



From the Hill

EPA Redesigns Conversion Certification Policies

At a recent meeting held in Washington, DC, officials from the U.S. Environmental Protection Agency (EPA) opened dialogue about proposed changes to its emission certification policies that affect alternative fuel vehicles (AFVs).

"We are trying to accommodate the Energy Policy Act (EPA) and Executive Order requirements while trying to change enforcement policies and guidance with

respect to conversions," said Rich Ackerman of EPA's Enforcement Office.

The meeting, attended by representatives of more than 60 organizations, was held to discuss actions addressing AFV emission certification. Specifically, topics included

- Conversion emissions performance data
• Status of environmental laws pertaining to alternative fuel conversions
• Possible need to modify alternative fuel conversions
• Possible need to modify EPA's policies
• Actions to address the problem.

The forum attracted diverse interests and opinions. Notable federal fleet users stressed the need for conversions in complying with EPA. "Conversions continue to play a central role in achieving alternative fuel vehicle acquisition goals for the federal government because they are less costly than [original equipment manufacturer (OEM)] vehicles and the decision to convert a vehicle is independent of the narrow purchase window created by the fact that OEM production and federal budget processes are not synchronized," explained Marc McConahy, Chairman, Interagency Committee on Alternative Fuels and Low Emission Vehicles - INTERFUEL. "Conversions will remain

necessary to meet EPA mandates as long as OEMs don't come to the table with sufficient vehicles at more reasonable prices."

Although EPA introduced policy options at the meeting, no formal decisions have been announced. "We are considering several options, including a more flexible definition of an engine family," said Cliff Tyree, Clean Fuel Fleet project manager for EPA. "However, the issues surrounding these proposed options must be reviewed by EPA's Office of General Counsel. We are anticipating an early resolution to our internal issues." Additional policy considerations include

- Certification of an AFV as a dedicated fuel system with an "emergency" gasoline fuel supply (up to a 50-mile range on gasoline), thus allowing a vehicle of this type to be optimized on one fuel
• Extension of the AFV On-Board Diagnostic II Waiver through the year 2004
• Exempting AFVs from the \$23K EPA certification fee for a maximum of 4 years.

"We support the proposed changes and expect them to remove roadblocks for AFV certification and encourage EPA compliance," added Lee Slezak, DOE's Alternative Fuels Data Center program manager.

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## CARB Standards to End Propane Conversions?

Strict air quality regulations set by the California Air Resources Board (CARB) and the high costs of conversions related to the air standards may have led to the end of liquefied petroleum gas (propane) conversions in California.

So far, conversion kit manufacturers have been unwilling to spend the dollars necessary to meet the stringent CARB certification procedures. According to industry experts, certifying a single engine family can cost more than \$200K

and may take more than 6 months to complete.

“We have nothing against conversion companies,” said Alan Hearst, a spokesperson for CARB. “What we care about is cleaner air for Californians. If our regulations raise the standards of conversion kits, then it’s up to the industry to meet them or California may never have clean air.”

Roughly 40% of pollution in California derives from mobile source emissions, which include passenger vehicles, buses, motorcycles, and off-road trucks.

*Continued from page 1*

## NGV Incentive Bill Introduced to 105th Congress

On March 5, 1997, Congressman Joe Barton (R-TX) introduced the Natural Gas Vehicle (NGV) Incentives Act of 1997 to the 105th Congress, in an effort to stimulate the use of liquefied natural gas (LNG) and compressed natural gas (CNG) in the transportation market. If enacted, this bill will eliminate the Energy Policy Act of 1992 (EPAct) private fleet mandates and will sunset the EPAct state fleet and fuel provider mandates in 1999.

Created and co-signed by House Speaker Newt Gingrich, the NGV Incentives Act aims to lower the tax rate for LNG to the current rate of CNG, as adjusted for Btu equivalence. At a federal rate of approximately 28 cents per gasoline gallon equivalent, LNG is the highest taxed fuel used for

transportation. Other tax incentives mentioned in the bill include

- A temporary tax credit equal to 50% of the incremental cost of an NGV used in commercial fleets
- A tax credit to provide for the lesser of \$25K or 10% of the cost of installing natural gas fueling equipment
- A credit of 25 cents per gallon of LNG or the gasoline gallon equivalent of CNG used in fleet vehicles
- An accelerated depreciation for vehicles fueled by LNG or CNG
- Grants in lieu of tax credits for NGV purchases by state and local governments.

