

Clean Cities DRIVE

Welcome

to the sixth issue of the U.S. Department of Energy's (DOE) *Clean Cities Drive*. Each issue of the newsletter will bring you valuable information from the Clean Cities program to help you succeed in putting more alternative fuel vehicles (AFVs) onto our roads. If you have a story to tell, a picture to share, or information of interest to Clean Cities participants, please call the Clean Cities Hotline at 1-800-CCITIES.

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STATE, FUEL PROVIDER FLEETS TO ACQUIRE ALTERNATIVE FUEL VEHICLES

Starting this September with the 1997 model year, states and certain fuel providers must start purchasing alternative fuel vehicles (AFVs) for their fleets as part of the Energy Policy Act of 1992 (EPACT). A final rule describing how the program will be implemented was published in the *Federal Register* on March 14, 1996.

Many of these fleets include Clean Cities stakeholders who have already implemented aggressive AFV programs. Furthermore, Clean Cities provides a valuable network that allows fleets to centralize their AFV purchases.

"It's a flexible program designed to allow states and fuel providers to meet their acquisition requirements in an economical manner," said Kenneth Katz, program manager for the U.S. Department of Energy (U.S. DOE). "The credit provisions in the program should, to a large degree, lessen the costs and allow states and fuel providers several options on methods of compliance."

States must make AFVs 10% of their fleet acquisitions next year. Private and local government fleets may play a role in their state's program; the rule allows states to submit to the U.S. DOE alternative compliance plans that include other fleets' voluntary acquisitions.

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1996 SECOND NATIONAL CLEAN CITIES CONFERENCE

HOSTED BY THE CLEAN AIR VEHICLE CONFERENCE AND EXPO

Atlanta, Georgia, June 18-21, 1996

Join hundreds of Clean Cities stakeholders in Atlanta, Georgia, June 18-21, 1996, for the Second National Clean Cities Conference, hosted by the Clean Air Vehicle Conference and Expo.

The conference will take place just one month prior to the Olympics and will include interactive workshops on national legislative developments, International Clean Cities, communications, and funding. An "Alternative Fuels 101 for Fleet Managers" session will also be offered. The conference will conclude with a National Clean Cities Town Hall meeting.

For conference information, contact the Clean Cities Hotline at 1-800-CCITIES.

HOPE TO SEE YOU THERE!



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FIVE CLEAN CITIES RECEIVE GRANTS FOR NATURAL GAS PROGRAMS

After announcing funding availability at last year's Clean Cities conference in St. Louis, Missouri, the Gas Research Institute (GRI) recently awarded \$500,000 to five designated and upcoming Clean Cities to boost their natural gas vehicle (NGV) programs.

"GRI's primary objective in selecting from among 26 applicants was to identify projects most likely to move a Clean City from one that has made an initial investment in NGVs to one that is committed to building a self-sustaining market," said Rajeeana Gable, GRI's NGV team leader.

Including \$100,000 to each of the five award winners from GRI, additional partner contributions totaling \$37.7 million will bring 250 additional NGVs and five fueling stations to the following areas: Palm Desert/Coachella Valley, CA; Minneapolis, MN; the State of Colorado; Washington, D.C.; and Atlanta, GA.

"The GRI awards are evidence that hard work pays off," said Jeffrey Hardy, co-director of the Clean Cities program. "Clean Cities participants have stepped forward to initiate alternative fuel market development, often prior to mandates or other regulations, and now they are benefiting from the rewards of being proactive."

GRI's funding will help these coalitions implement several projects:

In the **Coachella Valley**, Waste Management of the Desert worked with other Clean Cities stakeholders to develop a \$12 million program to place into service 55 natural gas waste collection trucks and a 24-hour public access fueling station. The vehicles are expected to reduce emissions by 215 tons each year. Other partners include Southern California Gas Co., South Coast Air Quality Management District, Dresser-Rand Corp., Cummins Engine Corp., and other Coachella Valley communities.

At least 20 low-floor, 40-foot compressed natural gas (CNG) buses will join the City of Minneapolis' municipal fleet. The \$12.8 million project includes a liquefied natural gas (LNG)-to-compressed natural gas (CNG) fueling station and underground LNG storage. Partners include Minnegasco, the City of Minneapolis, the Federal Transit Administration, and the Metropolitan Council of Transit Operations. Minneapolis is working toward Clean Cities designation as part of a statewide plan.

Colorado, which includes the Clean Cities of **Colorado Springs** and **Denver**, will increase the use of the state's NGV infrastructure by promoting the deployment of heavy-duty, high-fuel-use NGVs. Investment partners in the

\$10.5 million venture include Natural Fuels Corporation, Public Service Company of Colorado, Colorado Interstate Gas Company, the Colorado Governor's Office of Energy Conservation, the Colorado Institute for Fuels and Energy Research, and the National Renewable Energy Laboratory.

Visitors to the **Washington, D.C.**, area may soon see the results of a \$1.6 million project coordinated by the Metropolitan Washington Regional Clean Cities program when 40 dedicated NGV Chrysler B-250 vans join the Supershuttle fleets that service the area's two airports (Washington National and Dulles International). The \$1.6 million program will also bring new fueling facilities. Partners include Supershuttle and Washington Gas.

Recognizing the impact taxi fleets can have on fuel consumption and air quality, **Atlanta's** Clean Cities program aims to deploy 30 to 40 natural gas taxis in the metropolitan area. The cabs, Ford Crown Victoria and Chrysler minivan models, are expected to use 70,000 equivalent gallons of natural gas during the first six months of operation. The \$869,300 project brings together Atlanta Gas Light Company, Amoco Oil Company, NGV Southeast Technology Center, and the Checker Cab Company.



STATE, FUEL PROVIDER FLEETS (Continued from page 1)

Alternative fuel providers must make AFVs 30% of their fleet acquisitions next year. The final definition covers companies whose principal business is:

- Producing, storing, refining, processing, transporting, distributing, importing or selling any alternative fuel; OR
- Generating, transmitting, importing or selling electricity; OR
- Producing and/or importing an average of 50,000 barrels per day or more of petroleum; AND
- Which obtains 30% or more of its gross revenues from producing alternative fuels.

