

U.S. DEPARTMENT of ENERGY

ALTERNATIVE FUEL NEWS

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

From the Office of Energy Efficiency and Renewable Energy

THE NEW MILLENNIUM

What's in Store for
Alternative Fuels and
Advanced Technology
Vehicles?



Spotlight on Niche Markets

National Parks:

Working to Reduce Pollution by Using Alternative Fuels



Special Pre-Conference Issue

**Inside:
San Diego
Regional
Clean Cities
Coalition**



Dear Clean Cities Stakeholders:

This is an exciting time to be a part of the Clean Cities Program. Not only did we recently celebrate the designation of our 70th Clean Cities coalition, but we are also preparing for the Fifth National Clean Cities Conference, which is right around the corner. It promises to be an excellent conference.

I would like to thank Lieutenant Governor Stephen L. Henry, Mayor David L. Armstrong, and the City of Louisville for hosting this important event. I would also like to emphasize that under my leadership, the Department of Energy will continue to support your efforts as Clean Cities partners, and we will continue to promote the expanded use of alternative fuels.

The experiences of our first 70 Clean Cities coalitions have demonstrated that the grassroots partnership approach of Clean Cities can work, and this is exactly the type of activity that continues to lay the foundation for our mutual goals of energy diversification to protect our energy security, enhance environmental protection, and promote economic development.

You can be proud that your coalitions together operate more than 240,000 alternative fuel vehicles in both the public and private sectors and have access to more than 4,000 alternative refueling stations. It is through your outstanding efforts that those numbers continue to grow.

Building on the momentum of our previous successes, we are forging ahead into the new millennium with great expectations. I would like to take this opportunity to personally announce Ms. Shelley Launey as the new Clean Cities Program Director. Ms. Launey has a long and productive history at the Department. I am confident she will help to make great strides in the development of a stronger and more viable national alternative fuel vehicle market.

As you will see in our cover story, the future is full of promise for the continued success of the Clean Cities Program and the alternative fuels industry. Keep up the good work, enjoy the upcoming Clean Cities Conference, and of course, enjoy reading this issue of the *Alternative Fuel News*.

Sincerely,

Bill Richardson

Secretary of Energy

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Jeep Commander and Toyota Prius
courtesy of Wieck Photo DataBase

Car image on page 3:

Ford P2000 courtesy of Wieck Photo
DataBase

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The New Millennium

What's in Store for Alternative Fuels and Advanced Technology Vehicles?

The countdown has begun, and the year 2000 is less than 250 days away! Anticipation and excitement surround the approach of the new millennium, and questions about our future abound, ranging from the real impact of the Y2K bug to the importance of education, and from the health of Social Security to how best to ensure livable communities. What will be the hot issues for the next generation? Certainly climate change is one issue that is gaining momentum. In the final State of the Union address of the 20th century, President Clinton clearly indicated that clean air issues and alternative technologies are among the nation's top priorities. "Our most fateful new challenge is the threat of global warming," he said. "Last year's heat waves, ice storms, and floods are but a hint of what future generations may endure if we don't act now...I propose a new clean air fund to help communities reduce pollution, and tax incentives and investments to spur clean air technologies. And I will work with Congress to reward companies that take early, voluntary action to reduce greenhouse gases."

Although these incentives are still on the table with the President's other budget recommendations, it's clear that the White House sees advanced technologies and alternative fuels as important components of our transportation future. Are there other legislative agendas to help propel the alternative fuels industry into the 21st century? What is the Administration planning, and what does it mean for Clean Cities stakeholders? What are industry groups doing to make alternative fuels and vehicles more viable? It's been almost 7 years since the Energy Policy Act (EPA) was signed into law—will there be a local government and private fleet mandate? And we must not overlook the vehicles that will drive us into our cleaner future. Hybrid electric and fuel cell vehicles are quickly becoming a reality; some are commercially available this year. How will the introduction of these vehicles affect the Clean Cities Program, and what directions will Clean Cities take in the new millennium?



Clean Air Fund Partnership

The President's budget proposal, showcased in the State of the Union Address, includes a fund established to reduce greenhouse gas emissions and other air pollutants. The Environmental Protection Agency (EPA) would administer the Clean Air Partnership Fund, which would be used to provide state and local governments with grant money for voluntary projects to curb emissions. The fund is intended to stimulate cost-effective pollution control strategies, spur innovation, and help to leverage resources and investment in air quality improvements.



1998
1999
2000

2001

2002



Encouraging Early Action

As many Clean Cities coalitions can attest to, encouraging voluntary actions and investments in energy efficiency and clean air practices can sometimes be difficult. However, certain members of Congress have recognized the value of early action to reduce greenhouse gas emissions, and have stepped up to the plate to provide incentives for private businesses to do so. Senator John Chafee (R-RI) introduced a bill on March 4 that provides early regulatory credit to companies that voluntarily cut their greenhouse gas emissions. The Credit for Voluntary Reductions Act of 1999 would encourage emissions reductions in return for early recognition if a domestic policy were to mandate mitigation of greenhouse gas emissions before the year 2008. Credits would be awarded based on reductions below a predetermined baseline of current emissions, an annual average of 1996–1998 emissions, or as far back as 1990. (See “From the Hill,” page 14, for more information on this legislation.)



Tax Credits for Advanced Vehicles

Income tax credits for the purchase of fuel-efficient vehicles are being proposed under the President’s fiscal year 2000 budget, submitted in early February. Currently, these tax credits are available only for qualified electric and fuel cell vehicles. The electric vehicle (EV) tax credit is for 10% of the vehicle up to \$4,000, but this credit begins to phase down in 2002. Because the transportation sector accounts for approximately 33% of our nation’s greenhouse gas emissions, the proposed credits would encourage early introduction and purchase of vehicles with fuel-efficient technologies. The proposal would extend the present tax credit for EVs and also provide tax credits for fuel-efficient hybrid vehicles. Cars, minivans, sport utility vehicles, or pickup trucks would be eligible for the tax credit. Additionally, the budget proposal requests \$264 million in federal spending on work related to the Partnership for a New Generation of Vehicles, a joint effort by domestic automakers and the government to develop a 5-passenger car that gets 80 miles per gallon by 2004.



Legislative and Regulatory Actions

Since EPA Act was signed in October 1992, there have been amendments and significant changes to related and supporting legislation. Last year, the highly lauded legislation, TEA-21, established new AFV programs and extended ethanol tax credits. And changes that equalized fuel taxes for alternative fuels on an energy basis were made to the tax code. However, many in Congress believe it’s time to do more, and so the 105th Congress ended with encouraging momentum for the alternative fuels industry. Various members of Congress, including Senator John Rockefeller (D-WV) and former Congressman John Ensign (R-NV), drafted legislation that called for stronger federal incentives to promote alternatives to conventional gasoline and to reduce the nation’s dependence on foreign oil. Congress also passed legislation that allows fleets facing AFV acquisition mandates under EPA Act to meet up to 50% of their requirements through the biodiesel fuel use credit. This credit awards one AFV acquisition for every 450 gallons of neat biodiesel purchased to be used in biodiesel blends of 20% or higher in vehicles weighing more than 8,500 lb.

In the current 106th Congress, we anticipate Senator Rockefeller (possibly along with Senator Orrin Hatch [R-UT]) to sponsor legislation that would propose tax deductions for installing

alternative refueling stations and a \$0.50 tax credit per gasoline-gallon equivalent at the point of distribution to a vehicle. The alternative fuels to be covered under this legislation include compressed natural gas, liquefied natural gas, liquefied petroleum gas, hydrogen, and any liquid that is at least 85% methanol. This legislation would also provide various tax credits for purchasing EVs and extend the sunset date for the current EV tax credit (10% of the vehicle purchase price, up to \$4,000) to 2010, with additional incentives for EVs that meet an extended range.

Improving the quality of service at airports has become a very hot topic, especially in the nation’s capital, with legislation proposed to increase the number of flights at large commercial airports and to support funding increases for airport improvements. Airport facilities are an important niche market for AFVs, and Congressman Sherwood Boehlert (R-NY) saw this as a perfect time to incorporate AFVs into the mix. Congressman Boehlert, who was a featured speaker at last year’s National Clean Cities Conference, introduced the Airport Air Quality Improvement Act on March 10, to encourage the use of low-emission vehicles and supporting infrastructure at airports in non-attainment areas. (See “From the Hill,” page 14, for more details on this legislation.)



