

U.S. DEPARTMENT of ENERGY

ALTERNATIVE FUEL NEWS

The Official Publication of the Clean Cities Network and the Alternative Fuels Data Center

Contribute Your Comments on the Upcoming Rulemaking
Auto Shows Were a Hit for the AFV Industry
GSA Helps Federal Fleets Acquire AFVs



Kyoto Protocol

"What Does It Mean?"

Inside:
DOE Seeks
Input on E85
Action Plan

Living in Washington, DC, it seems like each week brings a new, major question, challenge, or problem for the President, Congress, or the “American people” to address, debate, or solve. Skimming through the newspaper reveals the need to revise the tax code, balance the budget, and improve health care. There is a challenge for better logging practices in the rain forests, and just what’s going to happen in Iraq? Although this may be an intellectually stimulating environment, all too often there is little that we as individuals have the power to influence.

Well, that’s not the case with the climate change issue, which splashed across every newspaper and magazine during December and January. Climate change is our issue. This is something we can influence. Here is a place where we can make a difference. I think our cover story headline hits the nail on the head in stating, “Historic Kyoto Protocol Presents Opportunities for Cleaner Transportation Technologies.” Right now in the 60 Clean Cities, you are working on a solution by promoting and using alternative fuel vehicles (AFVs). And, maybe more importantly, you are setting the stage to introduce the advanced technology vehicles of the next generation.

Our feature story, on new plans for E85 infrastructure, is a perfect example of how the hard work in and around Clean Cities can directly affect the “global challenge” of climate change. By building new ethanol refueling infrastructures, we can facilitate the use of more 85% ethanol fuel. The use of domestically produced renewable ethanol for E85 production significantly reduces tailpipe emissions that cause ozone and carbon dioxide emissions that contribute to global warming.

You may have noticed that Lee Slezak’s signature is missing this month. Lee has moved over to our vehicle testing and evaluation division here at DOE, where he will manage the advanced vehicle testing and field operations programs. Although he’ll be missed at the Alternative Fuels Data Center, we’ll soon be hearing special reports from him on the real-world characteristics and performance of advanced technology vehicles that will be in showrooms early in the next century. The Data Center will also undergo a bit of an organizational facelift. Cindy Riley from the National Renewable Energy Laboratory (303-275-4491) has assumed the management responsibilities, and she is planning an exciting new portfolio of informational materials and “tools” to help influence the choice for AFVs.

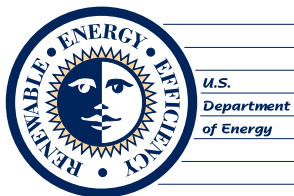
Lastly, Clara Chun from our Oakland office will be moving on in her career. Many of you know her from her work in California, but Clara has also been an instrumental and critical part of the National Clean Cities Team for more than 3 years now. Although I wish her well, she will be dearly missed. Fortunately, Ernie Rios (510-637-1950), a 10-year veteran of DOE and former director of the old San Francisco Regional Support Office, will take over the reins. So, as you can see, we’re already off to an eventful and exciting year!

As usual, enjoy the issue.



Jeff Hardy —
National Clean Cities
Program Director

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“The Great Wave
off of Kanagawa”
Hosukai

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Historic Kyoto Protocol Presents Opportunities for Cleaner Transportation Technologies

Efforts to reduce greenhouse gas emissions present new opportunities for the alternative transportation fuels industry. Responding to the vast majority of the world's climate scientists who believe human activities (primarily burning fossil fuels) are adversely influencing global climate, 160 nations recently reached a historic agreement to reduce greenhouse gas emissions by harnessing the forces of the global marketplace to protect the environment. "[The Kyoto Protocol] is environmentally strong and economically sound.... I am particularly pleased that it strongly reflects the commitment of the United States to use the tools of the free market to tackle this difficult problem," President Clinton stated.

"I propose \$6 billion in tax cuts and research and development to encourage innovation, renewable energy, fuel-efficient cars, and energy-efficient homes."

President Clinton,
State of the Union

Because transportation is the second largest source of U.S. greenhouse gas emissions, and is projected to be the largest source by the year 2000 (according to the Energy Information Administration), transportation industries will have a critical role to play in helping the nation reach the U.S. emissions reduction targets.

General Motors, Ford, and Chrysler recently demonstrated their understanding of the significance of the Protocol as they unveiled concept designs for cleaner vehicles and showcased how U.S. industry can find practical solutions to this problem (see From the Automakers). In response, Vice President Gore applauded the Big Three for "introducing a new generation of highly efficient cars that will meet the needs of America's families while also meeting the challenge of global warming. It shows that through ingenuity and innovation, American industry can dramatically reduce greenhouse gas pollution while strengthening our economy and creating new jobs."

"In light of the Kyoto agreement, such advanced vehicles will play an even more important role in meeting national environmental goals while preserving U.S. jobs."

Dan Reicher,
Assistant Secretary for Energy Efficiency
and Renewable Energy, U.S. DOE

Most importantly, the alternative fuel vehicles (AFVs) built by automakers today and already operating in Clean Cities, can also help address climate change. Automakers and fuel suppliers that are helping meet the nation's urban air quality and energy security goals can now market AFVs as part of the nation's climate change strategy.

More than 200,000 AFVs are on the road in the 60 U.S. communities participating in DOE's Clean Cities Program. Each vehicle fuel technology—ethanol, natural gas, propane, electric, and others—can provide net reductions in greenhouse gas emissions. Moreover, technology and fuel suppliers are learning how to measure and communicate these benefits to customers using AFVs, and create the necessary foundation to develop future markets for high fuel efficiency and advanced technology vehicles.

In addition, policy developments on the horizon can be expected to increase business opportunities for cleaner transportation technologies and alternative fuels. This reinforces the proposal released in October, which specifically targeted increased support for low-cost, lightweight materials for vehicle frames, batteries, inexpensive fuel cells (including new technology for using gasoline to power fuel cells), and advanced internal combustion engines for use in hybrid vehicles.

In the future, the President's proposal for domestic greenhouse gas emissions trading (modeled after the Clean Air Act's highly successful utility acid rain trading program) could bring new investments in advanced transportation technologies. Trading rewards U.S. companies that produce cleaner technologies through the sale of emissions reduction "credits" to those who need them to comply with regulatory requirements.

While policies unfold, the scientific need to reduce greenhouse gas emissions will remain, as will the challenges and opportunities this issue presents for clean energy and transportation technologies.