In addition, fuel providers must operate 20 or more of their light-duty vehicles in at least one of the 125 EPACT metropolitan and consolidated metropolitan statistical areas.

The credit trading program also described in the final rule rewards those fleets that have acquired AFVs since the law was passed on October 24, 1992, through September 1, 1996. AFVs acquired by covered fleets between those dates will earn one credit each in addition to credits for purchased AFVs exceeding the upcoming annual requirements. The acquisition of medium and heavy vehicles can also earn credits after the fleet meets its light vehicle requirements.

DOE has published a reader-friendly guide called *Alternative Fueled Vehicles for State Government and Fuel Provider Fleets*. "The guidebook should help fleet managers to understand the requirements of the program without having a law degree," Katz said. It answers the vast majority of questions about the programs in laymen's terms. It is already a popular document.

For a copy of the rule or the guide, visit the *Clean Cities Internet Homepage* at www.ccities.doe.gov and click on "Alternative Fuels Information," or call the *Clean Cities Hotline* at 1-800-CCITIES.

CLEAN CITIES ENTHUSIASM SPILLS OVER THE BORDERS

Latin American and Canadian cities are trying out the U.S. Clean Cities model to help fulfill commitments made at last year's Hemispheric Energy Symposium, a meeting of energy ministers from throughout the western hemisphere held in Washington, D.C. Among other goals, participants agreed to look at the Clean Cities program as a way to address environmental problems.

"We're promoting the Clean Cities model of public/private partnerships, where the government is a consumer rather than a regulator," said Clean Cities program co-director Tommy Foltz. International involvement can range from designation with a U.S. coalition to an information-sharing and marketing effort.

Taking Clean Cities across the borders can offer many benefits to the United States. As

international cities integrate alternative fuel vehicles (AFVs) into their fleets, they create an export market for American AFV products. "Alternative fuels need the right vehicle technology to fully realize their environmental potential. And right now the best technology comes from the U.S.," Foltz said.

These markets can help the industry compensate for instability in the U.S.

marketplace, Foltz added, a benefit to all consumers. "The industry is having trouble right now boosting demand for vehicles, and large production runs are necessary to bring the cost down. A thriving international alternative fuel market could help everyone." The U.S. Department of Energy (DOE) has been working with three international cities, and their activities demonstrate unique ways they can complement U.S. Clean Cities' activities.

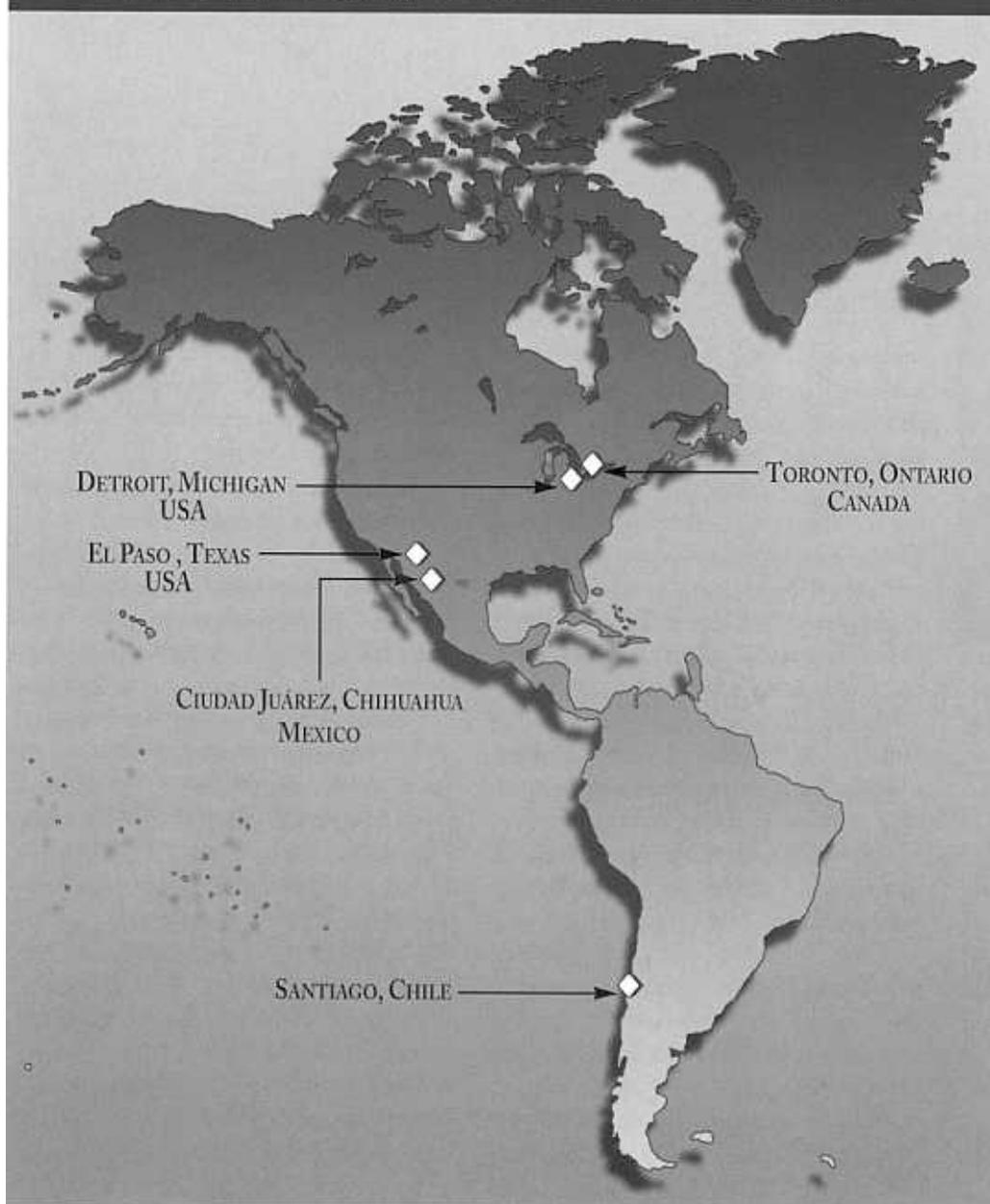
MEXICO—THE FIRST BORDER CROSSING

Ciudad Juárez, in Chihuahua, Mexico, became the first international stakeholder when the Paso del Norte coalition earned Clean Cities designation last November. Juárez is just across the border from its Texas sister city, El Paso, a non-attainment area for ozone, carbon monoxide, and particulate matter under the Clean Air Act Amendments of 1990. Sunland Park and Las Cruces, New Mexico, are also members of the Paso del Norte Coalition.