Industries Unite

Alternative fuel and vehicle use helps more than just the AFV industry; the air quality and energy security benefits gained from alternative fuels are far reaching. We all breathe the cleaner air and reap the benefits of energy security. In an effort to expand the call to Congress for alternative fuel and vehicle tax incentives, a diverse set of organizations is coming together to support the use of alternative fuels. As a first step toward creating a stronger and more unified voice to Congress, the Natural Gas Vehicle Coalition (NGVC) has expanded its membership to include other interest groups concerned with environmental protection and energy security. In addition to the NGVC, the Electric Vehicle Association of the Americas (which now includes the former Electric Transportation Coalition), the American Methanol Institute, propane and hydrogen providers, environmental groups, and fleet associations have united to support alternative fuel legislation. Upcoming regulatory proposals for light-duty vehicle emissions standards, gasoline sulfur levels, and diesel fuel quality make this a critical time for alternative fuel stakeholders to articulate their viewpoints.

Alternative fuels and vehicles should be an integral part of the solution to meet the new standards. Because additional alternative fuel legislation will help to clean the

environment and promote energy security, everyone will reap the benefits, not just the alternative fuel industry. According to NGVC President Rich Kolodziej, "Congress needs to act. We as a country need to support the alternative fuels industry."



Local Government and Private Fleets

As discussed in *AFN Vol. 2, No. 2*, the Advanced Notice of Proposed Rulemaking (ANOPR) for local governments and private fleets was released in April 1998. Throughout the year, public hearings were held and DOE received many comments to consider. DOE is currently working on the proposed rule, which should be published by late spring. Although the direction of the final rule is not yet known, possibilities discussed in the ANOPR include a replacement fuel program, private citizen credits for AFV purchases, and more. *AFN* will keep you posted on the progress of the rule.

PIX 07038



New Leadership for Clean Cities

The Clean Cities Game Plan 1998/99 is well underway; the tools are in place, and many coalitions are using their "Preferred Fleets Databases" and holding "Advancing the AFV Choice" events. What's next? Helping to develop the answer to this question will be Ms. Shelley Launey, recently designated as the Clean Cities Program Director.

Many Clean Cities stakeholders will remember Launey, for as the very first Clean Cities Program Director, she was on hand at the first designation ceremony in Atlanta, and the second in Denver. After a long history with DOE, Launey has come full circle. She has worked for several DOE assistant secretaries and in several different sectors within the Office of Energy Efficiency and Renewable Energy. A true Clean Cities pioneer, she led the program in its infancy, from the development of the early concept of the program through the first official designations. In 1994, she parted with Clean Cities to take charge of the DOE-sponsored student competitions—the Ethanol Vehicle Challenge and the FutureCar Challenge. As part of DOE's Office of Advanced Automotive Technologies, Launey also designed and managed several small business and university programs in transportation. But now she's back with Clean Cities, and leading a much larger and stronger network of coalitions.

AFN: How does it feel to be back with Clean Cities?

Launey: I am physically back in the same office now as I was when I first worked for Clean Cities, so I've truly come full circle in many ways.

Shelley Launey was recently designated as the Clean Cities Program Director.

Some things don't change, but some things do, and for the better. The program has changed enormously. There is so much grassroots and local support now that wasn't there 5 or 6 years ago. There really has been a ground-swelling enthusiasm that has become a part of this program, which makes it great to be back.

AFN: *What challenges do you see for Clean Cities coalitions?*

Launey: Certainly one of the biggest attributes of Clean Cities is the enthusiasm, but it's also a challenge to maintain that enthusiasm and drive. I think to keep up that momentum, we need more Congressional support for laws and incentives that



Alternative Fuel Vehicles or Advanced Technology Vehicles?

Which way should we go—alternative fuel vehicles (AFVs) or advanced technology vehicles (ATVs)? With all the recent announcements about new models of AFVs and flashy concept cars and trucks using hybrid or fuel cell technology, many buyers are wondering whether to buy now or wait. Here are some factors to consider:

Your Needs: AFVs are available in a wide variety of models: small, large, car, truck, van, and bus. Although some ATVs may become available very soon, it will take several years before the model variety expands. If you bought an AFV this year, you still might not be able to replace it with an ATV at the end of its useful life. So don't wait! Buy the vehicle that meets your needs now.

Costs: As a potential buyer, you must balance the costs of using AFVs or ATVs. We try to provide decision-making tools (visit the Fleet Buyer's Guide at www.fleets.doe.gov) to help assess life-cycle cost for vehicles, fuels, and maintenance. For the near term, AFVs should cost less than ATVs. So if cost is a concern, look more carefully at the AFVs for the next 3–5 years.

Motivation: What's motivating you? Clean air? Convenience? Fuel economy? Responding to a regulation? Many of the conceptual ATVs offer fuel economy savings and low emissions, but use petroleum-based fuel. Many AFVs offer oil substitution and low emissions, but at conventional fuel economy levels. Choose the vehicle/fuel combination that matches your goals.

are beneficial to AFVs. One of the challenges for Clean Cities, as a powerful grassroots coalition, is to make progress in the legislative area...to capitalize on the potential of the Clean Cities network.

AFN: *Clean Cities coalitions are well on their way through the Game Plan 1998/99. What's the next big step? In what direction is Clean Cities headed?*

Launey: Clean Cities will have to grow by building success in niche markets where AFVs make sense. Then, to keep up with the times, I think one of the next big steps we'll take is to expand Clean Cities membership to include advanced-technology, low-emission, high-fuel-efficiency vehicles.

AFN: *Where would you like to see Clean Cities 5 years from now?*

Launey: I'd like to see AFVs have a much more obvious presence. Right now they're known in fleets and niche market communities, but they are not recognized by the general public. I'd like to see obvious signs of AFV acceptance; for example, actual signs in gas stations that advertise fuel alternatives to gasoline and diesel, or signs in auto dealerships that indicate the options or alternatives that are available. Right now, alternative fuels are a hidden movement. When the average citizen knows there are options, then Clean Cities will really be a success. Furthermore, when we begin introducing ATVs into the Clean Cities network, we may find a greater role for the average driver because some of the ATVs available are not just for fleets. My vision is that in 5 years, we have very obvious signs of alternatives to conventional vehicles.



New Projects Selected to Help Clean Cities Reach Success

DOE recently announced the selection of 15 proposals that will receive just under \$1.7 million in financial assistance to help expand DOE's information dissemination and public outreach efforts for alternative fuels and advanced transportation technologies. The projects represent a diverse set of fuel and vehicle technologies that are being used across the country in Clean Cities to reduce reliance on petroleum and to improve air quality (see table, next page). These projects were selected from many high-quality proposals submitted during DOE's recent competitive solicitation. Stay tuned to future issues of AFN for details on these and other upcoming projects and solicitations.

Selected 1999 Awards for Information Dissemination

Organization	Project Objective/Description
American Council for an Energy Efficient Economy (ACEEE)	To further develop ACEEE's <i>Green Guide to Cars and Trucks</i> , which provides high-quality consumer information on the energy efficiency and emissions performance of these vehicles
California Energy Commission	To launch a consumer awareness campaign to advance the development of a mainstream market for EVs
Clean Vehicle Education Foundation	To target information dissemination and outreach to the commercial passenger transportation sector served by light-duty and heavy-duty vehicles, including airport shuttles, taxis, and shuttle vans
Clean Airport Partnership	To develop and disseminate technical information on alternative fuels and advanced technology vehicles for introduction into airport niche markets
Coloradans for Clean Air	To help support the Western Biomass Consortium (WBC) in 1999. The WBC supports and seeks to expand the use of biomass for energy production using small-diameter forest material
Environmental and Energy Study Institute	To develop an educational campaign for the environmental community about the environmental benefits of ethanol, the greenhouse gas reduction benefits of corn ethanol, and the role of corn ethanol as a transition to a cellulosic ethanol market
Gladstein & Associates	To support the continued implementation of the Interstate Clean Transportation Corridor project and to design and implement supporting outreach activities and workshops on expanding AFV use in transit and school bus fleets, and in other niche markets
Governor's Ethanol Coalition (GEC)	To support the public outreach activities of the GEC, as well as those of the National Ethanol Vehicle Coalition
Metropolitan Washington Council of Governments	To support the council's Advanced Technology Vehicle (ATV) Program, which aims to replace existing high-mileage/high-fuel-use vehicles from the highway with ATVs that result in reduced vehicle emissions
National Conference of State Legislatures	To put forth a series of initiatives to promote the continued discussion of AFV use, including an analysis of state AFV incentives, publications about AFVs, continued involvement with the Clean Cities Program, AFV presentations and roundtables with new state legislators, and technical assistance to states on AFV issues
Natural Gas Vehicle Coalition	To support the 1999 17th National Natural Gas Vehicle Conference
Natural Gas Vehicle Coalition	To publish, print, and distribute an updated directory of U.S. natural gas refueling stations
Northeast Sustainable Energy Association (NESEA)	To support the Northeast Tour de Sol Program, and a 20-month public education campaign in the Northeast
Propane Education Research Council	To support a grant program that provides visibility and media coverage to promote propane vehicles as a clean-burning option for EPA compliance
RP Publishing	To support the 2000 Propane Vehicle Conference and Exposition



FOR THE NEXT MILLENNIUM? The answer is a resounding “yes”! Momentum is growing behind the alternative fuels industry, and much of that momentum is attributed to the continued efforts of stakeholders throughout the Clean Cities network. The lasting partnerships between government and industry are helping to make AFVs a commercially viable transportation option as we head toward the year 2000. Our nation’s transportation future is under construction right now, and Clean Cities coalitions are paving the way!

