



March 2004

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## Clean Cities Unveils Expanded Program Focus

Since 1993, the Clean Cities Program's more than 80 coalitions have steadily increased the number of alternative fuel vehicles (AFVs) on our nation's highways, with gains averaging around 17% in recent years. But more can be done, and Clean Cities is taking charge by expanding the technologies and practices it will support as it strives to displace petroleum.

Alternative fuels will remain the cornerstone of Clean Cities, but, in addition, the program will now work to:

- ▶ Increase the use of fuel blends (diesel/biodiesel, ethanol/gasoline, and compressed natural gas (CNG)/hydrogen),
- ▶ Accelerate sales of hybrid electric vehicles,
- ▶ Promote informed consumer choice on fuel economy, and
- ▶ Encourage the use of idle reduction technologies for heavy-duty trucks and other vehicles.

These four additions to the Clean Cities portfolio will help the program realize its mission of advancing the national, economic, and energy security of the United States by supporting local decisions to reduce the use of petroleum fuel in vehicles.

The potential impact is clear, but how will the program actually increase the use of these technologies and encourage these practices? The details are outlined in the new Clean Cities Roadmap, which is due out this spring. However, the following strategies are currently being discussed.

### Fuel blends

To promote fuel blends, Clean Cities will work with coalitions to encourage regional and state-level incentives and policies. The program will share best-in-class policies across the nation and collaborate with the U.S. Department of Energy's (DOE)

### What is *Clean Cities News*?

In response to feedback from Clean Cities coordinators, *Alternative Fuel News (AFN)* has been redesigned and refocused. Its successor, *Clean Cities News (CCN)*, will more closely track the efforts of Clean Cities coalitions and coordinators and feature even more program news. *CCN* will also cover the evolution of the Clean Cities Program as it grows to include fuel blends, idle reduction, hybrid vehicles, and fuel economy.

As you can see, *CCN* is shorter than *AFN*. We're trying to trim costs, while still delivering value. We'll do that by increasing our news and supplementing our print stories on the Clean Cities Web site, which is also undergoing a redesign.

It is, indeed, a year of change—an expanded Clean Cities Program, a redesigned Web site, and the new *Clean Cities News*. And, we hope, a year of improved Clean Cities coverage.

hydrogen and biofuels research and development programs to advance technology and disseminate information on ethanol, biodiesel, and hydrogen blends.

### Hybrid vehicles

To promote the use of hybrid vehicles, Clean Cities will work with purchasing organizations and facilitate wide-scale fleet purchases. The program will also increase consumer outreach at the local and state levels.

### Fuel economy

To advance informed consumer choice and increase fuel economy awareness, Clean Cities will expand fuel economy outreach activities in partnership with other federal programs, such as the U.S. Environmental Protection Agency (EPA), the Federal Highway Administration (FHWA), and

Cover Story - p 7 ▶

San Francisco coordinator Rick Ruvolo's work takes him all over the world. For details, see p 6.



U.S. Department of Energy  
Energy Efficiency  
and Renewable Energy

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

## What Is Clean Cities?

The mission of DOE's Clean Cities Program is to advance the economic, environmental, and energy security of the United States by supporting local decisions to adopt practices that contribute to the reduction of petroleum consumption in the transportation sector.

Clean Cities carries out this mission through its network of more than 80 volunteer, community-based coalitions, which develop public/private partnerships to promote alternative fuels and vehicles, fuel blends, fuel economy, hybrid vehicles, and idle reduction.

For more information, visit [www.ccities.doe.gov](http://www.ccities.doe.gov).