For economic reasons, fleets in Juárez already operate 8,000 propane vehicles, including 2,000 in the city's public transit system. "That's one of

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LOCATIONS OF CLEAN CITIES INTERNATIONAL ACTIVITY



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the reasons we asked them to participate," said Victor Valenzuela of the Texas Natural Resources Conservation Commission and one of the coordinators for the Paso del Norte Clean Cities coalition.

The region is home to many propane suppliers, and local fleets are concentrating on the fuel. There are more than 2,000 AFVs in El Paso; most use propane, and some use liquefied natural gas (LNG). Half of the city's Sun Metro Transit Authority 180-bus fleet uses LNG. Several area school districts are converting their buses to propane and CNG, Valenzuela said.

The Clean Cities Program was a good fit with several regional programs. "Clean Cities brought the fuel producers and consumers

Protection Agency and Mexican officials to create the International Air Quality Management District (IAQMD). The IAQMD will bring together El Paso, Juárez, and New Mexico's Doña Ana County to develop methods to increase the use of AFVs. One method will be to implement an emissions-reduction credit-trading program, Valenzuela said. "The more vehicles running on alternative fuels, the fewer mobile source emissions, and the cleaner the air."

CANADA GIVES FUELING NORTHERN EXPOSURE

Toronto, Ontario, may be the second international stakeholder as part of Detroit's effort to earn Clean Cities designation. Just 250 miles apart, there is a natural alliance between the "Motor City" of Detroit and Toronto, the largest auto manufacturing center in Canada. The result is a steady flow of traffic between the two cities.

Toronto has explored the use of AFVs for environmental as well as economic development reasons. The area's growing AFV industry is already responsible for more than 800 jobs, according to Jordan Rothwell, manager of transportation and energy technology for the Municipality of Metropolitan Toronto. Fleets in Toronto operate about 7,000 natural gas vehicles, and the province of Ontario uses about 45,000 propane vehicles. The Toronto Transit Commission has 125 natural gas buses in service or on order, Rothwell added.

As in the Paso del Norte coalition, participants in the Canadian-U.S. venture are trying to draw attention to the migratory nature of air pollution. "The Clean Cities program focuses on AFVs, and that's where we'll start," Rothwell said. "Then we can build on that and look at other initiatives."

Coordinators from both cities are working on building a "clean fuel corridor" that would enable a variety of AFVs to make the trip without worrying about fueling. The 38 municipalities and 15 regional/county governments between Toronto and Detroit offer many potential customers. Key stakeholders

include Port Huron, Michigan, and Windsor, Ontario. So far the fuel suppliers working on the corridor project represent natural gas, propane, and electricity.

"It's exciting to think it can work," said Deb Schumacher, natural gas vehicle marketing specialist for Michigan Consolidated Gas Company. The relationship has already brought some benefits, she said. "We're learning from each other." As Detroit considers bringing alternative fuel buses into its transit fleet, it is looking at Toronto Transit's success.

CHILE SERVES UP HOT PROSPECTS

The most distant potential international Clean City is Santiago, Chile, where DOE is bringing together local stakeholders. "It is a place to start from scratch," Foltz said. "Chileans are very interested in solving their air quality problems, but have not yet implemented a Clean Cities-type approach," he said.

Foltz and Christopher Pedersen, a consultant on the project, met with national and regional energy, environment, and transportation officials in Chile this spring.

Chile is working on legislation similar to the United States' Clean Air Act. Santiago has been designated a non-attainment area for "Chile's air quality standards and has already established "no-drive" days to combat the problem. The city's 12,000 diesel buses, all owned by private companies, are considered to be a major source of pollution and will likely be the first target for alternative fuel conversion, Pedersen said. Natural gas is the city's fuel of choice for environmental and economic reasons. Proposed pipelines from Argentina through Chile will facilitate increased use of the fuel, according to Pedersen.

"If Santiago's program progresses, there will be significant opportunities for U.S. companies," Pedersen said. "As Santiago becomes a model for a number of other South American cities to join the Clean Cities program, these opportunities will be even greater."



Victor Valenzuela, Paso del Norte Clean Cities Coordinator, with propane-powered state vehicle.

together," Valenzuela said. "Clean Cities provides an opportunity to network and learn from all our neighbors in this international community. The advantages inherent in alternative fuels definitely have contributed to our economic development."

As coordinator of the Paso del Norte Air Quality Task Force, Valenzuela was already working with both countries to improve air quality. Last March, the task force finalized negotiations with the U.S. Environmental

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Journal

By Marcy Rood
Clean Cities Program Manager

I was thinking I guess I've finally "arrived" in Washington when I was asked to participate in the Electric Transportation Coalition's "Fact-Finding Trip to California." Along with 23 other enthusiasts from the utility industry, the auto industry, Capitol Hill, and other government agencies, I traversed the State of California during a three-day mission to learn more about electric vehicles (EVs).

AN ELECTRIC VEHICLE ROAD TRIP



DOE's Marcy Rood (right) joins the Electric Transportation Coalition's "Fact Finding Trip to California."