Spotlight on Niche Markets

Sustaining National Parks— A Smart Niche Market

What happens if you mix trucks, snowmobiles, cars, and lots of people? Pollution! Every year millions of tourists from around the world tour our nation's pristine national parks. With the number of visitors and vehicles increasing rapidly, protecting the parks from environmental degradation has become more and more challenging, and the increased congestion and pollution are making new air quality control measures necessary. Alternative fuel and vehicle use fits well into many niches, and the environmental benefits alternative fuel vehicles (AFVs) will bring to national parks make them a perfect fit. After all, the government designated these lands to preserve their natural beauty and wonder. What better reason to incorporate alternative fuels?

The National Park Service (NPS) is making great strides to correct the air quality and transportation problems created by heavier tourism. Various projects are underway in the nation's parks to decrease emissions and preserve the natural environment as the number of park visitors continues to increase. The projects range from running trucks on biodiesel, to fueling snowmobiles with E10 (10% ethanol/90% gasoline), to operating buses and trams on alternative fuels. All produce similar results—cleaner air for national parks.

Yellowstone National Park

Three million people and nearly 900,000 vehicles visit Yellowstone National Park each year. And during the winter months, more than 85,000 snowmobiles traverse Yellowstone. Snowmobile engine emissions, combined with dense, cold air, result in unacceptable health and environmental impacts. The two-cycle snowmobile

engines emit 20% to 33% of their fuel unburned, and produce high levels of hydrocarbons, carbon monoxide, and particulate matter. To address this problem, staff at Yellowstone designed a program to evaluate the potential emission benefits of using biomass-based fuels and lubricants in snowmobile engines. The program's results (see side box) led to an agreement on June 1, 1998, which permits only E10 to be used in gasoline-powered Yellowstone National Park service vehicles. The agreement also includes plans to offer E10 to the surrounding areas for the 1998/1999 winter season. According to Howard Haines from the Montana Department of Environmental Quality, "several bio-based lubrication oils and fuels already exist and may find a niche market in tourist-related applications."

As a first step toward reducing the congestion and pollution produced by vehicles in the park, Yellowstone staff conducted the "Truck in the Park" project, which aimed to reduce the impacts from diesel-fueled trucks. This project formed partnerships among the Department of Energy, the

states of Montana and Wyoming, NPS, regional businesses,

Emission results from the use of E10 and synthetic lubrication oil

- Ozone formation potential was reduced by 15%.
- Hydrocarbons were reduced by 16%.
- Carbon monoxide was reduced by 9%.
- Particulate matter was reduced by 25%.

[Montana Project Summary of Biomass Alternatives for Snowmobiles: "Emissions Testing and Demonstration of Bio-based Options for Emissions Reduction in 2-Stroke Snowmobile Engines in Yellowstone National Park." For a copy of the project summary, visit the Web site www.deq.state.mt.us/ppa/biofuels/biofuels.htm.]

Howard Haines/PIX 07370



(Above) Snowmobilers, west of Madison Jct. in Yellowstone National Park. (Right) The "Truck in the Park" is featured in front. The other trucks, operated by the Idaho Dept. of Water Resources or the University of Idaho, run on a combination of rapeseed, rapeseed methyl ester, and diesel.



regulators, DaimlerChrysler, Cummins, and JR Simplot. It resulted in data on the safety, performance, emissions, and benefits of using regionally produced 100% neat biodiesel fuel in a diesel-powered vehicle.

The truck was driven more than 92,000 miles without any major fuel-related problems, and additional benefits emerged: reduced toxicity, emissions, smoke, and unpleasant odors, along with increased safety and biodegradability. And because the park must ensure public safety when implementing a new fuel, participants conducted a "bear attraction test" that dispelled the notion that the "french-fry" smell of biodiesel would attract bears.

This project's findings helped to define a market for biodiesel, and also pointed out the challenges inherent in moving to such a regionally produced alternative fuel. In addition, it provided "lessons learned" data on emissions and performance that land managers, regulators, and providers of commercial tourism transportation can use.

The park and its partners also implemented the "Greening of Yellowstone" initiative, which encompasses all facets of the park—transportation, energy use and acquisition, green power purchases, waste management, cleaning products, laundry, and facility maintenance. In addition, the Green Gateway Corridors Project, which includes nearby areas such as Grand Teton and Glacier National Park, was formed through the program. These surrounding areas use and sell environmentally friendly products at service stations along the highways that lead to and from the park. For more information on the "Greening of Yellowstone," visit the Web site: www.greening.org/ystn/update.html.

Grand Canyon National Park

Many visitors will soon find themselves touring the Grand Canyon National Park on an alternative fuel transportation system. A combined light rail and alternative fuel bus system, designed to cut vehicle congestion and reduce air pollution, is planned along the South Rim of the Grand Canyon. The alternative fuel bus system has been operating during visitor seasons. The light rail will run from a local gateway community to the park, and from there, visitors will ride alternative fuel shuttle buses through the park.

Park administrators have grown increasingly concerned about the environmental impacts from the nearly 5 million annual visitors and their vehicles along the canyon rims. This amount of traffic, which is well above the level that the roads and facilities are equipped to handle, has caused gradual degrading. The NPS plans to expand the current visitor transit system through a concessions contract, which will design, build, finance, operate, and maintain the light rail and alternative fuel bus transit service.

Plans for the transit system include light rail service, which will require 9 miles of track and accommodate approximately 4,200 passengers per hour during peak times. The transit system will operate year-round, with fixed routes for the transit system and a tour bus service,

Buses used at Gand Canyon National Park include (L-R) CNG New Flier, Chance 26 ft. converted to LNG by Stewart and Stevenson, and a battery-powered electric by APS Systems.



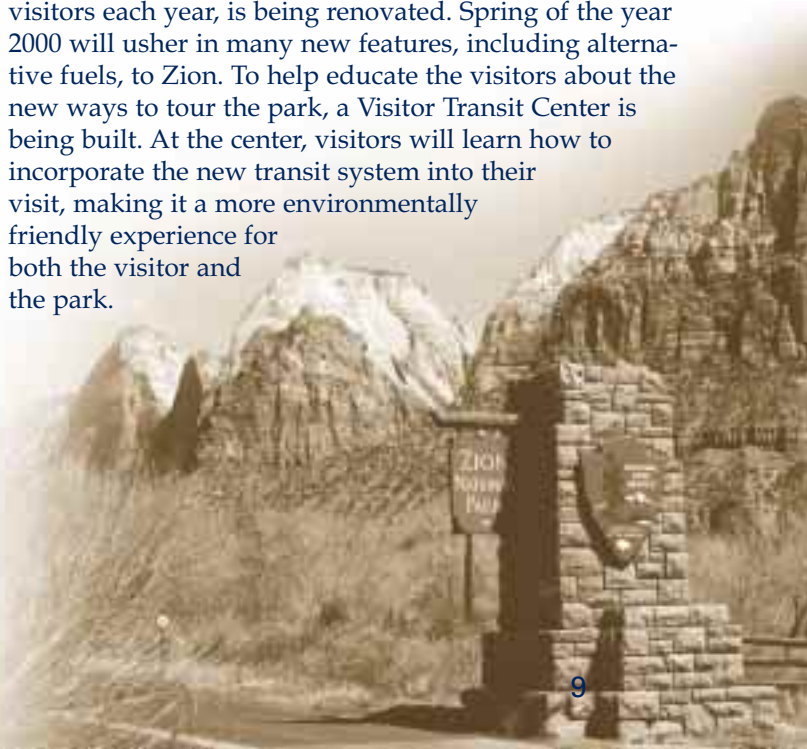
Grand Canyon National Park/PIX 07330

which plans to provide exclusive guided tours within the park. NPS expects that the alternative fuel buses will run on natural gas or electricity, and will be designed to reduce noise and exhaust emissions. Currently, the Grand Canyon shuttle bus fleet has 3 electric buses, 5 40-foot CNG buses, 7 diesel buses that are being converted to LNG, and an additional 7 diesel buses that will be replaced by natural gas buses. Plans are to expand the fleet to 100% alternative fuel by 2000.