"We can help tackle this problem now with the alternative fuel vehicles that are available today and in the nation's Clean Cities."

David Rodgers, Director
Office of Technology
Utilization, U.S. DOE





Federal News

Comments Welcome on the Rulemaking for Local Government and Private Fleets

If fleet managers want to convert their delivery fleets to an alternative fuel, they can. There is a variety of vehicles and fuels from which to choose, with an array of tax incentives and deductions to help defer the costs of vehicle purchases. From the time the Energy Policy Act (EPAAct) was

EPAAct Section 502 outlines the nation's petroleum displacement goals:

- 10% replacement fuel use by 2000
- 30% replacement fuel use by 2010

Box 1

passed 6 years ago and our nation's ambitious petroleum displacement goals were established (see Box 1), federal, state, and voluntary programs, such as

Clean Cities, have sought to help jumpstart the alternative fuel vehicle (AFV) industry. We've made a lot of headway, but there's still a long way to go in order for EPAAct goals to be reached. AFVs will need to comprise 35%–40% of new vehicle purchases, and AFV sales growth will have to double every year for the next 5 years—from approximately 30,000 to 500,000 AFV sales per year. Currently available incentives are not large enough to induce this growth in the AFV market. The private and local government fleet commitments to AFVs may be the key to reaching our nation's EPAAct goals.

April 1, 1998, is the legal deadline for DOE to publish an Advance Notice of Proposed Rulemaking (ANOPR) that starts the Department's effort to consider implementing a

EPAAct section 507(g)—conditional AFV acquisition requirements for local government and private fleets:

- 20% of new vehicle acquisitions must be AFVs in model year (MY) 2002
- 40% in MY 2003
- 60% in MY 2004
- 70% in MY 2005 and thereafter

Box 2

regulatory program for local government and private fleets. Although private fleet requirements will undoubtedly spark many debates, they could also ensure significant growth of the AFV market. This may be

an opportune time to implement private and local government fleet requirements because increasingly more AFVs are available from the automakers.

EPAAct outlines conditional requirements of municipal and private fleets that may or may not be implemented (see Box 2). Under the law, DOE has several options for

modifying the rule, including the choice to pursue no rule at all. DOE must also consider the petroleum replacement goals and whether or not to modify them. Each option will be outlined in the ANOPR and open for public comment. Should DOE decide to pursue a rule, the modification options include: (1) changing the start date of the program, thereby postponing the model year in which fleets covered under the rule must start acquiring AFVs; or (2) reducing the acquisition percentages specified in EPAAct section 507(g).

In addition to questions targeting feedback on local government and private fleet AFV requirements, the ANOPR will contain questions about including transit bus fleets in the rulemaking. Transit buses are perfect applications for alternative fuel use (pre-determined routes and central refueling), and they are already big players in the alternative fuel market. Many fleets have begun replacing their diesel-powered buses with alternative fuel buses. For example, SunLine Transit Agency in Coachella Valley, California, boasts a fleet that is 100% alternatively fueled. In fact, according to the American Public Transit Association, 22% of the new buses on order from January to April 1998 are powered by alternative fuels—an increase from 13.9% in 1996.

After the ANOPR is published, DOE will collect input from the public for 90 days. The ANOPR will give a mailing address for written comments. Three separate hearings will be held in different cities, providing forums for people to voice their opinions and offer suggestions to DOE. Due to the vast number of fleets affected by the proposed ruling, the hearings should be very well attended. "These hearings will offer the public an excellent chance to voice their opinions to DOE in person," said Ken Katz, DOE's program manager for EPAAct rulemaking and compliance. "The hearings also provide an opportunity for DOE to ask questions that will clarify or amplify a comment made, and thus enable DOE to use that information as it considers options for the fleet program." Refer to upcoming issues of *Alternative Fuel News* for hearing dates and locations, and keep checking the *Federal Register* at www.epa.gov/fedrgstr for the announcement and publication of the rulemaking and hearing date information.

After the ANOPR comments are reviewed, DOE has until May 1, 1999, the legal deadline for publishing a Notice of Proposed Rulemaking (NPR) in the *Federal Register*. The NPR, if published, would be a draft rule resulting from DOE's findings during the ANOPR comment review phase. The draft would outline the specifics of any proposed regulatory program, and ask for additional public comment. Following the NPR public comment period, DOE would have to publish a final rule on or before January 1, 2000, for

it to be considered effective. "The local government and private fleet program can be a vital component in the nation's efforts to decrease petroleum dependency," said Katz. "The Clean Cities network can help facilitate this program via education, advocacy, and early adoption of AFVs."

AFVs Available through GSA IFMS

Sedans

- Ford Contour (compact, bi-fuel, natural gas)
- Ford Crown Victoria (full-size, dedicated natural gas)
- Ford Taurus (mid-size, flexible-fuel, ethanol, or methanol)

Trucks

- Ford Ranger (compact, electric)
- Chevrolet S10 (compact, electric)
- Chevrolet C2500 (full-size, bi-fuel, natural gas)
- Ford F250 (full-size, dedicated, natural gas)

Minivans

- Chrysler Grand Caravan (mid-size, flexible-fuel, ethanol)

Full-Size Vans (passenger and cargo)

- Ford E250 (full-size passenger, dedicated, natural gas)
- Ford E350 (full-size cargo, dedicated, natural gas)
- Freightliner MT45 (medium-duty cargo, dedicated, natural gas)

GSA Helps Federal Fleets Acquire AFVs

The U.S. General Services Administration (GSA) held a meeting last December to outline AFVs available to federal fleet customers in 1998. GSA leases vehicles to its federal customers through the Interagency Fleet Management System (IFMS). GSA increased its AFV lineup to meet EPA and Executive Order demands, which in 1998 require 50% of all covered fleet light-duty vehicle purchases to be AFVs. The new lineup has additional vehicles and more flexibility than last year, helping fleet managers meet their specific vehicle needs (see box).

GSA will allow fleet managers to purchase the mid-sized flexible-fuel Taurus in lieu of their normal compact purchases. However, the higher cost of leasing a mid-sized vehicle instead of a compact must be made up by higher payments in the first lease year. Fleet managers can still obtain AFVs by purchasing them through GSA's Automotive Division (formerly the Automotive Center).