### Clean Cities Program Contacts

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202-586-7028

### Program Tools & Resources

- ▶ Alternative Fuels Data Center  
[www.afdc.doe.gov](http://www.afdc.doe.gov)
- ▶ Coordinator's Toolbox  
[www.ccities.doe.gov/toolbox](http://www.ccities.doe.gov/toolbox)
- ▶ Clean Cities Hotline  
800-CCITIES  
[www.afdc.doe.gov/hotline.html](http://www.afdc.doe.gov/hotline.html)
- ▶ Station Locator and Route Mapper  
[www.afdc.doe.gov/refueling\\_mapsite.shtml](http://www.afdc.doe.gov/refueling_mapsite.shtml)
- ▶ Vehicle Buyer's Guide  
[www.ccities.doe.gov/vbg](http://www.ccities.doe.gov/vbg)
- ▶ Fuel Economy Guide  
[www.fueleconomy.gov](http://www.fueleconomy.gov)

### Subscriptions

If you would like to sign up to receive *CCN*, or need to change or cancel your subscription, contact [ccities@nrel.gov](mailto:ccities@nrel.gov), 800-CCITIES.

## Success Stories



Sister Mary Schrader refuels one of her congregation's 13 CNG Honda Civic GXs.

Stephanie Strong/formerly of Northeast Ohio Clean Fuels Coalition

## "Green Sisters" Drive CNG Hondas

The Congregation of St. Joseph in Cleveland, Ohio, is steeped in history. This order of Catholic nuns is nearly 350 years old, but its well-respected traditions have not kept the sisters from driving boldly into the 21st century in Honda Civic GXs, which run on CNG.

The sisters, who are active members of the Northeast Ohio Clean Fuels Coalition, purchased their first Civic GX for one of their most travel-intensive programs: providing seniors with rides to and from doctors' offices. Since then they have purchased 12 additional Civic GXs for other activities that require significant travel. But they didn't stop there. In 2003, the congregation received roughly \$26,000 in DOE funding and a grant from the Gund Foundation to install a slow-fill FuelMaker CNG pump at the convent. The dispenser, which is working well, enables the sisters to travel without worrying about running out of fuel.

The sisters' main motivations for driving CNG vehicles are to help clean the air and educate people about AFVs. "For us it's a moral imperative to live out what we believe," says

Sister Mary Schrader. "We look upon this as getting an important message out to the people."

But their commitment goes beyond driving AFVs. They check labels for animal testing and have initiated a recycling program that has halved the amount of trash generated on their grounds.

They have also established programs on ecology, eco-spirituality, and eco-justice for the convent's high school and the public, and have raised a 130-foot tower to monitor wind direction and velocity to determine the feasibility of wind energy for the convent.

The sisters even have an environmental facilitator who works with the leadership team, the justice committee, and a 14-member environmental committee to ensure that environmental issues and practices are considered in all decisions and choices. Finally, and maybe most notably, they have a long-term goal of developing a model for other religious communities to follow.

For more information, contact Sister Mary Schrader at [mschrader@csj.cleveland.org](mailto:mschrader@csj.cleveland.org), 216-252-0440, ext. 402.

## Coalition News

Connecticut's **Greater New Haven Clean Cities Coalition** was recognized in January on a newscast by WTNH News Channel 8. The two-minute story featured New Haven's first natural gas vehicle, a Ford Crown Victoria operated by the city's director of traffic and parking. Also mentioned were the city's battery-powered trucks and electric trolleys. New Haven coordinator **Lee Grannis** appeared as a source in the story.

South Carolina's **Palmetto State Clean Fuels Coalition** held its Clean Cities designation ceremony on January 28, 2004. The **East Tennessee Clean Fuels Coalition** in Knoxville and the **East Texas Clean Cities Coalition** in Tyler have been approved for designation.

The **Northwest Riverside County Clean Cities Coalition** recently opened a 24-hour public/private CNG station in Riverside, California. The fueling site accepts MasterCard, American Express, Discover, Wright Express, and Voyager.

The **Tucson Regional Clean Cities Coalition** in December received Governor Janet Napolitano's 2003 Pride in Arizona Award for Pollution Prevention for its achievements in expanding the use of AFVs and building local alternative fuel infrastructure.

**Clean Cities Coachella Valley Coalition** and the College of the Desert's Energy Technology Center are hosting an event on the College of the Desert campus to educate students about the importance of alternative fuels and AFVs. The program will be held on April 2, 2004, from 9 a.m. to noon, as part of National AFV Odyssey Day.