According to Jim Tuck, the Grand Canyon park ranger responsible for the alternative fuel fleet, "our prime resource is the view of the canyon, and the air quality is part of keeping the view clear." The ultimate goal of these transit changes is to restore the environmental experience and improve air quality. Alleviating the hassles of parking emerges as a side benefit. Currently, the proposed transit system is being analyzed for cost and feasibility, with hopes that the project will be implemented by 2002. For more information about these projects, visit the Web site: www.nps.gov/grca/transit/.

Zion National Park

Utah's Zion National Park, which also has millions of visitors each year, is being renovated. Spring of the year 2000 will usher in many new features, including alternative fuels, to Zion. To help educate the visitors about the new ways to tour the park, a Visitor Transit Center is being built. At the center, visitors will learn how to incorporate the new transit system into their visit, making it a more environmentally friendly experience for both the visitor and the park.



Beginning in 2000, a shuttle fleet of 31 propane vehicles will operate in Zion Canyon. Ten 30-passenger shuttles will transport visitors to and from the local town of Springdale. Additionally, 21 power shuttles with trailers will operate within the park. The propane vehicles, ordered from the manufacturer El Dorado National, should begin arriving soon.

In addition, a new parking lot for visitors, propane bus maintenance building, shuttle stop, and intersection to regulate traffic in the most environmentally sensitive areas will be built. At one particular 6-mile portion of the canyon, only AFVs will be permitted.

New Partnerships

As you can see, national parks are taking matters into their own hands. The millions of visitors have brought human impact to a point of excess on these fragile lands. Rather than force mandates, park managers, businesses, communities, industry, and state and federal governments

are working together to control and prevent the degradation of our national parks and improve the visitors' experience. DOE recently signed a Memorandum of Understanding and implementation plan with the Department of Interior (DOI) and the NPS to further develop these important niche markets. Secretary of Energy Bill Richardson joined DOI's Donald J. Barry, Assistant Secretary for Fish, Wildlife and Parks, in an official signing ceremony held at the Presidio on April 27. In addition, DOE, through the Office of Transportation Technologies' Clean Cities and National Biomass programs, has committed \$500,000 for fiscal year 1999 to the national parks' alternative fuel efforts. "This is a great opportunity for partnership between the agencies," said DOE's Ernie Oakes, Clean Cities Denver Region Program Manager. "And what better place to showcase our clean air efforts than in our pristine national parks?" he added.

Stay tuned to future issues of AFN for details on the DOE/DOI partnership. For more information on Zion National Park, visit the Web site www.nps.gov/zion/, or to access all NPS locations, visit www.nps.gov.



From the Automakers

Original Equipment Manufacturer Sponsors Look Forward to the Clean Cities Conference

NISSAN

Nissan North America, a first-time sponsor of the Clean Cities Conference, will have two Altra EVs at the conference in Louisville. One will be displayed at Nissan's exhibit, and the other will be available at the Ride & Drive. Nissan Management Associate Todd Solan explains the company's involvement with the development of AFVs as "supporting the efforts of improving the environment while meeting [California Air Resources Board, or CARB] regulations." According to Solan, Nissan "just wants to be a player, committed to the environment." Solan continued, "the Clean Cities Conference will give Nissan a chance to promote and show its capabilities to this important group of industry leaders." He added that Nissan looks forward to working with the Clean Cities coordinators and providing additional Altra EVs as battery technology advances and the EV market expands.

DAIMLERCHRYSLER

DaimlerChrysler continues its commitment to AFVs in the 1999 model year, and will feature a CNG Ram wagon and a CNG Champion bus at the conference. Currently, flexible-fuel minivans, dedicated compressed natural gas (CNG) Ram vans and wagons, and the state-of-the-art "EPIC" electric minivan (which uses nickel-metal hydride



Nissan

(Left) Nissan Altra electric vehicle
(Below)
DaimlerChrysler's CNG Ram wagon



Wieck Photo DataBase

batteries) are available from DaimlerChrysler. Freightliner Custom Chassis, part of the DaimlerChrysler group, also provides several dedicated CNG chassis for

adaptation with several body manufacturers, such as Champion and Goshen Coach. The company is looking forward to working with each of the Clean Cities coalitions as they conduct their "Advancing the AFV Choice" events throughout the country in the coming months.

FORD

Ford Motor Company will have at least 6 different vehicles (one of each fuel type) at the Ride & Drive, and two vehicles on hand at its exhibit. The LPG Excursion and TH!NK electric city vehicle are among the new AFVs Ford is highlighting at the conference—both will be available for conference participants to test drive. You can stop by Ford's exhibit booth for a look at the new U.S. Postal Service flexible-fuel vehicle and CNG Econoline van

(Right) Ford Th!nk electric city vehicle
(Below) Toyota Prius hybrid vehicle



Ford Motor Company/PIX 07368



Toyota Motor Sales/PIX 07331

and to learn about Ford's other offerings, such as the NGV Expedition and Ranger EV. In addition to showcasing its latest AFV offerings, Ford also wants to

highlight the strong partnership between Ford and Clean Cities, and between Ford and its customers.

TOYOTA

Toyota's conference lineup of AFVs will include its RAV4-EV, CNG Camry, and hybrid Prius. The RAV4-EV and CNG Camry are currently available to U.S. fleet customers. The hybrid-system-powered Prius, which is currently being sold in Japan, will be available in the United States in late 2000. The Prius uses its gasoline engine, nickel-metal hydride batteries, electric motor, and electric generator to achieve nearly double the fuel efficiency of conventional gasoline engine vehicles, resulting in a fuel economy of 66 miles per gallon. "Toyota has been actively involved in reducing the automobile's effect on the environment for more than 30 years," said Dave Illingworth, Senior Vice President of Planning and Development for Toyota Motor Sales. "Our work on advanced technology vehicles has included electricity, clean-burning internal combustion engines, and hybrids, as well as alternative fuels such as CNG, hydrogen, and propane."

HONDA

Since last year's Clean Cities Conference in Washington D.C., where a GX was driven from California to the nation's capital, Honda Civic CNG GXs continue to find homes in fleets from coast to coast. The state of California acquired its first 40 GXs after an initial trial purchase, and the state of New York put 50 additional Civics to work after trying 15, and finding that they performed beyond expectations.

Now, the East Coast will benefit from two other fleet acquisitions of the "Cleanest on Earth" Civic GX.

The District of Columbia Department of Public Works just added 24 GXs to its fleet. And the Yellow Cab Company is helping to clean up the airport area of Hartford, Connecticut, by operating a fleet of 31 bright yellow Civic GXs. Because of its 100% alternative fuel use and sub-ultra-low-emission-vehicle emissions, the Civic GX remains an EPAct and Clean Air Act compliance specialist.

Honda recently introduced the first gas-electric hybrid vehicle to go on sale in the United States. Available later this year, it will become the world's most fuel-efficient gasoline-powered automobile. Initially code-named "VV," it will achieve 70 miles per gallon in combined city/highway driving and meet California ultra-low-emission-vehicle standards. As a two-passenger car, it is not targeted for fleet use, but it is very suitable for commuters.

GENERAL MOTORS

General Motors (GM) Advanced Technology Vehicles (ATVs) is a sponsor of this year's National Clean Cities Conference. GM plans to display several alternative fuel and electric vehicles from GM's Advanced Technology Vehicle Portfolio. The EV1, CNG bi-fuel Chevrolet Cavalier, CNG bi-fuel Chevrolet C/K, and CNG bi-fuel GMC Sierra will be at the conference and available to test drive.

