

NYSERDA

Alternative Fuel Incentive Programs in New York State

Clean Cities Conference

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New York State Energy Research and Development Authority (NYSERDA)

- Established in 1975 by State Legislature
- Mission: To identify solutions to State's energy challenges in ways that benefit the State's economy and environment
- Forge public/private partnerships with businesses, municipalities, residents, and other energy stakeholders to accomplish this goal.

Why New York in Particular is Interested.

Federal

- **EPAct** – requires state fleets with **50 or more vehicles** that at least **75%** of the vehicles they purchase must be **AFV's**
- **Air Quality** – half of New York's population lives in **non-attainment areas**

State

- **EO-111** – Starting in **2005** at least **50%** of the State fleet purchases must be **AFV's** with **100%** in **2010**.

NYSERDA's Market Transformation Program- Transportation

Highlights:

- All projects selected competitively
- We typically leverage about \$3 in co-funding for every \$1 of NYSERDA funding.
- Sources of funds include State, Federal DOE, EPA and Federal DOT CMAQ monies
- Currently have about 130 ongoing AFV deployment projects
- Representing over \$120 million in total AFV investment (3:1 leveraging)

AFV Deployment Programs

- New York State Clean Cities Challenge
- Federally funded thru U.S. DOE State Energy Program
- To be eligible must be a stakeholder of a Clean Cities Organization
- Funds to acquire AFVs and/or refueling infrastructure. Grant funds are awarded on a competitive basis, and can be used to cost-share up to 75% of the proposed project, including incremental purchase costs of alternative-fuel vehicles, the cost of installing fueling and recharging equipment, and the incremental costs to purchase alternative fuels such as E-85 or biodiesel.

AFV Deployment Programs

- Example Project
- \$150,000 for NOCO Energy in Buffalo to blend, market and sell half million gallons of B20 Biodiesel
- \$145,000 to Bachman AFV to re-power 7 heavy-duty diesel DOT trucks to Dual Fuel
- \$126,000 to City of Syracuse to upgrade their CNG refueling station

AFV Deployment Programs

- Department of Energy Special Projects
- Federal program from U.S. DOE
- Apply to DOE thru NYSERDA, must be a stakeholder of a Clean Cities Organization
- Funds to acquire AFVs and/or refueling infrastructure. Grant funds are awarded on a competitive basis, and can be used to cost-share up to 75% of the proposed project, including incremental purchase costs of alternative-fuel vehicles and the cost of installing fueling and recharging equipment.

AFV Deployment Programs

- Example Projects
- \$187,000 to Long Beach School District to purchase six Compressed Natural Gas school buses.
- \$250,000 for three natural gas refueling stations on Long Island (State – Private Partnership)
- \$150,000 for three E85 Ethanol public fueling stations in Western New York.

AFV Deployment Programs

- New York State Clean Fuel Bus Program
- Funded thru New York State 1996 Clean Water / Clean Air Bond Act
- Provides grant funds to state and local transit agencies, municipalities, and schools for up to 100% of the incremental cost of new alternative-fuel buses and associated infrastructure.
- Eligible vehicles must be powered by compressed natural gas, propane, methanol, hydrogen, ethanol, or use electricity, either stored or generated on board, as a primary motive force.

AFV Deployment Programs

- Example Projects
- \$2,511,000 to MTA- Long Island to purchase sixty two CNG buses
- \$1,102,000 million to Roosevelt Island Operating Corp for four hybrid-electric buses.
- \$1,157,500 to Long Beach Combined School District to purchase twenty CNG buses and pay for their refueling station and bus garage modifications

AFV Deployment Programs

- New York City Private Fleet Program
- Federal Department of Transportation Congestion Mitigation and Air Quality (CMAQ) funds thru NYSERDA
- For profit, private companies operating within the 5 boroughs of New York City
- Grant funds are awarded on a competitive basis for up to 50% of incremental cost of new light-duty natural gas or electric vehicles, and up to 80% of incremental cost for new or converted medium and heavy-duty natural gas, electric, or hybrid-electric vehicles.

AFV Deployment Programs

- Example Projects
- \$1,633,000 to Manhattan Beer Distributors for thirty CNG delivery trucks and a refueling station
- \$648,000 to FedEx for 10 hybrid-electric delivery trucks
- \$379,000 to Bronx Overall Economic Development Corp. for ten electric shuttle buses

AFV Deployment Programs

- New York City Taxi Program
- Federal Department of Transportation Congestion Mitigation and Air Quality (CMAQ) funds thru NYSERDA
- Partnership with NYC DOT
- Reimburses companies that sell natural gas or hybrid taxis \$8,500 for every yellow or black cab put into service in the New York City market.

