

*Clean Cities Now* ([www.eere.energy.gov/cleancities/ccn](http://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.

## **Communication Key to Building Partnerships, Securing Funding**

In late November, Boston-based Massachusetts Bay Transportation Authority (MBTA) received a substantial tax credit from the Internal Revenue Service for the use of compressed natural gas in its 360 transit buses. It was the first credit the authority received from a three-year tax program. For MBTA, the credit translates into \$7.4 million over three years, or roughly \$600,000 each quarter.

According to Massachusetts Coalition Coordinator David Rand, Clean Cities played an important role in MBTA receiving the credit. It was Rand who tipped off the authority to the credits after learning about them at a stakeholder meeting he held in March.

"NGV America's Paul Kerkhoven presented on the credits during our meeting," says Rand. "Afterward, I contacted MBTA, and they said they weren't aware of them. When they did the math they realized they were eligible for \$7.4 million."

This is a perfect example of what can be accomplished when Clean Cities brings the right people to the table, says Mike Scarpino, manager for the northeast region. He encourages coalitions to hold regular stakeholder meetings to keep the lines of communication open between local and regional members.

"I don't know if I can recall another coalition meeting that resulted in a savings of more than of \$7 million for a single stakeholder," says Scarpino, "but I definitely consider this another example of the power of the Clean Cities network."

Kay Milewski, manager of Clean Cities' north central region, agrees. "Never underestimate the power of a quarterly stakeholder meeting," she says. "Stakeholder meetings and events are probably the best opportunities to network with one another and establish partnerships for various projects and funding opportunities."

However, she acknowledges that coordinating schedules for regular in-person meetings can be difficult. In that case, she suggests coordinators put technology to work by setting up blogs or conference calls.

"Pittsburgh Clean Cities has a Google group where members can post e-mails and news articles about the various alternative fuel-related activities occurring in the region," she says. "You can set your e-mail preferences for how often you want to get updates and all the latest group news comes straight to your inbox. It's a great way for stakeholders to stay current on important and timely issues that impact their fleets and network with one another between stakeholder meetings."

But don't stop with stakeholders, says Mike Bednarz, manager of the western region. He encourages coordinators to invite neighboring coalitions to meetings to develop collaborative projects that benefit larger regions.

"The contacts and connections that occur in coalitions every day are helping to make a difference and move our industry forward," says Scarpino. "By bringing interested parties together through Clean Cities, we are learning and spreading new information that, in turn, benefits everyone."

## Coalition News

### Public-Private Effort Lays Groundwork for Hydrogen Gateway

St. Louis Clean Cities is teaming with federal agencies, a local university, and an automaker to establish Missouri's first permanent hydrogen fueling station in Rolla—home of the Missouri University of Science and Technology (S&T).

The new fueling site will serve two Ford E-450 hydrogen buses, which have been shuttling Missouri S&T students across campus since August. Until the site is functional, the shuttles will continue to use a mobile hydrogen station manufactured by Air Products and Chemicals.



Two Ford E-450 hydrogen shuttle buses have been transporting students across the Missouri University of Science and Technology since August.

Photo contributed by B.A. Rupert, Missouri S&T

So far, the buses have traveled roughly 2,200 miles and consumed about 300 gallons of hydrogen. Since the shuttles are a new service on campus, petroleum displacement statistics are not available, says Steve Tuttle at Missouri S&T. However, he muses, "we have been running the vehicles since mid August, so we like to think we have saved about 75 pairs of sneakers."

Plans for the new hydrogen station are being finalized for installation in 2008. The location and storage capacity of the site will allow the buses to do double duty. Not only will they serve students at Missouri S&T, they will be used to shuttle commuters between Rolla and Fort Leonard Wood, a military site in St. Roberts, Mo.

The project is a joint effort between Missouri S&T, the U.S. Department of Transportation's Research and Innovative Technology Administration, the National University Transportation Center, Ford Motor Co., U.S. Air Force Research Laboratory, and the Defense Logistics Agency.

According to Kevin Herdler, coordinator for St. Louis Clean Cities, a second hydrogen fueling station site is being scoped for a construction landfill site in Valley Park, Mo. "This location is ideal to serve St. Louis, Lambert International Airport, and Scott Air Force Base in Illinois," says Herdler.

With both hydrogen stations operational, the infrastructure will fuel hydrogen vehicles along 164 miles of Interstate 44, providing a gateway to the hydrogen highway.

