Formerly Clean Cities News

Clean Cities Now

Official Publication of Clean Cities and the Alternative Fuels Data Center

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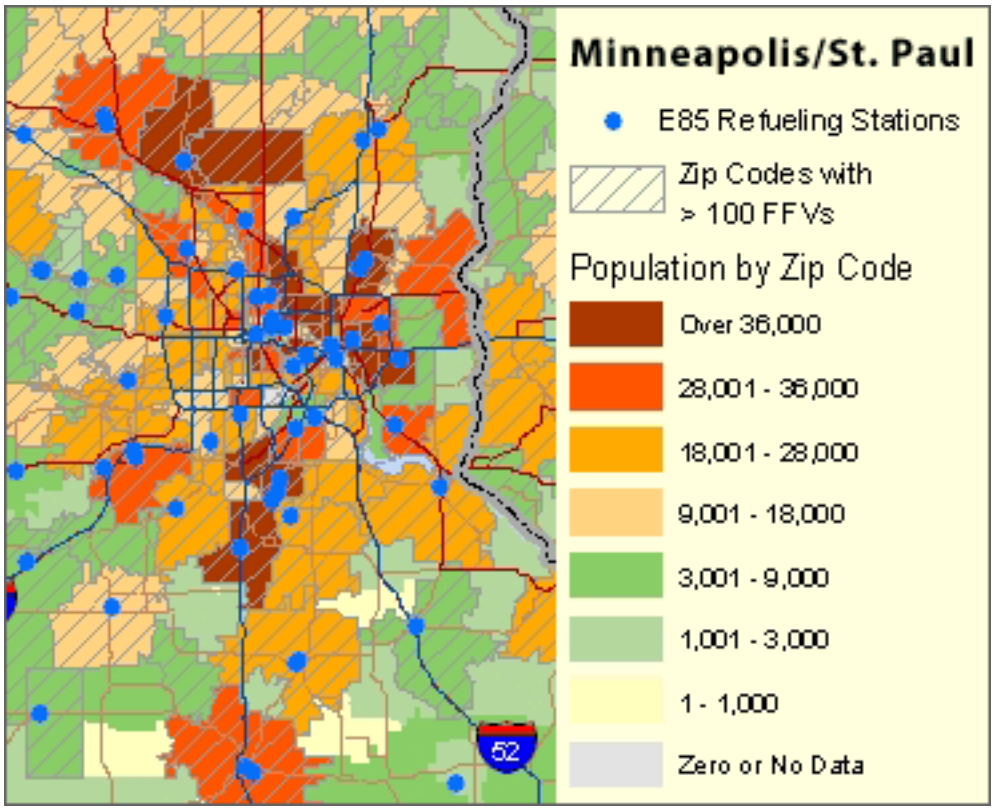
Clean Cities Now (www.eere.energy.gov/cleancities/ccn) is the official publication of Clean Cities, an initiative of the U.S. Department of Energy designed to reduce petroleum consumption in the transportation sector by advancing the use of alternative fuel vehicles, idle reduction technologies, hybrid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

Data Package Allows Clean Cities to Examine Alternative Fuel Industry in Detail

To help determine the most effective locations for alternative fueling infrastructure, Clean Cities acquired access to the Vehicles in Operation Database, a comprehensive statistics package published by reputable automotive data collection agency R.L. Polk & Co.

Polk's Vehicles in Operation Database offers a clear view of the alternative fuel playing field. Its accuracy comes from the registration information it collects from motor vehicle departments throughout the country and the vehicle identification number (VIN) specifications it obtains from original equipment manufacturers. The database compares the motor vehicle registrations with the VIN specifications and sorts the registrations into vehicle types (e.g., conventional, hybrid electric, flexible fuel). The result is a real-world count of light-duty vehicles (LDVs) by zip code.



Clean Cities is using Polk data to identify promising targets for refueling infrastructure. This map shows concentrations of E85-capable flexible fuel vehicles in Minnesota's Twin Cities.