Day One

THE DELEGATION'S FIRST MEETING BEGAN IN TORRANCE AT DELCO ELECTRONICS (HUGHES AIRCRAFT COMPANY), which manufactures residential inductive chargers and quick charge stations. We saw firsthand the manufacturing process of this piece of EV charging infrastructure. The inductive charge paddle is just that—it looks like a paddle, and is easily inserted into the vehicle's charging inlet. It is not hot to the touch after it's been in use. Delco also manufactures the battery pack for General Motors's (GM) prototype Impact and its EV-1 production vehicle.

We then went to downtown Los Angeles to visit a prestigious law firm, Graham and James, that has an EV available for its employees— all employees have the opportunity to drive the vehicle on a 2-week rotation. The law firm is committed to clean air and reducing dependence on foreign oil and will continue to offer its "Employee Drive Program" for 4 years. It may also join the Los Angeles Clean Cities program. (We've got Clara Chun, the U.S. Department of

Energy Clean Cities California program manager working on that.) Wouldn't it be nice if all law firms replicated this project with AFVs?

Next, we heard from three citizens who participated in GM's PrEView Program. One driver owned an automotive parts store and was such an enthusiast for the GM Impact, I wouldn't be surprised if she ends up on a GM commercial for the new EV-1.

After lunch we met with George Wilson of Bank of America, who took us out on a test drive of the company's electric shuttle bus. The shuttle is available to pick up employees from the transit station and deliver them to one of three downtown Bank of America buildings. (Bank of America is a stakeholder in the South Coast Association of Governments Clean Cities program.)

Later we arrived at Southern California Edison to hear more about a variety of programs offered in California, including the Quick Charge Program, which offers a \$5,000 reduction in price toward the purchase of an electric vehicle. Also, we learned more about Inland Empire's Clean Fuels Corridor, a \$1.9

million project coordinated by the Riverside County Transportation Commission, San Bernardino Associated Governments, United Parcel Service, Southern California Gas Company, and Edison International. It is the nation's first major corridor program to offer private citizens alternative fuels along major transportation routes. Drivers have access to a variety of alternative fuels, including compressed natural gas, liquefied natural gas, and electricity. What a great way to make it easier for the customer! In the long run, easy access will help maintain enthusiasm for AFVs.

In addition, we heard from one of our own California Clean Cities stakeholders, Ken McCoy from Antelope Valley School Transportation District. As always, he was very excited to share his EV experience as chief executive officer of Antelope Valley Schools Transportation Agency.

The day's official business ended with a ride and drive, which included a large number of electric light-duty vehicles— one converted by Alan Cocconi. I am told by those in the EV

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JOURNAL (Continued from page 5)

business that Cocconi is considered to be a grandfather in this industry. I drove the sporty Toyota RAV-4 and the "Cocconi EV." The Cocconi EV is touted to have a 100-mile range, but I didn't have a chance to go that far!

The day was not finished; we headed off to dinner and heard from GM and Ford representatives. Finally, after midnight we arrived in Santa Barbara.

Day Two

THE NEXT DAY WAS LESS HECTIC BUT STILL YIELDED A LOT OF USEFUL INFORMATION.

We arrived early at the Santa Barbara Metropolitan Transit District for a briefing, learned about maintenance operations, and received information on current research and demonstration projects under way at the Santa Barbara Electric Transportation Institute. The Institute is a big believer in electric transportation and has 13 electric shuttle buses, with 10 more on order. These 10 will be first used in the 1996 Summer Olympics in Atlanta.

At some point they would like to replace their entire fleet of diesel buses. I was impressed to learn that the number of riders on the downtown loop increased dramatically from 100,000 to 1 million since the first EV shuttle bus was put on this route in 1991.

Some of our delegation flew to Sacramento to visit the Sacramento Municipal Utility District's (SMUD) new facility. Unfortunately, not all of us could join the group for the SMUD tour/briefing—including me—because we were on a later flight. But since I was just at SMUD for the first EV Market Launch Workshop, I knew all about the great things it is doing to commercialize electric modes of transportation.

Day Three

THE LAST DAY OF THE TOUR WAS ANOTHER ACTION-PACKED DAY. We started at McClellan Air Force Base, and were hosted by Bill Fairbairn, the Sacramento Clean Cities Coordinator. McClellan is making prototype EVs for SMUD

out of different materials—composites, in fact. We learned more about the base's processes and its desire to privatize EV production in the future. McClellan is able to cut a typical manufacturing prototype process down from 7 months to 6 weeks. McClellan has more than 60 EVs in use and can boast that it has the largest operating EV fleet in the world.

After a tour of the facilities and another ride-and-drive, we said our good-byes and headed west to San Francisco on a natural gas bus provided by Pacific Gas and Electric. We arrived at the Ashby Bay Area Rapid Transit (BART) station in Berkeley to learn more about its "station car" program, an exciting program that all Clean Cities transit authority partners should be interested in promoting. In San Francisco, parking space is at a premium. The idea is to have a station car available to commuters coming from the BART metro; now they can drive a non-polluting vehicle from the station to work. These are cute cars to say the least, and the station car participants love their vehicles.

After BART, our next destination was the Alameda Naval Base, which houses the CALSTART facility. We learned more about its impressive business incubator program, which is building prototype EVs.

Our last destination was the Presidio, where an ambitious project is under way to create a sustainable environment at this national park. The U.S. Department of Energy is supporting the National Park Service's efforts, such as the initiative to use the Presidio as a testing ground for energy efficient transportation systems and electric vehicle applications. The Presidio served as the host site for our last set of panelists from the Electric Power Research Institute, the Electric Vehicle Association of the Americas, and BART.

I hope my fellow Clean Cities partners will have a similar opportunity to learn the "abc's" of EVs. As they say in the industry, "EVs are coming, you just can't hear them."

For more information, contact: Chris Harden, Electric Transportation Coalition at 202-508-5995.

AIRPORTS PROVIDE A CENTERPIECE FOR CLEAN CITIES PROGRAMS

Visitors often get their first impression of a city before they even leave the airport. Now, with many airports around the country expanding their use of alternative fuel vehicles (AFVs), that impression is often a clean and peaceful one. As many Clean Cities coordinators know, airports can play a vital role in programs designed to expand local alternative fuels infrastructure.

