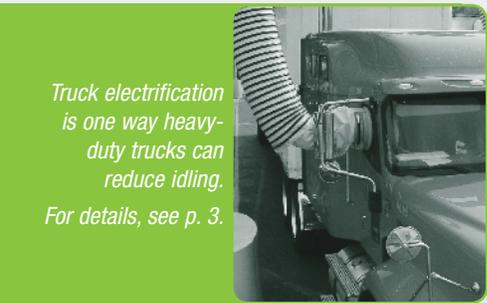




April 2004

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Truck electrification is one way heavy-duty trucks can reduce idling. For details, see p. 3.

## Roadmap Leads Us into the Future



Shelley Launey

During the past 10 years, the Clean Cities Program—along with a number of enthusiastic communities, organizations, and individuals—has succeeded in developing a national network of coalitions dedicated to increasing the use of alternative fuels. While we’ve made great strides in this area, growing economic, environmental, and security costs of U.S. petroleum dependence have prompted us to explore new ways to achieve greater impacts.

Toward that end, last fall a working group of Clean Cities coalitions, local and state governments, federal agencies, and private industry members took a fresh look at what Clean Cities can do to slow U.S. consumption of imported oil. After examining the program’s accomplishments and challenges and analyzing market forces likely to define the next 25 years, the working group set out to develop a program redesign that builds on our work with alternative fuels. The result is an expanded, technology-neutral focus on petroleum displacement through fuel blends, hybrid vehicles, fuel economy, and idle reduction, in addition to our commitment to alternative fuels.

Well-laid plans, certainly, but an expansion of this magnitude doesn’t happen overnight. The new Clean Cities Program is a work in progress. We know that our stakeholders have questions about what impact these changes will have on them, and we don’t yet have all the answers. But in this edition of *Clean Cities News* we provide a first look at the new Clean Cities Roadmap. We offer information on what’s currently being done in each of the new focus areas, by both Clean Cities and other agencies and organizations, and what we plan to do in the future. However, the work on the expanded program has only begun. As you read this issue, we are busy analyzing the petroleum displacement potential of these new strategies and practices; creating implementation plans that will provide our coalitions with concrete actions, timing, and goals; establishing partnerships with other agencies and organizations; and inviting input from you, our stakeholders.

Stakeholders are still the key to the success of Clean Cities. While the program emphasis is expanding, the heart of the Clean Cities Program is still the men and women who comprise the more than 80 Clean Cities coalitions nationwide. With your continued dedication, we will succeed in displacing significant and quantifiable amounts of imported petroleum. Stay tuned.

Sincerely,

Shelley Launey  
Director, Clean Cities Program  
U.S. Department of Energy

### Clean Cities Mission

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.



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

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

While alternative fuels and vehicles will continue to be the cornerstone of Clean Cities, the program is expanding its focus to include fuel blends, hybrids, fuel economy, and idle reduction. In this special edition of *Clean Cities News* we explain the five focus areas as described in the new Clean Cities Roadmap, and give an early look at what coalitions can do to meet Clean Cities' goal of displacing significant amounts of petroleum.

## Alternative Fuels

Alternative fuels are Clean Cities' forté and a significant force in the effort to reduce petroleum consumption. For 2003, Clean Cities coalitions (80-plus across the country) reported more than 173,000 alternative fuel vehicles (AFV) in their stakeholder fleets, which used alternative fuels equivalent to 148 million gallons of petroleum. Clean Cities has played a pivotal role in providing information, resources, and technical assistance and in forging relationships among fleets, manufacturers, and fuel providers that have helped build the alternative fuels and vehicles industry.

Under the expanded program, Clean Cities will focus its efforts to help increase petroleum displacement through alternative fuels. Coalitions will expand their relationships with fleets and help build the case for alternative fuel infrastructure and fuel use, especially related to the estimated 3 million flexible-fuel and bi-fuel vehicles on U.S. highways. We will also continue to target niche fleets, such as heavy-duty vehicles, airports, school buses, and locally significant niche markets. Infrastructure development remains a priority and will include training on ways to transition to hydrogen fueling.

In support of coalition efforts, at the national level we will develop a multiyear plan for work on airports, school buses, and other target fleets in collaboration with the Department of Transportation (DOT), Federal Aviation Administration (FAA) and Federal Highway Administration (FHWA), and the Environmental Protection Agency (EPA). We will continue to maintain resources such as the Alternative Fuels Data Center, the Clean Cities Web site, and the information hotline, and we will bolster those resources with additional information on lifecycle costs and benefits of AFVs and associ-

ated fuels. Clean Cities will continue to support infrastructure projects through grants and other leveraged funding. In addition to partnering with other agencies, we will strengthen our partnerships within DOE with the FreedomCAR and Hydrogen programs. And, finally, we will increase efforts to enhance the AFV resale market.

