

Clean Cities Now

Official Publication of Clean Cities and the Alternative Fuels Data Center

Vol. 9, No. 3 - October 2005

Clean Cities Now (www.eere.energy.gov/cleancities/ccn) is the official publication of *Clean Cities*, an initiative of the U.S. Department of Energy designed to reduce petroleum consumption in the transportation sector by advancing the use of alternative fuel vehicles, idle reduction technologies, hybrid electric vehicles, fuel blends, and fuel economy.

Survey Results: Clean Cities Displaces 1 Billion GGE of Petroleum

Results from the 2004 Annual Coordinator Survey indicate that Clean Cities coalitions across the country have passed an important milestone: They have displaced more than 1 billion gasoline gallon equivalents (GGE) of petroleum-based fuel. This represents enough petroleum to fill 18 supertankers or fuel 2 million vehicles for a year. By using less oil, the Clean Cities coalitions have improved the nation's energy, economic, and environmental security. At today's prices, 1 billion gallons displaced also represents an investment of \$2.75 billion invested in energy resources produced here in the United States.

"By passing the billionth gallon milestone," stated Clean Cities Director Shelley Launey, "Clean Cities coalitions have shown they are making a difference on a local level and a national level."

The impacts of the Clean Cities Initiative are determined each year from data provided by coordinators on accomplishments within their coalitions on acquiring alternative fuel vehicles (AFVs), installing fueling infrastructure, and implementing other petroleum-displacing technologies and policies. The 2004 survey showed displacement of approximately 237 million GGE, which, when combined with results from prior years, provide evidence of this billion gallon achievement.

The 2004 survey also showed that coalitions made great strides in increasing their influence and impact. Coalitions brought in more than \$120 million in grants—representing a 10-fold leveraging of Clean Cities program resources. They also added 459 stakeholders to their membership roles.

Included for the first time in the 2004 survey were Clean Cities' additional portfolio elements: fuel economy, idle reduction, fuel blends, and hybrid electric vehicles. These elements accounted for about 27% of the total displacement reported.

"Most of the petroleum displacement achieved by coalitions to date has been with alternative fuels," says Launey. "We expect that trend to continue for several years before the impacts of coalition initiatives on hybrids, fuel blends, idle reduction, and improved fuel economy begin to show the impacts on petroleum use we've achieved with alternative fuels." The Clean Cities goal is to displace 2.5 billion GGE annually by 2020, which will require displacement to increase by about 16% per year.

2004 Survey Results: Estimated Petroleum Displacement by Portfolio Element		
Portfolio Element	Million GGE Displaced	Percent of Total
AFVs	173	73
Fuel Economy	41	17
Idle Reduction	12	5
Fuel Blends	9	4
Hybrid Electric Vehicles	2	1
Total	237	100

Celebrating 'Beyond a Billion'

Displacing a billion gallons of petroleum is a milestone worth celebrating, and Clean Cities coalitions are stepping up to the challenge by hosting a nationwide event.



On (or near) October 14, 2005, coalitions across the country will be hosting local Beyond a Billion celebrations to pump the symbolic billionth gallon. The date was selected in honor of October's Energy Awareness Month designation, and coalitions will use the opportunity to recognize the contributions of their stakeholders to the displacement of more than a billion gasoline gallon equivalents of petroleum. Many coalitions have invited governors, mayors, senators, energy officials, and local dignitaries to their events. Planned venues include fueling stations, airports, universities, and ski areas. Coordinators made contact with local and national media to cover their celebrations.

Clean Cities is provided materials to assist coalitions in planning, promoting, and hosting their events. Press materials (including Clean Cities and Beyond a Billion fact sheets, photos, and logos), links to fuel and technology background, and contact information are available on the Beyond a Billion (www.eere.energy.gov/cleancities/beyond.html) portal site.

In addition, Clean Cities provided a satellite uplink of B-roll (background) video for television news programs during the week of October 10. For additional information on local events, contact a Clean Cities coordinator.

Coalition News

DOE Recommends \$5.4 Million in SEP Awards for Clean Cities Projects

In September, the U.S. Department of Energy (DOE) recommended more than \$5.4 million in funding for 70 cost-shared Clean Cities projects. That amount, made available through the State Energy Program (SEP) Special Projects activity, is \$1.4 million more than originally planned. "There were so many really worthy projects this year that we had to bump up our award amount," explains Shelley Launey, Clean Cities director.

Final awards are scheduled for fall 2005, and funds will be delivered to the State Energy Offices for disbursement. The funding will support projects in the categories of AFV incremental cost, alternative fuel refueling infrastructure, idle reduction technologies, heavy-duty hybrid electric vehicles, alternative fuel school buses, and coalition support.