“Ironically, current federal laws make this inexpensive, domestically produced, clean-burning fuel uncompetitive,” said Barton. Barton, who is serving his sixth term for Texas’ sixth district, is a member of the Committee on Energy and Commerce.

## Boxer Bill Introduced in April

Senators Barbara Boxer (D-CA) and James Jeffords (R-VT) are co-sponsoring the Clean Fuel Vehicle Act (CFVA) of 1997, introduced to Congress in early April. The bill aims to amend the Internal Revenue Service (IRS) Code of 1986, by increasing exemptions from the Luxury Automobiles Excise Tax for clean-fuel vehicles. The CFVA calls for major changes to the IRS code:

- Raising the exemption amount of electric vehicles (EVs)
- Raising the limit on the depreciation amount of the incremental cost for EVs, including the cost of installing recharging equipment
- Eliminating any distinction between heavy-duty EVs and other clean fuel heavy-duty vehicles, thus raising available credit limits for heavy-duty EVs;
- Allowing a flat rate credit of \$4K at time of purchase, for all EVs.



## From the States

### New Jersey Transit to Expand Refueling Infrastructure

New Jersey Transit will spend \$32 million this year to purchase 50 compressed natural gas (CNG) “Cruiser” buses and to construct a

new CNG maintenance and fueling facility in Monmouth County. The investment represents a ten-fold increase in the agency’s current fleet of CNG buses. The plan also includes developing partnerships with New Jersey-based companies looking to

explore alternative fuel technologies, including hybrid-electric and fuel-cell vehicles.

### **Sacramento Group Increasing Awareness of EV Benefits**

Ever since General Motor's EV1 hit the showroom floors last December, members of a Sacramento-based organization have been hitting the streets to increase public awareness of the benefits of driving electric vehicles (EVs).

Electric Vehicle Partners (EVP), a group of nonprofit health and environmental organizations, government agencies, and public utilities, predicts EVs will be available in Northern California in 1998. "This is simply a local effort," said Jamie Phillips, spokesperson for EVP. "We know EVs will be here soon, and we want to make sure local citizens are aware of all the benefits."

Two hundred public recharging stations in more than 30 locations are already in place in the Sacramento area, and Phillips said that new houses being built in the vicinity are equipped with conduits for charging at home.



**On the Road**

### **New York R&D Group Testing Hybrid Electric Buses**

The New York State Energy Research and Development Authority (NYSERDA), with co-funding from manufacturers in New York State, is sponsoring the

construction and testing of several hybrid-electric vehicles, including 40-foot transit buses, trucks ranging from 19,000 to 44,000 pounds (gross vehicle weight), a school bus, and a taxi. Some of the vehicles will be powered by natural gas, and others by diesel fuel.

"They offer improved efficiency, lower maintenance costs and cleaner emissions, but do not suffer from the short range limits of today's electric vehicles," said Larry Hudson, a senior project manager at NYSERDA.

Two early prototype hybrid electric transit buses were built at a cost of roughly \$7 million, with help from the Federal Transit Administration. Hudson said that future buses and trucks are expected to be competitive with conventional models in terms of cost, will save fuel and maintenance dollars, and help to reduce air pollution.

### **L.A. Airport, USPS to Use LNG in Heavy-Duty Vehicles**

Despite a federal fuel tax rate significantly higher than that for diesel, fleets continue to purchase liquefied natural gas (LNG) heavy-duty vehicles. The U.S. Postal Service (USPS) in Dallas, TX, and Los Angeles International Airport (LAX) have taken steps toward acquiring LNG-powered tractor-trailers and transit buses, respectively.

USPS in Dallas is developing an AFV program that will bring 127 LNG-powered tractor trailers into the local fleet. The 7-ton trucks will be used to haul mail between postal facilities. Officials at the Dallas office expect the program to begin 60-90 days after the contracts have been finalized.