**Northern Colorado Clean Cities** is also hosting an Odyssey Day event on April 2, in Estes Park, Colorado. The four-hour program includes a session on the pros and cons of alternative fuels.

The **City of Fort Collins**, Colorado, a member of the Northern Colorado coalition, is installing an Avalence Hydrofiller 175, a hydrogen fuel generator that will allow the city to produce Hythane for its fleet vehicles and buses. Hythane is a blend of CNG and hydrogen gas.



Delta Liquid Energy

This card-access propane pump offers Bakersfield-area fleets the convenience of fueling 24 hours a day, seven days a week.

## 24/7 Propane Pump Opens in Bakersfield

If you live or work near Bakersfield, California, and you drive a propane vehicle, you're in luck. Delta Liquid Energy, a California-based partner of Texas-based CleanFuel USA, now hosts a self-serve propane pump in Bakersfield that is accessible 24 hours a day, seven days a week.

The Bakersfield facility, which is located in the region of the San Joaquin Valley Coalition, has always been open regular hours to anyone, but in September 2003, Delta added the propane pump and extended its hours to attract area commercial and government fleets.

The pump, which looks like a regular dispenser, can dispense 100,000 gallons of fuel a year for about \$1.39 a gallon. It is operated with a universal access card. Private vehicle owners can obtain cards once they receive training from Delta. The whole process—from initial telephone call to the training, to the issuing of a card—takes about three days.

The pump's anchor fleets are the Department of Transportation (CalTrans) and the Department of Water Resources. Both have been trained and have recently received access cards. State fleets operate more than 2,000

propane vehicles, and about 100 are based in the Bakersfield area. Having the new pump so well located means drivers can fuel their trucks without returning to their home facilities.

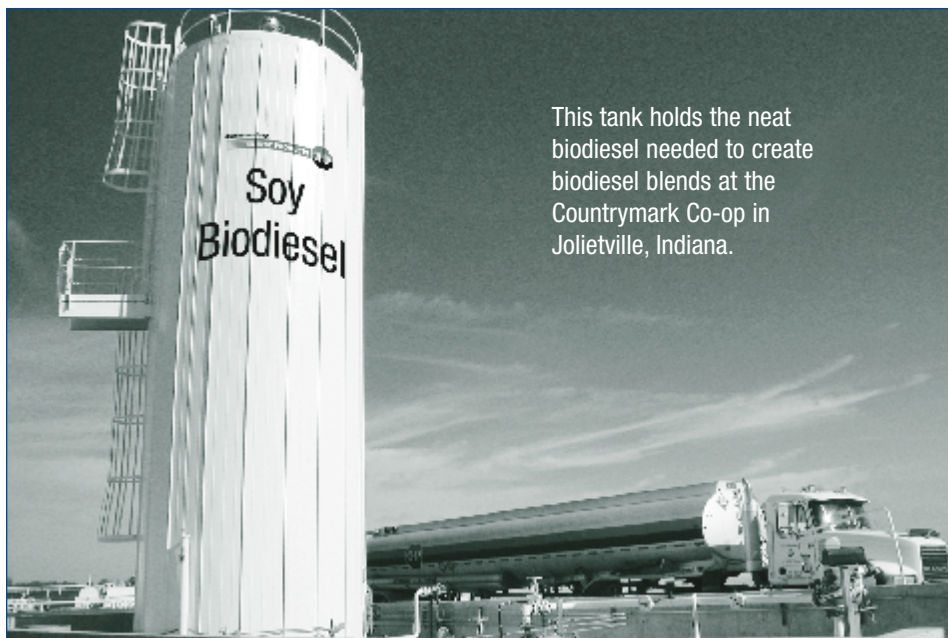
The Bakersfield pump is one of 13 projects funded jointly by Delta and the California Energy Commission's Alternative Fuel Infrastructure Program. Eight such propane pumps are currently operational. Delta is applying for an additional 30 propane pumps at gasoline stations from San Diego to the Bay Area for 2004, and plans to have 50 pumps in place by the end of 2005.