AFV Incremental Costs

Nine projects were selected in the AFV incremental cost category. The projects represent \$1,319,929 in recommended DOE funding to help offset incremental costs for:

- Deploying 22 compressed natural gas (CNG) shuttle buses that will provide hotel transportation to and from Los Angeles International Airport. (CA)
- Purchasing and converting 89 trucks to dedicated propane fueling. The trucks will operate from 34 Schwan's facilities throughout Texas. (TX)
- Purchasing 30 CNG refuse haulers for Rainbow Disposal's fleet. (CA)
- Deploying 20 CNG super ultra low emissions shuttle vans. These high-mileage shuttles will provide door-to-door service at major airports throughout the Los Angeles Basin. (CA)
- Converting 70 heavy-duty Schwan's delivery trucks from gasoline fueling to dedicated propane systems. (CA)
- Purchasing three CNG transit buses for the Tucson Intercity Express Transportation fleet. (AZ)

- Launching 10 new liquefied natural gas (LNG) refuse haulers for CR&R. (CA)
- Purchasing seven CNG trucks for the City of Visalia—the third group of natural gas refuse trucks purchased by the city. (CA)
- Purchasing two new CNG shuttle buses and two new CNG trolleys for use by the Woodshole Steamship Authority and CityView Trolley. (MA)

Refueling Infrastructure

Forty-one refueling infrastructure projects were proposed. Fourteen were recommended for funding for a total of \$1,703,665. The projects are:

- Constructing an LNG/CNG refueling station with public access for the CR&R Solid Waste Material Recovery and Transfer Facility. (CA)
- Building a CNG time-fill station with public access for Rainbow disposal refuse haulers. (CA)
- Installing E85 fuel pumps in approximately 11 high-priority areas in Illinois. (IL)
- Developing a public access CNG refueling station in central Orange County. (CA)
- Installing three propane refueling sites at current gasoline retail locations or fleet refueling locations in the East Bay. (CA)
- Installing approximately 10 E85 tanks and dispensing systems for public and government use at current and new sites. (WI)
- Constructing a CNG fueling station at Dallas-Fort Worth International Airport to encourage the use of AFVs by airport shuttle fleets and others. (TX)
- Constructing a CNG refueling station for Amador Valley Industries' fleet of refuse trucks and public access for other CNG vehicles. (CA)
- Establishing an E85 station for current and future city fleets in Rock Hill. (SC)
- Creating a cluster of three B95-B100 biodiesel refueling stations in central Puget Sound. (WA)
- Establishing three sites in the Salt Lake Valley that will provide biodiesel fuels to fleets and individuals. (UT)
- Installing a centralized biodiesel storage and fueling facility with retail outlets in North Little Rock. (AR)
- Constructing a dual compressor CNG station with a time-fill dispensing system primarily for city fleet users in Clovis. (CA)
- Installing an E85 fueling station for use by all state and local government fleets in Portland. (OR)

Idle Reduction

This is the second year idle reduction proposals were solicited. Both the number of proposals received and the funding recommended were increased this year. The six idle reduction projects that will share the recommended \$400,000 in funding are:

- Deploying and evaluating 16 onboard auxiliary power units in the Li-Way Transfer and Storage commercial trucking fleet. (GA)
- Retrofitting 35 school buses with ESPAR coolant heaters in the Ravena-Coeymans-Selkirk Central School District. (NY)
- Installing 30 Cummins ProHeat on-board electrification units on Styline heavy-duty delivery vehicles. (IN)
- Installing six engine pre-heaters for diesel-powered passenger shuttles in a shopping district and launching an associated public-awareness campaign. (CO)
- Installing an electrification system at the Clarence Central School District bus garage to provide start-up power to engine block heaters already installed in approximately 100 buses. (NY)

- Installing Clever Devices BusLink switches that automatically activate ProHeat auxiliary heaters in a fleet of approximately 100 transit buses (MD)

Heavy-Duty Hybrid Electric Vehicles

This is the first year proposals for heavy-duty electric hybrids were requested. Seven projects were proposed; two were selected. The \$283,600 in recommended DOE funding will be used to cover incremental costs for:

- Creating a prototype heavy-duty hybrid electric utility truck platform for a regional electric utility company. (PA)
- Purchasing one hybrid electric transit bus for the Franklin Transit Authority. (TN)

Alternative Fueled School Buses

After reviewing this year's school bus proposals, DOE recommended more than \$1 million in project funding. "We received many excellent school bus proposals this year," Launey says. "We were pleasantly surprised." The six projects recommended for funding are:

- Off-setting the purchase costs of 70 new CNG buses for the Tucson Unified School District. (AZ)
- Adding five CNG buses to the Jordan School District bus fleet. With this addition, the fleet will include 35 natural gas buses. (UT)
- Covering incremental costs for 10 CNG school buses and constructing a CNG fueling station. (NY)
- Retiring 11 pre-1989 diesel school buses and replacing them with 11 CNG buses in the Mansfield Independent School District. The project also includes one-half the cost of a new CNG refueling station. (TX)
- Deploying four new CNG school buses in the Arlington County Public Schools' bus fleet and associated outreach to other fleets across the state. (VA)
- Retiring five pre-1989 diesel buses and replacing them with CNG buses in the Duncanville Independent School District. The project also includes half the cost of a new CNG refueling station. (TX)

Coalition Support

Thirty-three projects were selected for negotiation in the coalition support category. The recommended awards total \$636,556 and will support outreach to fleets, staffing, administration, and leveraging project funding.

Statewide Iowa Coalition Approved for Designation

The Iowa Clean Cities Coalition (ICCC) was approved for designation in July. This new coalition is a statewide coalition and located in a state with air quality in attainment status.

Tami Foster of the Iowa Department of Natural Resources (DNR) in Des Moines leads the new coalition, which has already realized success. According to Foster, recent meetings with key stakeholders have helped address concerns about the safe management of underground E85 storage tanks. And discussions with state agencies have also green-lighted the coalition to direct market E85 to flexible fuel vehicle owners. Momentum generated from these discussions led to the creation of the Iowa coalition, says Foster.

ICCC's goals for 2006 involve idle reduction strategies, building fleet partnerships, expanding the hybrid market in Iowa, and continued expansion of ethanol and biodiesel use across the state.

Official designation is expected to occur later this year.

Arizona District to Use B20 in 130 School Buses

Amphitheater School District in Tucson, Arizona, in July approved an initiative to use B20 in its 130 buses starting this fall. The district's buses shuttle thousands of students to and from 22 area schools. According to Colleen Crowninshield, coordinator of the Tucson regional coalition, the district estimates it will displace more than 24,000 gallons of diesel by running its fleet of buses on B20.

Long Island Stakeholders Receive \$1.9 Million in CMAQ Funds

The Greater Long Island Clean Cities Coalition announced at its quarterly stakeholder meeting in May that 10 local businesses received more than \$1.9 million for clean fuel vehicle and infrastructure projects. The funding, which came from the federal Congestion Mitigation and Air Quality Program, is estimated to help displace more than 147,000 gallons of petroleum annually. Projects awarded include the purchase of compressed natural gas (CNG) vehicles, the installation of CNG and E85 infrastructure, and the conversion of heavy-duty vehicles to run on hybrid electric systems.

Tennessee Chemical Company Uses Only B20 in Vehicles

East Tennessee Clean Fuels Coalition member Eastman Chemical Company on April 1 began fueling its 200 onsite vehicles and 150 pieces of stationary equipment with B20. The switch came just one month after the company started running its vehicles on B5. According to staff engineer Darren Curtis, Eastman considers B20 "an excellent opportunity to do something beneficial for the community and the environment at the same time."

Six CNG Buses Serve Portland Airport

Oregon's Port of Portland Commission in April approved the purchase of six 35-foot, low-floor, CNG buses for use at Portland International Airport. The airport's bus fleet is now 100% alternative fuel. Purchased from Eldorado-National Bus Company for \$1.7 million, the 28-passenger buses will replace three old diesel and three old CNG buses, making the airport's entire fleet of 26 buses 100% alternative fuel. The purchase follows the Port's acquisition of six similar Eldorado-National buses in June 2004.

28 Coalitions Benefit from GM Awards Program

Clean Cities' partnership with General Motors (GM) is bearing fruit for coalitions. Thirty-six coalitions last spring were named recipients of the company's 2005 Clean Cities Rewards. The awards, which range from \$1,000 to \$10,000, were granted based on the number of E85 and CNG stations coalitions installed by the end 2004 and the number of fleet customer awareness functions they held in 2004.

GM announced the awardees at the 11th Annual Clean Cities Conference in May. The Hampton Roads coalition received a \$1,000 award this summer.