The shuttles, cars and buses serving airports make frequent and short round-trips, making them especially suitable for central refueling. Airports serve as an anchor for more than fueling opportunities, and can also be a valuable tool to educate the millions of airline passengers who walk through the terminals each year about alternative fuels.

- At the **Los Angeles International Airport (LAX)**, more than 33 compressed natural gas (CNG) support vehicles and 14 liquefied natural gas (LNG) shuttle buses are working to improve the area's air quality. This summer the city's Department of Airports will open a natural gas fueling facility that will be publicly accessible, and plans to continue purchasing LNG buses as older diesel buses are retired. The airport also utilizes electric vehicles, including four light-duty support vehicles, two half-ton stake bed trucks, and a shuttle bus.
- Through a special agreement, State of California employees flying into **Sacramento Metropolitan Airport** can get firsthand experience with electric and CNG vehicles when they rent a car through National Car Rental. State employees represent 8% of the car rental traffic at the Sacramento airport, according to the state's fleet administration office. "We see this project as an opportunity to learn about

ALTERNATIVE FUELS TAKE TO THE SKIES

ALTHOUGH MOST ALTERNATIVE FUELS SUPPORTERS FOCUS ON THE FOUR WHEELS THAT TOUCH THE ROAD, OTHERS ARE LOOKING HIGHER.

Changes in the gasoline industry, such as the lead phase-out, are opening the door to alternative aviation fuels for piston engine aircraft. Recent reports show that major oil companies are increasingly reluctant to produce aviation gasoline (avgas) because of dwindling sales and special handling requirements. Alternative fuels, such as ethanol, have already demonstrated their potential to replace leaded avgas while achieving high octane performance levels.

Baylor University's Renewable Aviation Fuel Development Center in Waco, Texas, has been demonstrating neat ethanol in piston planes for the past 14 years. "There's no question it works," said Max Shauck, the center's director. "We flew a

single-engine plane across the Atlantic. It's just a question of economics."

And fueling sites. When Shauck flies his ethanol-powered Pitts S2-B Special Aircraft at events around the country, he has to carefully arrange fueling stops. The Vanguard Squadron, an aerobatics performance group based in South Dakota, has the same concerns since it converted its six RV3 airplanes to fly on ethanol in 1992. So far alternative aviation fuels researchers in the United States are focusing on ethanol. Other



Dr. Max Shauck flies an ethanol-powered Pitts S2-B Special Aircraft.

countries are demonstrating liquefied natural gas and propane. If these efforts continue, it may only be a matter of time before passengers can choose a fuel when they book their airline and seat assignments.

alternative fuel vehicles from an operational point of view and from our customer's point of view," said Roy Finsterbusch, National Car Rental's Western region fleet manager. The program is a joint effort with American Honda Motor Company, National Car Rental, the State of California, and the Sacramento Municipal Utility District.

- Denver International Airport has become an important stakeholder in Denver's Clean Cities program since it opened 8 natural gas fueling stations that support the airport's 350 natural gas vehicles.
- Private shuttle services travel thousands of miles each week as they take airline passengers to their local destinations. By

switching to alternative fuels, they can have a major impact on reducing emissions and oil consumption. SuperShuttle has done this at several locations, including **Dallas-Fort Worth**, Los Angeles, and Phoenix.

SuperShuttle will soon bring its service to two Washington, D.C., area airports.

- At Broward County's Ft. Lauderdale/Hollywood International Airport on the **Florida Gold Coast**, five CNG vehicles support the operations and maintenance fleet. Two electric vehicles will join the fleet this spring.
- In May, the Ontario International Airport, a stakeholder in California's **SCAG** Clean Cities Program, hosted a meeting on

alternative fuels for ground service vehicles.

- Last fall **Pittsburgh** International Airport began a 2-year demonstration of a hybrid electric bus that will transport passengers to and from an extended-term parking lot.

To recognize the contributions airports are already making, the U.S. Department of Energy is working on expanding the success of the Clean Cities program to include Clean Airports. This program would target small airports that serve as home bases for aircraft seeking alternatives to using aviation gasoline (see box above). By adopting the Clean Cities model, airports can make significant gains in the nation's efforts to diversify U.S. fuel consumption patterns and improve air quality.

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CALIFORNIA USES TECHNOLOGY TO EXPAND THE FUELING NETWORK

Making alternative fuel vehicle (AFV) refueling available means more than just building sites, it includes making those sites convenient for drivers. Many sites are built with card locks for fleet use only, making them unavailable to other potential customers. The California Natural Gas Vehicle Coalition (NGVC) is tackling that issue with new technology that would make those limited-use sites accessible and billable with one fuel card.

"The Clean Cities program has been instrumental in helping us focus on the need for this, and helped us get our arms around the solution," said Gregory Vlasek, California NGVC's executive director. "Compared to gasoline or diesel, there are relatively few opportunities to fuel with natural gas, so we

have to maximize the convenience for the customers."

In its efforts to give NGV drivers access to a variety of private refueling sites around California, the coalition is working with Instant Card Systems of Portland, Oregon, as well as all major cardlock equipment manufacturers. The software development firm has already written a management software program that can make multiple-client fuel transactions possible. Over the next few months, coordinators will monitor transactions and billing at a pilot network of five sites throughout the state.

Once the technology is ready, the next step requires commitments from station owners to upgrade their card lock equipment. The software could cost less than \$1,000, and up to

\$5,000 in some cases. The U.S. Department of Energy and the national Natural Gas Vehicle Coalition have provided some funding for the project. Vlasek said they have identified about 40 sites in California that will join the FuelNet program by the end of the year.

"Integrating proprietary cardlock systems has never been done like this before, so in some respects we're making it up as we go along. But as we go around the state to muster support, we're getting a lot of positive input from Clean Cities participants," Vlasek said.