The Los Angeles Board of Airport Commissioners recently

approved a request for bids to purchase 39 alternative fuel vehicles (AFVs), at a cost of \$3.75 million, for use at LAX. Ten of the expected AFV purchases are LNG transit buses, with a cost of \$3 million. Included in the plan are 24 bi-fuel light-duty vehicles and five police sedans running on compressed natural gas.

"Of our current fleet of 52 buses, 21 already run on LNG," said John Driscoll, executive director of the Department of Airports. "Including six buses currently on order and the ten we are bidding out, 70% of our bus fleet will be LNG-powered."

### **DOE, USPS Team Up to Introduce Medium-Duty NGV**

In an attempt to "jump-start" the medium-duty AFV market, the U.S. Department of Energy (DOE) and the United States Postal Service (USPS) have announced a \$2.5 million program that will provide the USPS with 54 2-ton mail delivery trucks powered by compressed natural gas (CNG). DOE's total contribution to the program is more than \$1.4 million, according to department officials.

The program consists of two phases. Phase One sent two vehicles each to Huntington Beach, CA, and Atlanta, GA, to be tested on the job by the USPS and the Gas Research Institute. Phase Two, to be completed by late summer 1997, will distribute 30 medium-duty mail trucks to New York City, 10 to Huntington Beach, CA, and 5 each to El Paso, TX, and Denver, CO.

The mail trucks are manufactured by Freightliner Custom Chassis in a joint venture with the USPS and DOE's Clean Cities Program. According to USPS spokesperson Roy Bettis, the CNG trucks will be located in

designated Clean Cities, in part because of the fueling infrastructure in those areas.

As a result of this effort, United Parcel Service has placed an order with Freightliner for 200 CNG 2-ton truck engine/chassis combinations.



## At the Fuel Pump

### NGVC Forms Council to Support LNG

The Natural Gas Vehicle Coalition (NGVC) announced in March the creation of a council to support the development of a liquefied natural gas vehicle (LNGV) market. The council will address issues facing the LNGV industry and keep the Coalition informed of the special needs and opportunities for LNG users.

The NGVC represents more than 220 companies, government organizations, and environmental groups with an interest in natural gas vehicles.

### EV Charging Sites in Arizona

Electric vehicle drivers can charge while they eat and shop at three new sites between Phoenix and Tucson, AZ. The 240-volt inductive charging units were installed by Arizona's Salt River Project and will support the market launch of General Motors' EV1 at area Saturn dealerships. Conductive charging will be added later. The sites will charge an EV1 from 10% to 70% in about an hour. The units are located at



*The Los Angeles Metropolitan Transportation Authority is scheduled to receive 64 new CNG buses with a new design in May 1997.*

Courtesy of Los Angeles Metropolitan Transportation Authority / PIX 04615

Scottsdale Fashion Square, Biltmore Fashion Park, and Superstition Springs Center.

### Fuel Company to Purchase Natural Gas Refueling Stations

Pickens Fuel Corporation recently signed a letter of intent to purchase 33 natural gas refueling stations from Southern California (SoCal) Gas, the nation's largest natural gas distribution utility. With more than 4.7 million customers, SoCal currently owns and operates 81 refueling stations and sells approximately three-quarters of a million gallons (gasoline equivalent) of natural gas per month. Last fall, the California Public Utilities Commission ruled that larger public utility companies (SoCal Gas included) were to sell any natural gas refueling stations not used to refuel SoCal's fleet of natural gas vehicles (NGVs).

"We have seen and heard from a large number of entrepreneurs showing an interest in our stations," said Denise King, spokesperson for

SoCal Gas. "The intent of the state legislators was for the natural gas utilities to jump-start the NGV market, and when the timing was right, to let the market sustain itself."

Although SoCal Gas declined to comment on the deal, officials at Pickens acknowledged the letter of intent, signed in late December 1996. "We are working on the final terms of the agreement," said Sid McKinney, a Pickens representative. Because the stations included in the deal are located on customer property, SoCal Gas must first gain consent from the property owners before signing over the stations to Pickens, McKinney explained.

### Good News for Methanol in California

A drop in price for methanol fuel, timed with the opening of six public refueling stations in California, has proponents hoping for a boost in methanol sales.