Central Indiana: \$10,000	Greater Lansing Area (MI): \$2,000	Granite State (NH): \$1,000
Northern Colorado: \$5,000	Capitol District (NY): \$2,000	Commonwealth (KY): \$1,000
St. Louis (MO): \$5,000	Southwestern Connecticut: \$2,000	Central Texas: \$1,000
Twin Cities (MN): \$3,000	Wisconsin-Southeast Area: \$2,000	Greater Sacramento (CA): \$1,000
Greater New Haven (CT): \$3,000	Greater Philadelphia (PA): \$2,000	Silicon Valley (CA): \$1,000
Salt Lake (UT): \$3,000	Greater Long Island (NY): \$2,000	Atlanta (GA): \$1,000
Triangle (NC): \$3,000	South Shore (IN): \$2,000	Maine Clean Communities: \$1,000
Chicago (IL): \$3,000	Western New York: \$1,000	Central New York: \$3,000
San Joaquin Valley (CA): \$1,000	Central Ohio: \$3,000	Ann Arbor (MI): \$1,000

Coalitions Stand to Benefit from National Energy Policy

Signed into law on August 8, the Energy Policy Act of 2005 (http://energy.senate.gov/public/_files/ConferenceReport0.pdf) covers a dizzying array of energy initiatives—many of which may affect, and potentially benefit, Clean Cities coalitions and stakeholders.

The new energy policy includes potential funding opportunities or tax incentives in all five areas of the Clean Cities portfolio. Provisions of interest to coalitions fall under Titles VII (Vehicles and Fuels) and XIII (Energy Policy Tax Incentives). The following are brief descriptions of these provisions; they are not official interpretations.

It's important to note that while several provisions authorize federal funding, the Energy Policy Act doesn't actually provide the funds. Funds are only made available through a separate budget appropriations process, in which the Administration requests and Congress approves specific budgets for the federal agencies. Therefore, the budget amounts mentioned in the different portions of the new Act represent potential funding only.

Advanced Vehicle Demonstrations: The Act establishes a competitive grant program for advanced vehicle demonstration projects, to be administered by Clean Cities. Qualifying technologies would include alternative fuel vehicles (AFVs), hybrid vehicles, ultra-low sulfur diesel vehicles, motorized two-wheel bicycles, fuel cell vehicles, infrastructure, and operation and maintenance of vehicles, infrastructure, or equipment. Authorization: \$200 million until expended.

Hybrid and Diesel Vehicle Research and Development: The Act establishes a research and grant program that would advance the commercialization of hybrid/flexible fuel vehicles and plug-in hybrid/flexible fuel vehicles. Authorization: \$40 million from fiscal year (FY) 2006 to FY 2009. The Act directs the U.S. Department of Energy (DOE) to encourage the domestic production and sale of efficient hybrid and advanced diesel vehicles and accelerate efforts to ensure diesel vehicles meet Tier 2 emission standards.

Idle Reduction: The Act allows the U.S. Environmental Protection Agency (EPA) to analyze emissions reduction and fuel savings related to idle reduction and support deployment of idle reduction technologies. Authorization: \$94.5 million from FY 2006 through FY 2008.

Diesel Emissions Reduction: The Act establishes a competitive grant program for fleet modernization and retrofit of diesel trucks, to be administered by EPA. Authorization: \$100 million from FY 2006 to FY 2008 and as necessary for FY 2009 through FY 2010. Under the Act, EPA can also make grants and loans available to state and local governments and nonprofit organizations for diesel engine emissions reduction. Authorization: \$1 billion from FY 2007 through FY 2011.

Biodiesel Engine Testing: The Act allows DOE to work with engine and fuel injection manufacturers to study the effects of biodiesel blends on engines and emission control technologies. Authorization: \$25 million from FY 2006 through FY 2010.

Fuel Economy: The Act requires auto manufacturers to label dual-fuel vehicles to receive fuel economy incentives. Current CAFE (corporate average fuel economy) credits for dual-fuel vehicles extend through 2010. The Act also requires EPA to adjust fuel economy test procedures to reflect real-world driving conditions.

Clean School Buses: Under the Act, EPA may fund replacement or retrofit of school buses and installation of related infrastructure. Based on various criteria, up to 50% of bus replacement costs, up to 100% of bus retrofit costs, and up to 25% of infrastructure costs may be paid. Authorization: \$110 million from FY 2006 through 2007, and as necessary for FY 2008 through FY 2010.

Tax Incentives: The Act establishes several tax credits for the purchase of advanced lean-burn vehicles, fuel

cell vehicles, hybrid vehicles, and AFVs; credits will be adjusted for fuel economy improvements and emissions reductions. A tax credit is equal to 30% of the cost of alternative fuel refueling equipment. The current biodiesel excise tax provisions and income tax credit extend to 2008. The phase-out of the existing clean fuel vehicle and refueling property tax deductions was accelerated by one year. A related provision in the recently passed Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2005 establishes an excise tax credit for certain alternative fuels while increasing the motor fuels excise tax rate for the fuels.

