

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



ALTERNATIVE FUELS ACROSS AMERICA

SUCCESS STORIES FROM EVERY STATE



PLUS:

Sales Success Tips for AFV Dealers
Cummins Westport Drives Progress

INSIDE:

**CMAQ Funding
on Long Island**



Dear Readers:

Mark Twain said, "Facts are stubborn, but statistics are more pliable." The Clean Cities Program is defined by two very clear facts: By 2010 we will have 1 million AFVs on the road and we will be displacing 1 billion gallons of petroleum annually. As 2003 dawns, so does the realization that we have seven years to meet these ambitious goals. So, where are we and how are we going to get there?

The pliability of statistics aside, it's becoming increasingly clear that we have to get serious about documenting the impact that AFVs have on petroleum displacement. The first goal articulated in the new strategic plan of the Energy Efficiency and Renewable Energy Office of the Department of Energy is to "Dramatically Reduce, or Even End, Dependence on Foreign Oil." That alone is a compelling reason to show the impact that Clean Cities coalitions and stakeholders have had across the country. Equally significant, though, is using statistics to strategically determine where our potential market growth is both by geography and niche markets.

Two noteworthy developments are in the works that will help us more accurately capture fuel and vehicle sales. The Energy Information Agency (EIA) of the U.S. Department of Energy is the entity that compiles official energy statistics for the United States Government. They have agreed to work with us to collect our fuel and vehicle statistics. The second development has resulted from a series of meetings throughout the fall with original equipment manufacturers (OEMs) including representatives from the heavy-duty industry. Most of them acknowledge the importance of real data and have agreed to meet with Clean Cities staff and EIA to start the process rolling.

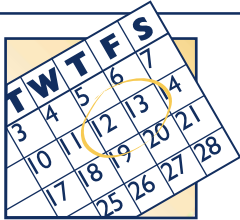
Clean Cities does have an existing mechanism to track vehicle-reporting numbers from coalitions and we'll factor that into our overall data compilation efforts. The success, though, of this enterprise is contingent upon our ability to get accurate information. That information will come from those who are willing to step forward and share their sales numbers. We are beginning to

tackle vehicle sales, but we also plan to quantify fuel use and the resulting oil displacement as well. Although hybrid-electric vehicles have never been considered AFVs (at least in their present commercial configuration), they are owned and operated by many Clean Cities stakeholders and they can contribute significantly to oil displacement. So we will begin including them in our annual inventory.

In one of my recent conversations with an OEM representative, he noted that our reports show a significant growth in AFV sales, yet his own reports showed no growth. While I can speculate why that is, I don't know for sure. Once this new system is in place, for the first time we'll be able to document numbers, extrapolate what efforts are succeeding in increasing sales, and show that Clean Cities and all of our stakeholders are actually making a difference as we strive for energy independence.

Shelley Launey, Director

Clean Cities Program
U.S. Department of Energy



Upcoming Conferences and Events

3rd Annual LNG Economics and Technology Conference

January 28–29, 2003
Houston, Texas
Contact: SR Institute
888-666-8514
www.srinstitute.com

8th Annual National Ethanol Conference

February 17–19, 2003
Scottsdale, Arizona
Contact: BBI International
800-567-6411

Clean Heavy Duty Vehicles for the 21st Century

February 19–21, 2003
Tempe, Arizona
Contact: WestStart
626-744-5600
www.calstart.com

For more conference and event information, visit
www.cities.doe.gov/events_cgi.shtml

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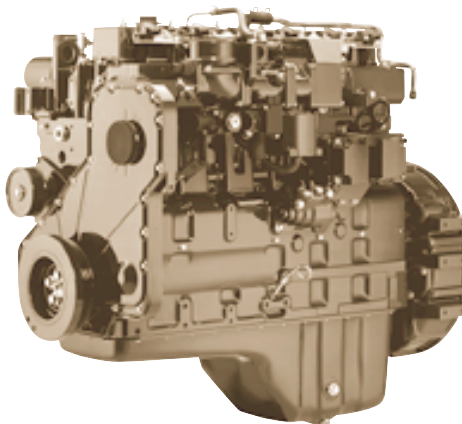
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ALTERNATIVE FUELS ACROSS AMERICA

One way to gauge alternative fuels activity in this country is to consider the wide variety of projects occurring in every state. Alternative fuels projects are in development from coast to coast—most based on specific needs and opportunities in the area, and rooted in the innovation and creative ideas of its people.

Clean Cities coalitions have been instrumental in many of these projects, and are constantly devising ways to put more AFVs on the road. Here's a listing of selected projects—one from every state plus the District of Columbia. It is not exhaustive, but a mere sample of the countless AFV success stories unfolding every day across the United States.

ALABAMA— Of Birmingham Jefferson County Transit Authority's 83 buses, seven are CNG vintage trolleys, two are electric vehicles, and 43 are low-floor CNG buses. The City of Birmingham is working toward a Clean Cities designation.

ALASKA— Unisea, an Alaskan fish processor, powers generators with a blend of fish oil and diesel fuel. It has used more than 900,000 gallons of fish-B50, resulting in lower emissions and significant cost savings compared with diesel. The fuel has no adverse maintenance effects.

ARIZONA— Tucson's Sun Tran public transit system operates 136 CNG buses, 68 percent of its fleet. The goal of Sun Tran and the City of Tucson is to have their entire transit bus fleet run on CNG.

ARKANSAS— The Central Arkansas Clean Cities Coalition was revitalized in 2002, with a renewed designation and a new executive director. The coalition is hosted by a four-county council of governments, and receives support from the State Energy Office. It anticipates niche market activities such as an electric vehicle program at the Little Rock National Airport.

CALIFORNIA— California leads the nation with roughly 70,000 AFVs. The first public biodiesel fueling station in a major city opened in San Francisco in 2001. More than 40 school districts operate CNG school buses. California lawmakers and an active state Air Resources Board are driving further AFV expansion.



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COLORADO— Denver International Airport was designed with alternative fuels in mind. For example, CNG is available at the end of each concourse wherever gasoline and diesel are available. DIA is the largest user of AFVs in the Denver area, with more than 300 vehicles operating on CNG.

CONNECTICUT— Yellow Cab of Connecticut operates 25 Honda CNG taxis and is obtaining 30 more. The company chose the AFVs because of their environmental advantages, a tax incentive from the state, and lower maintenance costs. The taxis average 100,000 miles per year.

DELAWARE— The State of Delaware currently operates 564 E85 vehicles. In a mutually beneficial agreement with the City of Wilmington, the state contracted to purchase fuel from the city's E85 station. Wilmington has begun to convert its city fleet to E85 as well.