Effective January 1, 1997, Methanex Methanol Company, the chief supplier of methanol to

California retail fuel suppliers, agreed to a price adjustment after factoring the energy content difference into the price. Now equal in cost, on a gasoline gallon equivalent basis, to regular unleaded gasoline, methanol prices in the past have been in the range of premium-grade gasoline, according to the California Energy Commission.

About 1.6 gallons of M85, a blend of 85% methanol and 15% gasoline, are needed to provide the same vehicle range as 1 gallon of gasoline.



**From  
Motor  
City**

### **OEM and Rebuilders Offering Heavy-Duty Alternatives**

Cummins Engine Company, Inc., and Jasper Engines & Transmissions have separately announced the addition of four heavy-duty engines to the alternative fuels industry.

Cummins alternative fuel engines are based on the 5.9 B series engine, which has been used in light-, medium-, and heavy-duty applications for almost 2 decades. The 5.9 G, optimized for natural gas, is also the first heavy-duty engine to meet the Environmental Protection Agency's Ultra-Low Emission Vehicle (ULEV) rating for 1998, when equipped with a catalytic converter. Currently, 200 5.9 G engines have been sold, used mostly in mass transit applications.

Cummins' 5.9 LPG, equipped to operate on liquefied petroleum

gas (propane) and developed with the support of the U.S. Department of Energy, will be offered in the spring of 1997, according to Cummins officials. Targeted emissions goals for the propane version are to meet Energy Policy Act and ULEV standards.

Jasper Engines & Transmissions is offering a rebuilt Ford V-8 engine to run on either natural gas or propane.

### **Chrysler Announces E-85 Minivan and Gasoline-Powered Fuel Cell**

Chrysler Corporation will be producing a minivan powered by ethanol in 85% blends for model year 1998. The vehicle will have no incremental cost and will be available in front- and all-wheel drive models.

Also, in early January, Chrysler announced the development of a gasoline-powered fuel cell. The automobile manufacturer claims advantages include the elimination of large on-board fuel-storage compartments and, with gasoline's widespread use, a refueling infrastructure already in place.

Emissions could be reduced by as much as 90%, compared to conventional gasoline-powered internal combustion engines. Seeing this technology in fleet-operated vehicles is still in the future. The gasoline-powered fuel cell costs approximately 10 times more than a standard gasoline engine, and in colder temperatures, the fuel cell can take more

than 10 minutes to make the adjustments needed to operate the vehicle.

### **Ford Provides 15 E85 Minivans for Use in State, USPS Fleets**

Ford Motor Company, in a test program with the U.S. Postal Service (USPS), the Illinois Corn Growers Association (ICGA), and the states of Illinois and Wisconsin, has produced a test fleet of 15 flexible-fuel Ford Windstar minivans to run on either gasoline or E85, or a combination of both. The U.S. Department of Energy funded the test program through the National Renewable Energy Laboratory.

The ICGA worked closely with Ford to initiate this program last February, and will assist in collecting data on the performance of the 15 E85 Windstars.

According to Jim Tarmann, field services director for the ICGA, the association has worked closely with the USPS for more than 5 years to find "a vehicle the Postal Service can use in day-to-day operations." The USPS operates three E85 Windstars in Dekalb, IL, two in Des Moines, IA, and one in Washington, DC. Prior to this program, the USPS had five E85 Tauruses in operation, four in Chicago and one at the USPS Research and Development Center in Merrifield, VA.

Research on the E85 Windstars includes vehicle user convenience, cost analysis on vehicle operations, tailpipe emissions, and a cold-start analysis.

Ford will be expanding its AFV offerings in model year 1988. The company will keep dedicated trucks and vans and bring back bi-fuel trucks and vans. Ford will also offer an electric light-duty Ford Electric Ranger. Watch our Web site for more information as it becomes available!

## GM Announces CNG Options on Sierra, C-Series Pickup Trucks

General Motors (GM) announced early this year that it is now offering compressed natural gas (CNG) as a fueling option on 1997 bi-fuel GMC Sierra and Chevrolet C-Series light-duty pickup trucks.

Both three-quarter-ton trucks have a sticker price of \$23K, including the \$5,800 CNG option. The CNG tanks hold 13.2 equivalent gasoline gallons of CNG, and both vehicles are fully backed by GM's standard new vehicle warranty. With the CNG option, the trucks are available only in two-wheel drive.