According to Jon Van Bogart, alternative fuels director at Delta, the company recently started discussions with Conoco Philips, which is interested in putting propane pumps in some of its stations in Sacramento, East Bay, and San Diego. Van Bogart jokes that the process is moving along like a "herd of turtles," considering California's thousands of fueling stations and millions of conventionally fueled vehicles. But those turtles are headed in the right direction.

For more information, contact Jon Van Bogart at [jonb@deltaliquidenergy.com](mailto:jonb@deltaliquidenergy.com), 805-239-0616.

Success Stories - p 4 ▶

## Central Indiana Opens the Nation's First Biodiesel Blending Facility



This tank holds the neat biodiesel needed to create biodiesel blends at the Countrymark Co-op in Jolietville, Indiana.

Indiana Soybean Board

The choice to install a metered blending system was economic—it costs \$50,000 to \$60,000 less than a fuel-injected system—and no one could predict that demand for the fuel would be so high and that the facility would be so successful. In fact, the demand has outstripped expectations. Since the facility opened, it has sold more than 125,000 gallons of neat biodiesel.

Statewide, biodiesel consumption more than tripled in 2003—good news for Indiana's 28,000 soybean farmers who needed a market for their soybean oil.

The Jolietville system is so successful that Countrymark is building another facility in Peru, Indiana, and is doing a feasibility study to determine whether to build one more blending system in the state.

The Jolietville blending facility was built using funding from the Indiana Soybean Board and the Indiana Department of Commerce Energy Policy Division, which provided grants to enhance biodiesel distribution. Countrymark invested in distribution infrastructure and has an alternative fuel transportation grant program that covers 50% of incremental fuel costs. Partners in the project are all members of the CICCA, which helped with the grand opening.

For more information, contact: Kellie Walsh at [klwccica@aol.com](mailto:klwccica@aol.com), 317-834-3754.

Countrymark Co-op in Jolietville, Indiana, is home to the nation's first soy biodiesel metered blending system. The facility, which opened in June 2003, offers area co-ops and fuel providers the convenience of bulk deliveries of soy biodiesel in B2 to B20 blends.

The process is simple. A fuel-delivery driver inserts a card that tells the biodiesel tank the correct amount of B100 required for the requested blend (usually B2, B5, or B20). The system then loads the right amount of biodiesel into the tank. Next, the driver brings the truck to the loading rack at Countrymark's full-service terminal,

where he loads the diesel fuel to complete the blend.

The fuel is then delivered to central Indiana stations like Energy Plus 24 (Countrymark's retail store) and Crystal Flash, where it is sold to consumers.

According to Kellie Walsh, executive director of the Central Indiana Clean Cities Alliance (CICCA), most Energy Plus and Crystal Flash customers don't seem to notice the difference between the blends they are buying and the diesel they are accustomed to. That's because the low-level blends the stations dispense (B2 and B5) perform the same as diesel and cost only a few cents more per gallon.

## Mammoth Cave Fuels E85, Propane, Biodiesel Onsite

As home to the longest cave in the world, Kentucky's Mammoth Cave National Park values clean air and environmental protection. It uses clean alternative fuels in all its support and transit vehicles to help achieve these objectives.

A member of the Kentucky Clean Fuels Coalition, Mammoth Cave has a variety of AFVs. It has 16 E85 flexible fuel vehicles (FFVs); its six tour buses have been converted to propane, and all its maintenance equipment—from car ferries to bobcats—operates on B20.

All other park vehicles, including the law enforcement fleet, operate on E10.

While in park boundaries, all Mammoth Cave's FFVs are required to run on E85. This isn't a problem for drivers, because the park boasts a 3,000-gallon E85 tank onsite, as well as a 3,000-gallon E10 tank for standard gasoline vehicles.

The park also has B20 and propane tanks onsite. Each of the above-ground steel tanks is clad in styrofoam and concrete to protect against fuel leaks—a priority for Mammoth Cave.