GM will also be promoting its alliance with Fuel Maker and Mangecharge, which supports the fueling infrastructure for alternative fuel products. GM continues to be dedicated to product development and supporting infrastructure development. The automaker welcomes the opportunity to unite with the other original equipment manufacturers and to display a solid commitment to a product portfolio and general market support. GM also hopes to gain an improved perspective on consumers' needs, satisfactions, and concerns toward the alternative fuel industry and GM's products. GM's representatives look forward to meeting industry officials, competitors, fleet managers, and other AFV purchasers.

Currently, GM's ATV product portfolio includes:

- EV1
- Chevrolet S-10 electric pickup truck
- Chevrolet CNG bi-fuel pickup truck (2-wheel and 4-wheel drive, and 4 wheel-drive crew cab options)
- GMC Sierra CNG bi-fuel pickup truck (2-wheel and 4-wheel drive, and 4 wheel-drive crew cab options)
- Chevrolet/GMC medium-duty propane dedicated truck.

GM's team of experts will be available at the conference to answer questions and discuss products.



General Motors / PIX 05552



(Left) Honda "VV" hybrid vehicle
(Above) Chevy S-10 electric pickup truck

American Honda Motor Company/PIX 05552



Federal News

DOE's EV Loaner Program Expands to New Areas

DOE recently awarded contracts to 5 electric utilities as part of the next phase of the Federal Fleet Electric Vehicle Loaner Program. Originally a pilot program that partnered DOE with Ford Motor Company and Potomac Electric Power Company (PEPCO) in Washington, D.C., the EV Loaner Program allows federal fleets to try an EV at no cost for 30 days. Fleet managers are then offered a sweet deal to keep the EVs permanently: utilities will assist the fleets in leasing additional EVs, and DOE will provide these fleets with 50% of the incremental cost of the EVs. Fifteen federal fleets in the D.C. area have used loaner EVs from PEPCO, and 4 have signed a 3-year lease agreement for Ford Ranger EV pickups.

Building on the success of the pilot program, the 5 new contracts will expand the program to include federal fleets in San Diego, Los Angeles, Atlanta, Boston, and Norfolk/Richmond/Northern Virginia. "We're very pleased with the success of the EV Loaner Program," said DOE's Federal Fleet AFV Program Manager Lee Slezak. "It's important for federal fleets to have a low-risk, first-hand experience with these vehicles, so they can see for themselves that EVs can successfully meet many of their vehicle mission requirements. DOE is helping to make that happen and make choosing alternative fuels easier."

Energy\$mart Schools

More than 70% of our nation's 110,000 K-12 schools were built before 1960. For many students, then, their school building is older than their parents! With inadequate heating, ventilation, and air conditioning systems, these schools desperately need repairs, and their inefficiency wastes large amounts of energy and valuable taxpayer dollars. Overcrowding simply adds to the problem, resulting in additional budgetary strains. It's estimated that 6,000 new schools will be needed to accommodate the growing student enrollment over the next 10 years.

The goal of the Energy\$mart Schools partnership is to reduce school energy bills by 25% by the year 2005. That's \$1.5 billion in savings each year that could buy 40 million new textbooks, 1.5 million new computers, or hire 30,000 new teachers!

But not to worry...DOE is working to introduce clean, energy efficient technologies to our nation's schools. By using these technologies to reduce their energy bills, the money saved can be redirected where it belongs—to the students and their education. DOE's Energy\$mart Schools partnership promotes a community approach that integrates different energy efficiency programs, including Clean Cities, Rebuild America, the President's Million Solar Roofs Initiative, and Energy Star (a joint DOE/EPA program) for school associations and administrators.

The goal is to create schools that are "smart" about energy—from the way the buildings are designed and operated, to the way administrators, teachers, and students understand how school buses and buildings use energy. The program operates an information

DOE-Atlanta Regional Support Office/PIX 07367



Secretary Richardson Supports Energy\$mart Schools Partners

On January 20, 1999, Secretary of Energy Bill Richardson visited the Southface Energy and Environmental Center in Atlanta where students from Woodland Middle School were on a field trip learning about energy-efficient and renewable technologies. Richardson reinforced President Clinton's commitment to quality education through Energy\$mart Schools. William Dahlberg, Chief Executive Officer of Southern Company, joined Richardson at Southface as the newest partner of the Energy\$mart Schools team. Richardson also recognized the Clean Cities - Atlanta, the very first official member of DOE's Clean Cities network.

Secretary Bill Richardson visited Southface Energy and Environmental Center in Atlanta to promote Energy\$mart Schools and recognize the Clean Cities - Atlanta. Pictured from left to right are Jim Powell (DOE), Dennis Smith (Atlanta Gas Light), George Walkosky (Ford Motor Co.), Kent Igleheart (Clean Cities - Atlanta), Secretary Richardson, Michael Anderson (Georgia Power), John Wilson (Southern Coalition for Advanced Transportation), Steve Horton (DOE-ARSO), and Yolanda Jones (DOE-ARSO).

Alternative Fuel School Bus Providers

Manufacturer	Engine Used	Contact
APS System—Electric	AC induction motor	Tim Foley, 805-984-0300, x22
Blue Bird Corporation—CNG/LPG	John Deere 8.1L, 6.8L Cummins B5.9G	Roland Gray, 912-757-7108
Thomas Built Buses, Inc.—CNG	Cummins B5.9G, C8.3G	Vinod Duggal, 812-377-2029



clearinghouse, and Energy\$mart School partners work with school officials and organizations to identify and address legislative, policy, and financial barriers that prevent them from investing in energy improvements. All that adds up to increased savings and more money for education. “Energy\$mart Schools is about partnerships between federal, state, and local governments and the private sector, all working together to help schools reduce their energy costs and create a better learning environment,” said DOE’s Joan Glickman, Special Assistant to Assistant Secretary Dan Reicher. “School buses that pollute less are an important part of being an energy-smart school. DOE is excited to work with our Clean Cities partners to help bring cleaner, more efficient fleets to school districts across the country.”

To inspire the Energy\$mart Schools spirit among Clean Cities stakeholders, additional funds have been made available in the alternative fuel school bus projects category of the State Energy Program (SEP) Special Projects grants. The funds are part of an additional \$1–\$2 million that has been added to the total amount available for SEP Special Projects grants for school-related projects. “Schools are a highly visible area of our communities,” said DOE’s Energy Technology Specialist Dorothy Wormley. “The additional funding for the school bus category will dramatically increase the awareness, use, and penetration of alternative fuels into this important niche market.”

For more information about the Energy\$mart Schools partnership, call 800-363-3732, or check out the program’s Web site: www.eren.doe.gov/energysmartschools.

DOE Goes Over the Top

DOE has emerged as a leader among federal fleets in the acquisition rate of more than 100% AFVs, with plans to achieve an AFV acquisition rate of 107% in FY 1999 by adding more AFVs than required by the Energy Policy Act of 1992 (EPAct). Approximately 900 AFVs will be acquired this year, which will bring the DOE AFV fleet to nearly 1,400 vehicles—15% of the total DOE fleet! Of the new vehicles for FY 1999, about 50 will be EVs, 300 will be E85 flexible-fuel vehicles, and 600 will be powered by natural gas. “Our stakeholders have been looking to DOE to take the leading role in the acquisition and use of alternative fuel vehicles,” said Lee Slezak, DOE’s Federal Fleet AFV Program Manager. “We’re doing just that by surpassing our EPAct goal for AFV acquisitions, and hope that by setting the example, other fleets will follow.”

The Post Office Goes Electric

The U.S. Postal Service (USPS) has issued the largest EV fleet solicitation in history—for 6,000 EVs. A purchase of this size can have a great impact on the entire EV industry, because a significant increase in the volume of EVs manufactured will not only decrease the production price, but will also lower the purchase cost.

Here are some of the guidelines and requirements outlined in the solicitation.

Solicitation Requirements

- Suppliers must have an established national service network capable of servicing and maintaining EVs with minimum disruption to USPS mail delivery.
- Suppliers must provide assurance that trained technicians and service facilities are available through an established national dealer network.
- EV chassis must be in production and available commercially.
- Suppliers are responsible for installing charging stations for the EVs at the USPS offices.

Solicitation Options

A- Provide new carrier route EVs that conform to the specifications.

B- Convert gasoline long-life vehicles to electric.

C- Offer a full-service EV lease with maintenance, demonstrating the advantages of leasing over purchasing.

