New York State-wide Alternative Fuel Vehicle Program for Vehicles and Fueling Stations

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Project ID#
ARRAVT053

This presentation does not contain any proprietary, confidential, or otherwise restricted information
Overview

Timeline
- Start: December 2009
- Finish: November 2013
- Currently 85% complete

Budget
- ARRA economic stimulus funding
- Total project funding
  - DOE: $13,299,101 (36%)
  - Cost-Share: $23,517,650 (64%)
- Funding received to date: $11,137,443.12
- Funding anticipated for next 12 months: approx. $1,800,000

Barriers/Risks Addressed
- Lack of alt fuels infrastructure
- Lack of experience with AFVs

Target deployment schedule

<table>
<thead>
<tr>
<th>Year</th>
<th>Vehicles</th>
<th>Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>2011</td>
<td>265</td>
<td>94</td>
</tr>
<tr>
<td>2012</td>
<td>17</td>
<td>8</td>
</tr>
</tbody>
</table>

Partners
- 42 New York State public and private fleets
- 5 Clean Cities Coalitions
Project Objectives

- **Spur economic growth and create jobs in New York State** through shovel-ready stimulus spending as part of ARRA
- Demonstrate that **fleets of all types** can implement and benefit from alternative fuel vehicle and infrastructure projects
- **Increase experience with AFVs** among NY’s public and private fleets, influencing future purchasing decisions
- Create infrastructure to **support future AFV deployment** in NY
- **Reduce petroleum use and GHG emissions** in the state’s transportation fleet, to help fulfill the State Energy Plan and Climate Action Plan
- Develop innovative programs to **train firefighters** to work with new alternative fuels and AFVs
Relevance

Project Sites in New York State

Clean Communities of Western New York

Genesee Region
Clean Communities

Clean Communities of Central New York

New York City –
Lower Hudson Valley
Clean Communities

Capital District
Clean Communities

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Relevance

Types of Program Participants

Program Participants (42)

- Municipalities and Counties (12)
- Private Fleets (11)
- School Districts (11)
- Universities (2)
- State Entities (4)
- Utilities (2)
Tasks for Project Completion

**Task 1: Project Management and Planning**
- Conduct a project kick-off meeting
- Finalize sub-recipient agreements
- Revise and update Project Management Plan

**Task 2: Vehicle Deployment**
- Complete vehicle NEPA process
- Purchase and take delivery of vehicles and/or convert vehicles
- Apply appropriate signage to vehicles stating that they are part of a US DOE Clean Cities Award
- Deploy vehicles

**Task 3: Infrastructure Development**
- Complete Infrastructure NEPA process and obtain necessary permits
- Complete actions necessary to begin construction and/or upgrades
- Install fueling Infrastructure
- Apply appropriate signage to fueling infrastructure stating that it is part of a US DOE Clean Cities Award
- Make infrastructure operational
Task 4: Training Development & Delivery
- Identify specific training needs of those operating and maintaining vehicle and refueling infrastructure
- Develop training to address needs of those mentioned above
- Provide training to appropriate audiences
- Perform on-going identification of additional training needs and hold follow-up training

Task 5: Outreach/Marketing
- Provide a plan for project marketing/outreach that informs the public about this project
- Execute project marketing/outreach plan
- Document all marketing/outreach conducted

Task 6: Documentation & Reporting
- Monitor performance of vehicles and infrastructure for a period of 24 months after deployment
- Document all training and marketing/outreach conducted and Clean Cities involvement in project
- Provide quarterly and annual reporting of fleet data to DOE and local Clean Cities coalitions
- Provide project updates/lessons learned at merit reviews to ensure that the information and knowledge gained by project participants is shared
Original Schedule/Milestones

**2010**
- Finalize all sub-recipient contracts
- Receive approval for all NEPA EQs
- Vehicle orders 70% complete
- Vehicle deployment 30% complete
- Infrastructure development 30% complete
- Trainings and outreach/marketing activities started
- Ongoing reporting

**2011**
- Vehicle deployment 100% complete
- Infrastructure development 100% complete
- Training and outreach/marketing activities complete
- Ongoing reporting

**2012-13**
- Complete reporting and data collection
- Ongoing training through programs established with ARRA funds
Key Accomplishments to Date

