



New York State Overcomes Barriers to Comply with Aggressive State Legislation

New York State's (NYS) Clean Fueled Vehicle Program (CFVP) has come a long way during the past six years. This program was created to acquire clean-fueled vehicles for state use and to test and evaluate clean-fueled technologies. The program's achievements since 1996 include providing fueling infrastructure to support the state's growing number of AFVs; installing 30 low-volume compressed natural gas (CNG) stations and three portable, skid-mounted, high-volume CNG stations across the state; and developing 16 high-volume, fast-fill CNG stations along a heavily traveled "clean fuel corridor." The program has also initiated an infrastructure plan that includes provisions for fueling ethanol and propane, and for charging electric vehicles (EVs).

Formed in response to Gov. George Pataki's Clean Water/Clean Air Bond Act of 1996, the program now focuses on complying with Gov. Pataki's 2001 Executive Order 111, which directs all state entities

to acquire 50% of their new light-duty vehicles (LDVs) as AFVs by 2005, 100% by 2010—with the exception of specialty, police, or emergency vehicles as designated by the New York State Division of the Budget. Additionally, state agencies and affected entities that operate medium- and heavy-duty vehicles must implement strategies to reduce petroleum consumption and emissions by using alternative fuels and improving vehicle fleet fuel efficiency.

NYS Fleet Profile*

Total Number of Vehicles: 12,823	
Types of AFVs	Amount
CNG	1,275
Ethanol	294
Propane	86
Electric	155
Hybrid Electric	24
Methanol	70
Total AFVs	1,904

* As of December 31, 2001. Data from E. Redmond, Office of General Services.

To help fleets achieve compliance, NYS sets aside funds to reimburse state agencies for the incremental cost of AFVs and to pay for supporting infrastructure, works with vehicle manufacturers to ensure that enough AFVs are available to New York fleets, and trains state employees in the use and fueling of the AFVs.

This forward-looking program makes it easy for state government fleets to comply with the Energy Policy Act of 1992 (EPAct), which requires certain state agencies to acquire AFVs as a proportion of their LDV fleets to help reduce the country's dependence on imported oil. The U.S. Department of Energy (DOE) establishes EPAct compliance guidelines and monitors fleets' progress.

Lessons Learned

- Encourage participation and communication among state agencies.
- Offer purchasing incentives to state agencies.
- Operate parallel programs for vehicle acquisition and infrastructure development.
- Form public-private partnerships to provide infrastructure.
- Undertake direct interaction with AFV manufacturers.
- Provide education and training for state AFV users.
- Track program success semiannually through vehicle use reports.

Innovative Methods for Success

NYS fleets exceeded their EPA Act acquisition requirements from 1998 to 2000, a trend that is projected to continue. With more than 1,900 AFVs in its fleet, the New York program has evolved rapidly. However, these results were not reached without overcoming barriers, and members of the CFVP have at times developed innovative methods to achieve this success. These methods include:

Developing a multi-agency working group:

In 1998, representatives from the state's agencies, authorities, and universities formed the Clean Fueled Vehicles Council (CFVC), a working group that offers advice, makes decisions, and carries out the provisions of the Clean Water/Clean Air Bond Act. Perhaps its most significant feature is that it is both a planning and decision-making body. This allows the group to be action oriented and accomplish its objectives in a timely fashion.

Offering AFV acquisition incentive programs to state agencies: New York funds were set aside in the Clean Water/Clean Air Bond Act to reimburse agencies for the incremental cost of acquiring AFVs (compared to a conventional vehicle). Incentive funds are also available from the Bond Act to pay for AFV infrastructure.

The Office of General Services' (OGS) Procurement Services Group awards competitively bid contracts for use by state agencies. An array of AFVs is included in these contracts, and fleets do not need to negotiate for these vehicles. New York also offers state agencies, political subdivisions, and local governments and municipalities contracts for CNG fueling equipment. Various fuel capacities are offered, depending on the organization's requirements.