Fueling the vehicles is easy. A driver inserts a computerized key into the pump to access the fuel. Fueling infrastructure is restricted to park service vehicles—except during the summer when the concessionaire fuels its lawn mowers with B20.

For now, the tanks are located in or near the park's maintenance area, but plans are underway for a consolidated fueling station in the next year or two.

For more information, contact Vickie Carson at [vickie\\_carson@nps.gov](mailto:vickie_carson@nps.gov), 270-758-2192.

## Upcoming Events

## Conference Celebrates a Decade of Drive

Clean Cities coalitions and stakeholders are invited to come to Ft. Lauderdale—the location of the 10th National Clean Cities Conference and Expo. This year's event is set for May 2-5.

The annual conference will celebrate “a decade of drive”—commemorating 10 years of Clean Cities success and looking toward the future, which now includes idle reduction, hybrids, fuel blends, and fuel economy (in addition to alternative fuels and vehicles). Planned sessions will explore trends, successes, and new approaches to reduce U.S. dependence on imported petroleum.

This year we'll kick off the conference with George Wendt (Norm!), General Motors' (GM) special guest, from the popular TV show *Cheers*. “Norm” will join us Sunday, May 2, at GM's Opening Reception and Awards Ceremony. Other events planned for the conference include extended Ride-n-Drive hours. Conference participants will have an opportunity to view and drive the latest alternative fuel, hybrid, and advanced technology vehicles, as well as take part in a live auction of used AFVs conducted by the U.S. General Services Administration. The 2004 schedule includes the second staging of a “public day,” in which the trade show will be open without charge to the public. Also returning will be ScienceFest, held this year for area seventh graders.

It all happens at the Greater Ft. Lauderdale/Broward County Convention Center. The official conference hotel is the Marina Marriott. For all the conference details—including convenient online registration for attendees, exhibitors, and sponsors—visit [www.ccities.doe.gov/conference/lauderdale](http://www.ccities.doe.gov/conference/lauderdale).



**10th National Clean Cities  
Conference and Expo  
May 2-5, 2004**

### Mark Your Calendar

April 17–20, 2004  
NAFA Fleet Management Institute  
Atlanta, Georgia  
[www.nafa.org](http://www.nafa.org)

April 26–30, 2004  
Hydrogen: A Clean Energy Choice  
Los Angeles, California  
[www.hydrogenconference.org](http://www.hydrogenconference.org)

**May 2–5, 2004**  
**10th National Clean Cities  
Conference and Expo**  
Ft. Lauderdale, Florida  
[www.ccities.doe.gov/conference/lauderdale](http://www.ccities.doe.gov/conference/lauderdale)

May 17–19, 2004  
National Idling Reduction Planning  
Conference  
Albany, New York  
<http://transtech.anl.gov/v3n3/industry-v3n3.html>

## EPAct Update

## U.S. Marine Corps Honored for Energy Management, Alternative Fuels

The U.S. Marine Corps (USMC) was named one of several recipients of the Federal Energy and Water Management Awards for 2003. Presented annually by DOE's Federal Energy Management Program, the awards recognize individuals and organizations for significant contributions to the efficient use of energy and water in the federal government.

Cited specifically was the leadership of Lieutenant General Richard Kelly. Based at USMC headquarters in Quantico, Virginia, Kelly is responsible for worldwide logistics and installations for the Marines.

A key component of energy management in the USMC, under Kelly's leadership, has been the use of AFVs and fuels that run them. As a federal fleet operator, the USMC is regulated by EPAct, which mandates AFV acquisition in specific proportions; and by Executive Order 13149, which requires a 20% reduction in petroleum fuel use



Lieutenant General Richard Kelly,  
U.S. Marine Corps

by federal fleets by 2005, using 1999 as a baseline.