Image contributed by NREL

"This level of detail is what makes the data so useful," says Paul Bergeron, Senior Engineer and Analyst at the National Renewable Energy Laboratory (NREL). "We have never been able to narrow down alternative fuel vehicle location estimates to such a small area."

Because the information is outputted by zip code, the information can be loaded into a geographic information system (GIS) for mapping—a capability that makes it easy for Clean Cities to identify areas (both rural and metropolitan) where alternative fuel vehicles (AFV) are (and are not) predominant and what types of fuels the vehicles run on.

To enhance the effectiveness of information gleaned from the Vehicles in Operation Database, Clean Cities couples it with supplemental information. For example, when performing an analysis of a certain area, Clean Cities notes locations of current gasoline and alternative fueling stations, the price of and convenient availability of alternative fuels in the area, and consumer knowledge of and attitudes toward alternative fuels in the area. Clean Cities also takes into consideration population densities, traffic patterns, areas with special incentives or promotional programs, and more.

"By pairing Polk data with supplemental information, we get the most complete picture of alternative fuels markets across the country," says Bergeron. "We want the information we publish to be as accurate as possible so our coordinators and stakeholders can make informed decisions on the most successful locations for infrastructure."

Because the data is proprietary, it cannot be copied and distributed to individual coordinators. Instead, it will be used for U.S. Department of Energy (DOE) analysis. Look for findings in Clean Cities select reports, fact sheets, and presentations. In some cases, the data could potentially be used for analysis in coalition projects.

Coalition News

Airport CNG Shuttles Become Hit of the Party

A fleet of compressed natural gas (CNG) airport shuttle buses has taken on a new life, resulting in even more CNG use in St. Louis, Missouri.

Lambert-St. Louis International Airport, a St. Louis Clean Cities stakeholder, recently sold five of its CNG shuttle buses at auction as part of its standard three-year turnaround cycle for shuttles. (The airport replaced the vehicles with new CNG shuttles.) The good news for St. Louis: The buses were bought by Windows on Washington, a popular restaurant and banquet facility in the Washington Avenue Downtown District.

A downtown St. Louis banquet facility, Windows on Washington, runs a fleet of five CNG shuttle buses as a service to its downtown customers.

Photo contributed by Thomas Klein, Windows on Washington

Windows on Washington uses the shuttles to transport guests to and from downtown parking lots and hotels to the banquet and restaurant facilities. The CNG choice made sense for the banquet facility. "CNG is environmentally prudent and a patriotic American response (to energy concerns)," says Windows on Washington owner Tom Klein. And he says the clean running buses are very popular. "We receive compliments from passengers, drivers, downtown corporate and residential neighbors, other employees, and even the Metropolitan St. Louis Taxi Cab Commission."

The shuttle drivers fuel the vehicles with the FuelMaker owned by Windows on Washington and at the Laclede Gas Company Public Fueling Facility in St. Louis.

Palmetto State Uses Fine Money to Install E85 Pumps

The Palmetto State Clean Fuels Coalition in South Carolina received $447,000 to install E85 pumps throughout the state. The money was part of an $11.2 million fine levied against an area pulp and paper company by the U.S. Environmental Protection Agency (EPA). Palmetto State received the funds through the South Carolina Department of Health and Environmental Control to develop E85 infrastructure conveniently accessible to the state's largest fleets.

The $447,000 fully funded 10 stations in Columbia, Greenville, and Fort Mill—nine of them received new

underground storage tanks, while one received a retrofit. "CleanFUEL USA provided new dispensers and retrofitted a couple of existing dispensers," says Wendy Bell, coordinator of the Palmetto State Clean Fuels coalition. "Installation costs ranged from $6,000 for a conversion up to roughly $79,000 for all new equipment. The average cost per station was $45,000 to $49,000."

All but one of the funded dispensers is located under the stations' main canopies—a requirement to the sites receiving the equipment.

In addition to these 10 stations, Palmetto State guided the opening of 26 more E85 dispensers throughout South Carolina, mainly along interstate corridors in Greenville, Spartanburg, and Columbia. The last of the 36 stations opened in Fort Mill in January 2007.