Additionally, the Act sets a new national minimum requirement for the use of biofuels, particularly ethanol. The new Renewable Fuels Standard requires that gasoline sold in the United States contain a total of 4 billion gallons of biofuels in 2006, increasing to 7.5 billion gallons in 2012.

EERE Information Center Takes Over Hotline October 1

As part of a U.S. Department of Energy (DOE) streamlining effort, the Clean Cities and National Alternative Fuels Hotlines (NAFH) were integrated into the Office of Energy Efficiency and Renewable Energy's (EERE) Information Center on October 1.

Questions can be asked by phone or over the web. Inquiries are taken by phone at 877-EERE-INF (337-3463). The original numbers, 800-CCITIES (224-8437) and 800-423-1DOE (423-1363), will be redirected to the Information Center during the first year.

To submit a question electronically, click EERE Information Center (www.eere.energy.gov/cleancities/informationcenter.html) at the top right of the Clean Cities or Alternative Fuels Data Center homepages. Fill out the electronic form at the bottom of the page, and press Send.

Hardcopies of most Clean Cities documents can also be ordered "shopping-cart" style from the Information Center's online catalog. Orders will be processed and shipped within five business days.

Questions about Clean Cities and other DOE activities are answered by operators at the EERE Information Center. More complex technical inquiries are forwarded to the same experts who previously answered Clean Cities/NAFH Hotline questions.

You can help make this transition a success. Contact us with questions or suggestions.

Industry News

IRS Clarifies Biodiesel Tax Incentive Guidance

In August 2005, the Internal Revenue Service released modified guidance to clarify biodiesel tax incentive guidance published in January 2005. The original document (Notice 2005-4) addresses tax provisions added or affected by the American Jobs Creation Act of 2004 (Public Law 108-357) and requests public comment. These provisions include a federal tax credit for biodiesel blending companies for up to \$1 per gallon of biodiesel mixed with diesel fuel.

The modified guidance (Notice 2005-62) addresses several areas related to the biodiesel tax credit. It revises the original guidance related to the Certificate for Biodiesel, which is required for claiming the credit. It also provides new information on topics including the definition of a biodiesel mixture, the definition of agri biodiesel, and procedures for claiming the credit. The modified guidance is not the Final Rule.

President Bush signed the energy and transportation bills into law in August. Among other provisions in the energy bill, the biodiesel tax incentive was extended through 2008.

For details on the biodiesel tax incentive and related guidance, see the following sources:

- IRS Notice 2005-4: Fuel Tax Guidance (www.irs.gov/irb/2005-02_IRB/ar14.html)
- IRS Notice 2005-62: Modification of Notice 2005-4 (www.nbb.org/news/taxincentive/Biodiesel%20Notice%202005-62.pdf)
- National Biodiesel Board—Tax Incentive Information (www.nbb.org/news/taxincentive)

Minnesota Passes E20 Law

On May 10, Minnesota Governor Tim Pawlenty signed into law a statute that will require gasoline sold throughout the state to contain 20% ethanol (E20), beginning in 2013.

A couple of hurdles need to be cleared before the law goes into effect. The U.S. Environmental Protection Agency (EPA) will need to approve the blend at that level. Currently only blends of up to 10% ethanol (E10) are allowed in conventional gasoline vehicles. Blends of up to 85% ethanol (E85) are permitted in flexible fuel vehicles. EPA-approval will take the form of a “211-F waiver” certifying that E20 is “substantially similar to gasoline” for air quality and other factors. Implicit in that determination is acceptance of the blend by automobile manufacturers, meaning that they will agree to amend their vehicle warranty statements to include the use of E20.



A billboard in a Minnesota cold field promotes the use of E85.

NREL/PIX 14145

The law is also conditional on the state reaching 20% average renewable fuel gasoline content by 2010 from increased use of E85 in flexible fuel vehicles. Given the small market share of E85, that would be very difficult—even in Minnesota, a state that is home to about half the E85 stations in the country.

Minnesota has had a 10% ethanol requirement since 1997. It has 14 plants with production capacity of 450 million gallons of ethanol per year. Of those, 12 are farmer-owned. According to Ralph Groschen of the Department of Agriculture, the success of the state’s ethanol program is due to “courageous and visionary Minnesota farmers.”

Manila Receives First CNG Buses, Clean Cities Continues Support

The first three of what may become thousands of compressed natural gas (CNG) buses were delivered to Manila in July. Philippine President Gloria Macapagal-Arroyo and the country’s Department of Energy Secretary Raphael P.M. Lotilla joined other dignitaries for an inaugural ride in one of the buses from the presidential palace.