AFV Deployment Programs

- Example Projects
- 300 Natural gas medallion cabs in NYC
- Two upgraded KeySpan CNG refueling stations in the City
- Synergy with R&D transportation projects (GSM & Metroking)

AFV Deployment Programs

- Greater Long Island Clean Cities Coalition CMAQ Program
- Federal Department of Transportation Congestion Mitigation and Air Quality (CMAQ) funds thru NYSERDA
- Funds public and private AFV fleet projects in Nassau and Suffolk Counties on Long Island
- Projects include incremental cost of vehicles and alternative fuel re-fueling infrastructure

AFV Deployment Programs

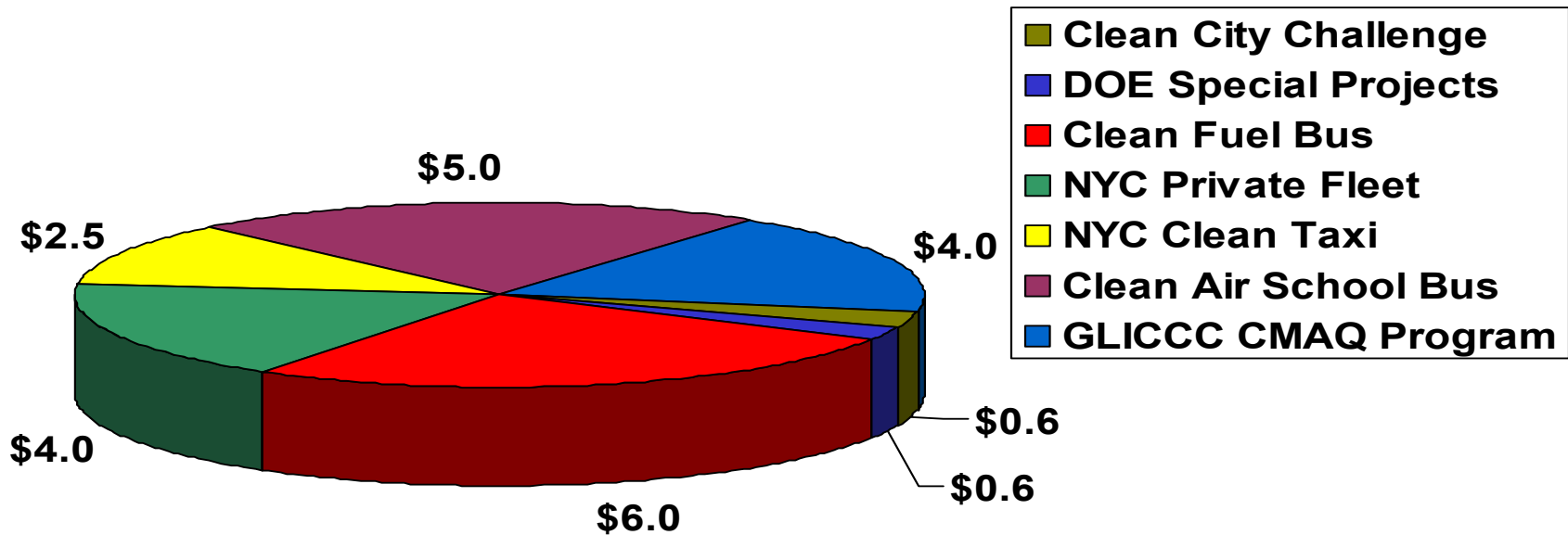
- Clean Air School Bus - School Bus Retrofit
- Funded thru New York State 1996 Clean Water / Clean Air Bond Act
- Program pays for diesel school buses to retrofit with EPA Certified/Verified emission reducing technology such as particulate traps and diesel oxidation catalysts.

AFV Deployment Programs

- First round of program
 - \$5 million
 - 75 school districts
 - 2,194 buses
- Coincides with Federal Initiatives

2004 Alternative Fuel Vehicle Deployment Program Funding

Millions of dollars



What are we getting?

- 2,000,000 gallons of B20 Biodiesel
- over 430 light, medium and heavy-duty CNG vehicles on New York's roads
- 418 heavy-duty CNG buses
- 128 heavy-duty hybrid electric buses
- 2,200 retrofitted diesel buses
- 11 CNG refueling stations
- three training programs
- 63.7 million gallons of petroleum displaced over the vehicle lifetimes
- Emissions avoided over the vehicle lifetimes of over 3,000 tons Nox, 155 tons PM, 217,000 tons CO₂
- At least \$15,000,000 in State investment in New York manufacturing enterprises representing over 3,000 jobs

The Future?

- Hybrid Vehicles
- Renewable Fuels
- Increased efficiency of current designs
 - Continuously variable transmissions
 - Combined alternator - starter
 - 42v electrical systems
- Stricter emission controls
- Hydrogen
- SBC program?

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