The stations were sited to serve South Carolina's more than 2,600 state fleet flexible fuel vehicles (FFVs). Area federal fleets also use the facilities.

Colorado Coordinator is One of 1,000 Voices

Teri Ulrich, coordinator for the Colorado Springs Clean Cities Coalition completed training to be one of former Vice President Al Gore's "1,000 voices," a program under The Climate Project.

The goal of the 1,000 Voices initiative is to train 1,000 volunteers worldwide to present the information featured in the Oscar-winning documentary "An Inconvenient Truth." Information covered in the film includes an overview of current scientific thought on global warming and suggestions on how people can reduce greenhouse gas emissions (GHGs).

"I saw the movie last summer, and it really affected me," says Ulrich. "It filled me with hope that I could help with the issue of climate change."

After completing an online application process, Ulrich was selected due in part to her affiliation with Clean Cities. "The Climate Project selected participants with an eye toward geographic diversity and those who have a forum where they can be heard by others," she says.

In December 2006, Ulrich traveled to Nashville, Tennessee, for a two-day training session with 149 other volunteers aged 14 to 70 from all 50 states and several other countries. "Mr. Gore was there the whole time, supporting us and walking us through his slides," she says. "The organizers gave us access to the slides to download, encouraged us to use their extensive online forum for questions and latest information, and sent us off to do a minimum of 10 presentations per year."

Ulrich has already presented several times and has more in the schedule book. Naturally, her main message in reducing GHGs is the use of alternative fuels. "I have an extensive section on alternative fuels where I explain where stations are located and why they are a part of the answer to petroleum reduction."

She says she is grateful for the opportunity. "The most exciting part is that I now have another avenue to share my concerns about climate change with the public in a way it is respected and legitimized."

For more information, visit The Climate Project.

South Shore Race Team Revs Up on CNG

The National Hot Rod Association race team of Charlie Lundquist and Chuck Lundquist, South Shore (Indiana) Clean Cities stakeholders, is setting new standards in alternative fuel drag racing. Both men race cars fueled with CNG and have worked to change racing league rules on alternative fuel race cars.

In 1996, Charlie Lundquist had to petition for a rule change to race his 1979 Chevy Malibu, which had been converted to run on CNG. He won the event. Today the Hebron, Indiana, race team stable includes a CNG

dragster and a CNG Chevy Nova. The cars are sponsored by NIPSCO, NiSource, Quality Oil Company, and Kendall Motor Oil.

The team uses several fueling options. When traveling, it carries its own fuel or contacts the local utility for fueling close to the race venue. When at home in northern Indiana, Team Lundquist can fuel up at any of several CNG refueling stations or use the FuelMaker connected to its natural gas line at the shop.

In addition, the Lundquists are Clean Cities advocates. "They travel across the country racing with South Shore Clean Cities stickers on their cars and distribute information on the Clean Cities initiative," says Carl Lisek, South Shore Clean Cities Coordinator. "They are very loyal to CNG and to Clean Cities."

In Other Indiana News...

Family Express Corp., a small chain of convenience stores, announced plans to make E85 available at 20 new locations throughout northwest and north central Indiana by the end of 2007. The corporation is expanding consumer access to E85 to complement Indiana's initiative to increase its ethanol production. These 20 stations make Family Express, a Clean Cities stakeholder, the largest E85 retailer in the state.