At the Pump

DART's New Facilities Are Truly Texan

The first of two 30,000-gallon, above-ground liquefied natural gas (LNG) storage tanks was installed at the Dallas Area Rapid Transit (DART) LNG refueling station. Built by Lone Star Energy, a Texas Utilities Company, the facility will service 210 LNG buses that DART will procure under separate contracts. The LNG used to fuel the buses is produced at the Amoco Chemical Chocolate Bayou plant near Alvin, Texas, and transported to the DART facility by LNG-powered tractor trailers. The buses are expected to consume up to 12 million gallons of LNG over 5 years as part of the contract with Lone Star Energy. "The DART commitment to LNG will showcase to other heavy-duty fleet operators the advantages of using alternative fuels and contribute to improving the air quality in the Dallas/Fort Worth metroplex," said DOE's Dan Deaton. "I believe this project is unique in that the heavy-duty trucks that will haul the LNG to Dallas were converted to LNG utilizing Clean Cities Program funds received by Lone Star Energy, an active stakeholder in the Dallas/Fort Worth Clean Cities coalition." The station is scheduled to be operational by March 1998, and the buses should be delivered later this Spring. For more information, contact Stan Taylor, Lone Star Energy Company Alternative Fuels Division, at 214-573-3854.

New Technologies Are Right around the Corner

IMPCO Technologies, Inc. announced the opening of its new gaseous fuel technology center in Irvine, California. The new center focuses on the development and manufacture of automotive original equipment manufacturer fuel systems and fuel storage vessels, and provides advanced fuel system technology for heavy-duty engines, forklifts and small industrial engines. The center employs more than 100 professionals and has state-of-the-art testing equipment and laboratories. IMPCO is diversifying its products and services to meet global demands for clean-burning, energy-efficient technologies. IMPCO recently acquired two alternative fuel companies to diversify its product line and fully service the growing Mexican and Latin American markets. IMPCO is also teaming with General Motors on domestic and international ventures, including the development of a bi-fueled Chevrolet Cavalier. For more information, contact Dale Rasmussen at 206-575-1594, extension 306.



From the Automakers:

AFVs Were a Hit at the Auto Shows

Electric vehicles (EVs) and hybrid electric vehicles (HEVs) were popular themes at the Los Angeles and Detroit Auto Shows held back-to-back in January. Both auto shows focused on environmentally friendly vehicles with advanced automotive technologies. The automakers demonstrated commitment to more energy-efficient and less polluting transportation.

Both General Motors' (GM) and Honda's EV exhibits were well attended. The GM EV1, available only through leasing, was a key attraction at GM's Saturn exhibit as EV1 owners shared their driving experiences. Honda's exhibit also drew crowds as attendees asked questions about the EV Plus, which is currently available in California through a pilot lease program.

The Prius, Toyota's new HEV, was accompanied by an elaborate show highlighting the propulsion system. The display, with the help of video, component cutaways, and moving parts, showed how the hybrid system actually works. Currently, the Prius is being sold only in Japan, but it may be available in the United States through a 1999 pilot program.

DOE's Office of Transportation Technologies (OTT) exhibit, which featured a student-built HEV, also attracted much interest. The vehicle, built by the University of California-Davis, won first place in OTT's 1997 Future Car Challenge, a student engineering competition in which college students competed to build an 80-mpg fuel-efficient vehicle that performs like a traditional vehicle. Engineering students, representatives from OTT's Office of Technology Utilization, and California Clean Cities' stakeholders answered questions about HEVs and explained the program's involvement in developing fuel-efficient and alternative fuel vehicles (AFVs). Consumers were especially excited about hybrids; many said they would buy them when they become available to the public.

At the Detroit Auto Show, the automakers reinforced their commitment to advanced automotive technologies. GM showcased its advanced vehicles and EVs in a high-tech video display featuring parallel and series hybrids, and methanol-powered fuel cell concept vehicle technologies. GM's EV1 was outfitted with an Ovonic nickel metal hydride battery, which could increase the EV1's range to 120-160 miles per charge. "Our family of clean car options



Photo courtesy of John Hampton, Abacus Technology/PIX 05467

Detroit Auto Show—GM's prototype fuel cell concept vehicle



HONDA



CHRYSLER CORPORATION

is growing fast," said Jack Smith, GM's chairman, president and chief executive officer. "This year, we're phasing in nickel metal hydride batteries to our pioneering vehicles, the EV1 and S10 electric truck, and we plan to have a production-ready HEV by 2001."

Ford unveiled its P2000 DIATA, a mid-sized HEV weighing 40% less than a standard mid-size sedan with a fuel economy of 63 mpg. The P2000 has an aluminum direct-injected compression ignition engine and light-weight body parts. Ford also displayed a fuel cell-powered P2000. "Later this year we'll have an electric hybrid powered version of the P2000 on the road. And by 2000, we

Ford Moves into the Fast Lane



Ford Offers E85 Muscle Car

You better not blink when you see Ford's future E85 offering, or you might miss it! Ford unveiled its Mustang Super Stallion concept car at the Los Angeles Auto Show in January. The vehicle comes equipped with a 545-horsepower 5.4-liter engine with the E85 flexible-fuel option. The Super Stallion can do the quarter mile in a mere 13 seconds; whoever thought AFVs could be so much fun! The Stallion will be offered in limited quantities in model year 1999. For more details, call your local Ford dealer or the National Alternative Fuels Hotline at 800-423-1DOE.

Does America Want Ford's E85 Windstar?

Ford is currently testing prototype E85 Windstars in several test fleets throughout the Midwest. So far the vehicles are performing well, according to Rob Seiter of Ford Motor Company. "Some of the vehicles have logged more than 15,000 miles and are performing flawlessly." Most of the fuel system and engine emission control technology comes from the E85 Taurus, which has a history of reliable performance. One of the goals of the demonstration project is to evaluate consumer response to the product. Commercialization of the E85 Windstar will depend on an evaluation of market potential for the vehicle.



Ford FFV Taurus Sales Look Good for 1998

According to Ford representatives, favorable sales figures are expected for the flexible-fuel Taurus for 1998. The Taurus is one of the favorites of federal fleet managers who will be using these vehicles to meet EPA's purchasing requirements. The Taurus FFV has no increased incremental cost, which makes it an attractive option for fleet managers concerned about the bottom line. The flexible-fuel concept (a fuel system that can run on 85% alcohol, gasoline, or a combination of both) gives drivers fuel flexibility without additional costs.