If a proposal is submitted for A, B, or C, the bidder is also responsible for the following:

D- Installing charger stations at post offices where EVs will reside.

E- Maintaining the vehicles and charging stations.

The 6,000 EVs will be delivered in stages. The plan currently includes 500 EVs, with subsequent deliveries of 1,000, 1,500, and 3,000 initial EVs over 4 years. At any time, the vehicles purchased may be subject to a test/acceptance program conducted by DOE and USPS. Should the vehicles not meet performance or support expectations, USPS may delay further acceptance of the vehicles until agreed-on acceptance criteria are met, or may terminate the contract for default.

As you can see, the USPS has created a very ambitious program. Proposals were originally due by March 1, 1999, but that deadline has been extended to May 31. The award will probably be announced in late summer. For more information on this solicitation, please contact Peter Schwind at 202-268-4121.



From the Hill

Congress is now back in session, and new legislation introduced by both House and Senate members may greatly benefit the alternative fuels industry and help to reduce greenhouse gas emissions. In addition to legislation being proposed by Senator Rockefeller (see page 4), Senator John Chafee (R-RI) and Congressman Sherwood Boehlert (R-NY) have created environmental legislation on different issues that, if enacted, may have a positive impact on the alternative fuels industry.

In the House...

Congressman Boehlert introduced the "Airport Air Quality Improvement Act" (HR 1035), to promote inherently low-emission vehicles (ILEV) and the infrastructure to accommodate these vehicles at airports in metropolitan areas in non-attainment for federal air quality standards. The substance of the bill was then incorporated into a larger measure, HR 1000, called the Aviation Investment and Reform Act (AIR-21) and sponsored by Representative Bud Shuster (R-PA).

According to a press release from

Congressman Boehlert's office, the measure will promote the use of low-emission vehicles at the nation's largest airports to reduce air pollution. The Secretary of Transportation will award grants of up to \$2 million each to 10 public-use airports for the acquisition of AFVs, such as natural gas and electric vehicles. According to Congressman Boehlert, "The operation of cars, vans, trucks, buses, and other vehicles at America's largest commercial airports contributes significantly to air pollution. Because airports are often the single largest point source of air pollution within their region, they present real problems for state and local officials charged with improving air quality."

Funds may be used (1) to acquire materials and construct infrastructure facilities necessary for using ILEVs at airports; (2) to pay the incremental cost of acquiring such vehicles (over that of conventional vehicles used for the same purpose); or (3) to acquire technology or equipment necessary for using ILEVs. Under this measure, the Secretary of Transportation will provide a report evaluating the effectiveness of the pilot program to the House Committee on Transportation and Infrastructure and the Senate Committee on Commerce, Science, and Transportation. HR 1035 is supported by many organizations, including the Electric Vehicle Association of the Americas, the Natural Gas Vehicle Coalition, Southern California Edison, the Union of Concerned Scientists, the American Gas Association, and the U.S. Conference of Mayors.

In the Senate...

Senators John Chafee (R-RI), Joseph Lieberman (D-CT), and Connie Mack (R-FL) introduced the "Credit for Voluntary Reductions Act" (S 547), designed to help curb the threat of global warming by providing early regulatory credit to industry for voluntarily reducing greenhouse gas emissions. This piece of legislation, which has been re-introduced from the 105th Congress, is different in that the bill is now a free standing Act, rather than an amendment to the Clean Air Act. The crediting period has also been modified.

While climate change issues are debated in Congress, Senator Chafee stated, "The least our government can do is to protect those companies who have decided on their own to make voluntary contributions to the general goal of climate mitigation." As S 547 currently reads, the President would have the authority to establish "binding" agreements with businesses. The credits would be based on reductions below a predetermined baseline of current emissions, and the companies would be awarded one-for-one credit for voluntary cuts below the baseline, which could be sold or traded. According to co-sponsor Senator Lieberman, "The credit for early action bill we are introducing again is an attempt to change the climate on climate change here in Washington. Our appeal today to our colleagues and all who have a stake in this debate is to work with us, to help us improve this bill, and raise the quality of the climate change debate in general, and build the common ground necessary for preserving the common planet we inhabit." For a copy of either bill, visit the Web site thomas.loc.gov (see below) and enter the bill number (HR 1035 or S 547).

This may be just the beginning of the legislative discussions on climate change and greenhouse gas emission reductions. The differing perspectives seem to include some reservations that early action will negatively affect the ratification of the Kyoto Protocol. Stay tuned to the AFN for updates on this and other pending legislative actions.



PhotoDisc





Focus On

AFV Focus On . . . The San Diego Regional Clean Cities Coalition

Want to know the key to a successful organization? Just ask Steve Bimson, Chair of the San Diego Regional Clean Cities Coalition. "You have to have dedicated people," said Bimson. "It can't be because your boss told you to do it. You have to have people who believe in your cause, who are emotionally charged, and who believe the right thing to do is to drive vehicles that save the air and promote energy security—that's the trick."

It seems to have worked so far. The coalition was first created in January 1995 with the strong support of San Diego Gas & Electric (SDG&E); today there are nearly 65 members, all actively involved in projects to increase the number of AFVs on the road and spread the word about alternative fuels.

One of those projects is the San Diego Regional Transportation Center (RTC)—a virtual "one-stop shop" for your every alternative fuel need. Want to buy an AFV? The RTC has one for you. Do you have an AFV, but need a tune-up? The RTC can service your vehicle. Simply need to refuel? You can fill up at the RTC. The RTC is also an excellent resource for the future drivers of America. The RTC educational center will teach more than 30,000 middle and high school students about alternative fuels—and that's in its first year of operation alone.

The RTC, slated to open next spring, is a joint venture among San Diego Regional Clean Cities partners, including Ford Motor Company; Miramar College; the city of San Diego; the state of California; and RTC-1, Limited Liability Company (the developer). The project also received funding through a 1998 DOE State Energy Program Special Projects grant.

But the RTC is just one of the San Diego Regional Clean Cities stakeholder projects. Others include an incentive program for AFV purchases and infrastructure development, an EV Solar Chargeport, and educational workshops for schoolteachers (see box next page). Coalition stakeholders are also busy working with niche market fleets, including several area transit agencies, airline support vehicles at the San Diego International Airport-Lindbergh Field, local military installations, and the U.S. Postal Service.

Just the Facts

Name: San Diego Regional Clean Cities Coalition

Designation date: December 18, 1996, Clean City #50

Incorporated as a 501(c)(3) nonprofit organization

Membership: Approximately 65 members

Meetings: General Membership, meets quarterly; Board of Directors, meets monthly; Standing Committees, meet monthly; Ad-Hoc Committees, meet as needed.

Web site: www.sdrafvc.org



San Diego Regional Clean Cities Coalition

San Diego Regional Clean Cities Coalition/PIX 07050

Current number of vehicles: ~1,800

Projected number of vehicles by the year 2000: More than 2,000

Sounds like a full plate, but San Diego Regional Clean Cities stakeholders have a strong foundation of support. The coalition, which is a 501(c)(3) nonprofit organization, maintains a formal structure that includes a Board of Directors and recognized standing and ad-hoc committees. "We have a very active, task-oriented board," said Bimson. "Each board member has ongoing responsibilities...it's a really mixed group, from all different entities—fuel providers, the auto industry, the port authority, the air pollution control district, the college system—everybody has something different to bring to the table," he said. "We meet on the first Thursday of each month; that way our meetings are on the calendar for the entire year. Board members must be dedicated and attend the meetings—there can't be any dead weight. You have to have dedicated people to make it work."

One of those dedicated individuals is San Diego's Regional Clean Cities Coordinator, Kim Cresencia, Senior Engineer in Marketing at SDG&E. As the founding coordinator of the coalition, Cresencia has been actively involved in developing and managing the coalition from its preliminary organization to bylaw development, through Clean Cities designation and incorporation, to its current status today as a recognized non-profit organization. Cresencia, who is also the coalition's secretary, says that in addition to dedicated stakeholders, one of the secrets to their success is organization. "We're very organized. We manage the coalition in a formal manner, with an established structure, and we hold regular coalition meetings."

Education

Teacher Education—Coalition stakeholders are working together to hold educational workshops for middle and high school teachers. The workshops are intended to facilitate the introduction of air quality and alternative fuels issues into the school curriculum. Teachers are given EV model kits and the opportunity to drive and ride in an EV. In addition to coalition support, stakeholders include SDG&E, the San Diego Office of Education, the San Diego Air Pollution Control District, the California Energy Commission, the California Air Resources Board, General Motors, and Saturn retailers. The American Lung Association also provided materials and support for the projects.