- Kick-off meetings and subsequent quarterly meetings held with all sub-recipient
- Reporting protocols implemented for sub-recipient
- 100% of contracts with sub-recipient signed
- 100% of NEPA EQs submitted and approved
- 97% of vehicles deployed thru 3/12 (372 out of 382)
- Site work complete for 93% of infrastructure projects thru 3/12 (99 out of 106)
- 110 trainings conducted by sub-recipient, with over 1,800 attendees
- 296 marketing and outreach events held
- Through March 2012, deployed vehicles have driven over 3 million miles using alternative fuels and advanced technologies
### Technical Accomplishments

#### Types of Vehicles Deployed

**Light-Duty**
- CNG (169)
- LPG (6)
- Electric (8)
- Hybrid Electric (12)
- Total: (195 vehicles)

**Medium- and Heavy-Duty**
- CNG (80)
- LPG (40)
- Plug-in Hybrid (3)
- Hybrid Electric (63)
- Hydraulic Hybrid (1)
- Total: (187 vehicles)
Technical Accomplishments

Types of Infrastructure Deployed

Infrastructure Installations (106 stations)

- Electric Charging Stations (99)
- LPG Fueling Stations (3)
- CNG Fueling Stations (4)
Technical Accomplishments

Progress vs. Barriers, Milestones

• Fleets around the state have better understanding of and positive experiences with AFVs
• Partners have spread knowledge to other potential AFV adopters
• AFV infrastructure expanded in major cities
• All early milestones accomplished
• A few projects still to be completed because of delays with suppliers, siting and will be completed by summer 2012
• Reporting underway and on track to continue through 2013
• Extensive data comparing AFV cost of ownership to standard vehicle cost of ownership
Collaborations

List of Sub-recipients

- AAA of Western New York
- Albany International Airport
- Ballston Spa Central School District
- Bard College
- BOCES of Rockland County
- Casella Waste Systems, Inc.
- Cayuga County
- Central Hudson Gas & Electric
- Charlotte Valley Central School District
- City of Albany
- City of Rochester
- City of Syracuse
- City of White Plains
- Coca-Cola Enterprises
- Demon Logistics, LLC
- East Greenbush Central School District
- Fairport Central School District
- Ferrario Ford, Inc.
- Gilboa-Conesville Central School District
- Harbec, Inc.
- Hoosic Valley Central School District
- Malone Central School District
- Manhattan Beer Distributors, Inc.
- Modern Disposal, Inc.
- Monroe County
- National Grid
- New York Power Authority
- NYS Department of Environmental Conservation
- NYS Division of Homeland Security and Emergency Services
- Palmyra-Macedon Central School District
- Roosevelt Island Operating Corp.
- Synapse Sustainability Trust
- University at Albany
- Tompkins County
- Town of Dobbs Ferry
- Town of Mamaroneck
- Town of Warwick
- Trumansburg Central School District
- Verizon Communications
- Village of Minoa
- Wayne Central School District
- Westchester Ambulette, Inc.
- Capital District Clean Communities
- Clean Communities of Central New York
- Clean Communities of Western New York
- Genesee Region Clean Communities
- New York City Lower Hudson Valley Clean Communities

An Independent Contractor to:

nyserda
Energy Smart Communities Program
Proposed Future Work

Work Scheduled for Remainder of 2012/13

- Deployment of *remainder of vehicles and infrastructure*
- Additional *trainings and marketing/outreach*
- Possible *media events* around deployments in New York City, Rochester, and Albany
- *Firefighter trainings* around NYS on fighting liquid biofuel fires
- *Reporting* on jobs creation and expenditures
- *Reporting* on fuel usage, fuel dispensed, vehicle miles traveled, and emissions from vehicles
NYSERDA’s Clean Cities project will create jobs and spur economic growth through the purchase and deployment of nearly 400 AFVs and over 100 alternative fueling stations. Our project is bringing together all types of fleets across New York State to build interest in and experience with alternative fuels and alternative fuel vehicles. New York is initiating innovative training programs to prepare stakeholders like firefighters to work with AFVs. The vehicles and infrastructure deployed will show significant petroleum and GHG emission reductions, in support of New York State’s energy and climate plans.