Ford Announces AFV Incentives for 1998

Ford has announced incentives for 1998 model year AFVs reaching \$2,000 per vehicle. The car prices, different for each model, are based on the reengineering cost of each vehicle built to run on a specific fuel. The incentives include \$1,000 for the flexible-fuel Taurus, and either \$1,500 or \$2,000 for the other AFVs. Also, the Ford EV Ranger has a \$5,000 incentive off the actual price! For more information on Ford AFV incentives call 800-ALT-FUEL.

<u>Model</u>	<u>Incremental Cost</u>
Flexible-fuel	
Taurus	\$165
Dedicated	
F Series NGV	\$3,520
Econoline Van NGV	\$4,245
Crown Victoria NGV	\$4,665
Bi-fuel	
F Series NGV	\$4,625
Econoline Van NGV	\$5,465
F Series Truck LPG	\$4,265
Econoline Van LPG	\$4,155

will have a fuel cell version that produces no emissions other than water vapor," said Jack Nasser, Ford Automotive Operations president.

Chrysler displayed its Dodge Intrepid ESX2 sedan, which uses lightweight composite plastics and a diesel-electric hybrid engine to meet future vehicle emission requirements and achieve up to 70 mpg.

Domestic automakers are currently working together to develop hybrids through the Partnership for a New Generation of Vehicles (PNGV), a government/industry partnership between the Big Three automakers (Chrysler, Ford, and GM) and DOE. The partnership's goal is to

develop and bring to market a prototype 80-mpg vehicle by model year 2004. As shown by the demonstration of vehicles at the early 1998 auto shows, the new concept vehicles have significant technological advancements. However, these vehicles will be required to achieve the more ambitious PNGV goal of a safe, reliable, cost-competitive 80-mpg vehicle with very low emissions and a 100,000-mile vehicle life.

DOE Seeks Input on E85 Action Plan

It's the classic chicken and egg story. Vehicles first, then stations? Or is it build the stations and the vehicles will follow, as in "if you build it, they will come?" It's a scenario that the alternative fuel vehicle industry has grappled with for several years. It seems that now, at least for one alternative fuel, the dilemma may be over. Ethanol industry stakeholders, together with DOE, are developing a plan that could lead to the widespread use of E85 flexible-fuel vehicles (FFVs) by the general public. This partnership is particularly timely as the conference in Kyoto (see cover story) has drawn much attention to climate change issues, and E85, as a domestically produced, renewable fuel, can mitigate potential problems associated with climate change.

In June 1997, Chrysler announced that for the 1998 model year, all of its 3.3-liter minivans will be FFVs, capable of running on either E85 or gasoline at no additional cost. All will be E85-ready, which means as many as 200,000 new vehicles in major metropolitan areas across the country in the next year alone, a giant leap for the E85 vehicle market. Ford will extend the leap even further in model year 1999, when all of its 3.0-liter V-6 Ford Ranger pickups will be E85-ready.

But where will these vehicles refuel? At the time of the automakers' announcement, there were just 38 public E85 refueling stations and 29 private stations, mostly in the Midwest. Very few of these stations were located in major cities, only one in California, and none in the northeastern or southern states. That may have been fine for the approximately 10,000 E85 vehicles on the road, but what about 20 times that number? According to industry stakeholders, if all the Chrysler minivans used the E85 option all the time, the demand for E85 would increase by about 150 million gallons per year—the



Photo courtesy of Chrysler Corporation/PIX05467

The Chrysler E85 minivan

equivalent of approximately 100 stations. With this in mind, a group of ethanol stakeholders including the Governors' Ethanol Coalition, the National Corn Growers Association, the National Ethanol Vehicle Coalition, and DOE, are developing a plan to significantly expand the availability of ethanol and encourage use of the E85 option in new vehicles. The plan is called the *Action Plan to Promote the Development and Use of E85 Refueling Infrastructure* (E85 Action Plan), and is now available in draft form for public comment.

The Chrysler E85 minivan. The White House showed support for the alternative fuel program by purchasing 30 Chrysler E85 minivans. The U.S. General Services Administration (GSA) purchased the 1998 minivans for the White House fleet. Federal employees working on Capitol Hill are driving them today!

The plan aims to identify several major metropolitan areas where a significant number of the new FFVs can use E85 most of the time. E85 infrastructure could then be placed in these "high priority" areas with increased confidence that many vehicles will take advantage of the E85 option, laying a foundation for the expanded use of E85 as a transportation fuel.

The strategic approach of the E85 Action Plan outlines proposed criteria for determining the high priority areas for infrastructure investment. It offers suggestions for determining areas that would best respond to E85 infrastructure investment, and ways in which industry stakeholders can ensure sufficient throughput of the new stations.

Your input and buy-in are needed to move forward with the implementation of the action plan. "The large-scale introduction of flexible fuel vehicles is a challenge to the ethanol producers and retailers—if they can provide a significant amount of fuel for this emerging market—they may well guarantee significant ethanol use in light-duty vehicles for



Photo courtesy of Ford Motor Company/PIX 05149

Ford's E85 Ranger Pickup

years to come,” said David Rodgers, director of DOE’s Office of Technology Utilization. The potential for success is enormous. Widespread public availability of these vehicles, strategically located refueling stations, and effective education and outreach to alert people of these vehicles and the benefits of their use could mean a turning point for the

AFV industry. The summit in Kyoto has brought climate change issues to the forefront and set the stage for clean burning, domestically produced renewable fuels to penetrate the market. With a strong industry partnership and the right plan, E85 FFVs will be the breakthrough AFVs to be widely used.

To obtain a copy of the E85 Action Plan, call the National Alternative Fuels Hotline at 800-423-1DOE, or check out the Office of Transportation Technologies web site at www.ott.doe.gov/news/actionplan.html. Send your comments to U.S. Department of Energy, EE-34, 1000 Independence Ave., S.W., 20585, ATTN: E85 Action Plan, or e-mail them to afv-deployment@hq.doe.gov.



From the Hill

Converted Vehicles Subject to New Rules

There have been diverse reactions to EPA’s Addendum to Memorandum 1A, which tightened the certification standards for vehicle conversions. Many people are still adjusting to the more stringent EPA guidelines, particularly because converted vehicles won’t count toward EPA compliance unless they meet EPA conversion standards. Furthermore, EPA has set stiff penalties for noncompliance: \$25,000 for manufacturers and \$2,500 for individuals (per infraction).