As reported to FAST, the Federal Automotive Statistical Tool, the USMC estimates that by 2002, it had already reduced petroleum consumption by

more than 24%, and thus met its mandate three years ahead of schedule. In complying with EPAct, the USMC exceeded its fiscal year (FY) 2002 mandate for AFV acquisition by 82%, earning 862 credits when only 473 were required. With its considerable success already, the Marine Corps is confident it will meet or exceed the requirements in both FY 2004 and FY 2005.

Of its 862 credits accumulated in FY 2002, the Marine Corps earned 129 by using biodiesel fuel. (EPAct was amended in 1998 to award one AFV credit for every 450 gallons of pure biodiesel used.) B20 is used in most commercial, nontactical vehicles in the Marine Corps. Many such vehicles are leased from the U.S. General Services Administration. The Marines have promised to pay for any maintenance problems that may result from using biodiesel. So far, no such problems have occurred.

## Coordinator Profile

## Rick Ruvolo Finds Success at Home and Abroad

This year marks an important milestone for San Francisco coordinator Rick Ruvolo: 10 years on the job. On the job as a Clean Cities coordinator, that is. His experience in alternative fuels actually reaches back to the late '80s when he organized San Francisco's Clean Air Vehicle Coalition.

Ruvolo's dedication to alternative fuels started early in his career when he worked as a legislative aide to Harry Britt, a retired president of the San Francisco Board of Supervisors who was greatly concerned about U.S. dependence on foreign oil. "Harry had an alternative fuels vision and often spoke of our need to prepare for a future of 'colorful little zero-emission electric cars' and 'clean air transportation zones'—long before the actual birth of the

alternative fuels world as we know it. He introduced me to the possibilities of energy independence and cleaner air, and when he retired from politics in 1993, I decided to continue my alternative fuels work to realize his dreams," Ruvolo says.

Thanks to Ruvolo's efforts, San Francisco is home to a municipal fleet of more than 700 light-duty AFVs—one of the largest in the nation (additionally, San Francisco's mass transit fleet is more than 57% zero emission/electric).

The light-duty fleet is a direct result of an ordinance Ruvolo helped develop (and pass) that requires local government fleets to purchase AFVs and run them on alternative fuels. Ruvolo's team also produced the popular "Vehicle Purchasing Guide," which walks fleets through the process of choosing and acquiring AFVs. Not only is this guide used by municipal fleets, it's used by other U.S. cities as a model for developing their own AFV programs.

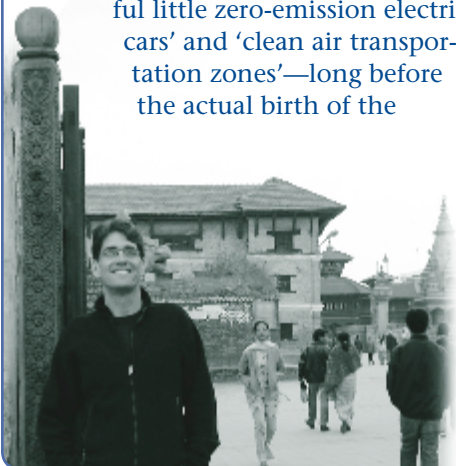
Despite the critical role he's played in San Francisco's success, Ruvolo is quick to give credit where credit is due: to stakeholders and government partners. "I've had a long history and very close working

relationship with key stakeholders in our coalition, like Pacific Gas & Electric, the City of San Francisco's purchasing team, automakers, funders, and other activists, and our coalition has always enjoyed extraordinary support and leadership from its legislative family," Ruvolo says. "Without them, we wouldn't be where we are today."

With a solid clean air program in place at home, Ruvolo has been taking his show on the road, teaching leaders in Nepal, Thailand, Vietnam, and Mexico how to implement clean air programs of their own.

"I'm really proud of our local accomplishments, but when I saw opportunities to share our vision with people in other states and overseas, I wanted to help them avoid making the same mistakes we have made in the United States," Ruvolo says. "I've always been concerned about the role the United States has played in terms of global air pollution, and I see our work abroad as a way to give back to that world community."