Products

Incentive Information—The coalition provides comprehensive information on the alternative fuel incentives available to its members, which helps to paint a full financial picture for AFVs. Some incentives are available only to San Diego Regional Clean Cities Coalition members, so membership is a definite plus.

Technical Guide—The coalition's technical committee is developing a full-color guide for AFV users and enthusiasts. It will include fueling reference information, information on CNG training courses at the local college, and coalition membership forms.

Web Site—In addition to general information about the benefits of AFV use, the Web site (www.sdrafvc.org) includes direct links to board members and coalition membership information. And to show San Diego's citizens just how easy it is to make the AFV choice, the site also includes an AFV product list with vehicle photos; a list of local refueling stations, including addresses and access information; and a list of local dealerships with contact information.

Alternative Flash—This monthly communications tool is either faxed or e-mailed to the San Diego Regional Clean Cities membership. It provides the latest information on coalition business and happenings in the AFV industry. Additional issues of the newsletter are also distributed as needed to alert members to late-breaking news, such as grant information.

This organization helps the coalition's board stay in tune with the general membership, including the types of services offered to stakeholders to help facilitate AFV projects. One such service is a rapid-response funding information system. An Internet filtration/notification system alerts the coalition's community relations chair almost immediately when a request for proposals or grant availability notice is posted on the Web. If the grant requirements are appropriate to any of the coalition's stakeholders, a notice is sent to the public relations chair, who then immediately passes it along to all the San Diego Regional Clean Cities stakeholders. And the coalition provides its stakeholders with even more support by offering grant-writing seminars to help them ensure successful proposals. "We receive a lot of very positive feedback on the proposal writing seminar," said Cresencia. "It's helped our members become more proficient at proposal writing so they can go after outside funding sources to support their projects."

Although the San Diego Regional Clean Cities has been fortunate, with approximately 50 organizations and individuals already committed to AFVs, the coalition constantly reaches out to recruit new members. Not only does expanded membership contribute to increasing AFV numbers, it also increases the coalition's resources, and the ability to remain proactive through partnerships between stakeholders. More than 1,800 AFVs are already on the road in the San Diego area, and the coalition expects that number to jump to 2,000 by the year 2000.

One way the coalition markets its program is through its Clean Cities booth. "Our table-top display is never folded up," said Bimson. "It's never in its case in someone's office. If it's boxed up, it doesn't do us any good. That's why it's always on location somewhere—at a private business, a shopping mall, the airport, the college—it's a great way to outreach." Handouts and business cards are always available at the booth, so anyone can learn a little about alternative fuels and call the coalition for more information. "These are the little things that make it work," he said. "We need to always be out in the public somewhere."

For more information on the San Diego Regional Clean Cities Program, check out its Web site: www.sdrafvc.org.

Vehicles and Stations

Incentive Program—With the help of a DOE State Energy Program grant, the coalition offers an incentive program to its stakeholders to help cover the incremental costs of AFV purchases, as well as refueling and recharging station development.

EV Solar Chargeport—San Diego Gas & Electric recently unveiled an EV Solar Chargeport along the San Diego waterfront at the County Administration Center. The chargeport is a cooperative effort between the County of San Diego and SDG&E. The California Energy Commission also contributed funds toward data collection and monitoring. The chargeport, which offers three inductive and three conductive EV chargers, is accessible and free to the public.

SolarChargeport dedication





Clean Cities Roundup



Downtown Denver

Denver Takes Charge!

Denver, Colorado, recently added three Bombardier Neighborhood Electric Vehicles (NEVs) to its fleet. The vehicles, affectionately named Charge I, Charge II, and Charge III, are available to city employees for business travel in and around Denver. Before he retired from office, former Colorado Governor Roy Romer was so charged by the NEVs that he signed a bill allowing their use on Denver city streets. The vehicles only cost about \$6,200 each, and each is equipped with a global positioning system that monitors location and battery charge. Operating between 20 and 25 miles per hour, the vehicles range between 35 and 40

miles per charge—quite a deal at approximately 38 cents per charge!

And the savings don't stop there! The city also offers free metered parking for NEV drivers on downtown streets. According to Ernie Oakes, DOE's Clean Cities Denver Regional Program Manager, the vehicles have become very popular among city employees. Each has accumulated more than 125 miles in the first month of use alone. "There isn't a city around that couldn't be doing this," said Oakes. "There is a practical use for this type of vehicle in any metropolitan area. These vehicles are great for short distance trips to meetings around town or any number of other applications, like parking enforcement, for example."

Clean Cities Designations

• **Indianapolis.** The number of Clean Cities coalitions grew to 68 on March 4, as the Central Indiana Clean Cities Alliance (CICCA) was officially designated a member of the program. DOE's Tom Gross, Deputy Assistant Secretary for Transportation Technologies, returned to his home state to join Indiana Lieutenant Governor Joseph E. Kernan and Indianapolis Deputy Mayor John Hall in signing a Memorandum of Understanding with CICCA stakeholders. The coalition serves the city of Indianapolis and surrounding eight counties in the Central Indiana region. CICCA has been working closely with the neighboring Evansville, Tri-State, and Central Kentucky (Louisville) Clean Cities coalitions on clean corridor development. The "Clean Crossroads" partnership is working to enable AFV travel between the metropolitan areas in the Ohio-Kentucky-Indiana region. Approximately 850 AFVs are

now operating in the Central Indiana region, and future plans include an additional 400 AFVs by the year 2002.

- **Ann Arbor, Michigan.** The Ann Arbor Area Clean Cities Coalition was designated the 69th member of the Clean Cities Program on April 19. Ann Arbor Mayor Ingrid B. Sheldon was on hand to accept the Clean Cities plaque from DOE. The coalition plans to place more than 300 AFVs into operation in the next 3 years, and is working to develop the necessary public refueling infrastructure to support the additional AFV acquisitions. Plans are currently underway to install CNG refueling sites at Eastern Michigan University, Meijer department stores, and the Ann Arbor Area Transit Authority bus station.
- **Schenectady, New York.** The Clean Cities Program celebrated its 70th designation in Schenectady, New York, on April 26. DOE's Dan Reicher, Assistant Secretary for Energy Efficiency and Renewable Energy, signed a Memorandum of Understanding with Capital District Clean Communities stakeholders to officially designate the coalition a member of the program. Capital District Clean Communities, the sixth Clean Cities coalition in the state of New York, serves the counties of Schenectady, Albany, Rensselaer, and Saratoga. Coalition stakeholders plan to acquire more than 200 additional AFVs and build 17 additional alternative refueling/electric recharging stations in the next 3 years. The coalition has been featured in previous issues of *AFN* for its logo contest for school children, as well as for several stakeholder efforts, including the Shenendehowa Central Schools CNG alternative fuel school bus acquisitions and the Schenectady County Job Training Agency's alternative fuel vans.



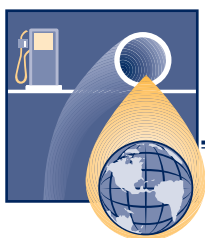
Indiana Lieutenant Governor Joseph Kernan addresses the audience at the Central Indiana Clean Cities Alliance designation.

Clean Cities Preferred Fleets Database Update

After months of planning and preparation, the Clean Cities Game Plan 1998/99 is underway! (see *AFN Vol. 2, No. 4* for the Game Plan Overview). All designated coalitions have received their Preferred Fleets Databases and many are starting to put them to use, recruiting those fleets listed as inclined or interested in alternative fuel use. The Delaware Clean State Program used the database to invite area fleets and other potential stakeholders to its Fifth Anniversary Celebration event. The response was overwhelming. More than 60 attendees gathered to learn about alternative fuel activities in the area, including the AFV rebate opportunities offered by the coalition through a 1997 DOE State Energy Program (SEP) award and

construction of a new CNG/propane station, also supported by SEP funds. Participants also heard from local fuel providers and several of the automakers. The media also took an interest in the event, which was covered by a local television station.

Delaware Clean State Coordinator Sue Sebastian remarked, "The database was really easy to use—the information was accurate and we didn't get many returns. The vendors that attended our event were very impressed with the audience because people were actually interested in purchasing vehicles," said Sebastian. "The database helped us reach our target audience—people who have an interest in alternative fuels—so it was not only beneficial to our coalition in terms of increasing membership, but it helped our vendors as well."