### Seventh Graders Help Legislate School Bus Idle Reduction in Vermont

At Brown's River Middle School in Jerico, Vt., Patty Brushett's seventh grade class committed itself to a yearlong project called "Sustainability is Our Mission" (SOM). The project focused on researching the environmental effects of school bus exhaust. As a result of its findings, the preteen group became a driving force behind a law to limit bus idling on school grounds.

Using the [fuel savings calculator](#) on the National Idle Reduction Campaign Web site,\* the SOM group determined that if 10 buses reduced idling time by five minutes every day for one year, the school district would save 75 gallons of diesel fuel and approximately \$185. With 1,800 school buses in Vermont, the annual savings added up to more than \$33,000 and 13,500 gallons of diesel.

Armed with this information and the environmental and health consequences of exposure to diesel emissions, the students aggressively advocated for the enactment of a state law that would prohibit bus idling on school

property. They wrote letters to all 150 legislators, gave public speeches, and testified to the school board and three legislative committees about how idling is costly, pollutes the air, and affects public health.

Approximately four months after their lobbying efforts began, Vermont Gov. Jim Douglas visited Brown's River Middle School to officially sign into effect Act 48, which mandates school bus operators to refrain from idling engines while waiting for children to board or exit buses on school grounds and from starting engines until they are ready to leave school premises.

Not only were the students successful in getting the state law enacted, they were officially commended by the U.S. Environmental Protection Agency (EPA) for their efforts to ban school bus idling statewide.

Brushett says her students were innovative in implementing changes inside the school and in educating their classmates through mini-tutorials on sustainability during morning meetings. Karen Glitman, coordinator of the Vermont Clean Cities Coalition, helped guide Brushett through pressure points the students had to address throughout the program.

*\*A campaign of EPA's Clean School Bus USA program.*



Thanks to students at Brown's River Middle School, buses no longer idle on school grounds throughout Vermont.

NREL/PIX 14147. Photo contributed by Southwest Transportation Agency JPA

## **Pennsylvania Project Installs E85 Stations along 200-Mile Stretch**

Pennsylvania's roughly 160,000 flexible fuel vehicle (FFV) drivers are noting progress along the state's E85 corridor—a project to open 14 E85 fueling sites along a 200-mile stretch of highways running from State College to Philadelphia. To date, four of the planned stations are operational and three more are slated to open soon.

The E85 corridor, which is a project of the Greater Philadelphia Clean Cities (GPCC) coalition and funded in part by the National Energy Technology Laboratory, runs between State College and Middletown on Route 322, continues on Route 283 from Middletown into Lancaster County, then follows Route 30 from Lancaster County to Montgomery County. It also includes three stations that are planned along or near Interstate 83 through York County, and one more in Gettysburg along Route 15.

When complete, GPCC estimates that the corridor will dispense 648,000 gallons of E85 each year. Further growth is expected as marketing efforts ramp up in the state.

According to GPCC Coordinator Dennis Winters, goals for the E85 Corridor Project include converting 14 conventional stations to sell E85, educating consumers on the use and benefits of E85, increasing consumer awareness of FFVs and alternative fuels, and promoting growth in FFVs and infrastructure in the greater Philadelphia area.

GPCC designed hangtags for placement in FFVs at area dealerships.  
Photo contributed by GPCC

A vertical graphic for E85 fuel. The top half has a blue background with a white circle and the text "I am a Flexible-Fuel Vehicle!". Below that is a green field of grass with the text "I'm capable of running on" and an E85 logo. The bottom half has a dark blue background with the text "Fill me up with E85, regular gasoline, or any combination of the two!" and a list of benefits. At the bottom are logos for Clean Philadelphia Cities, Alternative Fuels, and EPA.

**I am a Flexible-Fuel Vehicle!**

I'm capable of running on

**Fill me up with E85, regular gasoline, or any combination of the two!**

- E85 looks & fuels just like regular gasoline
- Domestically produced
- Reduces dependence on petroleum
- Biodegradable & non-toxic
- Burns cleaner than gasoline
- Reduces greenhouse gas emissions

Clean Philadelphia Cities | ALTERNATIVE FUELS | EPA

“The E85 corridor project offers a great opportunity to market E85 to folks with flex-fuel vehicles,” says Winters. “Without that infrastructure, people can’t really take advantage of the benefits of owning an FFV.”