For more information, visit the Clean Air Program Web site at [www.sfgov.org/sfenvironment/aboutus/air](http://www.sfgov.org/sfenvironment/aboutus/air), or contact [rick.ruvolo@sfgov.org](mailto:rick.ruvolo@sfgov.org).



## Industry News

## GM, NEVC Team up to Raise E85 Awareness

General Motors (GM) and the National Ethanol Vehicle Coalition (NEVC) are working together to promote the use of E85 in six states: Missouri, Wisconsin, Colorado, Minnesota, Michigan, and Illinois. The two-year partnership, which began in February 2003, will focus on increasing the use of E85 in FFVs through a variety of activities, including dealership information, advertising, and online efforts.

According to Phil Lampert, executive director of NEVC, "The limited number of ethanol fueling stations available ... makes it a challenge for people to utilize this alternative fuel

source. We believe this effort will help increase the use of ethanol, which will benefit the environment and help reduce the nation's dependency on foreign oil."

A direct mail program called "I Fuel Good" is an integral part of the partnership's efforts. Through this program, the partnership contacts owners of 2002–2004 model year GM FFVs. The owners are given a \$30 debit card that can be used to purchase E85. They are also given informational literature, a list of E85 stations in their area, a window sticker, and a T-shirt.

Additional efforts by GM and NEVC include helping GM dealers educate

customers about FFVs and coordinating a variety of public awareness campaigns in the target states.

GM produces more than one-third of the more than 3 million E85 FFVs on American roads. "E85 is only beginning to become available in many areas," says Gary Herwick, director of alternative fuels for GM. "Working together, we can make a difference when it comes to alternative fuels. GM is manufacturing E85 compatible vehicles and encouraging industry and consumers to do their part by continuing to develop the E85 infrastructure and by using E85 in their GM FFVs whenever possible."

DOE's 21st Century Truck Program (21CTP).

### Idle Reduction

To promote broader use of on-board idle reduction technologies and truck-stop electrification, Clean Cities will engage equipment manufacturers, trucking associations, and other vehicle fleets. In addition, the program will explore collaboration with EPA, FHWA, and 21CTP.

### Alternative Fuels

Promoting traditional alternative fuels has long been Clean Cities' forte and remains its core focus. To accelerate petroleum displacement,

the program will increase attention to alternative fuel use and infrastructure development, as well as continue to focus on expanding opportunities for key niche markets. Clean Cities will also expand consumer outreach efforts to include off-road applications of alternative fuels.

These additions to the Clean Cities portfolio will help accelerate the near-term displacement of imported petroleum and improve our economic, environmental, and energy security.

The details on the expanded program will be unveiled at the Clean Cities Conference, May 2–5. Stay tuned for more information in the next issue of CCN—a special conference edition.

## Resources

The “**Clean Cities Fact Sheet**,” which offers a general overview of the program, can be found at [www.ccities.doe.gov/pdfs/35285.pdf](http://www.ccities.doe.gov/pdfs/35285.pdf).

“**Alternative Fuels and Advanced Vehicle Technologies Information Resources**,” which details Clean Cities' online resources, is available at [www.afdc.doe.gov/pdfs/31404.pdf](http://www.afdc.doe.gov/pdfs/31404.pdf).

The latest “**Alternative Fuel Price Report**” (December 2003) is now available at [www.afdc.doe.gov/pdfs/afpr\\_12\\_30\\_03.pdf](http://www.afdc.doe.gov/pdfs/afpr_12_30_03.pdf).

The National Biodiesel Board is ever-expanding its **Buying Biodiesel** Web guide to include the most comprehensive information on where to purchase biodiesel. Visit the site at [www.biodiesel.org/buyingbiodiesel/guide](http://www.biodiesel.org/buyingbiodiesel/guide) to find or add supplier and retailer contacts in your area.

Clean Cities continues to gather input and perform analytical work that will lead to the definition of concrete, long-term national petroleum displacement/reduction goals in the program's new focus areas (hybrids, fuel blends, fuel economy, and idle reduction), along with accelerated use of AFVs. After finalizing high-level national goals, Clean Cities will establish specific targets and metrics for monitoring the program's contributions in meeting the national goals over time. Coalitions will have the flexibility to contribute to oil displacement goals in any or all of the new focus areas, including alternative fuels and vehicles.