FLORIDA— The City of Miami Beach's ELECTRO WAVE shuttle system is Florida's first alternatively fueled transit service. The 11 electric buses, which service the South Beach area, have transported more than 3.5 million passengers since 1998 and are credited with reducing traffic congestion and air pollution.

GEORGIA— The Metropolitan Atlanta Rapid Transit Authority (MARTA) is introducing 140 new CNG buses as part of an effort to convert its diesel bus fleet to alternative fuels. By mid-2003, two-thirds of MARTA's fleet of more than 700 buses will run on CNG.



HAWAII— Ten new battery-electric trams will replace the aging diesel-powered Wiki-Wiki shuttle buses at Honolulu International Airport in 2003. A small propane generator powers the air-conditioning system on each tram to counter the Hawaiian heat while preserving the main batteries.

IDAHO— The University of Idaho continues to be a leader in biodiesel research, using various feedstocks including rapeseed, mustard seed, and chicken frying oil. Idaho stakeholders were also instrumental in forming the Greater Yellowstone–Teton Clean Cities Coalition, designated in September 2002.

ILLINOIS— Chicago-based Mexican food distributor El Milagro operates 24 of its 32 delivery trucks exclusively on propane and plans to convert the remaining trucks to propane. It is a 5-Star Illinois Green Fleet, and its accomplishments were formally recognized in a ceremony last fall by U.S. EPA Administrator Christine Todd Whitman.



INDIANA— The Evansville–Vanderburgh School Corporation began converting its school buses to CNG in 1986 and now operates 104 of its 189 buses on CNG. The Corporation has 66 CNG fueling pumps and is investigating using B20 in its diesel buses.

IOWA— Before AFV acquisition was mandated for state fleets, Iowa started using ethanol in vehicles. Its early deployment earned excess AFV credits for the state, which it sold to other regulated fleets. The funds are used to purchase biodiesel for state vehicles.

KANSAS— Fort Riley received the nation's first public/private CNG fueling station at a military base. The Manhattan Area Clean Cities Coalition, Kansas Energy Office, Department of Defense, General Services Administration, and Kansas Gas Service partnered to build the station.

KENTUCKY— Kentucky's Campbell, Kenton, and McClean County Schools use B20 in their fleets, a total of 250 school buses. East Kentucky Power Cooperative uses biodiesel in 70 vehicles and pieces of equipment, and Kenton County Public works uses it in more than 250.

LOUISIANA— A Clean Cities-led partnership helped Baton Rouge Metropolitan Airport receive federal funding to construct a CNG fueling station and purchase CNG vehicles. The CNG station will provide complete CNG fueling coverage for East Baton Rouge Parish and will serve as many as 50 vehicles per day.

MAINE— The Greater Portland Metro transit agency will soon begin replacing its fleet of 21 diesel buses with CNG buses. A CNG fueling station for the buses is planned for 2003.

MARYLAND— The Beltsville Agricultural Research Center uses soy-based B20 in all its 150 vehicles and equipment. This includes trucks, tractors, farm equipment, mowers, and a bus. Mechanics at the Center report good performance from the B20-fueled vehicles.



MASSACHUSETTS— Massachusetts Clean Cities facilitated the deployment of 275 Ford TH!NK neighborhood electric vehicles. TH!NK recipients included the City of Boston, the Massachusetts State Police, the National Park Service, and numerous local government agencies.

MICHIGAN— The University of Michigan has the state's largest active AFV fleet. More than 400 vehicles operate on biodiesel, ethanol, or electricity. More than 300 vehicles use E85, and the university has a 10,000-gallon underground E85 storage tank.

MINNESOTA— Minnesota's "E85 Team" boasts of diverse members including trade associations, government agencies, an automaker, and the Twin Cities Clean Cities Coalition. Approximately 70 E85 fueling stations have been established in and around the Twin Cities—a feat sometimes called the "Minnesota Miracle."



Twin Cities Coordinator Tim Gerlach fuels up at an E85 station.

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MISSISSIPPI— Gulfport’s Coast Transit is purchasing five propane-electric hybrid shuttle buses, in part with grant money from the Mississippi State Energy Office. The buses will relieve congestion and improve air quality along heavily congested Highway 90 in the Gulfport/Biloxi area.

MISSOURI— Liberty-based propane supplier Ferrellgas operates 65 percent of its service fleet on propane. In addition to showing commitment to the propane industry, the company chose the vehicles for their environmental and economic advantages.

MONTANA— Yellowstone National Park uses B20 in all its approximately 300 diesel vehicles and pieces of equipment and has a 15,000-gallon biodiesel tank in Gardiner. The park’s biodiesel use led the way for Montana’s first publicly available biodiesel station in West Yellowstone.



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NEBRASKA— The “Cornhusker State” is among the nation’s largest ethanol producers. Seven plants produced more than 350 million gallons of ethanol in 2001, about 20 percent of the nation’s total production. Production was projected to reach 365 million gallons in 2002.

NEVADA— With more than 1,000 school buses operating on B20, Clark County School District has one of the largest biodiesel school bus fleets in the world. The biodiesel used in the buses is made from frying oil recycled from Las Vegas casino resorts.

NEW HAMPSHIRE— The Granite State Clean Cities Coalition was officially designated in 2002. It has helped secure \$1 million to support CNG bus purchases and a new CNG station for Wildcat Transit.

NEW JERSEY— The Capital Connector program provides five electric vehicles at the Trenton rail station for State employees to commute from the station to work. The New Jersey Department of Transportation and the Greater Mercer Transportation Management Association run the program.

NEW MEXICO— In 2002, auto manufacturers and dealers, fuel providers, federal, state and local government, and non-profit organizations collaborated on the first Alternative Fuels Day at the New Mexico State Fair. The event raised awareness about AFVs in New Mexico and showcased current technologies.

NEW YORK— The Clean Fueled Vehicle Program has installed more than 40 CNG filling stations across the state and initiated a plan for ethanol, propane, and electricity stations. The program now focuses on complying with a mandate to meet ambitious AFV goals for 2005 and 2010.

NORTH CAROLINA— The state’s Motor Fleet Management (MFM) division has 1,222 FFVs in its Raleigh fleet, which uses 175,800 gallons of E85 annually. MFM chose E85 because there are no extra costs for purchasing FFVs, and ethanol could be produced in state.

NORTH DAKOTA— North Dakota is a major producer of ethanol and biodiesel feedstocks, and its AFV population is rising. The state added 797 AFVs in 2001, an increase of 278 percent over its 2000 total. Most of the additions were ethanol vehicles.

OHIO— AMERICAB operates 120 dedicated propane taxis that drive about 70,000 miles every year in the Cleveland area. “Propane gives us a competitive advantage,” said AMERICAB’s Jonathan Schwartz. Schwartz said propane engines are lasting 30 to 40 percent longer than gasoline engines.