## Fuel Blends

Blending relatively low levels of alternative fuels with conventional fuels is an important option for reducing petroleum use. Examples of blends include E10 (10% ethanol/90% gasoline), B5 (5% biodiesel/95% diesel), and B2 (2% biodiesel/98% diesel). Blends can also consist of two types of alternative fuels, such as hydrogen/compressed natural gas (HCNG), which might be a combination of 20% hydrogen and 80% CNG, for example. Many coalition stakeholders use blended fuels in their fleet vehicles.

There is significant activity helping to increase the market for, and quality of, blends. A large segment of the market—low-level ethanol blends—has been developed through EPA's Fuel Oxygenate Rules which require oxygenates in gasoline to help reduce air pollution. DOE's Biofuels Program researches the production of alternative fuels used in blends, and the properties of blends and blending. It also supports activities of the ethanol and biodiesel industries related to standards development. Even the Department of Defense (DOD), not directly engaged in programs to promote alternative fuels, is an important user of alternative fuel blends. In the 2003-2004 contracting year, DOD contracted for 5.2 million gallons of pure biodiesel, which was used in blends. All these activities go a long way toward establishing and sustaining a market for alternative fuel blends.

| Common Blends |   |
|---------------|---|
| B2:           | 2% biodiesel/98% diesel                         |
| B5:           | 5% biodiesel/95% diesel                         |
| E10:          | 10% ethanol/90% gasoline                        |
| HCNG:         | 20% hydrogen/80% CNG<br>(blend ratios can vary) |

As interest in blended fuels increases, Clean Cities will train coordinators on the benefits of blends and work with them to determine which blends make sense locally or regionally. We will also work with state and local governments to explore opportunities to expand mandates and other programs for increasing blended fuel use. Long-term goals include forming partnerships for establishing fuel standards for blends and working with the DOE Bioenergy Initiative to fill gaps in regional assessments of feedstock availability and to seek out opportunities for enhanced production.

More specifically, coalitions may get involved in reviewing markets and feedstock availability to identify opportunities for work on policy or local fuel production with a target of having a plan for policy and/or production work by the end of fiscal year 2005. Coalitions may develop plans for outreach to their heavy-duty fleets.

## Hybrid Vehicles

Hybrid vehicles seem to have touched a nerve. Worldwide sales of light-duty hybrid electric vehicles have exceeded 150,000 and hybrid systems in heavy-duty vehicles, such as transit buses, are on the rise. In 2003, sales for the Honda Civic and Insight and Toyota Prius were expected to exceed 54,000, according to JD Power and Associates, with significant sales of 107,000 to be attained in 2004.

Clean Cities already provides basic information about hybrid vehicles and



City of Plano, Texas

The Dallas-Fort Worth Coalition teamed with the North Central Texas Council of Governments to launch the Clean Vehicle Program to offer reimbursements to qualified buyers of hybrids and AFVs. Fleets can earn \$3,000 rebates on each hybrid they purchase. See the upcoming autumn edition of *CCN* for more details on this hybrid success story.

- ▶ Ford, General Motors, DaimlerChrysler, and Nissan plan to offer gasoline hybrids in the near future.
- ▶ Toyota plans to expand its hybrid line-up to include the Lexus 400h later this year and Highlander in early 2005. Toyota is also developing hybrid systems for other platforms that will be introduced between now and 2007.
- ▶ BAE Systems, Allison Transmission, Oshkosh Trucks, and Eaton manufacture heavy-duty hybrid systems.

allows coalitions to include hybrids in their annual reports of vehicle acquisitions. DOE is leading the technology advancements for hybrid systems through the FreedomCAR initiative—a partnership among light-duty vehicle manufacturers and 21st Century Truck—a similar effort in the heavy-duty sector. And DOT encourages the use of hybrid transit buses as part of the Federal Transit Administration (FTA) and the FHWA CMAQ program. Clean Cities could play a significant role in the deployment of these efforts.