Both vehicles will be available with the CNG fueling option to the public in all 50 states through local dealerships, according to GM officials. With EPA's approval, the pickup trucks could be certified as low-emission vehicles.



## Funding

The U.S. Department of Energy (DOE) has announced a request for \$1.05 billion for fiscal year (FY) 1998, \$213 million more than Congress authorized for FY 1997. "Our mission is to lead the nation to a stronger economy, a cleaner environment, and a more secure future through the development and deployment of sustainable energy technologies," said agency officials.

The Office of Transportation Technologies (OTT), which includes alternative fuel and vehicle programs,

requested \$243.3 million, almost \$40 million more than last year's budget. The biggest increase in OTT was in the Office of Advanced Automotive Technologies, with a request of \$129 million, \$24.4 million more than FY 1997. One goal of the Office of Advanced Automotive Technologies is to enable technologies for advanced vehicles with significantly improved fuel economy.

"The number of miles traveled in the U.S. is rising at a rate three times faster than our population growth," said Richard Moorer, Associate Deputy Assistant Secretary in OTT. "And the transportation industry accounts for two-thirds of all oil use in our country. An increase in the [OTT] budget offers a greater opportunity to improve air quality."

Moorer credited Clean Cities, a DOE program designed to increase alternative fuel use in vehicles, "as one of the best ways to get alternative fuel vehicles (AFVs) on the road." DOE is requesting \$17 million for Technology Deployment, which includes Energy Policy Act of 1992 voluntary and mandatory programs to increase the number of AFVs on the road.



## Clean Cities Update

### Virginia Company Getting CNG Off the Ground

VISIONS Helicopter Technologies (VHT), Inc., based in Woodbridge, VA, has developed two light-utility helicopters that run on natural gas.

"The aviation industry remains relatively untouched by strict

environmental regulation," said Hans Mumm, president of VHT. "Eventually, it will have to respond to the global movement to improve our air quality."

Mumm reported that test results from September 1996 show a 70% reduction in emissions, and the weight differential with the additional CNG equipment is just 27 pounds. VHT is targeting a goal of zero emissions for the bi-fuel helicopter, and is seeking funding through the U.S. Department of Energy's Clean Airports program.

## Clean Cities Program Adds First Two Ohio Cities to List

The U.S. Department of Energy's (DOE) Clean Cities program, which began in 1993, recently added two new designations, Evansville, IN, and Cincinnati, OH. Both cities had alternative fuel vehicles (AFVs) and refueling sites in operation before being designated Clean Cities.

Although listed in the Clean Cities directory as the "Greater Cincinnati" designation, the program actually encompasses towns in Kentucky and Indiana, making it the first tri-state Clean City. Two hundred of the nearly 300 AFVs in the tri-state coalition run on propane, and stakeholder plans call for the acquisition of an additional 180 AFVs (120 propane) added by the year 2000. The vehicles can refuel at 19 sites in the area.

Eleven refueling sites support nearly 250 AFVs in Evansville, 227 of which run on CNG. City plans call for 500 AFVs and six refueling sites to be added to the state fleet by 2001. With 180 CNG school buses, the city boasts one of the largest natural gas-powered school bus fleets in the nation.

## Study Shows CNG in Philly's Future

The compressed natural gas (CNG) vehicle market in Philadelphia will grow by 30 times during the next decade, totaling more than 20,000 CNG fleet vehicles by 2007, according to a report released by Alex Farrell, Ph.D., a research fellow at the University of Pennsylvania. The study focused on the Philadelphia Clean Cities program, a U.S. Department of Energy program designed to encourage the formation of voluntary partnerships between local businesses, environmental groups, and local governments to encourage the use of alternative fuels. Farrell credits the Clean Cities program with reducing "transaction and search costs," allowing fleet operators easier access to purchasing alternative fuel vehicles.

Farrell states his report is a forecast, not an endorsement, but his predictions show little growth for propane-, ethanol-, and electric-powered vehicles in the Philadelphia metropolitan area.