Coordinating vehicle acquisition and infrastructure deployment: Early on, the CFVC decided to coordinate infrastructure development with vehicle acquisitions. By 1999, a comprehensive "fueling infrastructure plan" was included in the council's deliberations. With OGS and New York's Department of Transportation (NYDOT) in the lead, the CFVC worked diligently to develop a plan that would provide adequate fueling facilities for the expanding AFV fleet.

The state agencies were asked to project the number and types of AFVs they would need over a five-year period and where the AFVs would be housed. The council then met with utility companies and energy

suppliers to identify opportunities to share established fueling sites or to work together to build new ones.

Developing a CNG infrastructure plan: Most AFVs (67%) in the state fleet are fueled by CNG, creating a need for high-volume fueling stations. A two-phase plan was developed to meet this demand. During Phase I, 30 low-volume FuelMaker CNG stations were installed at NYDOT facilities across the state. Each operation can produce 100 gasoline gallon equivalent (gge) of CNG per day for state vehicles only. Six of these low-volume stations are being upgraded to high-volume capability of 500 gge per day with more station upgrades planned.

Phase II is an innovative public/private partnership to build 16 high-volume, fast-fill CNG stations located on state-owned land in major urban locations or along heavily traveled roads, creating a "clean fuel corridor." The stations will be able to produce at least 500 gge daily. AFVs from state and local government fleets, municipalities, private fleets, and the general public may be fueled at these sites.

Equipment and installation costs for construction of one high-volume CNG station of this size would total between \$190,000 and \$200,000. Therefore, this joint public/private partnership to construct 16 stations will save New York State taxpayers approximately \$3 million.

To fill the immediate needs, three portable, skid-mounted, fast-fill CNG compressor stations were set up to deliver as much as 600 gge per day at key locations in the state. Additionally, there are 46 commercial CNG fueling stations in New York, most of which are open to state vehicles. NYDOT has established accounts with all the major commercial CNG providers throughout the state.

In 2000, state agencies used 210,000 gge of CNG. With more AFVs on the road, officials estimated that approximately 400,000 gge of CNG would be purchased in 2001.

Developing a non-CNG alternative fuel infrastructure: Although CNG is the predominant alternative fuel type used in New York, other activities are underway to build infrastructure for other alternative fuels.

- **Ethanol:** A committee of state agency representatives is evaluating the potential for ethanol fueling and has already identified several sites for ethanol stations.

- **Propane:** There are currently four state-owned propane stations in operation, with two more under construction, and the CFVC is evaluating the installation of propane stations at other state facilities. There are also 112 commercial propane stations across the state, which are available to state agency vehicles. State agencies used approximately 16,216 gge of propane in 2001.
- **Electric:** Seven EV charging sites are available at the Empire State Plaza in Albany, N.Y., to accommodate Capital District EVs and visitors to the state office complex. There is currently capability for charging 154 state-owned EVs in New York.

Coordinating with auto manufacturers to ensure vehicle availability: Members of the CFVC are working directly with vehicle manufacturers, such as Ford Motor Company, General Motors, Daimler-Chrysler, Honda, and Toyota, to ensure that AFVs are available when the state wishes to acquire them.

Coordinating with fueling equipment suppliers: NYS has established procurement contracts for CNG fueling equipment for a variety of capacities and applications. This allows fleets to purchase from these contracts instead of negotiating their own.

Training AFV drivers: Education and training are available to state agency employees in the use, maintenance, and fueling of AFVs. Hands-on experience with proper fueling methods is included. This crucial information ensures that the drivers will feel confident about using the vehicles. It also makes drivers aware of safety features of fueling facilities. Vehicle manufacturers and leading utility companies assist with the training, which is held regularly in locations across the state.

To supplement formal training, AFV operators (and other interested parties) receive newsletters, testimonials, and announcements related to the state AFV programs. The CFVP has also established a Web site (www.ogs.state.ny.us/cleanfuels) with more complete details on the program, including reporting requirements and methods, copies of necessary forms, and current and future fueling sites.

Tracking program success: According to EPAAct, state fleets must report their AFV acquisitions and alternative fuel use annually. Agencies that purchase AFVs through the established state program must also submit semiannual reports to the state on miles driven and fuel used. NYS collects this information

to track the data for the program and to record any problems in program implementation.