Under the expanded portfolio, Clean Cities will work with fleets to increase demand for hybrids, especially as new hybrid vehicle classes are introduced. We will also explore opportunities to educate consumers about the benefits of hybrid technologies and will track product availability, growth potential, and original equipment manufacturer (OEM) fleet marketing plans. Clean Cities also plans to con-

duct analyses to determine where and how the program can have the biggest market impact. We will develop documents that include hybrid lifecycle costs and benefits, funding sources, federal and state incentives, and case studies. In some instances, coalitions may develop state and local outreach campaigns, in partnership with others, by the end of fiscal year 2005.

In the long term, Clean Cities will focus on demonstration projects for medium- and heavy-duty hybrids. We will also assess a potential role to strengthen resale and develop new markets through activities such as leasing and rental cars.

## Fuel Economy

Clean Cities has long recognized the potential for petroleum displacement offered by fuel economy measures. We've helped disseminate the message by working with EPA to produce and distribute the annual "Fuel Economy Guide" and to develop the Fuel Economy Web site: [www.fueleconomy.gov](http://www.fueleconomy.gov).

Other federal activities include perhaps the most prominent fuel economy program: the fuel economy label required on all new vehicles. The sticker describes the vehicle's fuel economy and its anticipated annual fuel use based on average mileage per year. The Federal Trade Commission, in support of DOT's CAFE program, oversees this activity. EPA's efforts, in which Clean Cities may play a role, include the "Green Vehicle Guide," which compares vehicle emissions and fuel economy within vehicle classes.

Clean Cities coalitions and their fleets will play a significant role in our strategies for influencing petroleum displacement through fuel efficiency. Clean Cities' fleets are a good fit for this effort, because they are managed in groups, so fuel economy results are easier to achieve than they would be for individually owned vehicles. And, best of all, fuel economy is not affected by fueling infrastructure, so fleets can start tracking results immediately.

Clean Cities will reach out to established and new fleets to inform them about the cost savings of more fuel-efficient vehicles. Additionally, Clean Cities will work with *MotorWeek*

and the "It All Adds Up to Cleaner Air" campaign led by DOT/FHWA and EPA to educate the public about the benefits of fuel-efficient vehicles.

## Idle Reduction

Reducing vehicle idling represents another opportunity for reducing petroleum consumption. DOT requires that truck drivers rest for at least 10 out of every 24 hours. Many drivers idle their trucks to keep their engines warm, heat or cool their cabs, or to use other on-board appliances.

According to EPA, long-haul trucks idling overnight consume more than 800 million gallons of diesel fuel each year, translating to nearly \$3,600 a year in fuel costs per truck. Idle reduction strategies help alleviate the need to keep the engine running by providing access points to plug into the electric grid for power or using onboard power generation and storage equipment. These strategies can provide cost savings for trucking firms and help reduce air pollution.



IdleAire Technologies Corporation

Already on track to reduce heavy-duty truck idling, the South Shore Clean Cities Coalition teamed up with IdleAire Technologies to install 50 truck electrification units (similar to these units in Knoxville, Tennessee) at the Pilot Oil Truck Stop in Gary, Indiana.

Current efforts in the federal government are led by DOT and EPA, which are working on joint programs to reduce truck idling, including efforts targeted at major transportation corridors, as well as broader education and outreach. DOE is also developing idle reduction technologies through 21st Century Truck and evaluating commercial technologies through its Advanced Vehicle Testing Activity.

Clean Cities will educate coordinators and appropriate niche market fleets about idle reduction technologies

## Alternative Fuels Data Center

National Renewable Energy Laboratory

1617 Cole Blvd., MS/1633

Golden, CO 80401-3393

and the impacts they can have on fuel and cost savings through workshops and fact sheets. The program will also encourage coalitions to work with DOT and EPA in key transportation corridors to develop projects to encourage voluntary adoption of idle reduction technologies. SEP grant funding may continue to be made available for these efforts. Information derived from these early projects will be used to build a market penetration plan for the future.

Clean Cities may work with DOT and EPA on a multiyear plan for the future and may partner with the 21st Century Truck Program to disseminate technology updates. We'll also establish and track national and regional idle reduction goals and impacts.

### More to Come

In the coming months look for more information on the expanded Clean Cities Program as we complete analysis and implementation plans. You'll find updates in coming issues of *CCN*, on our new, restructured Web site: [www.eere.energy.gov/cleancities](http://www.eere.energy.gov/cleancities), and in the Clean Cities Roadmap: [www.eere.energy.gov/cleancities/roadmap.html](http://www.eere.energy.gov/cleancities/roadmap.html), or call the Hotline at 800-CCITIES.

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