The buses feature Cummins Westport B and C series natural gas engines, which are manufactured in the United States. Cummins Sales and Service Philippines, a Cummins-owned distributor, will provide after-sale support and service for the engines. The buses are manufactured in China by several different Chinese companies.



One of Manila’s first three new CNG buses on display in July 2005. The city hopes to have 3,000 CNG buses in service by 2014.

NREL/PIX 14146

The Philippines is looking to alternative fuels to tackle its energy security and environmental challenges. In 2004, President Macapagal-Arroyo signed an executive order to implement the Natural Gas Vehicle Program for Public Transport, which aims to increase energy security and clean transportation through the use of natural gas vehicles.

Clean Cities is supporting these efforts as part of the Sustainable Energy Development Program (SEDP), a partnership that also includes the U.S. Agency for International Development and the Philippine Department of Energy. In February 2005, Clean Cities provided training in Manila to prepare the city for CNG bus operations. A train-the-inspector course is planned for this fall to support deployment of the CNG buses. The buses

will begin operation after CNG fueling stations become operable in October 2005, according to Divina Chinguanco, country director of SEDP.

Metro Manila has more than 10 million people and a large bus-riding population. Incentives for operators to use CNG buses include subsidized natural gas prices and government financing of CNG bus purchases. The Philippine Department of Energy reported the following targets for future CNG bus acquisitions in Metro Manila:

- 200 CNG buses by 2006
- 2,000 CNG buses by 2007
- 3,000 CNG buses by 2014

GM Loans FFVs to Alternative Fuel Organizations

General Motors (GM) worked out agreements with several organizations to use 28 Avalanche and Tahoe flexible fuel vehicles (FFVs) on one-year loans.

The vehicles were initially set to go to members of the Governor's Ethanol Coalition (GEC). However, four of the states did not have ethanol infrastructure to support the promotional program and others had "no gift" policies, which precluded vehicle loans. Therefore, GM loaned the FFVs to the other organizations.

The majority of the vehicles were loaned to GEC members across the country. Other recipients included the Renewable Fuels Association, the National Corn Growers Association, the National Ethanol Vehicle Coalition, the Clean Fuels Development Coalition, and the American Lung Association.

Colleen Crowninshield, coordinator of the coalition in Tucson, Arizona, and Dave Pelton, of Clean Cities of Middle Tennessee, received the FFV loans because their states' GEC members could not accept them. Pelton says the vehicles are "moving billboards" and people are constantly asking him about his Tahoe FFV. He keeps a stack of flyers in his vehicle describing the advantages of FFVs and hands them out constantly.

According to Connie Scarpelli, GM Marketing Manager, Alternative Fuels, the goal of the program is to spread public awareness of FFVs and their environmental advantages. "There has been a wide, positive response from recipients—not just because they get to use the vehicles but because of the opportunity to educate the public," she says.

New Propane Technology Showcased at 2005 Forum

The latest propane technologies and research from around the world were displayed at the 2005 Texas/North America Propane Technology Forum on August 25 in San Antonio, Texas.

The forum focused on propane technologies being developed for residential use, including combined heat and power units, the latest technologies for use in agriculture, as well as fuel cells and fuel quality. The forum concluded with a session on propane engine research being conducted, including a European transport emissions study in France. Forum participants also got an up-close look at new propane vehicles, including a prototype propane Ford F-150 truck, General Motors' 8.1-liter liquid injection propane system, and composite cylinders.

Also on display was a new dedicated propane-powered Hino truck expected to be available for delivery from the Toyota division in July 2007. In November 2004, the Propane Education & Research Council approved funding for the development, certification, and sale of a propane Hino JO8E engine in the U.S. market. The intent of the project is to make available a medium heavy-duty truck that complies with the U.S. Environmental Protection Agency's 2010 standards.

Milwaukee Airport Boosts CNG Use

A few years ago, the management at General Mitchell International Airport (GMIA) in Milwaukee, Wisconsin, determined that alternative fuel vehicles (AFVs) could play an important role in positioning the airport for growth. With the help of the Clean Cities Technical Assistance Project, also known as "Tiger Teams," the airport implemented a far-reaching strategic plan to add AFVs to its fleet.

The Alternative Fuel Strategic Plan (www.eere.energy.gov/cleancities/pdfs/gmia_afv_strategy_plan.pdf) was published in May 2003. The ambitious multiyear, multiphase plan aims to reduce airport fleet emission levels by about 78%—approximately 115 tons a year—through the use of compressed natural gas (CNG) vehicles. Airport management oversees the Clean Airport Partnership, which helps implement the plan.