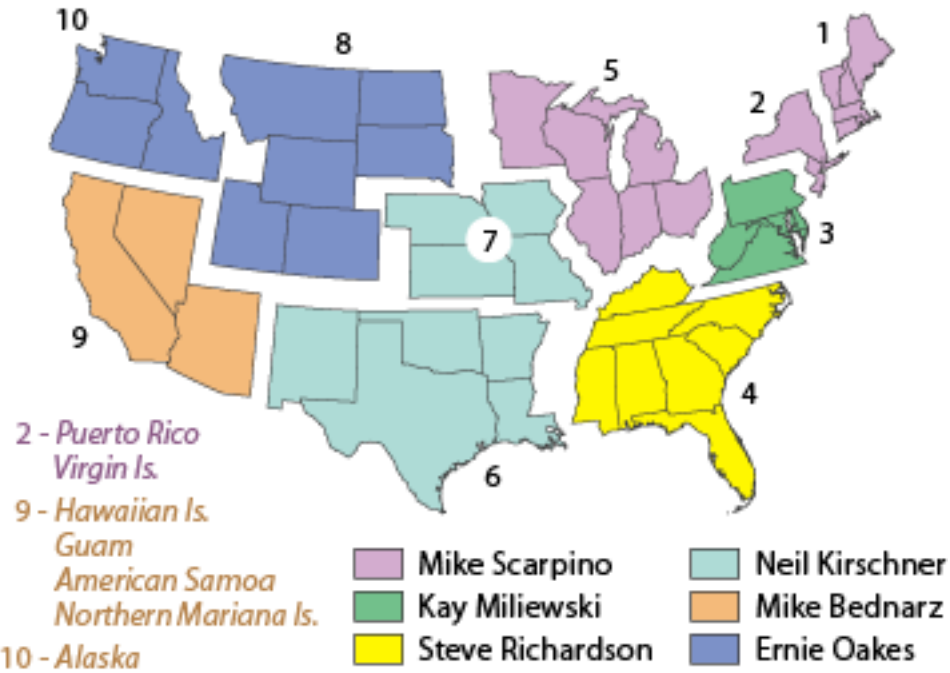
Program News

Clean Cities Welcomes New Coordinators, Regional Officers

Two regional officers and six coordinators recently joined the Clean Cities team.

Formerly of Ford Motor Company, Kay Milewski joined DOE in mid-March as the officer for Region 3, which covers Delaware, the District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia. Milewski works out of the National Energy Technology Laboratory (NETL) in Pittsburgh, Pennsylvania.

Previously officer to DOE's Central Region, Ernie Oakes presides over Regions 8 (Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming) and 10 (Idaho, Oregon, and Washington). Oakes is located at the DOE Golden Field Office in Colorado.



This map represents new regional officer assignments.

Milewski and Oakes join Mike Scarpino, Steve Richardson, Neil Kirschner, and Mike Bednarz, regional officers who work out of NETL in Pennsylvania and West Virginia. Contact information is available for all regional officers on the Clean Cities Web site.

In addition, Clean Cities welcomes the following new coordinators:

- Richard Battersby, who joins Chris Ferrara as co-coordinator of the East Bay coalition in California.
- Brian Crowe, who now leads the State of Iowa coalition in Des Moines.

- Samantha Bingham, who took over the Chicago Area coalition in Illinois.
- Barbara Bernstein, who is in charge of New Hampshire's Granite State coalition.
- Nathaniel Doyno, who joins Rick Price as co-coordinator of the Pittsburgh Region coalition in Pennsylvania.
- Andrew Hudgins, who now leads the Alamo Area coalition in San Antonio, Texas.

Coordinator contact information is also available on the Clean Cities Web site. In addition, an updated version of "What is Clean Cities?"—a fact sheet that lists the e-mail addresses and phone numbers of all 90 coordinators—is now available.

Industry News

Auxiliary Units Can Reduce Idling in Light-Duty Fleet Vehicles

According to a 2006 report by Argonne National Laboratory, more than 13.3 million LDVs are used for commercial purposes in the United States today. These LDVs, which include pickups, vans, and sport utility vehicles, are potentially using upwards of 600 million gallons per year of fuel (gasoline and diesel) just for idling.

The auxiliary power unit draws low levels of energy from the truck's engine to heat the cab without idling.

Image contributed by Espare

Fleets idle their LDVs for many reasons: safety (keeping windows clear), protection of perishable cargo, warmth for outdoor workers, and more. Therefore, a good idle reduction policy is the first line of attack to save fuel and ensure idling when absolutely necessary. Many fleet managers aren't aware there are idle reduction technologies available for LDVs. They actually have several options, including coolant heaters, air heaters, and energy recovery systems.