OKLAHOMA— Oklahoma Natural Gas (ONG) operates more than 800 of its 1,120 vehicles on CNG. The utility’s goal is to have 100 percent of its fleet run on CNG. Central Oklahoma Coordinator Yvonne Anderson last year accepted a Honda Civic GX donated by ONG. Also pictured (from left) are Zach Taylor of the Association of Central Oklahoma Governments, Kent Jackson of ONG, and Edmund Farrell of ONG’s parent company.



OREGON— Oregon’s first commercial CNG fueling station will help Portland International Airport expand its CNG use. Half the airport’s vehicles currently use CNG, including 17 of 26 shuttle buses. The airport plans to replace its entire shuttle fleet with CNG buses.

PENNSYLVANIA— Natural gas utility Philadelphia Gas Works (PGW) operates 307 CNG vehicles. This includes 173 dedicated CNG vans, 93 bi-fuel CNG vans, and 41 bi-fuel CNG sedans. PGW has received nearly \$500,000 through Pennsylvania's Alternative Fuels Incentive Grant Program.

RHODE ISLAND— Providence-based New England Pest Control serves Massachusetts, Connecticut, and Rhode Island. The company currently has 25 light-duty CNG trucks that drive more than 20,000 miles per year on average. Among other benefits, using CNG vehicles enhances the company's environmental image.

SOUTH CAROLINA— An E85 fueling station was installed at the State Department of Health and Environmental Control offices in 2002. It is open to all government fleets. Before the station opened, all fleets in the Columbia area were using gasoline in their FFVs.

SOUTH DAKOTA— Tax incentives have enabled a fueling station in Sioux Falls to offer E85 at \$0.20/gallon below the price of unleaded gasoline. It now sells 4,000–5,000 gallons of E85 monthly, more than twice what it sold when E85 was priced the same as unleaded gas.

VERMONT— A grant from Chittenden County enabled the purchase of two electric and two CNG vehicles, two charging stations, and one CNG fueling station. The vehicles will be leased to various municipalities in rotation to give the municipalities a low-cost taste of AFV operations.

VIRGINIA— Colonial Williamsburg operates 15 of its 18 transit buses on CNG and has its own CNG station. Williamsburg switched to CNG because of complaints from tourists about diesel smoke and fumes. The three remaining diesel buses will be replaced with CNG buses.

WASHINGTON— Tacoma won a 2002 Clean Cities National Partner Award for using B20 in its 85-truck fleet of garbage and recycling trucks. The trucks use 200,000 gallons of B20 annually. Tacoma is the first northwestern city to commit an entire fleet to biodiesel.

WASHINGTON, D.C.— The Washington Metropolitan Area Transit Authority (WMATA) operates 164 CNG buses and is obtaining 250 more. WMATA has one CNG bus facility in Washington, D.C. and is finalizing expansion design for additional facilities in Arlington, Virginia and Montgomery County, Maryland.

WEST VIRGINIA— The National Alternative Fuels Training Consortium is one of the world's premier AFV training institutions. It also promotes AFVs through events such as the National AFV Odyssey Day, which drew more than 17,000 attendees in 31 states in 2002.

WISCONSIN— Transit Express operates more than 200 shuttles in metropolitan Milwaukee and southeastern Wisconsin and has transportation contracts with agencies such as Milwaukee County. It has 10 dedicated CNG vans and anticipates purchasing 50 more.

WYOMING— Yellowstone National Park was recently designated as part of the Greater Yellowstone–Teton Clean Cities Coalition. Yellowstone has introduced four propane pickup trucks and two fueling stations. In development is a vehicle intended to run on multiple alternative fuels, modeled after Ford's retro-style red buses that already serve the park.



A multifaceted AFV is in development at Yellowstone.



Electric Transit Vehicle Institute

TENNESSEE— Chattanooga was honored in 2002 for its downtown fleet of electric and hybrid-electric buses. In the U.S. Competition for Metropolitan Energy Design sponsored by the Gas Technology Institute, the city was judged to have the best approach to Alternative Fuels and Mass Transit among more than a dozen city plans submitted.

TEXAS— Northside Independent School District's buses transport 33,000 students to and from school every day. Ninety-five percent of its 472 buses are powered by propane. Northside is dedicated to operating a 100-percent alternatively fueled fleet.

UTAH— The Newspaper Agency delivers the two major Salt Lake City region newspapers. Of its 230 vehicles, 196 are CNG vans and 17 are propane trucks. The CNG vans drive more than six million miles per year. The agency estimates annual fuel savings of \$350,000.

Dealer Incentives

Auto dealers are key to AFV market penetration.

Clean Cities coordinators and stakeholders can help them make sure the rubber meets the road.

The chicken-and-egg problem persists: Must AFV sales come first, before alternative fuels become widely available? Or if fuel providers take the first step, will vehicle sales follow?

The answer is elusive, but one thing is certain. Car dealers are an essential piece of the puzzle. Helping them sell and succeed is an objective shared by all Clean Cities stakeholders.

Granted, dealers aren't involved in all AFV sales. Many vehicles are sold directly by manufacturers to the U.S. General Services Administration (GSA), which then often leases them to other federal agencies. GSA sometimes sells vehicles directly to states, and used vehicles are sold at public auctions.

But manufacturers agree, dealer networks are key to the success of their own AFV programs. And like the chicken-and-egg problem perplexing the industry, another one applies here: Sales success requires interested, committed dealers—but dealers live on sales. "Without sales, there is no reason for them to bother," says Steve Ellis, AFV marketing manager at American Honda. "It is the only way to keep dealers interested."

Competitive products are essential, says Ellis. Planning and hard work are key. But often it takes even more than that, he says. "When we released the Civic GX, we targeted areas that could support dedicated natural gas vehicles." According to Ellis, the best chance of success occurs when a market area satisfies four criteria:

- High population density
- Need to reduce air pollution
- Large customer base (i.e., regulated fleets)
- Available infrastructure

In past successes, dealers have benefited through partnerships with other local players including Clean Cities stakeholders, says Ellis. "There are markets in the United States where the

moon and stars aligned. Dealers jumped in with both feet and so did the Clean Cities people." In Los Angeles, Washington, D.C., and Kansas City, good planning and partnerships have helped develop successful Honda AFV dealerships.

Selling the Sellers

What can Clean Cities stakeholders do to help dealers? Start by conveying some of the basics about the AFV market, advises Lee Grannis, coordinator of the Greater New Haven Clean Cities Coalition in Connecticut. He sells Ford and DaimlerChrysler cars and trucks at a dealership operated by Stevens Auto Group in nearby Milford.