Breaking alternative fuel barriers may require a lot of innovation and effort, but the results can make a big difference. "Once we eliminate the inconvenience of extended trips, we can increase the use of NGVs," Vlasek said.



POLICE DEPARTMENTS HOT ON THE TRAIL OF CLEANER VEHICLES

Although emergency vehicles are exempt from federal mandates requiring alternative fuel use, numerous police fleets around the country are already making the switch. An informal survey by the Clean Cities program showed that 39 police departments have added alternative fuel vehicles (AFVs) to their fleets.

Most of those are vehicles that have been converted to run on compressed natural gas (CNG) or propane, but several police departments will also take advantage of Ford Motor Company's original equipment CNG Crown Victoria that comes with a police package option.

Many police departments are demonstrating one or two AFVs, but all the patrol cars in Jefferson, Wisconsin, about one hour west of the Wisconsin Southeast Area Clean Cities coalition, have been running on propane since the second oil crisis in 1979. Alternative fuels have

come a long way since then, and while there have been a couple of problems, Sheriff Orval Quamme said they are not considering switching back to gasoline.

Quamme's patrol fleet includes 12 dedicated and 5 dual-fueled propane vehicles; the department also has 3 additional propane vehicles that transfer inmates. Each patrol vehicle is driven about 135,000 miles during the 2 years it serves the fleet, and the fuel and maintenance cost savings over that time more than make up for the vehicle conversion cost, according to Quamme. Moreover, the propane vehicles typically bring in an extra 15% to 20% more when they are sold at auction because they attract many fleet managers looking for secondhand AFVs. "Taxi cab companies looking for AFVs come from all around the country," Quamme said.

The Los Gatos Police Department in California's bay area recently switched its fleet of 12 marked patrol vehicles to CNG. As part of the South Bay Clean Cities coalition, the city was considering how to best use grants from the Bay Area Air Quality Management District and

a rebate from Pacific Gas and Electric, said Captain Duino Giordano. "We went to the administrators and told them our fleet runs 24

hours a day, 7 days a week; they [AFVs] would be better put to use here for what they're trying to accomplish," Giordano said. The \$261,000 grant includes installing a fuel site.

"Each patrol vehicle is driven about 135,000 miles during the 2 years it serves the fleet, and the fuel and maintenance cost savings over that time more than make up for the vehicle conversion cost..."

The department ordered full-size Caprice models from Chevrolet and had them converted by Los Angeles-based NGV Ecotrans before putting them on the streets six months ago. The vehicles are bi-fuel, so the officers can switch to gasoline if they need the extra range for a pursuit.

There has not been enough time to show any economic benefits, but according to Giordano, the vehicles perform the same as their gasoline counterpart— maybe even better than the vehicles they replaced— making them well-received by the officers who drive them. "The Chevys are the hottest of all patrol cars," Giordano added. "[For the officers] it's like night and day."

CLEAN CITIES A "DREAM JOB" FOR DOE PROGRAM MANAGER

For almost two years, James Ferguson has served as a Clean Cities program manager for the U.S. Department of Energy (DOE). Working out of the Philadelphia Regional Support Office, James is responsible for the region covering Delaware, the District of Columbia, Maryland, New Jersey, Pennsylvania, Virginia, and West Virginia. He was born and raised in Philadelphia, and came to DOE from the Department of Defense. He earned a B.S. in mechanical engineering from Temple University in Philadelphia, and returned later for an MBA to broaden his skills.

Clean Cities Drive: What makes the Clean Cities program different from other DOE programs?

James Ferguson: I think we're less bureaucratic, and have better communication between headquarters and the Regional support offices than other programs. One day I'll be talking to Jeff [Hardy, co-director of the Clean Cities program] about an idea and within a couple of weeks we're implementing it. There are many active, creative minds involved with this program.

And our partners, stakeholders, have no formal contracts. But there's also just enough structure.

I think the program's also so successful because our educational materials are helpful and they're simple and short in length—The *Road to Clean Cities* guide, the *Taking an Alternative Route* brochures, the new funding guide [*Guide to Alternative Fuel Vehicles Incentives and Laws*], even the logo!

Drive: You work with both designated and undesignated Clean Cities. [Designated Clean Cities include Philadelphia, Pennsylvania; Wilmington, Delaware; Washington, D.C.; Baltimore, Maryland; State of West Virginia, Pittsburgh, Pennsylvania, and several upcoming Clean Cities] What's different about working with each?

JF: The main difference is that the undesignated cities are a little less structured and are working at earlier stages in the process, Jersey City and Newark for example. I spend more time on the phone helping these cities develop their MOUs [memorandums of understanding] and program plans versus going to meetings. "Though these cities are still doing a lot, I tell them that one of the primary reasons to get designated is to get prioritized for DOE and other funding (like GRI), and for GSA and postal service placement of vehicles. The more organization you have, the more respect you are going to get.

I've also found that even a lot of the [designated] cities aren't sure of the process, and our job is to educate them. Pittsburgh really galvanized the stakeholders through their process; I felt the synergy from all parties signing the MOU. It really helped them come together, like joining a family, and making a commitment to fellow stakeholders.

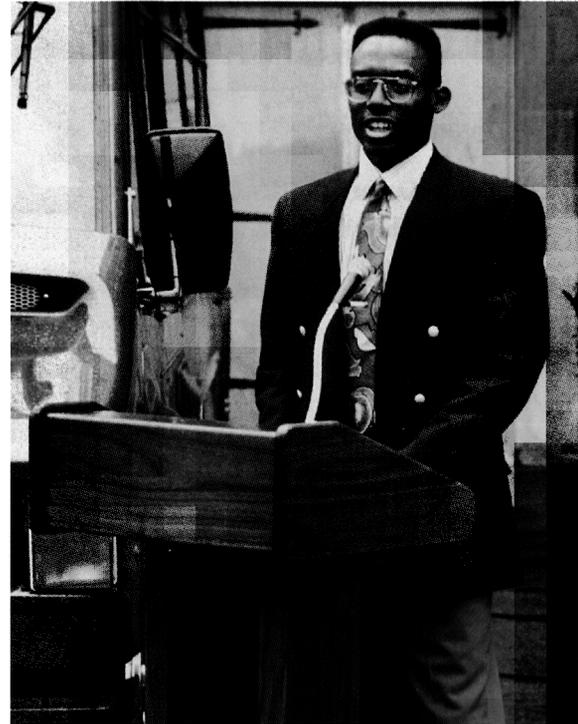
Drive: What has the program done in terms of competition among fuel groups?