One of GMIA's natural gas shuttles drops travelers at the main terminal. NREL/PIX 14148

A member of the Wisconsin Clean Cities–Southeast Area coalition, GMIA is the largest airport in Wisconsin. Owned and operated by Milwaukee County, GMIA has approximately 140 fleet vehicles.

Since 2003, the airport has purchased three CNG shuttle buses and three CNG Honda Civics. GMIA used \$51,000 from a Congestion Mitigation and Air Quality (CMAQ) Improvement Program grant to help pay the incremental costs of the three buses. According to Greg Frailey, GMIA Environmental Manager, the airport will probably purchase a fourth CNG shuttle bus in the near future. Long term, the county hopes to replace all gasoline- and diesel-powered vehicles with those that run on CNG, he says.

The conversion will be spurred by a new CNG fueling station on airport grounds. A federal CMAQ Improvement Program grant for \$389,600 will enable construction of the public facility, which will be called the Mitchell Multipart.

"Mitchell Multipart will be a boon for airport customers, rental car companies, and the general public. Road warriors, Sunday drivers, and future generations will benefit from the cleaner air and energy security afforded by the introduction of this full-service enterprise," says Francis Vogel, Executive Director of Wisconsin Clean Cities—Southeast Area. Construction and a grand opening are anticipated in 2006.

Education Center Features Prototype CNG/LNG Fueling Station

Since April, about one-third of Fresno's school buses have been filling up at a new state-of-the-art natural gas fueling station at the Southwest Education Support Center in Caruthers, California. Not only is the station helping to decrease the use of imported petroleum, it is a test facility for new compressed and liquefied natural gas (CNG/LNG) fueling technology.

The 16,000-square-foot education support center was built in November 2004. Half the space is used for school administration, the other half for bus maintenance. The administration portion includes the offices of the Southwest Transportation Agency, which operates the buses and is a member of the San Joaquin Valley Coalition.

Fourteen years ago the fleet included only 10 CNG buses, says Kirk Hunter, agency director. The agency worked through an experimental phase with those buses and realized that CNG was a viable alternative to diesel. To date, Hunter says, CNG is cost-effective, costing the same as or less than diesel. Now, 29 of the agency's 90 school buses are fueled with CNG. The agency serves 15 school districts, transports 7,000 children each school day, and the buses travel 1 million miles a year.

When it was decided to build the new center, Hunter says he wanted it to have a CNG/LNG fueling station to support expansion of alternative fuel buses in the fleet. With the blessings of "a very forward thinking agency

board,” he sought funding. The agency obtained \$1 million in funding from two programs run by the San Joaquin Valley Air Pollution Control District: the Heavy-Duty Engine program and the Reduce Motor Vehicle Emissions program.

The Idaho National Laboratory and Pacific Gas and Electric helped develop the prototype CNG/LNG station and will be using the site to test fueling technology yet to be developed.

The public and other private fleets can also use the station. So far, Hunter says some Fresno Area Express buses are using the station and that he hopes use by public and private fleets will increase.

In the meantime, the Southwest Education Support Center’s CNG/LNG fueling station will continue powering buses to get children to school so they can learn and, at the same time, educate area adults about the benefits of natural gas vehicles.

For more information contact Kirk Hunter at khunter@southwestjpa.org, 559-644-1020.

Clean Cities’ Technical Assistance

Project (Tiger Teams) provides AFV and infrastructure technical expertise to Clean Cities coalitions nationwide, assisting when coalitions encounter barriers that challenge local resources. Tiger Team assistance includes planning for and implementing AFVs and infrastructure, developing educational and training tools, and evaluating AFV-related legislation. For more information, visit the Technical Assistance (Tiger Teams) website (www.eere.energy.gov/cleancities/technical_assistance.html).

Success Story

Education Center Features Prototype CNG/LNG Fueling Station

Since April, about one-third of Fresno’s school buses have been filling up at a new state-of-the-art natural gas fueling station at the Southwest Education Support Center in Caruthers, California. Not only is the station helping to decrease the use of imported petroleum, it a test facility for new compressed and liquefied natural gas (CNG/LNG) fueling technology.

The 16,000-square-foot education support center was built in November 2004. Half the space is used for school administration, the other half for bus maintenance. The administration portion includes the offices of the Southwest Transportation Agency, which operates the buses and is a member of the San Joaquin Valley Coalition.



Twenty-nine Fresno County school buses fill up at the Southwest Education Support Center’s CNG/LNG station.