"They need to know it's a two-tier market," he says. One tier consists of flexible-fuel vehicles (FFVs) capable of running on E85 as well as gasoline. Examples are the Ford Taurus, several GM trucks, and minivans and small sedans from DaimlerChrysler. A searchable listing of FFVs for model year 2003 is at the Clean Cities Vehicle Buyers Guide at www.ccities.doe.gov/vbg. An FFV fueling system typically is an option, often at no extra cost.

"FFVs are mainstreamed, and those dealers don't need certified service personnel or special tools," he notes. Like their customers, many dealers are unaware of their vehicles' E85 capability.

Gaseous-fueled vehicles make up the second tier of AFV sales. "CNG- and propane-fueled vehicles must be sold by AFV-certified dealers," says Grannis. Ford's AFV certification program, for example, requires CNG and propane vehicle dealers to have qualified service personnel and specialized tools. Certified dealers are kept abreast of AFV products and programs. They receive exclusive marketing materials and a quarterly newsletter. Ford dealers

Texas Fleet Sales Events Take off on Advancing the AFV Choice

Fleet sales events in Texas last fall may have helped bring about the sale of hundreds of propane-fueled Ford pickup trucks, according to one official who participated. Held in four cities, the events were sponsored by Ford, propane equipment supplier Clean Fueling Technologies, the Texas Railroad Commission, and individual Clean Cities coalitions.

The events were similar in purpose to "Advancing the AFV Choice" events held frequently by Clean Cities coalitions nationwide. But the Texas meetings differed in several important ways. They included only one automaker and focused on just one vehicle—the bi-fuel Ford F150. Each meeting was just two hours, held early in the morning to accommodate busy fleet managers.

Ford took the opportunity to outline purchase incentives of as much as \$4,000 per vehicle, some of which would expire on December 31. Expected to follow the events,



Ford addresses fleet managers in San Antonio

said Heather Ball of the Texas Railroad Commission, was the purchase of as many as 400 Ford pickups, mostly by the Texas Department of Transportation. Exactly how much the state purchase decisions were influenced by the events was uncertain, she admitted. But the meetings were "extremely effective," said Ball. Central Texas Clean Cities Coordinator Stacy Neef concurred. "I met people I've never met before, who wouldn't even return my calls in the past," she said.

OEMs Offer Clean Cities Support

Several automakers have created financial incentives specifically for Clean Cities coalitions:

Ford— A program administered by National Clean Cities (NCC) Inc. and funded by Ford provides incentives to NCC chapters and other Clean Cities coalitions nationwide. Incentives will be awarded for grants and other funding and for sales of Ford CNG and propane AFVs. For more information, contact NCC executive director Carol Butler at info@nationalcleancities.org.

General Motors— GM's new Clean Cities Reward Program will provide funding to 40 Clean Cities coalitions in 2003, ranging from \$1,000 to \$5,000 per coalition. Additionally, \$10,000 will go to the top-performing coalition. Awards will be announced at this year's Clean Cities Conference in May. The program will reward increases in CNG and E85 vehicle sales and fueling sites, as well as participation in fleet functions and involvement with GM certified AFV dealers. The application deadline is January 31, 2003. For more information, write to patricia.landrum@gm.com.

Honda— A discount on FuelMaker natural gas refueling appliances is available exclusively to Clean Cities stakeholders and coordinators who purchase Honda Civic GX natural gas vehicles. Clean Cities stakeholders and coordinators save 10 to 20 percent more than the standard Honda/FuelMaker discount. More information is available at www.fuelmaker.com/ccpromo.htm.

and Clean Cities coordinators can learn more about Ford's AFV certification program by calling 877-593-4716.

GM launched a similar program in 2002. Beginning with model year 2003, only certified dealers would sell AFVs from GM, the company said. The program aims to help dealers gain sales by ensuring customers of the quality of the dealership experience. The certification process involves training of sales staff as well as technicians. Special tools and diagnostic equipment are required in the service department.

FFVs on the Road

Among all automakers, DaimlerChrysler has put the most FFVs on the road. A 2002 study commissioned by the National Ethanol Vehicle Coalition, reported these figures:



	Daimler-Chrysler	Ford	General Motors	Total
Actual through model year 2001	840,145	637,731	100,000	1,577,876
Anticipated through model year 2002	240,000	100,000	400,000	740,000
Total	1,080,145	737,731	500,000	2,317,876

FFVs from Ford include the Taurus, Ranger, and Explorer. GM offers several full-size trucks including the Chevrolet Silverado, Suburban, and Tahoe. DaimlerChrysler has expanded its FFV lineup for 2003, offering not only minivans such as the Dodge Caravan but also the Chrysler Sebring sedan and convertible. By producing FFVs, manufacturers receive credit toward their federal Corporate Average Fuel Economy (CAFÉ) requirements.

GM's certified AFV dealers receive the company's AFV Sales Toolkit, a binder stocked with information on GM vehicles, AFV markets in general, fuel types, fueling infrastructure, and creative ways to finance AFVs. Certified GM AFV dealers also receive exclusive marketing materials, plus email notification of products and incentive programs. More information about GM's AFV Dealer Certification Program is available at www.gmaltfuel.com.

Beyond the Basics

Through its AFV dealer certification program, Ford Motor Company has carefully considered the question of how to help AFV dealers succeed. Most of its advice applies to all AFV dealers:

What must dealers **know** to successfully sell AFVs?

- Product offerings—their own and the competition
- Purchase mandates and incentives—local, state, and federal
- City and state air quality mandates
- Production schedules—both "Job 1" and end-of-production dates
- Fleet customer types—names and needs
- Fuel availability and proximity to customers
- Clean Cities coalition contacts and services

What must dealers **do** to successfully sell AFVs?

- Train and retain fleet and retail sales consultants on AFV products
- Train and retain service technicians and managers on AFV service
- Keep up with sales trends and AFV news and bulletins
- Keep everyone informed—the dealer principal, retail and fleet, sales and service
- Seek out AFV requests for proposal (RFPs)
- Bid on all RFPs with reasonable profit potential
- Stay connected with local fuel providers
- Display manufacturer demo vehicles at AFV events
- Lend demo vehicles to potential customers
- Educate the community through events such as barbecues, golf tournaments, and conferences
- Identify current and potential fleet customers including candidates for partial fleet conversion

What **characteristics** describe successful AFV dealers?