Some industries, such as the propane (LPG) industry, are hit harder than others. There are approximately 250,000 propane vehicles in the United States, most of which are conversions. The addendum will severely limit the availability of conversion kits in the short term. However, new LPG vehicles from Ford may help meet LPG vehicle demand. Some companies have changed their business strategies in order to comply with EPA guidelines. Companies are slimming down the number of vehicle applications for which they offer kits, and sell only the more popular conversion kits. Industry experts have forecasted that smaller companies will join together to merge capital and human resources.

If you are a fleet manager who relies on vehicle conversions, get proof from your vendor that the conversion kits you purchase are EPA certified. Otherwise these conversions will have no value toward EPA requirements and EPA could fine you. If you have any questions about conversions, call the National Alternative Fuels Hotline at 800-423-1DOE, or browse the Alternative Fuels Data Center web site at: www.afdc.doe.gov.

CMAQ Funds Are Still Alive

On December 1, 1997, President Clinton signed a 6-month extension to the Intermodal Surface Transportation Efficiency Act (ISTEA). The extension, referred to as the Surface Transportation Extension Act of 1997, permits the allocation of federal transportation funds to continue through May 1, 1998, and allows surplus funds to be spent through July 1, 1998. These funds, totaling approximately \$15.5 billion, are being used for various programs including CMAQ (Congestion Mitigation and Air Quality) projects.

Tommy Foltz, president of Clean Fuels Strategies, stated, “People should continue to apply because if 1998 surplus funds still exist, stakeholders can get funding for alternative fuel-related projects, and send a message to Congress about the importance of reauthorizing the program.” According to Mike Savonis, of DOT’s Federal Highway Administration, “The serious competition for CMAQ funds demonstrates the continued viability and importance of the CMAQ program.”

The extension bill is a positive action in that it allows states to continue obligating federal transportation funds; however, the extension is temporary. The current version of the Act, referred to as ISTEA 2, is now being debated in Congress. To learn more about ISTEA, visit the web site at www.istea.org. For more information on how to apply for funding, contact your local metropolitan planning organization, state DOT, or local office of the Federal Highway Administration.



Funding Opportunities

SEP Grants Promote Partnerships

One of the great attributes of the Clean Cities Program is that it brings together all the key players of the AFV market. State Energy Offices are among those key players. One way Clean Cities works with states is through the State Energy Program (SEP) Special Projects grant program. For the third year, DOE's Office of State and Community Programs, in conjunction with the Clean Cities Program, is offering approximately \$2 million for projects that help accelerate the introduction or increase the use of AFVs.

The benefits of the program are twofold: (1) it helps Clean Cities coalitions leverage funds to foster development of their local AFV markets, including projects to get more AFVs on the road, install infrastructure, develop educational tools, and build the organizational capacity of local coalitions; and (2) it helps strengthen the relationship between the federal, state, and local governments, and Clean Cities private-sector partners. Selected projects are funded as part of the state's SEP, so cities must work with their State Energy Offices on proposal development. "As a former state energy official, I know firsthand the value and important role states play in building long-term public and private partnerships to create new markets for energy-efficient technologies. Clean Cities has a lot to gain from the experience and leadership of the State Energy Offices," said Marcy Rood, deputy director of the National Clean Cities Program. "In regard to alternative fuel markets, State Energy Offices have provided leadership by offering guidance on AFV regulations, information on AFV products to public and private fleets, and support to their local Clean Cities, all of which is most appreciated," said Rood, "I know we couldn't do it without them!"

Also unique to this year's SEP funding is a partnership between the Clean Cities Program and DOE's Federal Energy Management Program (FEMP). FEMP/Clean Cities are interested in funding three pilot programs that would develop a process to allow easy adoption of energy service performance contracting legislation for local and state facilities, and non-profit schools and hospitals.

Awards for both the Alternative Fuels Special Projects and the FEMP SEP Special Projects are available only to designated Clean Cities coalitions or groups that have submitted a formal application for official Clean Cities status. Winners will be announced this March, and will be highlighted in our next issue. For information on next year's SEP, call Dorothy Wormley at 202-586-7028.

ICLEI Award Winners Announced

The U.S. Office of the International Council for Local Environmental Initiatives (ICLEI) has awarded \$250,000 in grants to 10 U.S. cities and counties under the Transportation Solutions Grant Program (see box for winners). The program is offered annually though ICLEI's Cities for Climate Protection Campaign-U.S., with funding provided by EPA's Transportation Partners and DOE's Office of Transportation Technologies and Clean Cities Program.

ICLEI Award Winners

Mesa, Arizona Telecommuting project	\$25,000
Berkeley, California Electric Station Car Project	\$30,000
Los Angeles, California Traffic Enforcement Officers on Bicycles	\$14,500
San Jose, California Electric Vehicle Recharging Stations	\$17,500
Fort Collins, Colorado Propane-powered Shuttle Van Service	\$32,000
Miami Beach, Florida Electrowave Electric Bus System	\$25,000
Maplewood, New Jersey Natural Gas-Powered Community Jitney Service	\$25,000
New York City, New York Natural Gas-Powered Shuttle Service	\$30,000
Schenectady County, New York Natural-Gas Shuttle for Welfare-to-Work	\$28,000
Salt Lake City, Utah Police Officers on Electric Bicycles	\$23,000

Ninety-five U.S. local governments competed for the grant funding to support projects that incorporate alternative fuels, alternative fuel vehicles, or other technologies to reduce vehicle travel, air pollutants, and greenhouse gas emissions. The 10 projects chosen involve a variety of transportation solutions, including electric cars, buses, and bicycles; propane and compressed natural gas-powered shuttle vans; and telecommuting. Each project will help reduce the negative impacts of urban transportation on local air quality, global warming, and the quality of urban life. For more information on how to apply for funds under the ICLEI program, call Matt Nichols, ICLEI Sustainable Transportation Program Coordinator, at 510-540-8843.

EPA Pollution Prevention Can Help Clean Cities

The EPA is soliciting grant proposals under the Environmental Justice through Pollution Prevention (EJP2) grant program. This program is designed to support pollution prevention approaches that address environmental justice concerns in affected communities. EPA anticipates that as much as \$4 million will be available in FY 1998. Cost sharing is no longer required. EPA strongly encourages cooperative efforts between communities, businesses,

industry, and government to address common pollution prevention goals. Applications are due April 20, 1998. For more information contact Louise Little at 703-841-0483, or go to www.epa.gov/opptintr/ejp2.