Coolant heaters warm the car's regular heat-transfer system. The heater is mounted in the engine compartment; draws gasoline or diesel from the fuel tank; and pumps heated coolant through the engine, radiator, and heater box. The warmth generated by coolant heaters keeps defrosters working properly and passenger compartments at comfortable temperatures.

Webasto and Espar manufacture coolant heaters appropriate for both diesel and gasoline LDVs. Webasto's coolant heater can run about 20 hours on a gallon of fuel and costs about $1,800 installed, says Jeff Frasier, a light-duty sales specialist at the company. Espar's unit uses about a cup of fuel per hour and usually costs about $1,700 installed, says Espar's Vice President of Marketing and Communication, John Dennehy.

In addition to after-market sales, Espar also plays a significant role in the original equipment market. It sells units to manufacturers for installation at the assembly line. Several manufacturers install the Espar coolant heaters as supplemental heaters for diesel pickups and vans. These new light-duty diesels are said to be too efficient to have enough waste heat for passenger compartment heating. By ordering optional automatic controls, it is easy for fleets to use these supplemental heaters to avoid idling.

Fleets more concerned with passenger compartment warmth than engine efficiency—such as taxi and limo drivers—may prefer air heaters. Although they operate on engine fuel, air heaters are separate self-contained units that blow hot air directly into the vehicle interior. Like coolant heaters, they have only a small draw on the battery and use a modest amount of fuel. Webasto says that fuel usage and cost for its air heater are similar to its coolant heater.

Another option for keeping fleet vehicles warm is an energy recovery system from Autotherm. This system uses the vehicle's heat-transfer system much like a coolant heater, but without a separate heater. A very small (1/10 amp) electric pump is connected to the water line, which keeps the car's cooling system and heater operating after the engine is turned off, using heat that would otherwise dissipate. Autotherm representative Bill Bianchi says there is enough heat remaining to keep a car warm for an hour or two and that installed cost runs about $700. The system was originally developed for day-cab trucks but is also used in police cars. The company is undertaking a major marketing effort toward taxi fleets.

All three systems include sensors and controls to shut off before they draw battery charge or if the engine temperature becomes too low. Installation kits are developed for specific models, but universal kits are also available.

Success Story

Louisville School Buses Fueling with Biodiesel

Since mid December, all the buses operated by the nation's nineteenth largest school district have been fueled with B2—a blend of 2% biodiesel, 98% diesel. With approximately 97,000 students, Jefferson County Public School (JCPS) District in Louisville, Kentucky, operates 1,100 school buses, which travel more than 85,000 miles a day. According to School Superintendent Stephen Daeschner, the district expects to "significantly reduce" exhaust emissions through the use of more than 50,000 gallons of biodiesel per year.

Jefferson County School District in Louisville, Kentucky, fuels its 1,100 school buses with B2.
Photo contributed by KCFC

The Kentucky Clean Fuels Coalition (KCFC) played a key role in initiating biodiesel use by JCPS. It helped the district develop bid specifications for the fuel and line up distributors. More importantly, KCFC helped convince Marathon Oil Company to start blending biodiesel at its fuel terminal in Louisville and obtained grants (from the Kentucky Soybean Board, National Clean Cities Inc., and the Congestion Mitigation and Air Quality Improvement Program) to help it do so. This is only the second fuel terminal of the nation's fifth largest refiner to blend biodiesel. Marathon is now distributing B2 and B5 (5% biodiesel, 95% diesel) for a variety of other customers. "Fuel availability was a huge factor for the school district's move to biodiesel; it started using it shortly after Marathon started blending it," says KCFC Coordinator Melissa Howell.

According to Howell, JCPS fuels the buses from its own fleet facilities at seven depots where many of the district's students transfer from one bus to another. This depot system makes the air quality benefits of using biodiesel particularly important because students have to switch buses in a location where hundreds of buses are operating.

With an incremental cost of only $.02 per gallon, 35 Kentucky school districts are now using biodiesel in their buses. The state offers a tax credit for biodiesel producers and is looking forward to the opening of a major biodiesel production plant within the coming months. Owensboro Grain expects to have a 50-million-gallon-per-year facility—far larger than existing plants in the state—operational in Owensboro, Kentucky, sometime this summer.