- Entrepreneurial in seeking to expand business
- Involved in their communities as leaders
- Concerned about the local environment
- Active in Clean Cities coalitions
- Connected electronically via the Web
- Up-to-date on company communications
- Strong fleet sales departments—usually with both commercial sales and governmental divisions

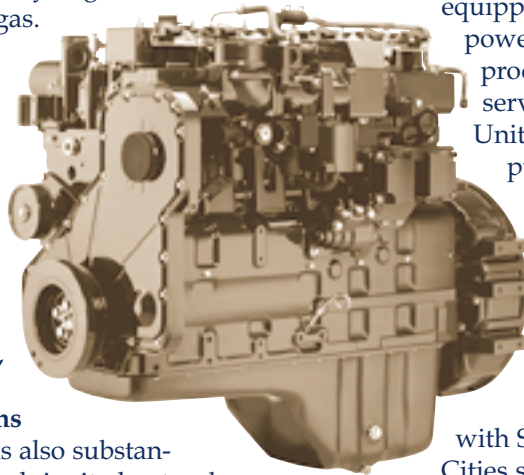


From the Automakers

Cummins Westport Drives Progress in Natural Gas Technology

Natural gas engine designers have long borrowed components and design concepts from diesel engines. That trend continued with the joint venture between Cummins, Inc., based in Indiana, and Westport Innovations of Vancouver, British Columbia. Cummins Westport has emerged as an important, high-volume supplier of alternative fuel technology, adapting heavy-duty engines designed for diesel to run on natural gas.

Among its most promising products are Cummins Westport's 15- and 11-liter heavy duty engines equipped with proprietary high-pressure direct injection natural gas fueling system. The so-called "Westport Cycle" engines produce torque and fuel efficiency like diesel engines, but with lower emissions of oxides of nitrogen, particulate matter, and carbon dioxide, the company says. (See media release dated October 8, 2002 at www.cumminswestport.com/press.) The company has also substantially upgraded its smaller, existing spark-ignited natural gas engines which pre-date Westport Cycle technology.



Cummins Westport is currently field-testing 17 of its 15-liter engines, most in waste-transfer trucks operated by Norcal Waste Systems of San Francisco. Cummins Westport expects to build 40 of the engines in a "pre-production" run in 2003, with full production expected in 2004. Field-testing of its smaller 11-liter engine will start in late 2003 with full production beginning in late 2004.

The San Diego Metropolitan Transit Development Board has announced plans to purchase more than 100 buses equipped with another Cummins Westport powerplant. The 8.3 liter C Gas Plus engine produces 280 horsepower, and is already in service in more than 600 transit buses in the United States. Upon announcing its vehicle purchase plans, San Diego had not identified a bus manufacturer, but the C Gas Plus was the only engine clean enough to meet the transit district's strict emissions standards. The district reserved an option to purchase as many as 357 buses in total.

Cummins Westport has joined forces with SunLine Transit Agency, a strong Clean Cities stakeholder and alternative fuels champion based in Thousand Palms, California. Together they will field test two buses fueled by a blend of hydrogen and compressed natural gas (HCNG). Previous tests have shown certain HCNG blends can reduce oxides of nitrogen emissions without hurting the performance and efficiency of natural gas engines, according to Cummins Westport.

Shuttle buses also rely heavily on the Cummins Westport engines. More than 70 5.9-liter B Gas Plus engines are in service or on order at airports in San Jose, Denver, Seattle, and Dallas-Fort Worth. "We expect significant additional demand because of the need to improve air quality around airports," said Cummins Westport president Hugh Foden.

Cummins Westport has invested in many infrastructure projects through its participation with natural gas supplier ENRG. In San Francisco, ENRG helped build the city's first LNG refueling station. Those companies helped launch the California Natural Gas Vehicle Partnership, a group of 34 manufacturers, fuel suppliers, government agencies, and environmental groups. The group hopes to increase the number of natural gas vehicles in California from 19,000 at present to 600,000 in the next 10 years.

Last year, the company secured \$250,000 from Gas Technology Institute to develop its own B Gas Plus natural gas engine, replacing an older Cummins engine. Support for developing the technology came from various stakeholders



San Francisco-based Norcal Waste Systems has field tested 17 of Cummins Westport's 15-liter engines, operating with high-pressure direct injection natural gas fueling. Above, a spark-ignited 8.3-liter C Gas Plus engine.

Westport Cycle engines run primarily on natural gas, but they maintain the higher compression ratio characteristic of diesel engines. As in a diesel engine, fuel and air are injected separately into the combustion chamber. A small squirt of diesel fuel serves as a pilot. The heat of compression ignites the diesel fuel, which in turn ignites the natural gas. The injection of both natural gas and diesel fuel occurs relatively late in the combustion cycle, allowing a much higher compression ratio than in a typical natural gas engine.

including DOE, the National Renewable Energy Laboratory, the California Energy Commission, SunLine Transit, California's South Coast Air Quality Management District, Viking Freight, and Southern California Gas Company.

The C Gas Plus and B Gas Plus engines are equipped with new electronics and sensors that adjust to variations in fuel composition. The engines will be able to operate on natural gas of lower methane composition than the engines they replace.

DOE's Office of Energy Efficiency and Renewable Energy recognized Cummins Westport in the form of a \$477,000 grant, announced in October 2002. The grant will fund development of an LNG tank and pump system to maintain fuel at its maximum-density state, at temperatures as low as -160° Celsius (-260° Fahrenheit). The purpose is to increase vehicle range and eliminate the need for

pressure-increasing equipment at LNG fueling stations, improving their reliability and decreasing their cost.

Recognition from its own industry came last October from the Natural Gas Vehicle Coalition (NGVC), which represents more than 180 engine, vehicle, and equipment manufacturers, natural gas companies, service providers, environmental groups, and government organizations. NGVC's achievement awards are given annually to those who have made outstanding and measurable contributions to advance natural gas as a vehicular fuel.

Speaking at the World Natural Gas Vehicle Conference, NGVC president Richard Kolodziej praised the company. "Cummins Westport's dedication to advanced natural gas engine technology and commitment to the natural gas vehicle industry has made it a cornerstone of the NGV industry," he said.

FuelMaker "Phill" to Advance Home NGV Refueling

American Honda and FuelMaker have provided a glimpse of what they hope will be a major advance in consumer AFV acceptance—home refueling, using an appliance connected to natural gas supply lines in residential garages.



Nicknamed "Phill," the appliance was unveiled in prototype form at the World Natural Gas Conference in Washington, D.C., in October 2002. It is expected to expand the appeal of natural gas-powered personal vehicles such as the Civic GX from Honda, which owns 20 percent of Phill's manufacturer, FuelMaker Corporation.

Phill is modeled after FuelMaker's commercially available natural gas Vehicle Refueling Appliances. More than 8,000 such devices are already in use, but priced at more than \$6,000, they are generally too costly for individual consumers. Phill will be priced between \$1,000 and \$2,000. It is expected on the market by late 2003, according to Honda and FuelMaker.