NREL/PIX 14147

Fourteen years ago the fleet included only 10 CNG buses, says Kirk Hunter, agency director. The agency worked through an experimental phase with those buses and realized that CNG was a viable alternative to diesel. To date, Hunter says, CNG is cost-effective, costing the same as or less than diesel. Now, 29 of the agency’s 90 school buses are fueled with CNG. The agency serves 15 school districts, transports 7,000 children each school day, and the buses travel 1 million miles a year.

When it was decided to build the new center, Hunter says he wanted it to have a CNG/LNG fueling station to support expansion of alternative fuel buses in the fleet. With the blessings of “a very forward thinking agency board,” he sought funding. The agency obtained \$1 million in funding from two programs run by the San Joaquin Valley Air Pollution Control District: the Heavy-Duty Engine program and the Reduce Motor Vehicle Emissions program.

The Idaho National Laboratory and Pacific Gas and Electric helped develop the prototype CNG/LNG station and will be using the site to test fueling technology yet to be developed.

The public and other private fleets can also use the station. So far, Hunter says some Fresno Area Express buses are using the station and that he hopes use by public and private fleets will increase.

In the meantime, the Southwest Education Support Center's CNG/LNG fueling station will continue powering buses to get children to school so they can learn and, at the same time, educate area adults about the benefits of natural gas vehicles.

For more information contact Kirk Hunter at khunter@southwestjpa.org, 559-644-1020.

EPAct Update

New Energy Policy Could Affect Covered Fleets

The new energy policy signed by President Bush on August 8 may alter how regulated fleets comply with EPAct requirements.

Under the Energy Policy Act of 1992, qualifying federal, state, and alternative fuel provider fleets must acquire a certain percentage of alternative fuel vehicles (AFVs) as part of their annual light-duty vehicle acquisitions.

These requirements will remain the same. The new policy, however, includes the possibility for state and alternative fuel provider fleets to request waivers from DOE to reduce petroleum consumption in lieu of complying with the original fleet program. The waiver does not apply to federal fleets.

Also different is a mandate that federal fleets must run all dual-fuel vehicles on alternative fuels 100% of the time, rather than 51% of the time, as required by Executive Order 13149. Federal fleets must also continue to purchase the same percentage of AFVs as they have in the past.

Other changes include tax credits and incentives on the acquisition of AFVs and the development of alternative fuel infrastructure.

At this time, DOE is reviewing the policy and considering how the new provisions will be implemented.



President Bush signed the Energy Policy Act of 2005 into law on August 8.

Credit: Eric Draper, White House

New Resources

New Tool Compares Costs of Conventional and Hybrid Vehicles

The Hybrid Electric Vehicle (HEV) Cost Calculator Tool (www.eere.energy.gov/cleancities/hev/cost_calc.html) is now available on the Clean Cities website. Developed by the National Renewable Energy Laboratory, Center for a New American Dream, and the American Council for an Energy Efficient Economy, the tool allows fleets to compare the full costs and benefits of a HEV versus a conventional vehicle. Fleets can also use the tool to determine the cost and benefits of a fleet of HEVs versus a fleet of conventional vehicles.

AVTA Releases Annual Overview

The U.S. Department of Energy's Advanced Vehicle Testing Activity (AVTA) recently published its Overview of Advanced Technology Transportation, 2005 Update (www.eere.energy.gov/afdc/pdfs/37777.pdf). The annual review tracks industry progress on light- and heavy-duty hybrid, fuel cell, and alternative fuel vehicles.

GEC Publishes Ethanol Report

The Governor's Ethanol Coalition (GEC) in April released Biomass from Ethanol (www.ethanol-gec.org/GEC_biomass_rept_4-12-05.pdf), a report that outlines three recommendations GEC developed in response to its concerns about energy, economic, and environmental security. The recommendations, which were forwarded to President Bush, focus on creating a renewable fuel security standard, supporting further fuel research and development, and offering commercialization and production incentives.

New Study Explores Biodiesel Performance in Cold Weather

The National Biodiesel Board and the Cold Flow Blending Consortium recently released the Biodiesel Cold Weather Blending Study (http://www.nrel.gov/vehiclesandfuels/nbpf/pdfs/cftr_72805.pdf), a report that describes tests conducted to determine the blending properties of biodiesel in different cold-weather temperatures.

A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

For more information contact: EERE Information Center 1-877-EERE-INF (1-877-337-3463)
www.eere.energy.gov

Neither the United States government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States government or any agency thereof. The views and opinions of the authors expressed herein do not necessarily state or reflect those of the United States government or any agency thereof.

DOE/GO-102005-2188
October 2005



U.S. Department of Energy

Energy Efficiency and Renewable Energy

Bringing you a prosperous future where energy is clean, abundant, reliable, and affordable