For further information, contact Melissa Howell, KCFC Coordinator, 502-452-9152.

EPAct Update

Alternative Compliance Option Now Available for State, Fuel Provider Fleets

DOE on March 20, 2007, published a final rule that offers state and alternative fuel provider fleets a new way to comply with their Alternative Fuel Transportation Program requirements. The new rule was mandated by Section 703 of the Energy Policy Act (EPAct) of 2005.

Using alternative fuels is one way covered fleets can reduce petroleum consumption through the new Alternative Compliance option.

Photo contributed by Keith Wipke, NREL

Known as Alternative Compliance, this new rulemaking allows state and alternative fuel provider fleets covered under EPAct's Alternative Fuel Transportation Program to apply for a waiver from its AFV acquisition requirements. The waiver lets fleets reduce petroleum consumption, in lieu of acquiring AFVs, by using methods such as energy-efficient technologies or fuel blends.

Alternative Compliance—which applies to light-, medium-, and heavy-duty vehicles, as well as certain nonroad vehicles—does not limit the technologies or ways a fleet can reduce petroleum use. For example, fleets can reduce petroleum consumption through the use of hybrid electric vehicles, more efficient internal combustion engines, or fleet management practices. The use of alternative fuels in AFVs will also continue to be encouraged.

"The rulemaking opens new doors to fleets that don't have alternative fueling infrastructure in their areas or can't find AFV technologies that meet their needs," says Linda Bluestein, Regulatory Manager for the Alternative Fuel Transportation Program.

DOE will grant waivers based on the fleet's ability to show it will reduce petroleum use by the amount of alternative fuel it would have used in the fleet's AFVs notwithstanding the waiver.

To apply for a waiver, fleets must file paperwork with DOE in several stages. An intent to file a waiver is due by March 31 of the model year (MY) for which the waiver is sought (for MY 2008 the deadline was extended until May 31, 2007). Fleets must then file an application that calculates an annual petroleum reduction requirement and details how the required petroleum reduction will be achieved. Finally, fleets are required to submit annual reports certifying their actual petroleum reductions.

DOE will decide to grant or deny the waiver within 45 days of receiving a complete application.

To help fleets understand the new rule and application process, DOE will publish detailed guidelines, a tutorial, and a user-friendly Web tool.

Three hundred fourteen state and alternative fuel provider fleets are covered under the Alternative Fuel Transportation Program. In model year 2005, these fleets acquired more than 10,000 AFVs, used 3 million gallons of biodiesel, and traded over 1,000 credits. Statistics published by the Energy Information Administration show that covered fleets use more than 20 million gallons of alternative fuels per year.

For more information, visit the EPAct Web site.

New Resources

Flexible Fuel Vehicles: Providing a Renewable Fuel Choice

Clean Cities' updated two-page fact sheet offers a general overview of FFVs and E85—the fuel that powers

them. Its question-and-answer format makes it an easy-to-understand handout for readers unfamiliar with E85-compatible vehicles.

SmartWay Transport: Helping the Freight Industry Save Fuel, Money, and the Environment

This comprehensive booklet serves as the 2005 annual report of EPA's SmartWay Transport Program, a voluntary partnership seeking to reduce toxic and greenhouse gas emissions from the ground transport industry. According to the report, the program saves nearly 300 million gallons of diesel per year.

From Electricity to Ethanol: Georgia Power Keeps Alternative Fuels Going Strong

This two-page document features Georgia Power's successful AFV program. Starting with electric vehicles and switching to E85 FFVs, this alternative fuel provider takes innovative approaches to surpassing its EPAct requirements.

Alternative Fuels: Biodiesel

This two-page EPA fact sheet covers the basics of biodiesel. Featured topics include fuel production, benefits, availability, and vehicle maintenance. EPA also published a similar document on E85 and FFVs.

What is Clean Cities?

This four-page fact sheet is updated quarterly and provides an overview of the Clean Cities initiative. The document describes Clean Cities' mission, stakeholders, and portfolio of technologies. It also provides a current list of coalitions and coordinator contact information.

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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