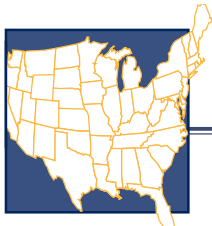
Recharge Your EV While Staying at the Hilton

The Hilton Hotel Corporation is installing free electric vehicle (EV) recharging stations in all its Southern California locations. The stations are funded by General Motors Corporation and have been installed by Edison EV. The inductive chargers can fully recharge batteries in 1 hour.



Clean Cities Roundup

- Long Island. On December 2, the Long Island Clean Cities coalition hosted its first Alternative Fuel Vehicle Funding and Acquisition Clinic. This "how-to" workshop was developed to inform fleet owners and operators of the 1998 funding opportunities available for alternative fuel vehicles (AFVs) on Long Island. The clinic included information on AFV grant programs and tax incentives available from the federal and state governments, fuel providers, and vehicle manufacturers. A ride and drive featuring electric vehicles (EVs), compressed natural gas, and propane vehicles afforded participants a hands-on experience with the technologies available for their fleets in the coming year. Local dealers and auto manufacturers were also available to discuss vehicle offerings, delivery dates, and purchase costs. More than 160 people attended the event, which was covered by local television and newspapers.
- Los Angeles. The City of Los Angeles recently received the Governor's Environmental and Economic Leadership Award in the "Environmental Economic Partnership" category for its Quick Charge L.A. Program. The award, California's most prestigious environmental honor, was established in 1993 by Governor Pete Wilson to recognize outstanding achievements that successfully balance environmental protection and conservation with sustainable economic development. Under Quick Charge L.A., 29 public and private sector partners are working to develop EV infrastructure throughout the region in areas including shopping malls, hospitals, universities, office buildings, event centers, transit centers, and employers. The City of Los Angeles is also introducing 59 EVs into various departments including airports, harbor, transportation, water and power, and the zoo.
- Florida Gold Coast. Miami's "Electrowave," Florida's first electric shuttle bus system, began service on February 1 of this year. The Electrowave provides residents and visitors access to the many attractions in South Beach free of charge, 365 days a year. The system consists of seven fully air conditioned 22-passenger vehicles. Each is a moving work of art, with the exterior panels designed by one of five artists chosen in a design competition. The Electrowave shuttle bus system was developed by the Miami Beach Transportation Management Association and the City of Miami Beach, in partnership with the Florida Gold Coast Clean Cities Coalition, the Florida Departments of Transportation and Environmental Protection, Florida Power & Light Company, Florida Alliance for Clean Technologies, and the International Council for Local Environmental Initiatives.
- Central Oklahoma. The Central Oklahoma Kids for Clean Cities initiative is already under way for 1998. This year's feature project involves a partnership with students at Edmond Memorial High School in Edmond, Oklahoma, to create a Clean Cities magazine. Funded by a grant from the Oklahoma Department of Commerce and supplemented by advertising sales, the magazine will feature AFV fleets and businesses in Oklahoma. The students plan to enter the completed magazine in the Oklahoma Interscholastic Press Association's annual student magazine competition.



From the States

New Jersey Electrifies Commuting with Project: Power Commute

The New Jersey Department of Transportation (DOT), in conjunction with New Jersey Transit and Transportation Management Associations (TMAs), has implemented a \$1.5 million pilot project to promote commuter alternatives, decrease traffic congestion, and improve air quality. Project: Power Commute is geared toward closing the commuting gap between train stations and the workplace by using electric vehicles (EVs) as shuttles driven by employees from the station to their work, and back to the station.



Morristown, the first location in New Jersey to implement the project, uses Solectria Force EVs. The Solectria is a four-person sedan with a 50-mile range, regenerative braking, and cabin pre-heat. Charging boxes will be installed both at the train stations and work locations.

The program benefits will greatly affect the people of New Jersey by closing the transportation gap between public transit and the workplace, reducing harmful automobile emissions, decreasing the number of single-occupancy vehicles on our roadways, and creating a market for EVs in the state. "It's great to see this partnership between government agencies and several private sector organizations—this is what Clean Cities is all about," said James Ferguson, DOE Clean Cities program manager for the Philadelphia Region. "This is just another example of New Jersey's leadership and commitment to alternative fuels initiatives. The recently designated North Jersey Clean Cities Program should really benefit from this highly visible project," he said.

Businesses that purchase the EVs at project end are eligible for a 10% alternative fuel vehicle (AFV) tax credit, and would receive a tax deduction if they install a charging infrastructure. The TMAs will manage the project at



each location. For more information call: MCRIDES in Morristown (973-267-7600), Cross County Connection in Cherry Hill (609-596-8228), and Greater Mercer in West Windsor (609-452-1491).

Clean Cities Program Hits the Airwaves

Channel surfers in a few select cities may catch a glimpse of the latest and greatest PBS series on alternative fuels entitled, *On the Road to Clean Cities for the 21st Century*. The series, a joint effort of the Clean Cities Program, New Vision Communications, and The Jefferson Energy Foundation, features video segments and panel discussions on current issues in the AFV industry. Each broadcast is taped in front of a live studio audience and will be packaged as one segment in a series of town hall meetings throughout the country.

The series debuted on December 2 at the University of California Riverside's Studio Theater. This premiere show was broadcast live to PBS channel KVCR in San Bernardino and Orange Counties. It opened with a video segment featuring David Gergen, *U.S. News and World Report*, who commented on the connection between the transportation sector and air pollution.

William Cook, also of *U.S. News and World Report*, then led a panel discussion on the role of alternative

fuels and AFVs in improving air quality and energy independence. For nearly 50 minutes, Bill Cook directed questions to the panelists and led an informative (and occasionally controversial) discussion on alternative fuels and the role of AFVs in Southern California. Although the panelists agreed that there is a definite need and viable role for AFVs, there were differences of opinion on the level of

Riverside Town Hall Panelists

Doug Henderson
Western States Petroleum Association
William Keese
California Energy Commission
Mayor John Longville
City of Rialto
Dennis Minano
General Motors
Wayne Nastri
South Coast Air Quality
Management District
Dr. Joseph Norbeck
UC Riverside/CE-CERT
T. Boone Pickens
Pickens Fuel Corporation
David Rodgers
U.S. Department of Energy

urgency, the degree to which these technologies can penetrate the market, and the timing of their introduction. Much of the attention was turned to the development of hybrid and fuel cell technologies. Although most of the participants agreed that fuel cell technology is the ideal alternative, the point was well made, especially by David Rodgers, director of DOE's Office of Technology Utilization, that there are readily available alternatives to gasoline today that can be very successful when placed in the appropriate application. Comments made after the show by the studio audience indicated that this message was by far the most important.