JF: I think the program has really made the competition more friendly, both within and among the fuels. Fuel suppliers are forced to improve quality and customer service to get more customers.

Drive: What is your biggest challenge in the Clean Cities program?

JF: I wish I could tell people there was more money. Getting funding for alternative fuels and vehicles would have to be my greatest challenge.

Drive: Where do you see this program going in the future?



James Ferguson, Clean Cities Program Manager,
U.S. Department of Energy,
Philadelphia Regional Support Office

JF: Rather than preaching to the choir, I like to preach to the unconverted. That should be our primary goal: to get the information to those that don't have it. I think we are getting to be more successful with this as time goes on, but we've got more to do. We need to reach the people who don't know anything about alternative fuels or where to get the information, and the people who could be making decisions about whether or not to use them. We are focusing our efforts on working with NAFA [National Association of Fleet Administrators], and following up with cities affected by EPACT [Energy Policy Act of 1992]. We are contacting the states and fuel suppliers, trying to be more, rather than less, inclusive.

We also need to do more training of fleet managers on alternative fuels and Clean Cities. That's why we're sponsoring the National Alternative Fuels Training Program at West Virginia University, the model alternative fuels training program.

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Clean Cities HOTLINE: 1-800-CCITIES

World Wide Web Site: www.ccities.doe.gov ♦ E-mail address: CCITIES@nrel.gov

CLEAN CITIES UPDATE

NEW DESIGNATIONS

COACHELLA VALLEY, CALIFORNIA — APRIL 22, 1996

California's **Coachella Valley** was designated the 46th Clean City on Earth Day 1996, but the coalition's achievements were noted well before then.

As the home to agricultural and tourism industries, "it was in our best interest to focus on clean air," said Phil Bostley, mayor of Indian Wells and chairman of the SunLine Transit Agency. When it was time to replace its aging fleet of 40 buses in 1994, the agency decided to go with cleaner burning alternative fuels. Today the entire fleet runs on natural gas.

The story doesn't end there. Instead of private refueling, the agency worked with the local utility to install a public refueling site. An additional 5 to 6 stations are planned by the end of the year, offering adequate infrastructure to travel anywhere within the valley and always be within 15 minutes of fuel, Bostley said.

Tourists will have an opportunity to try out an AFV with Hertz Rental Car's 5 new natural gas Ford Crown Victorias. The city helped secure that demonstration project by committing to purchase the vehicles for the local taxi fleet when Hertz is ready to retire them, Bostley said. Indian Wells also passed an ordinance requiring alternative fuels to be part of the consideration when renewing trash hauling contracts, he added.

LOS ANGELES, CALIFORNIA — MARCH 22, 1996

When U.S. Secretary of Energy Hazel O'Leary welcomed the City of **Los Angeles** (LA) as the 45th Clean City, she also announced the federal government's commitment to place 80 new AFVs in the area's federal fleets.

The designation included other commitments. The LA Department of Water and Power (DWP) plans to purchase up to 30 General Motors Chevrolet S-Series electric pickups next year, complementing the fleet's 21 EVs currently in use. The DWP already offers special EV charging rates to consumers, allowing them to charge at night for about \$1 to travel 70



Thomas J. Gross, DOE Deputy Secretary, presents the plaque to Congressman Sonny Bono at the Coachella Valley Clean Cities Designation Ceremony on Earth Day.



U.S. Department of Energy Secretary Hazel O'Leary (center, behind podium) presents a Clean Cities plaque to Los Angeles Councilman Marvin Braude. Also shown is Lilian Kawasaki, General Manager, Environmental Affairs Department, City of Los Angeles (far left, center row).

to 90 miles. It is also developing a program to install additional public charging stations.

The city is part of the South Coast Air Basin, currently the only region in the nation classified as in extreme non-attainment for ozone under the Clean Air Act Amendments of 1990. Partly because of that reason, LA has been adding to its AFV experience since the early 1980s. Among the city's 20,000 departmental vehicles, nearly 300 are alternatively fueled. The city has also integrated several liquefied natural gas, compressed natural gas (CNG) and electric shuttle and transit buses into daily fleet operations, and will add CNG

street sweepers and sanitation trucks later this year.

Other stakeholders in the Clean Cities effort include the Los Angeles Department of Airports; City Council; Fire Department; Department of Public Works; Department of Transportation; General Services Department; Harbor Department; Policy Department; Office of LA's Chief Legislative Analyst; Office of LA's City Administrative Officer; Southern California Gas Company; Southern California Economic Partnership; CALSTART; Coalition for Clean Air; and the Natural Resources Defense Council.

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS— MARCH 1, 1996

On March 1, a southern California coalition of 185 cities and 6 counties officially joined the Clean City network. **The Southern California Association of Governments (SCAG)** includes the cities of West Hollywood, Riverside, San Bernardino, Imperial, Ventura, Santa Monica, Malibu, and Oxnard, and Los Angeles County.

SCAG is also part of the South Coast Air Basin. SCAG's plan as a Clean City is to add more than 12,000 alternative fuel vehicles (AFVs) and six refueling sites by the year 2010. The region is already home to 515 AFVs (143 natural gas, 105 electric, 173 methanol, and 94 propane) and 223 fueling/charging sites (29 natural gas, 1 electric, 12 methanol, and 181 propane).

In addition to the city and county governments, stakeholders include ARCO Products, Bank of America, College of the Desert, Hughes Aircraft Company, Pacific Bell, Southern California Edison, Southern California Gas Company, University of Southern California, Vargas and Company, General Motors, Batey Ads USA, and Parsons Brinckerhoff.