### 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. By investing in technology breakthroughs today, our nation can look forward to a more resilient economy and secure future.

Far-reaching technology changes will be essential to America's energy future. 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 portfolio of energy technologies that will:

- Conserve energy in the residential, commercial, industrial, government, and transportation sectors,
- Increase and diversify energy supply with a focus on renewable domestic sources,
- Upgrade our national energy infrastructure, and
- Facilitate the emergence of hydrogen technologies as vital new “energy carrier's.”

### The Opportunities

#### Biomass Program

Using domestic, plant-derived resources to meet our fuel, power, and chemical needs

#### Building Technologies Program

Homes, schools, and businesses that use less energy, cost less to operate, and ultimately, generate as much power as they use

#### Distributed Energy & Electric Reliability Program

A more reliable energy infrastructure and reduced need for new power plants

#### Federal Energy Management Program

Leading by example, saving energy and taxpayer dollars in federal facilities

#### FreedomCAR & Vehicle Technologies Program

Less dependence on foreign oil and eventual transition to an emissions-free, petroleum-free vehicle

#### Geothermal Technologies Program

Tapping the Earth's energy to meet our heat and power needs

#### Hydrogen, Fuel Cells & Infrastructure Technologies Program

Paving the way toward a hydrogen economy and net-zero carbon energy future

#### Industrial Technologies Program

Boosting the productivity and competitiveness of U.S. industry through improvements in energy and environmental performance

#### Solar Energy Technology Program

Utilizing the sun's natural energy to generate electricity and provide water and space heating

#### Weatherization & Intergovernmental Program

Accelerating the use of today's best energy-efficient and renewable technologies in homes, communities, and businesses

#### Wind & Hydropower Technologies Program

Harnessing America's abundant natural resources for clean power generation

To learn more, visit [www.eere.energy.gov](http://www.eere.energy.gov).

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## Technical Assistance

## Toolkit Unlocks Short-Haul Trucking Market

Short-haul trucks are all around us. If you need proof, pull up to a convenience store at 3 a.m. and watch one short-haul truck deliver potato chips, another drop off newspapers, and yet another deliver gasoline. And that's just scratching the surface.

Short-haul trucks transport packages, furniture, linen, cement, trash, milk, and every other product imaginable in every city in the United States. They consume a lot of fuel, produce a lot of emissions, and are well suited for alternative fuels.



The new "Short-Haul Trucking Niche Market Toolkit" helps Clean Cities coordinators unlock the alternative fuel potential of the short-haul trucking market. The toolkit characterizes the U.S. trucking industry, describes market opportunities for alternative fuel short-haul trucks, and suggests strategies for marketing AFVs to trucking operations.

The U.S. trucking industry includes 73 million trucks and moves 74% of the nation's freight. Vehicle sizes range from cargo vans to tractor-trailers, and fleet sizes range from one truck to thousands. Diesel engines dominate the industry, but a variety of suitable alternative fuel engines and vehicles is available.

Because of their operational characteristics, short-haul trucks are particularly well suited to AFV use. Good AFV candidates have a daily range of fewer than 200 miles, local or regional operation, central deployment,

and defined routes or territories. The toolkit details a five-part plan for approaching candidate fleets:

- ▶ Understand the market and opportunities.
- ▶ Assemble the team.
- ▶ Create the plan.
- ▶ Make the "sale."
- ▶ Follow up.

The toolkit also provides success stories and describes obstacles that must be overcome. "Short-haul trucking is tougher to understand than some other markets, such as transit buses, but if you crack it, you can reap big benefits," says Bill Elrick, transportation planner with Edwards & Kelcey.

Edwards & Kelcey and the Clean Vehicle Education Foundation produced the "Short-Haul Trucking Niche Market Toolkit" for the Clean Cities Program. Look for it this summer on the Clean Cities Web site.