The General Motors Innovention Center at EPCOT in Orlando, Florida, was the setting for the second show of the series, which was broadcast live to PBS stations in Miami and Tampa Bay. This show had a special feature, as it dovetailed into the Electric Vehicle Symposium-14 (EVS-14), also held in Orlando. Following the general introduction, the video featured scenes from the EVS-14 Exhibit Hall and provided an overview of EV technologies.

Orlando Town Hall Panelists

- Ken Baker
General Motors
- John Bradley
University of South Florida, Center for UrbanTransportation Research, and Florida Sun Coast Clean Cities Coordinator
- James Gerwen
Lockheed Martin Power & Drive Systems
- Richard Moorer
U.S. Department of Energy
- Marvin Rush
Electric Vehicle Club of California
- Robert Stempel
Energy Conversion Devices
- Bob Suggs
Florida Power & Light
- John Wallace
Ford, and EVS-14 Chair

After the opening video, moderator David Gergen led a lively panel discussion on the role of EVs in improving air quality and energy independence. Although everyone agreed that there is a definite need and a viable role for EVs, the panelists differed somewhat on the feasibility of EV technologies, the level of urgency for EVs, the degree to which these technologies can penetrate the market, and the timing of their introduction. Attendees were provided with expert information on various battery technologies in addition to predictions of more advanced technologies in the near future. Participants touted hybrid and fuel cell technologies as very promising future alternatives.

"Future Fuels: Powering the Next Millennium," aired from Texas A&M University on January 23, 1998. This special third broadcast featured congressional participation. Viewers tuned into PBS station KAMU in College Station, Texas, to hear from Congressman Joe Barton (R) (who drives his own natural gas vehicle), as he joined seven

other panelists in a lively discussion on the past, present, and future of the natural gas and propane industries. Following the introduction and video segments, Gergen led the group in a debate over the potential effects of compressed natural gas and propane on mitigating our nation's air quality problems and

dependence on foreign oil. There were mixed reviews on whether natural gas and propane are the fuels of the future, but all agreed that they are viable options that are available today as a means to fight against air pollution and decrease our oil imports. Guests cited the lack of infrastructure as one of the main barriers to market penetration. Suggestions were made to focus future efforts on development of refueling stations, education for fleets on the benefits of AFVs, and explanation of the available incentives needed for greater penetration. With these goals accomplished, natural gas and propane could indeed become viable transportation fuels.

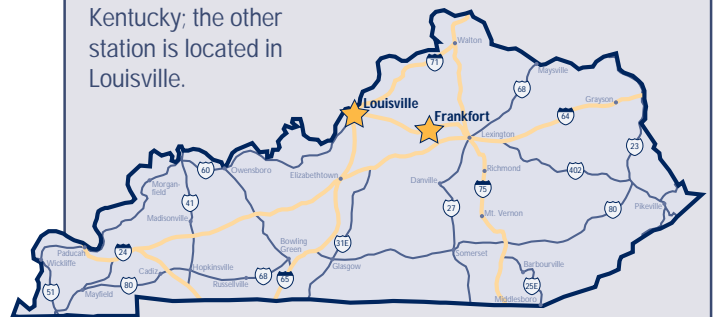
The Clean Cities message will undoubtedly hit the television airwaves again soon. "This sort of public outreach offers a special opportunity for the public to learn about the scope of this new technology and how it's becoming part of our everyday lives," said College Station panelist Dick Moreau, of General Motors.

College Station Town Hall Panelists

- Joe Barton
U.S. Congressman (R-TX)
- Eugene Bissell
Amerigas
- Jim Moore
Lone Star Gas
- Dick Moreau
General Motors Corporation
- Robert Newman
EA Engineering, Science, and Technology
- Patrice "Pete" Parsons
Texas General Land Office
- Marcy A. Rood
U.S. DOE's Clean Cities Program
- Tim Wood
Texas Propane Gas Association

Ethanol Refueling Station Opens in Kentucky's Capital

Kentucky's capital city of Frankfort recently opened its first ethanol facility. The new station is privately owned with full public access. So far fuel sales have been limited to state-owned vehicles. The station is the second E85 station in Kentucky; the other station is located in Louisville.





Hot off the Press

Biofuels for the Global Environment

DOE's National Renewable Energy Laboratory has produced a new ethanol fact sheet entitled, *Bioethanol—The Climate Cool Fuel*. The document explains the effects of greenhouse gases on our global climate, and outlines how bioethanol limits the production of greenhouse gases by reducing and recycling carbon dioxide emissions. Copies of this fact sheet (document 3664) are available from the National Alternative Fuels Hotline at 800-423-1DOE.

DOE Report Helps Clarify EPA Act

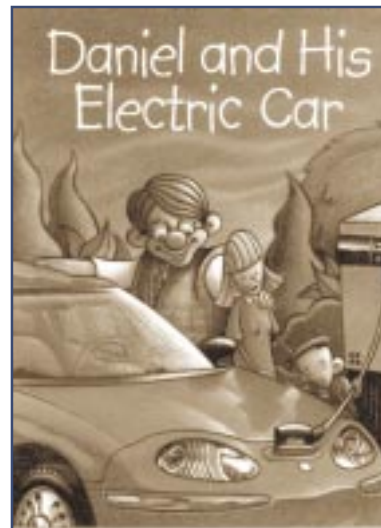
Sometimes the big picture is confusing, especially EPA's oil displacement goals for 2010. DOE has made it easier to understand EPA's Act with the *Replacement Fuel and Alternative Fuel Vehicle Technical and Policy Analysis*. This document outlines the how, why, and when of petroleum displacement. Both the Overview and Summary (document 3661), and the full text (document 3657) are available on the World Wide Web at www.afdc.doe.gov, or through the National Alternative Fuels Hotline at 800-423-1DOE.

New Case Study about CNG Vehicles

DOE's Office of Technology Utilization recently published *Tests Demonstrate Safety of Natural-Gas Vehicles for King County Police*. This case study tells you how converted Chevrolet Caprice Classics performed in this high-demand application as police vehicles in and around the Seattle, Washington, area. Call the National Alternative Fuels Hotline at 800-423-1DOE for this study. This and other case studies are also available on the World Wide Web at www.ott.doe.gov/showcase.html under "Showcasing Transportation Technologies."