CLEAN CITIES ROUNDUP

Last April, the **City of Long Beach**, the U.S. Department of Energy, the California Energy Commission, and the South Coast Air Quality Management District celebrated the arrival and dedication of 3 compressed natural gas (CNG) refuse packers and the dedication of a CNG refueling station at the city's Southeast Resource Recovery Facility...

■ The **Greater Norwich** [Connecticut] Clean Cities Program was highlighted by the U.S. Department of Energy's Boston support office for its highly innovative Norwich initiative, which combines the use of stationary generation emission credit reduction requirements and the demonstration of the first use of alternative fuel school buses in the state.

Program goals include using "NO_x dollars" to complete the first public fast fill CNG station in Southeastern Connecticut, purchase AFV

school buses, provide technical and economic data to the state Department of Environmental Protection, and distribute AFV educational materials to parents and students. The project is currently in the early stages of implementation....

■ This spring, the **Sacramento** Clean Cities coalition participated in a number of activities. Coalition members endorsed the Sacramento Metropolitan Air Quality Management District (AQMD) and Yolo-Solano AQMD applications to the California Energy Commission for matching funds for electric vehicle funding incentives, and participated in Ford's 1996 OEM CNG Crown Victoria roll-out at the California State Capitol in Sacramento. Clean Cities program coordinator Bill Fairbairn traveled to Seattle to present information on Sacramento's activities to the National Association of State Energy Officials....

■ For those who couldn't attend, the **Portland** Clean Cities coalition has videotapes available of its successful and informative "Fleets at the Crossroads" conference in February. With more than 150 people in attendance, the program featured a presentation by a popular race car driver, presentations from automakers, and information on fleet activities. Tapes cost \$20 each and can be obtained from Curt Nichols in the Portland Energy Office at 503-823-7418....

■ Oregon's **Rogue Valley Transportation District (RVTD)** has organized a series of training and orientation sessions for local firefighters on the characteristics and safety features of CNG.

"We wanted to help firefighters become comfortable with the use of CNG as a motor fuel," said Tim D'Alessandro, RVTD's fleet maintenance manager. "Should there be an incident involving one of our CNG buses, we thought this level of firsthand awareness and information among public safety officials would make an important difference not only in how the situation is handled, but also in building the public's confidence."

The sessions include a manufacturer's video presentation about Blue Bird's CNG cylinder safety standards, a briefing on the buses' fuel system configuration, and a review of passenger evacuation and accident reporting procedures....

■ Results from a recent survey of fleet managers show that the **Florida Gold Coast** Clean Cities Coalition includes 603 AFVs and 16 refueling stations. Those numbers are expected to grow to 1,138 AFVs and 22 fueling facilities by the end of 1997. Fuel types include CNG, propane, and electricity. Along these lines, the City of Hollywood celebrated the opening of its natural gas refueling station in May, and Palm

Beach Gardens was recently awarded a contract to build a natural gas refueling facility at the Public Works Department.

Funds from the DOE Grant for the Electric Vehicle Pilot Project will be used to purchase an electric vehicle and coordinate a public
(Continued on page 12)



Clean Cities Coordinator Paul Smock and Long Beach Mayor Beverly O'Neill at the April dedication of three new refuse packer trucks powered by CNG

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"DREAM JOB" (Continued from page 9)

Drive: What do you feel is the role of the DOE Regional Support Offices in the program?

JF: Our main job is to promote alternative fuels. I believe DOE serves as a catalyst, a provider of information, and a technical liaison between Clean Cities, DOE Headquarters, and all other groups. I also serve as an involved facilitator and an advisor, but still let the groups make their own decisions.

Drive: You're very enthusiastic about your job. What do you enjoy most about it?

JF: I think this is the perfect job for me—a dream job! I wasn't sure I wanted to be a full-time engineer and this job combines my technical and marketing skills. I love going out and meeting stakeholders, and trying to help them be more successful [with their Clean Cities programs]. I love the freedom and autonomy I have from Tony Pontello [who until very recently was the Acting Office Director in

Philadelphia] and Charles Baxter, our Office Director. I've developed a strong relationship with my state energy offices and Clean Cities coordinators, all of whom have been extremely supportive and active in the Clean Cities program; talk to my coordinators a least once a week; and try to attend every Clean Cities meeting in my region. I intend to maintain this commitment throughout the life of the Clean Cities programs. I also get a lot of satisfaction from knowing this program helps the country.

CLEAN CITIES ROUNDUP (Continued from page 11)

education program targeted at middle schools. In April, Broward County held a ribbon-cutting ceremony to present its electric vehicle and recharging station to the public.

In addition, 1996 marks the beginning of the Gold Coast Clean Cities Alternative Fuel Vehicle Revolving Loan Fund and Grants to

Local Governments Program (a request for proposals was mailed this spring to local governments) and the beginning of a rigorous public awareness campaign, which is still in the early planning stages.

In April, the coordinator for the Gold Coast traveled to Daytona Beach to present information about alternative fuels and Gold

Coast Clean Cities activities to the Florida Association of Governmental Fleet Administrators.

After much time and effort, the Coalition just added four new Governor's appointees to the Coalition Board, adding diversity, balance, and, not of least importance, necessary political support for alternative fuels and vehicles.

CLEAN CITIES CALENDAR

New Designations

See details in next *Clean Cities Drive*.

May 21, 1996

Weld/Larimer/Rocky Mountain National Park, Colorado Clean Cities Designation
Contact: Linda Devocelle, 970-221-6312.

May 29, 1996

Central Oklahoma Clean Cities Designation
Contact: Jennifer James, 405-848-8961.

June 27, 1996

Electric Transportation Coalition's (ETC) EV-Ready Market Launch Workshop, Boston, MA
Contact: DOE's Marcy Rood, 202-586-8161 or ETC's Kathryn Saatkamp, ETC, 202-508-5995.

August 7, 1996

ETC's EV-Ready Market Launch Workshop, Detroit, MI. Contact: Same as above.



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