention to biodiesel is the Biodiesel Fuel Use Credit Interim Final Rule issued by DOE in May. The Final Rule allows fleets required to purchase certain percentages of AFVs under EPAct to meet up to 50% of their acquisition requirements through the use of biodiesel blends, such as B20, in vehicles weighing 8,500 lbs. gross vehicle weight or greater. B20 is a blend of 20% biodiesel and 80% diesel. With the new option, a fleet can get credit for one AFV purchase by using 450 gallons of 100% biodiesel.

Joe Jobe, Executive Director of the National Biodiesel Board, was very pleased with the turnout at the workshops. "The feedback and response we received was great. We utilized survey forms to fine tune the workshops and make information more in-line with what the participants wanted."

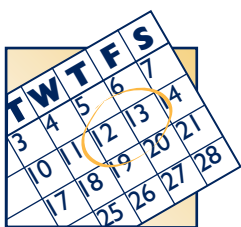
Although sponsors would like to continue with more workshops, no more are scheduled at this time. To learn more about biodiesel, visit the National Biodiesel Board Web site at <http://www.biodiesel.org>. The Biodiesel Fuel Use Credit Final Rule can be found on their Web site at <http://www.biodiesel.org/fueluselang.htm>

comment on various topics related to the vehicles, such as "Would you change your big car (SUV) for one of the cars in the exhibition?" The comments submitted via the interactive Web site will be forwarded to the auto manufacturers.

According to the exhibit's assistant curator in the Department of Architecture and Design, Christopher Mount, "The show is really about efficient, responsible automobiles being likeable, appealing, and charming in their own way. In a sense, a good design can be affordable." This exhibit was the first automobile exhibition to be held in the Sculpture Garden since the landmark exhibition, Ten Automobiles, in 1952. An indoor gallery space with explanatory text and

computer terminals was also available for the public to view the Web site. The Web site was created especially for the exhibit, and allows the public to gain a better understanding of the complex technology behind the design of these automobiles. The site provides photos and automotive information, including vehicle dimensions, construction, speed, engine type, etc. Internet links are also provided to many different locations to find new power plants and fuels, new materials, new structures and designs, and federal government agencies (which, of course, includes DOE).

For more information on the alternative fuels exhibit, visit www.moma.org/exhibitions/differentroads/links.html.



Upcoming Conferences and Events

1999 North American EV & Infrastructure Conference and Exposition

November 17–20, 1999

Atlanta, Georgia

Contact: Pam Turner, 650-365-2667

Transportation Research Board 79th Annual Meeting

January 9–13, 2000

Washington, D.C.

Contact: TRB Conference Dept.
202-334-2934

Clean Fuels 2000

February 7–9, 2000

San Diego, California

Contact: Tiffany Swiger
207-781-9800

National Conference on Ethanol Policy and Marketing

March 22–24, 2000

San Francisco, California

Contact: Bryan & Bryan
719-942-4353

Future Car Congress

April 2–6, 2000

Arlington, Virginia

Contact: SAE International
724-772-7131

Get Ready

*for the
6th National
Clean Cities Conference
and Exposition*

Where: San Diego, California

When: May 7-10, 2000

*Your postcard with more
conference details is on the way!*

S a n D i e g o

6th National Clean Cities Conference and Exposition