EVs through the Eyes of Child

The decision to purchase an alternative fuel vehicle (AFV) may seem a lot less complicated through the eyes of a five-year-old. *Daniel and His Electric Car*, written by DOE's own Ann Hegnauer and published in partnership with General Motors, is the story of a little boy who goes with his dad to the Saturn dealership looking for a small, red car they can use for short family trips. Sounds like a job for GM's EV1, right? Young readers can learn all about electric vehicles (EVs) and how they work as the dealer takes Daniel for a test ride in an EV1. "Our public outreach efforts to promote AFV use must also consider our nation's future drivers," said Hegnauer. "Not only can kids influence their parents' choices, but a few years down the road when it's time for them to get behind the wheel, they will hopefully make the AFV choice." To obtain a copy of *Daniel and His Electric Car*, contact Ann Hegnauer at 202-586-8014, or e-mail your request to ann.hegnauer@hq.doe.gov.



Electric Vehicle International Challenge (EVIC)

The Electric Vehicle International Challenge (EVIC) brought together more than 50 elementary, middle, and high school teams to compete in designing electric vehicles. The major sponsors for the event were the DOE's Clean Cities and Student Vehicle programs, Florida Power and Light, and Toyota. The Southern Coalition for Advanced Transportation was the managing organization, which comprises businesses, universities, and government entities to develop advanced transportation technologies for global markets.

The EVIC included educational forum sessions and various competitions that were held in Orlando, Florida, on December 11-14, 1997 in conjunction with EVS-14, the world's largest conference and exhibition devoted to electric and hybrid electric vehicles. The events were broken down into elementary, middle, and high school levels. The vehicle competition included design, troubleshooting, acceleration, slalom driving, and presentation. The focus of EVIC was to join today's students with the technological advancements in the automobile industry to help increase partnerships between industry and education. Of 13 competing schools, the overall winner was Northampton East High School in Conway, North Carolina.



On the Web

Get AFN On-Line!

www.afdc.doe.gov

Do you have Internet access, an e-mail address? Do you want to save your tax dollars? Do you want to see the next issue of *Alternative Fuel News* before the hardcopy edition is mailed?

If so, just send your e-mail address to hotline@afdc.nrel.gov. We'll let you know via e-mail when the new *Alternative Fuel News* is available in the electronic version on our web site at: www.afdc.doe.gov/AltFuelNews. If you would like to receive a copy of *Alternative Fuel News* in the mail, send us your mailing address too. If you no longer wish to receive *Alternative Fuel News*, ask us to remove you from our mailing list. For more information regarding *Alternative Fuel News*, call the National Alternative Fuels Hotline at 800-423-1DOE.

Pure Energy Corporation

www.pure-energy.com

The Pure Energy Corporation's P-series fuel is a blend of natural gas liquids, ethanol, and other biomass-derived chemicals that are substantially renewable and domestically produced. It has been designed to operate in flexible-fuel vehicles and can be mixed with gasoline. The ozone-forming potential of the emissions is boasted to be 50% lower than reformulated gasoline. For more information visit the "About Our Fuels" and "FAQs" sections of the site.

The 1998 Greater Los Angeles Auto Show/Detroit Auto Show

www.laautoshow.com or www.theautochannel.com

You may have missed the auto shows that were held in January, but it's not too late to stroll through the shows on the web. Several original equipment manufacturers showcased electric and hybrid vehicles. The web site also covers the Automobiles and the Environment conference that was held at the Los Angeles show. This site has everything from press releases and pictures, to direct links to the original equipment manufacturers' homepages.

Hank Hill's Propane Page

soli.inav.net/~penfold/andy/koth.html

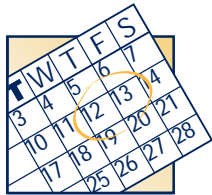
This is a down-to-earth approach to alternative fuels. As you may know, Hank Hill is the title character of Fox's show "King of the Hill." The character proudly sells propane and propane accessories in Texas. The sound clips on this site may be fun and games, but there are some serious links to propane sites.

Don't forget!

www.ott.doe.gov/credits/index.html

DOE's AFV Acquisitions and Credits Database provides you with a convenient way to report your AFV acquisitions electronically. Check it out at www.ott.doe.gov/credits/index.html.





Upcoming Conferences and Events

SAE/NESEA – Making Hybrid Electric Vehicles Commercially Available

May 7–8, 1998
Crowne Plaza Hotel La Guardia
Queens, New York
Contact: SAE, 724-772-7148

NESEA 10th Annual American Tour de Sol The U.S. Electric Vehicle Championship

May 8–14, 1998
New York to Washington, DC
Contact: Northeast Sustainable Energy Association, 413-774-6051

National Association of Fleet Resale Dealers 1998 Spring Conference

May 2, 1998
Four Seasons Olympic Hotel
Seattle, Washington
Contact: Mark Engle, 847-375-4729

Fourth National Clean Cities Stakeholders Conference & Exposition

May 31–June 3, 1998
(see ad this page)

1998 Windsor Workshop on Alternative Transportation Fuels

June 8–10, 1998
Toronto, Ontario Canada
Contact: Susan Horton, 905-822-4111 Ext. 515

*For more information on these events visit the Alternative Fuels Data
Center web site at www.afdc.doe.gov.*



Mark your calendar now for the

4th National Clean Cities Stakeholders Conference and Exposition in Washington, DC

May 31–June 3, 1998

The J.W. Marriott is the hosting hotel. Call the hotel directly for room reservations at 202-393-2000. The conference sessions will be held at the adjacent Ronald Reagan Building and International Trade Center.

Learn from the successes of the nation's 60 Clean Cities and experience firsthand the chance to meet and network with policy makers and lawmakers in the nation's capital.

We are expecting this to be the biggest and best Clean Cities Conference ever. So don't miss out on this great opportunity to meet people from all areas of the alternative fuels and vehicles industries. To receive future conference information regarding registration, exhibiting, or sponsorship, call the Clean Cities Hotline at 800-CCITIES.

Questions? Comments? Suggestions?

Call the National Alternative Fuels Hotline at 800-423-1DOE or the Clean Cities Hotline at 800-CCITIES
Check out the Alternative Fuels Data Center web site at www.afdc.doe.gov or the Clean Cities web site at www.ccities.doe.gov.