Award recipients included CenterPoint Energy Alternative Fuels, the Coachella Valley Clean Cities Coalition, Cummins Westport, Michael Eaves of Southern California Gas Company, John Lapetz of Ford Motor Company, the Los Angeles County Metropolitan Transportation Authority, Manhattan Beer Distributors, Michael Manning of KeySpan Energy, MTA Long Island Bus, Norcal Waste Systems, and the Natural Resources Defense Council-Sierra Club's Clean Bus Campaign.

NGV Technology Forum Leads Industry Collaboration

Numerous government and industry NGV projects are rapidly progressing, but until recently they weren't well connected. DOE established the Natural Gas Vehicle Technology Forum (NGVTF) in 2002 to consolidate, update, and reinvigorate its NGV support efforts.

The NGVTF is an ongoing forum that facilitates communication and information sharing among stakeholders with a common interest in advancing NGV technology. It will support development of NGV technology in engines, vehicle platforms, and fueling infrastructure. It addresses short-term obstacles to widespread NGV use as well as long-term solutions for reducing the nation's reliance on imported oil and bridging the gap to a clean energy future powered, in part, by hydrogen.

The first NGVTF technical committee meeting is scheduled for January 28–29, 2003 in Dallas. Technical committees will play a key role in the NGVTF, providing briefings on technology developments and opportunities for interactive communication. Interested NGV stakeholders are encouraged to attend this meeting. Visit www.ott.doe.gov/ngvtf/index.html for more information on the NGVTF, its current membership, and the upcoming meeting.

NGVC Announces Award Winners

The Natural Gas Vehicle Coalition (NGVC) announced the winners of its 10th annual Achievement Awards during the World Natural Gas Vehicle (NGV) 2002 conference, held during October in Washington, D.C. NGVC said the awards are intended to recognize individuals and organizations in the NGV industry that make "significant achievements in the advancement of natural gas as a transportation fuel."



Federal News

Workshop Brings Fischer-Tropsch Closer to Alternative Fuel Designation

A public workshop brought Fischer-Tropsch diesel (FTD) one step closer to being designated an alternative fuel under the Energy Policy Act of 1992 (EPAAct). The event, held October 16, 2002, represented the first formal step in a rulemaking process that falls under the EPAAct Alternative Fuel Petitions Program.

Industry stakeholders joined petitioning companies Rentech Inc., Syntroleum Corp., and PetroSA at DOE headquarters for the one-day workshop, giving attendees a chance to voice their support or register their concerns about the fuel and its possible designation as an EPAAct sanctioned alternative fuel. Key players in attendance included representatives of DOE, the National Renewable Energy Laboratory, Argonne National Laboratory, Shell, Sasol Chevron, Exxon-Mobil, Conoco, the American Petroleum Institute, and each of the petitioners.

Fischer-Tropsch diesel is named after the conversion process used to manufacture it, in which natural gas is turned into hydrocarbons and subsequently refined into diesel fuel. The fuel is also called GTL, a reference to the gas-to-liquid nature of the process. It can be produced by reforming carbonaceous materials such as coal and biomass, but natural gas is expected to be the primary feedstock.

According to test results presented at the workshop, compared to petroleum diesel, FTD's average emission reductions are 12 percent for oxides of nitrogen and 27 percent for particulate matter. Its near-zero sulfur content may also enable exhaust aftertreatment, resulting in further emission reductions. Although combustion of FTD fuel produces fewer criteria pollutant emissions, greenhouse gas emissions appear to be somewhat higher than for petroleum diesel. DOE is examining potential health effects and issues related to biodegradability and ecotoxicity. Still, chances are good that the petitioning process will proceed.

Under EPAAct, DOE can designate a fuel as "alternative" if the fuel is substantially nonpetroleum and yields substantial energy security and environmental benefits. Because EPAAct credits are granted based on the number of light-duty AFVs a fleet purchases each year, the designation of FTD won't result in more AFVs on the road. However, it could help federal fleets lower their annual petroleum consumption. Under Executive Order 13149, certain federal agencies are required to reduce their petroleum consumption by 20 percent by 2005. Unlike EPAAct, the executive order applies to all federal vehicles—light-, medium-, and heavy-duty. So FTD, like biodiesel, could help displace the diesel fuel that is typically used to power medium- and heavy-duty vehicles.

Following the October 16 workshop, DOE initiated a public comment period that lasted until November 15. The next step is for DOE to decide whether to write a Notice of Proposed Rulemaking. Next would be a 90-day comment period and a 90-day review by the Office of Management and Budget. If approved, FTD could be designated an EPAAct alternative fuel as early as winter 2004.

For more information on the possible designation of FTD, visit the Alternative Fuel Petitions Web site at www.ott.doe.gov/epact/fuel_pet.shtml. A complete docket for the rulemaking is provided with petitions from Rentech, Syntroleum, and PetroSA. Also included are DOE questions about the petitions with responses by the petitioners, plus technical analysis, a transcript of the workshop, and stakeholder comments.

DOE to Fund 23 AFV Infrastructure Projects

To support the expanded use of alternative fuels in fleets nationwide, DOE's Field Operations Testing Program and Federal Fleet AFV Program selected 23 alternative fuel infrastructure projects at 12 DOE facilities to receive \$2.7 million. DOE targeted projects that have the greatest potential to help fleets comply with Executive Order 13149, and were evaluated for their potential to provide alternative fuels to state and local government fleets, commercial fleets, and the public.

Each project involves the construction of AFV fueling stations and storage tanks. Of the 23 projects, 11 involve E85, 8 focus on CNG, and 4 involve B20.

The grantees include Bonneville Power Administration (two CNG projects); Fermi National Accelerator Laboratory (one E85 project); Idaho National Engineering and Environmental Laboratory (one B20, one E85, and two CNG projects); Lawrence Berkley National Laboratory (one E85 project); Lawrence Livermore National Laboratory (one CNG project); and Los Alamos National Laboratory (one B20 and two E85 projects).

Other facilities receiving grants are the National Energy Technology Laboratory (two CNG projects and two E85 projects); the Nevada Test Site (one E85 or CNG project); Oak Ridge National Laboratory (one B20 project and two E85 projects); Pantex Facility (one E85 project); Richland Operations Office (one E85 project); and Sandia National Laboratory (one B20 and one CNG project).



At the Pump

Production Spells FFV Potential as Ethanol Gains Ground in the U.S.

Like other alternative fuels, ethanol offers its own unique advantages in terms of emissions, cost, and availability. Ethanol is the main component in E85, a bona fide alternative fuel approved for use in fleets striving to meet mandates established by the Energy Policy Act of 1992 (EPAAct).

For many reasons, the ethanol industry is booming. According to the Renewable Fuels Association, U.S. ethanol industry production in August 2002 hit a record-high monthly rate of 135,000 barrels per day—an annualized rate of 2.7 billion gallons.