NYDOT conducted a limited survey of AFVs operated in its department over a two-year period (1999-2001). The data show that operating the gasoline-powered automobile fleet cost DOT \$.07 per mile, while the average cost of operating the natural gas-powered fleet, which includes automobiles, pickup trucks and vans, was just \$.05 per mile.

Program Recognition

CFVP efforts have been recognized by both the public and private sectors. During the past few years, CFVP received the following awards:

- The National Conference of State Fleet Administrators presented the Environmental Leadership Award to NYS in October 1999 in recognition of its "extensive efforts to promote the use of a variety of alternative fuels, the significant number of [AFVs] purchased by its agencies, and its ambitious plan to develop an extensive network of fueling infrastructure to support . . . AFVs throughout the state."
- The Natural Gas Vehicle Coalition presented the Ninth Annual Achievement Award to CVFC in 2001 to recognize "its outstanding contributions to the advancement of natural gas as a vehicular fuel within the last year."
- DOE's Clean Cities Program presented the 2000 National Partner Award to CFVC for "its comprehensive refueling infrastructure plan and its direction and assistance to EPAAct covered state fleets."

Future Trends

The following are new initiatives being considered or implemented by the CFVP:

Meeting the requirements of Executive Order 111: One component of Gov. Pataki's Executive Order calls for state agencies to acquire 50% of their annual new LDVs as AFVs by 2005, 100% by 2010. A working group of state agency representatives was convened to draft guidelines for achieving this level of compliance. The New York State Energy Research and Development Authority (NYSERDA) issued the state's final implementation guidelines document in December 2001.

Adding heavy-duty vehicles to the mix of AFVs: NYSERDA is working with state agencies to explore

the use of alternative fuel technologies for heavy-duty vehicles. Specific fuels being considered are biodiesel blends and liquefied natural gas.

Offering a leasing option for AFVs: The present state contract for acquiring AFVs requires the vehicles to be purchased by the agencies. OGS is studying the idea of offering a leasing option for AFVs through the vehicle manufacturers and authorized dealers. To date, only EVs have been available for lease.

Participating in a large regional AFV initiative: NYS is participating in an initiative of the Northeast Association of State Transportation Officials to address the issues that states must overcome in acquiring AFVs and developing supporting infrastructure. A committee (composed of nearly 20 members that represent northeastern states, two Canadian provinces, General Motors, Ford Motor Company, Daimler-Chrysler, and Honda) is studying the various issues.

Encouraging the use of AFVs by New York City private fleets: NYSERDA and the New York City Department of Transportation recently solicited proposals for projects to encourage the use of AFVs by private sector fleets operating in New York City. NYSERDA will award \$1.5 million to fund a percentage of the incremental cost of acquiring new dedicated CNG or electric LDVs; acquiring new dedicated CNG, electric, or hybrid electric medium- and heavy-duty vehicles*; or converting new medium- and heavy-duty vehicles to dedicated CNG use or dual-fuel operation optimized to use 80% CNG. Benefits of this program will include lower air emissions and reduced use of imported petroleum.

For More Information

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*Hybrid vehicles are not considered AFVs under EPAct.

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What is EPAct?

The Energy Policy Act of 1992, or EPAct, was passed by Congress to reduce the nation's dependence on imported petroleum. Provisions of EPAct require certain fleets to purchase alternative fuel vehicles. DOE administers the regulations through its State & Fuel Provider Program, Federal Fleet Program, Private & Local Government Program, and Fuel Petition Program. EPAct also includes voluntary programs, such as Clean Cities, which help accelerate the use of alternative fuels in transportation.

For more information, visit <http://www.ott.doe.gov/epact>, or call the Regulatory Information Line at (202) 586-9171.

Sponsored by the U.S. Department of Energy
 Energy Efficiency and Renewable Energy
 Office of Transportation Technologies

Prepared by
 the National Renewable Energy Laboratory (NREL)
 NREL is a U.S. Department of Energy National Laboratory
 Operated by Midwest Research Institute • Battelle • Bechtel

DOE/GO-102002-1511
 February 2002

Printed with a renewable-source ink on paper containing
 at least 50% wastepaper, including 20% postconsumer waste



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