As part of its publicity efforts, GPCC designed E85 hangtags for all new FFVs for sale at area dealerships. The front of the tag distinguishes the vehicle as an FFV, while the back lists nearby E85 retail stations.

Local General Motors (GM) dealerships will be the first to display the hangtags. In addition, the U.S. General Services Administration in Philadelphia agreed to display the tags in all FFVs leased to area EPAAct-mandated government fleets.

## Program News

### Updated Technology Bulletin Details UL Announcement

The U.S. Department of Energy (DOE) issued a technology bulletin on Underwriters Laboratories’ October announcement to issue safety requirements and accept submittals for certification investigations on E85 fuel dispensing equipment.

Available on the [Alternative Fuels and Advanced Vehicles Data Center](#) (AFDC) Web site, the bulletin updates readers on UL’s announcement, features a link to UL’s press release, and tells readers where to go for more information.

“Technology bulletins are a fast, effective way for Clean Cities to keep coalitions and stakeholders updated on industry issues,” says Dennis Smith, technology deployment manager and Clean Cities director. “They also offer a historical reference for ongoing topics.”

To read about the latest UL announcement, visit the [Technology Bulletins](#) section of the AFDC.

### Natural Gas Vehicle Industry Honors Marcy Rood

Clean Cities Manager of Coalitions Marcy Rood received the 2007 National Natural Gas Vehicle (NGV) Achievement Award, an honor presented by NGV America and the Clean Vehicle Education Foundation.

Rood was recognized for her efforts in advancing natural gas vehicles and related infrastructure in the United States and overseas. The award was one of six presented at the National NGV Conference in Reno, Nev., in October.

“Marcy has been a strong and effective advocate for developing a sustainable NGV market both here and abroad,” says NGV America President Rich Kolodziej.

## Industry News

### SmartWay Grow and Go Promotes Renewable Fuels

Looking for ways your company can be greener in its everyday operations? The U.S. Environmental Protection Agency’s (EPA) SmartWay Grow and Go program can help. It reaches out to carrying and shipping companies committed to using renewable fuels and provides resources to help them successfully implement these fuels into their operations.

Launched in October 2006, the SmartWay Grow and Go program expands on EPA’s original SmartWay Transport Partnership, which encouraged the freight industry to use energy-efficient technologies, such as idle reduction equipment and low-rolling resistance tires. In just three years, the Transport Partnership grew to more than 600 members—75% of them carriers, 25% shippers—and claims to have displaced more than

350 million gallons of diesel fuel and kept nearly 4 million tons of carbon dioxide emissions out of U.S. skies. The voluntary Grow and Go program encourages companies to commit to using biodiesel and ethanol in response to the President's fuel displacement initiative. [Forty-eight companies](#) have already signed on. They include General Motors, Coca-Cola, Safeway, and Anheuser-Busch.

Under the Grow and Go program, partners commit to using biodiesel in heavy-duty vehicles and ethanol in light-duty fleets. The goal is for 25% of the program partners to commit to using renewable fuels by 2012 and 50% to commit by 2020. While the Transport Partnership rigorously assesses member companies' fuel use, EPA does not yet have an accurate projection on how much petroleum and carbon emissions the Grow and Go program will displace once it reaches its goal. But judging from the success of the Transport Partnership, EPA expects it to be "significant."

Although renewable fuels are a large focus of the Grow and Go program, it still supports the Transport Partnership's original mission: energy efficiency. That's why EPA is now collaborating with the Small Business Administration and three lenders to provide expedited, flexible-term loans to obtain energy-efficiency equipment. With idle reduction auxiliary power units costing between \$8,000 and \$9,000, this can be a great help for small trucking companies.

For more information on the SmartWay Grow and Go program, visit the [EPA Web site](#), which includes a cost savings calculator, contacts for the loan program, and links to extensive information on trucking energy-efficiency technologies.

## Fleet Experiences

### Portland Water Bureau Leads the Way with B99

Oregon's Portland Water Bureau (PWB) is committed to using the highest blend of biodiesel available. Since 2006, it has been using B99 (99% biodiesel, 1% diesel) in its city-owned, diesel-powered vehicles and equipment from spring through fall and B50 (50% biodiesel, 50% diesel) in the winter.

PWB's switch to B99 is the latest in a string of initiatives aimed at building alternative fuel infrastructure in the region and state. "We're doing our part to increase biodiesel demand and help spur the development of Oregon-based production facilities, reduce greenhouse gas emissions, and decrease reliance on foreign oil," says Portland City Commissioner Randy Leonard. A long-time biodiesel advocate and an instrumental leader in the bureau's switch to biodiesel, Leonard promotes B99 as a cleaner-burning renewable fuel and an opportunity to boost the local economy.