☛ *For a summary of Dr. Farrell's report, the Energy Security and Air Quality Benefits of the Greater Philadelphia Clean Cities Program, call the Clean Cities Hotline at 1-800-CCITIES.*

## Clean Cities Conference Just around the Corner

The U.S. Department of Energy's Third National Clean Cities Stakeholders' Conference and Exposition will be held June 24-26, 1997 in Long Beach, CA. The conference will be hosted by the California Alternative Fuel Vehicle Partnership and the City of Long Beach. More than 600 stakeholders are expected to attend this flagship event that draws participants from

more than 50 designated Clean Cities across the United States.

☛ *For conference registration, exhibition and sponsorship information, call the Clean Cities Hotline at 1-800-CCITIES.*

## CD-ROM to Be Introduced at Clean Cities Conference

The Clean Cities CD-ROM, an educational, one-stop source for information on the U.S. alternative fuel and vehicle markets, will be available to attendees at the National Clean Cities Conference in Long Beach, CA, June 24-26. The CD-ROM includes

- Specific city-by-city information
- Federal, state, and local alternative fuels laws and incentives
- Comprehensive information and data on vehicles, engines, fuels, and other products
- Valuable directories of industry and government contacts and resources
- Information about various products and services for all alternative fuel types
- Hyperlinks to relevant websites.



## Hot off the Press

Check the Web site (<http://www.afdc.doe.gov>) for the following, or call the Alternative Fuels Hotline (1-800-423-1363):

- Conference and Events List, an up-to-date listing of alternative fuels-related conferences and event. Click on "Events."
- *Guide to Alternative Fuel Vehicle Incentives and Laws*. The second edition of one of the most requested documents the Hotline

offers. Details state-by-state funding/incentives and tax credit information related to alternative fuel vehicles. A must for any fleet manager. Click on "Alternative Fuel Information."

- *Alternatives to Traditional Transportation Fuels, Vol. II*. A joint effort by the U.S. Department of Energy and the Energy Information Administration, "Alternatives" gives readers a precise breakdown of alternative fuel vehicles, fuel consumption, and fuel characteristics (available only from the Hotline at this time).
- 5th Annual Report to Congress. A study of the Alternative Fuel Federal Fleet. Click on "Alternative Transportation Fuels and Vehicles."



## On the Web

### What's New on the AFDC Website (<http://www.afdc.doe.gov>)

Check out the latest additions! Here's a sample.

#### April

- *Guide to Alternative Fuel Vehicle Incentives & Laws* – 2nd Edition, November 1996

#### March

- *U.S. DOE Light-Duty AFV Product Offering Guide*
- *AFDC Update* newsletter, Volume 5, Issue 4, February 1997

#### February

- ETC Fast Tracks (with permission from the Electric Transportation Coalition)

### Correction

In Volume Five, Issue Three of the *AFDC Update* (Fall 1996, page 7), we inadvertently omitted the State of Wisconsin as a participant in the ethanol Windstar demonstration project. We regret any inconvenience that this omission may have caused. Please call Nicole Anderson, program manager for Governor Thompson's Alternative Fuels Task Force, (608) 267-2715, with any questions.

- Electric Vehicle Charging Sites (Courtesy of the Electric Vehicle Association of the Americas)

### Browse These Related Websites

Three Websites related to alternative fuels and vehicles:

- EPA has an area on its homepage dedicated to the Office of Mobile Sources:  
<http://www.epa.gov/omswww>
- OTT Analytical Page. Lots of facts and figures from the Office

of Transportation Technologies.  
<http://www.ott.doe.gov/fact.html>

- For the latest press releases and information (including funding grants!) from the U.S. Department of Transportation, type in  
<http://www.dot.gov/affairs/ftaind.htm>

A listing of Metropolitan Statistical Areas covered by EPAAct is available on the AFDC Website at  
<http://www.afdc.doe.gov/whatsnew.html>

### How to Reach Us

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e-mail: [hotline@afdc.nrel.gov](mailto:hotline@afdc.nrel.gov)

Phone: 1-800-423-1DOE

Fax: 703-528-1953

Address: P.O. Box 12316, Arlington, VA 22209

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ALTERNATIVE FUELS DATA CENTER  
PO. Box 12316 • Arlington, VA 22209