A 2001 study by the California Energy Commission (updated in 2002) projected U.S. ethanol production to hit 3 billion gallons in 2003—a doubling in less than five years and more than a fifteen-fold increase since 1980. The California study also anticipates ethanol production of 4.5 billion gallons by 2005. (See the study at www.energy.ca.gov/reports/2001-08-29_600-01-017.PDF.)

California has more than a passing interest in ethanol. In 1999, Governor Gray Davis signed an executive order banning the use of methyl tertiary-butyl ether, commonly called MTBE, as an oxygenate additive in gasoline. The California ban has been delayed, and is now set to take effect in 2004. Many other states have moved to ban MTBE, which is believed to cause groundwater contamination.

What will replace MTBE? Various additives could fill the bill from a technical standpoint, industry experts say. But almost universally, for reasons relating to cost and availability, its replacement will be ethanol.

Another reason for increased ethanol demand is the drive for a national “renewable fuel standard.” As written in legislative proposals in 2002, the standard would have required oil companies to boost the use of ethanol in the nation’s gasoline supply. By 2012, the total volume of ethanol in gasoline would ramp up to 5 billion gallons. That proposal was part of the national energy bills considered in the House and the Senate in last year’s 107th Congress. The proposals expired without action, but proposals for a renewable fuel standard are certain to re-emerge in 2003.

The renewable fuel standard may seem substantial, says the RFA, but it would raise the percent of ethanol in gasoline from only 1.3 percent at present to about 3 percent by 2012.

Nearly 99 percent of ethanol sold today is as an ingredient in E10, which is 10 percent ethanol and 90 percent gasoline. Even with its tiny representation in gasoline supplies, a similarly small share of the nation’s ethanol—perhaps just 1 percent—is used in E85. Approximately

150 filling stations nationwide are known to sell E85, according to data provided by Clean Cities in the Alternative Fuels Station Locator (online at <http://afdcmap.nrel.gov/locator>).

According to a survey commissioned in 2002 by the National Ethanol Vehicle Coalition (NEVC), more than 2.3 million flexible-fuel vehicles (FFVs), capable of running on E85 or gasoline, were believed to exist in the United States by the end of 2002 (see table, page 9). DOE’s Energy Information Administration cites a higher number, saying some 2.6 million FFVs existed as of 2000. Among the most popular models are the Ford Taurus and Ranger, several GM trucks, and minivans and small sedans from DaimlerChrysler.

How many of the nation’s FFVs actually run on E85? Not even the NEVC claims to know for certain. EIA estimates the number at 82,477 as of 2002. But the problem of FFVs not using E85 is well known. Many EPAAct-regulated fleets have earned credits by buying FFVs and then fueling them only with gasoline. Individual motorists often buy and drive vehicles without any awareness their E85 capability.

With ethanol so widely available, and so many FFVs already on the road, the potential for increased E85 use is tremendous, says NEVC executive director Phil Lampert. “We face the same challenge as the Clean Cities Program—to get more stations in the ground, more people buying the cars, and more cars using the fuel.”

The Minneapolis–St. Paul Airport is home to an interactive E85 kiosk. Beneath a billowing American flag, its touch screen presents questions and answers on E85, while a tagline reminds visitors that the fuel is clean, renewable, and “made in the USA.”





On the Web

Resource Guide Aids LNG Decision Makers

The *Resource Guide for Heavy-Duty LNG Vehicles, Infrastructure, and Support Operations* helps fleet managers and other decision makers evaluate the use of LNG in heavy-duty vehicles. The guide is divided into three sections:

- **Basics**—Summaries of information needed to make the decisions.
- **Science and Details**—Information about current users, fuel and equipment manufacturers and suppliers. Covers planning and handling issues arising before and after equipment is purchased.
- **Appendix**—A list of technical documents on LNG fleet experiences, issues, standards, federal and state regulations, and safety assessments; LNG-related periodicals; Web sites; and fleets that currently use LNG.

The publication was prepared by Battelle for DOE's Brookhaven National Laboratory and the Gas Technology Institute. It is available online at www.ott.doe.gov/otu/field_ops/pdfs/lng_resource_guide.pdf.

National Energy Foundation Launches "Action" Web Site

The National Energy Foundation sponsors the Energy Action Web site, focusing on classroom education. Included are attractive, useful instructional materials, student-led school energy management programs, and school-to-home energy conservation projects.

Located at www.nef1.org/ea, the site offers various student activities related to worldwide energy consumption, conservation, and renewables. It presents the Kool Kids program, in which kids learn about urban, suburban, and rural communities, and how thermal properties affect local air temperatures.

The site will be revised by March 2003 to provide information to teachers throughout the country about how to create resource kits for students in their specific areas, and will include a section on Rebuild America EnergySmart Schools. For more information, contact Sunny Dent at sunny@nef1.org.

Study Focuses on LNG, CNG Waste Trucks

Environmental research organization INFORM recently released a study of the nation's estimated 179,000 garbage trucks, saying "a slow but successful shift is taking place as fleet operators in 25 U.S. cities move from diesel to cleaner natural gas." According to the study, 90 percent of existing garbage trucks are powered by traditional diesel engines. Approximately 41 percent are more than 10 years old and "performing at reduced efficiencies."

Although some testing of other alternative fuels and hybrid-electric technology is underway in garbage trucks, most innovation in the field involves the use of natural gas, according to INFORM. Natural gas-powered garbage trucks displace approximately 6 million gallons of diesel per year, the study says. By 2010, natural gas garbage trucks currently planned are expected to displace nearly 20 million gallons of diesel fuel per year.

"Greening Garbage Trucks: New Technologies for Cleaner Air" is available online at www.informinc.org.

Clean Cities Conference Sessions to Address Fleets

Fleet managers will have their day at the 9th National Clean Cities Conference and Exposition in Palm Springs, California from May 18–21, 2003. Breakout sessions on May 20 will focus on specific fleet types: airport, municipal, freight, university, transit, schools, waste haulers, military, and parks. Sessions throughout the conference will cover general-interest matters such as regulation, fuels, emissions, and AFV success stories.

Events of the past year have raised interest in petroleum displacement, and Clean Cities is determined to put more AFVs on the road. The 2003 conference will emphasize partnerships between the AFV community and all fleets including federal, state, local, international and private. This year's exposition will feature the world's largest display of AFVs and related products and services. Attendees may drive a wide array of vehicles, including heavy-duty.

Online registration is available at www.ccities.doe.gov/conference/palm/palm_home.shtml. The site includes information on conference activities, hotel accommodations, and how to become a sponsor or exhibitor.