At the Pump

Refueling Made Easier

Thanks to FuelMaker, refueling your natural gas vehicle (NGV) just got a lot easier and more affordable. NGV drivers can now refuel conveniently on site without the substantial investment required for new station construction. The FuelMaker Vehicle Refueling Appliance (VRA) uses the existing gas line at any business or residence and compresses the natural gas for use in the pressurized fuel cylinders of vehicles. The system is capable of accommodating both time-fill and fast-fill requirements, and once installed, it couldn't be simpler—just connect the hose nozzle into the vehicle and press the start button. When refueling is complete, the system automatically shuts off. Any remaining gas pressure in the hose is retrieved and stored inside the unit, so there are no evaporative emissions before, during, or after the refueling cycle.

Other benefits of VRAs are that they can be used with a storage system, enabling vehicles to refill in 3 to 4 minutes, and that they are easily transferable, so if you move, the FuelMaker can move with you. Units can also be added to accommodate a growing fleet, and should you need to downsize, units can easily be removed. "FuelMaker Vehicle Refueling Appliances can be installed virtually anywhere that there is a natural gas pipeline," said John Lyon, President of FuelMaker. "The FuelMaker system is safe, reliable, and inexpensive relative to large public refueling stations. In fact, many companies are able to increase the productivity of their fleets due to the convenience of an on-site natural gas refueling system."

Sales and marketing alliances with original equipment manufacturers are making the FuelMaker option even more attractive. In an effort to promote the use of natural gas vehicles, FuelMaker has partnered with DaimlerChrysler,



FuelMaker's refueling systems offer both time-fill and fast-fill refueling. Here a forklift refuels using the fast-fill method, allowing the driver to be back to work in 2 minutes with a full tank of CNG.

Ford, General Motors (GM), and Honda to offer additional savings on the VRA. DaimlerChrysler, Ford, and GM customers purchasing a dedicated or bi-fuel NGV will receive a 10% discount off the manufacturer's suggested list price of a FuelMaker VRA (~\$4,500). American Honda has earmarked \$100,000 to help with the cost of FuelMaker refueling systems for Honda Civic GX customers.

Partnering with Clean Cities is another way in which FuelMaker plans to encourage fleets to choose alternative fuels. "Our number one objective is to participate with Clean Cities programs in each of the cities through our network of FuelMaker dealers," said Rod Crawford, vice president of Sales and Marketing at FuelMaker. "We have over 55 independent dealers trained in sales, installation, and service." For more information, check out www.fuelmaker.com.



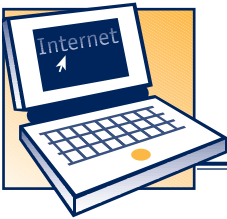
Hot off the Press

Ethanol versus Gasoline

What are the benefits of using ethanol instead of gasoline, exactly? According to a study recently released by Argonne National Laboratory (ANL), using 1 gallon of cellulosic ethanol would reduce greenhouse gas emissions by 84%–144%, fossil energy use by 87%–126%, and petroleum use by 86%–108%. Using corn-based ethanol would result in slightly lower results—a 12%–35% reduction in greenhouse gas emissions, a 40%–55% reduction in fossil energy use, and a 90% reduction in petroleum use. In some cases, reductions of more than 100% are possible because the biomass processes generate electricity and other co-products in addition to ethanol.

The study, *Effects of Fuel Ethanol Use on Fuel-Cycle Energy and Greenhouse Gas Emissions*, was funded by DOE's Office of Technology Utilization and is an interagency effort in partnership with the U.S. Department of Agriculture and the EPA. The study compares the per vehicle-mile fuel-cycle petroleum use, greenhouse gas emissions, and energy use effects of using ethanol blended with gasoline in a mid-size passenger car to those of using gasoline only in the same car. The analysis includes petroleum and energy use, along with the emissions associated with chemicals manufacturing, corn and biomass farming, and ethanol production and combustion.

For a copy of the full report, call 800-CCITIES, or visit ANL's transportation Web site: www.transportation.anl.gov/ttrdc/publications/pdfs/wang.pdf



On the Web

Enhanced Interactive Refueling and Recharging Site Map Now Available

afdcmap.nrel.gov/nrel

Locating convenient alternative refueling stations is now a mouse click away! The National Renewable Energy Laboratory's Interactive Alternative Refueling Site Locator is now live on the World Wide Web. The application allows for searches based on fuel type, city, state, and zip code, and provides detailed maps of particular stations and station locations, as well as addresses. The software is Environmental Systems Research Institute, Inc.'s ArcView GIS.

Model Year 1999 Fuel Economy Guide

www.eren.doe.gov/feguide or
www.epa.gov/omswww/mpg.htm

The *Model Year 1999 Fuel Economy Guide* has arrived at dealerships nationwide and is also on the Web! For the first time, the guide includes estimated city and highway mileage for AFVs in addition to the gasoline and diesel vehicles available. On the Web site, you can download the entire document or search for vehicles by fuel type. Also, the EPA Web site has extensive sorting and searching features that provide comparisons among all the vehicles.

To order hard copies of the guide, please contact the National Alternative Fuels Hotline by e-mail at hotline@afdc.doe.gov or call 800-423-1DOE.

New and Used NGVs for Sale

www.ngvc.org/mktexch.html

Are you in the market to buy or sell a used natural gas AFV? The Natural Gas Vehicle Coalition (NGVC) has added a new section to its Web site called "Market Exchange," which includes a listing of used natural gas vehicles. NGVC welcomes any visitors to its site to submit classifieds for posting. The categories include equipment for sale; vehicles (new and used); and "In Search Of," which lists parties looking to purchase NGV-related products.

If you are interested in posting or need more information, please contact Susan Jacobs at sjacobs@ngvc.org.

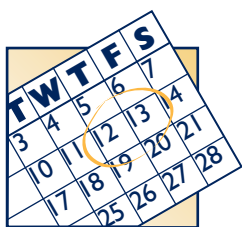
New Vehicle Evaluation Program

afdc3.nrel.gov/demoproj/ldv/nve

The National Renewable Energy Laboratory (NREL) evaluates and tests AFVs entering the market, along with their conventional gasoline counterparts, for performance, handling, and emissions. Once the data are collected, NREL organizes the information into fact sheets and posts them online. Results are posted for the E85 Dodge Caravan and the dedicated CNG Honda Civic GX.

**National Alternative Fuels and
Clean Cities Hotline**

National Renewable Energy Laboratory
1617 Cole Blvd., MS/1633
Golden, CO 80401-3393



Upcoming Conferences and Events

1999 Ethanol Vehicle Challenge

May 19-26, 1999

From Milford, Michigan, to Springfield, Illinois

Contact: Cindy McFadden, 630-252-1353

1999 FutureCar Challenge

June 1-10, 1999

From Auburn Hills, Michigan, to Washington, D.C.

Contact: Cindy McFadden, 630-252-1353

National Parks Transportation Alternatives and Advanced Technology for the 21st Century

June 2-5, 1999

Big Sky, Montana

Contact: Shelley Fleming, 406-994-6724

Windsor Workshop on Transportation Fuels

June 7-9, 1999

Toronto, Ontario, Canada

Contact: Susan Metcalf, 905-822-4111, ext. 515

7th Annual Environmental Vehicles and Alternative Fuels Conference and Exposition (EnV99)

June 13-16, 1999

Ypsilanti, Michigan

Contact: Geraldine Robak, 248-355-2910, ext.117

Sunrayce 99

June 20-29, 1999

From Washington, D.C., to Ocala, Florida, ending at
the EPCOT Center in Orlando, Florida

Contact: Bryan Arnold, 800-606-8881

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JOB ANNOUNCEMENT

New national alternative fuels 501(c)(3) organization dedicated to educating the public about alternative transportation fuels and their effect on the environment and health is seeking a DC-based Executive Director/Fundraiser. Fundraising and alternative transportation fuels experience required. Starting salary \$45k with additional compensation possible as funding increases. Send cover letter and resume by June 11 to: BDA, Inc.; 8720 Georgia Ave., #1000, Silver Spring, MD 20910; fax 301-588-1035.

15th Annual International Fuel Ethanol Workshop and Exposition

June 22-25, 1999

Cedar Rapids, Iowa

Contact: Bryan and Bryan, Inc., 719-942-4353