To that end, the biodiesel used by PWB is locally produced. The city's partners in the effort—Oregon-based Star Oil and SeQuential Pacific Biofuels—blend and distribute the fuel, while regional farmers (from Oregon, Washington, Idaho, and Montana) grow the seed crops that eventually become the feedstock for B99. PWB and its project partners are stakeholders in the local Columbia Willamette Clean Cities coalition.

With PWB's approximately 144 vehicles—ranging from backhoes and forklifts to dump trucks and tractors—running on B99, the emissions benefits are adding up. During the first quarter of 2007, the fleet offset:

- 1.5 million pounds of carbon dioxide.
- 1,800 pounds of carbon monoxide.
- 519 pounds of sulfur oxides.
- 170 pounds of particulate matter.
- 126 pounds of hydrocarbons.

Contact: [Rick Wallace](#), Columbia Willamette Clean Cities coordinator, 503-378-3265.

### **EPAct Requires Federal Fleets to Use Alternative Fuels**

Fiscal year (FY) 2008 marks the first year EPAct-covered federal fleets are required to comply with Section 701 of the Energy Policy Act (EPAct) of 2005. Under this provision, fleets must use alternative fuel in dual-fuel vehicles unless they obtain a waiver from DOE.

Dual-fuel vehicles (which include ethanol/gasoline-capable FFVs and gasoline/natural gas- or gasoline/propane-capable bi-fuel vehicles) currently make up more than 85% of the alternative fuel vehicles (AFVs) in the federal fleet.

According to Section 701, federal fleets must use alternative fuels in dual-fuel vehicles unless it is not reasonably available or is unreasonably expensive. "Not reasonably available" is defined as unobtainable within a 15-minute drive or within five miles (one way), whichever is greater. "Unreasonably expensive" is defined as costing considerably more than gasoline on a gasoline gallon equivalent basis.

If a federal fleet can prove either of these cases applies, it can request a waiver from DOE. Waiver requests are due by June 30 prior to the fiscal year for which the waiver is sought (for example, the deadline for submitting a request for FY 2008 was June 30, 2007). Waivers are good for one year and only apply to vehicles that meet the waiver criteria. Fleets are responsible for using alternative fuels in dual-fuel vehicles that are not covered by waivers.

"Waivers are considered a short-term solution," says Brad Gustafson, DOE's acting federal fleet regulatory manager. "Fleets that receive them are expected to spend their waiver year finding ways to use alternative fuels in their dual-fuel vehicles during subsequent fiscal years."

Regardless of whether they obtain waivers under Section 701, all federal agencies must still comply with Executive Order 13423, which requires agencies with 20 or more vehicles in the United States to decrease petroleum consumption by 2% per year relative to their FY 2005 baseline through FY 2015 and to increase alternative fuel use by 10% per year relative to the previous year from a FY 2005 baseline.

For more information on EPAct Section 701, read the guidance on the [EPAct Web site](#).

## Resources

### **E85 Retail Business Case**

Published by the National Renewable Energy Laboratory (NREL), this comprehensive report presents a model fuel retailers can use to determine whether E85 is a profitable business venture. It offers innovative strategies station retailers have devised to overcome challenges they faced when installing E85 ([PDF 1.4 MB](#)).

### **Validation of Hydrogen Fuel Cell Vehicle and Infrastructure Technology**

This four-page fact sheet describes a DOE program to build small fleets of fuel cell vehicles and supporting infrastructure for demonstration projects in California, Michigan, the Mid-Atlantic region, and Florida. Four teams of auto manufacturers and energy companies are participating in the program. ([PDF 790 KB](#)).

### **Fuel Economy Guide**

Hardcopies of the 2008 Fuel Economy Guide are now available. To order, fill out [this form](#) on the Alternative Fuels and Advanced Vehicles Data Center Web site. An electronic version of the guide is also available ([PDF 4 MB](#)).

# Fuel Cell Buses in U.S. Transit Fleets: Summary of Experiences

Published by NREL, this technical report reviews the development of fuel cell bus technology and compares the fuel cell programs of transit agencies throughout the United States. ([PDF 814 KB](#)).

## 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)

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**Energy Efficiency and Renewable Energy**

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