Clean Cities Roundup

Long Island Clean Cities Tops \$3 Million in CMAQ Funding

“Clean vehicles” has a double meaning on Long Island, where CNG-fueled vans are operated by Fleetwash, Inc. The company serves customers at their own locations, washing their trucks and collecting and disposing of the wash water in an environmentally responsible manner. Fleetwash operates in 29 states including New York.

Funding from the federal Congestion Mitigation and Air Quality (CMAQ) program, secured through diligent work by the Greater Long Island Clean Cities Coalition, has helped Fleetwash purchase six dedicated-CNG Dodge Ram vans now operating on Long Island. The company has received a total of \$18,338 in two separate CMAQ grants. Its fuel supplier is KeySpan Energy Delivery, which has built much of Long Island’s public and private CNG fueling infrastructure. KeySpan received one of the Clean Cities National Partner Awards in 2002.



Alternative fuel project representatives accepted a total of \$145,000 in CMAQ funding at a press conference held by the Greater Long Island Clean Cities Coalition. From left, Joseph Eng of Brookhaven National Laboratory, Ron Gulmi of KeySpan, Marianne Zacharia of the American Lung Association, James DiCarlo of Fleetwash, and Tom Mattioli of The Rinx.

CMAQ is a program of the U.S. Department of Transportation, created to fund transportation projects with air quality benefits. CMAQ funds are distributed locally through Metropolitan Planning Organizations (MPOs), which sometimes work with Clean Cities coalitions to identify worthy projects. Since 1998, the Greater Long Island Clean Cities Coalition has participated in designating \$3,184,000 in CMAQ grants for alternative fuel vehicle acquisition and infrastructure development.

Long Island’s success with CMAQ funding has been the result of “relationship-building” with the region’s MPO, says coalition coordinator Anne Balfour. The coalition seeks out worthy alternative fuel projects, and assembles a comprehensive list for the MPO. Gradually, the MPO has grown to trust and follow recommendations from the coalition. Dozens of government and industry projects have been funded.



With help from CMAQ, Fleetwash has purchased six Dodge Ram vans fueled by CNG.

The work of Balfour and her Clean Cities colleagues has been a model for others to follow, says Mike Scarpino of DOE’s Boston Regional office. “We ask them to go after government, utilities, school districts, and private company fleets. They’ve done all that and more,” he said.

Long Island projects funded in whole or in part through CMAQ have included:

- 40 CNG vehicles operated by Arrow Security, a private security firm
- 15 CNG vans operated by All Corporate Transport for ambulette use
- 50 CNG light-duty trucks, vans, passenger cars, and an on-site CNG fueling station at Brookhaven National Laboratory, with plans to add an additional 18 vehicles to its fleet in each of the years 2003 and 2004.
- 7 CNG vehicles and a CNG fueling facility serving the town of Brookhaven
- 2 bi-fuel CNG vehicles and an on-site CNG fueling facility at Fenley & Nicol, an environmental construction company with plans to open the station to area businesses
- A 28-passenger CNG streetcar to be operated by Suffolk County, circulating between Stony Brook and Port Jefferson, and points in between
- 2 electric Ford Ranger pickups and charging stations serving parks on the island, as part of a park-greening program in which mowers, leaf blowers, chain saws, and other equipment have been converted to electricity
- A station car program in which 30 electric vehicles have been leased to people who drive them from home to a commuter train station
- 30 dedicated CNG school buses and a fueling station planned to serve the Long Beach School District
- The upgrade of a public CNG fueling station operated by KeySpan Energy
- A bi-fuel CNG pickup truck and fueling station serving The Rinx, a public hockey arena, which also uses CNG-fueled ice-resurfacing equipment
- 2 CNG fueling stations serving Sayville Ford, with the intent of making it the area’s premier CNG vehicle service facility
- A CNG van to shuttle passengers at Atlantis Marine World, bi-fuel vehicles and a CNG fueling station at Foxtrot Bee and Berry Farms, and projects serving other public attractions and private businesses

For more information about CMAQ funding, visit www.fhwa.dot.gov/environment/cmaqpgs.

Where CNG Means Hassle-Free

Rush hour can last several hours for commuters driving through northern Virginia into the Washington D.C. metro area. That was once the case for Nic van Vuuren, Coordinator of the Hampton Roads Clean Cities Coalition. But last summer he purchased a 1997 dedicated-CNG Ford Crown Victoria and promptly affixed a Virginia Clean Special Fuels Vehicle decal to its license plate. So equipped, he can now use the high-occupancy vehicle (HOV) lane on Interstate 95. Van Vuuren has cut his travel time to D.C. by approximately an hour. Here's his own account of one recent trip.

6:00 a.m.: Leaving home in Hampton Roads, nearly 200 miles south of D.C., I cruise the first 75 miles with ease. Then I take I-64 into Richmond to fuel up. My Crown Vic has the old "standard range" package, allowing 120–140 miles on the highway. Its range is rarely an inconvenience, however, with the excellent CNG fueling infrastructure around my home and along I-95.

7:00 a.m.: James River Petroleum in Richmond is a great fueling facility. After some teething problems when it came online two years ago, it now operates on regular, reliable schedule. I have used it on more than 10 occasions over the past 4 months without incident. I'm back on the interstate in less than 10 minutes.



First stop Richmond, then on the road again.

8:15 a.m.: The drive up I-95 is uneventful so far, but I know what's coming—a sea of brake lights. But up ahead I also see a more welcome site—the sign inviting me onto the two northbound HOV lanes.

8:20 a.m.: The brake light brigade extends for miles. But I'm cruising at 70 mph, playing the radio, and not using an



Brake lights abound for petro-powered commuters, but HOV traffic is unobstructed.

ounce of petroleum. The news and talk shows are focused on the Middle East. If we were all using alternative fuels, I note, maybe certain international figures would have been reduced to irrelevance by now.

8:50 a.m.: I arrive in Alexandria 10 minutes early for my 9:00 a.m. meeting. The urge to do a victory dance is strong, but I remain calm. In the meeting room, however, I am soon boasting of my abbreviated commute time.

11:00 a.m.: With business concluded, I need to refuel again for the ride home. Normally in downtown D.C., I fill up at the public American Fuel pumps just outside the Pentagon, offering CNG and E85. But now I have another option, having just received my Washington Gas card, issued by the local gas utility. This allows me to choose among several filling stations on my way back. One is just around the corner in Springfield. After a quick fill-up, I'm on my way home.

2:30 p.m.: I am home on the Chesapeake Bay after an easy return trip on I-95, lunch, and a third fuel stop. I know that today's NGVs such as the Honda Civic GX the newer Crown Vic would take me more than the 200 miles between home and D.C. A single fuel stop would be nice. Still, what a great way to get around. For me, it's been the best-kept secret in town—until now.