

# 2012 DOE Vehicle Technologies Program Review Presentation

## **NJ COMPRESSED NATURAL GAS REFUSE TRUCKS, SHUTTLE BUSES AND INFRASTRUCTURE**

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Project ID #  
**ARRAVT051**



# Overview

## Timeline

- Start date: Dec. 15, 2009
- Complete date: Dec. 14, 2013

## Budget

- Federal Share:  
\$14,997,240
- Non-federal share:  
\$31,672,444
- Total Project:  
\$46,669,684



# Overview – con't

## Partners

- Atlantic County Utilities Authority
- Waste Management of NJ
- Clean Energy
- Atlantic City Jitney Association
- Central Jersey Waste & Recycling
- Blue Diamond Disposal
- Suburban Disposal
- The Parking Spot Group
- City of Linwood
- Giordano Companies
- Casworth Enterprises



# *Objectives*

- Stimulate the economy by creating and preserving green jobs
- Increase visibility of the DOE's role in support of alternative fuel deployment projects
- Reduce tailpipe emissions in heavy-duty fleet applications as natural gas refuse trucks and shuttle buses are deployed
- Reduce oil dependency by having fueling stations that provide a domestically produced fuel;

# *Objectives – con't*

- Educate the public about the “mainstream availability” and other benefits of using a clean, domestically produced fuel as more vehicles are sold and owners operate their vehicles throughout the region.
- Reduce more than 900,000 pounds of identified criteria pollutants and greenhouse gas emissions annually.
- Displace approximately 2 million gallons of petroleum per year as a direct result of this project.

# *Approach*

- The NJCCC has assembled and is managing a public/private partnership which is utilizing DOE ARRA grant funds to offset the cost of:
  - Deployment of approximately 300 natural gas vehicles (NGVs) in refuse and shuttle bus fleets operating across the state of New Jersey.
  - Design and construction of 6 Compressed Natural Gas fueling stations at various locations across the state.
  - Public outreach and education, and for significantly increased visibility of alternative fueled vehicles

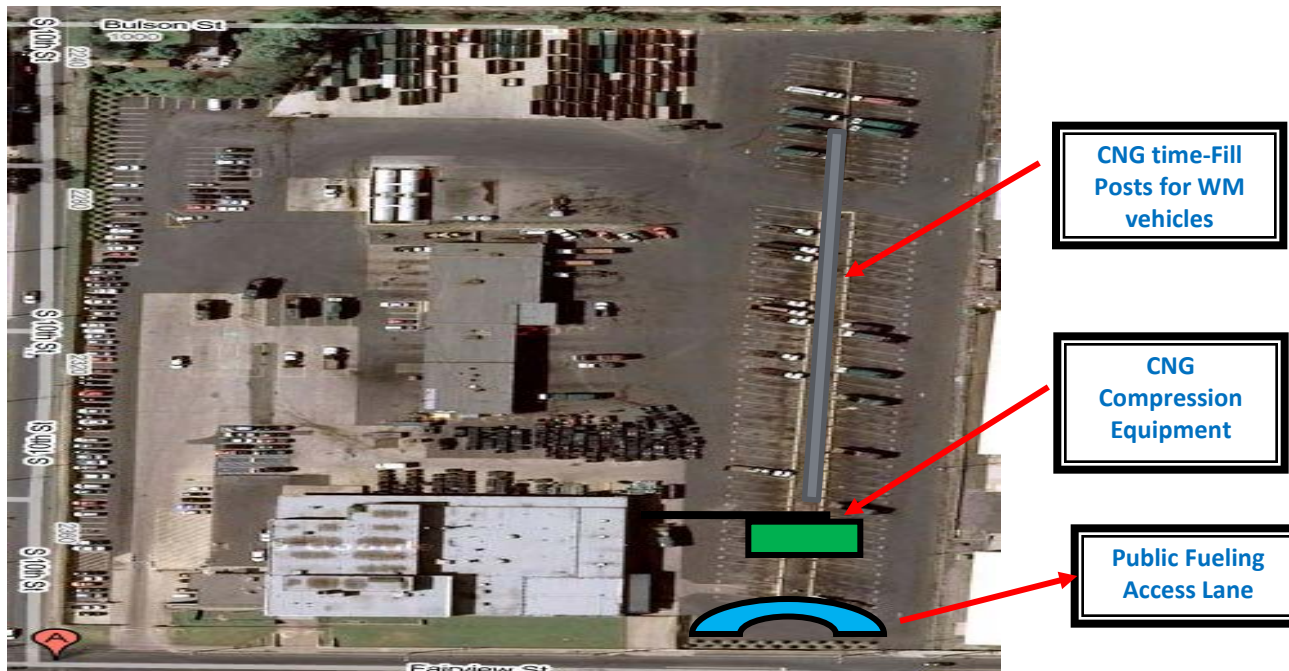
# *Technical Accomplishments*

- NEPA Categorical Exclusions have been approved for all 6 CNG Station sites as well as for vehicle purchases
- Design, construction and operation contracts have been awarded for all of the stations
- Three stations are operational, two will be opened shortly, and one is in the local permitting process

# *Technical Accomplishments*

## CAMDEN SITE

- Twin 330 SCFM compressors (660 SCFM total)
- Two Public Access, Dual Hose Fast-Fill Dispensers with card readers to accept major credit cards
- 88 time-fill CNG posts for WM CNG vehicles





# *Technical Accomplishments*

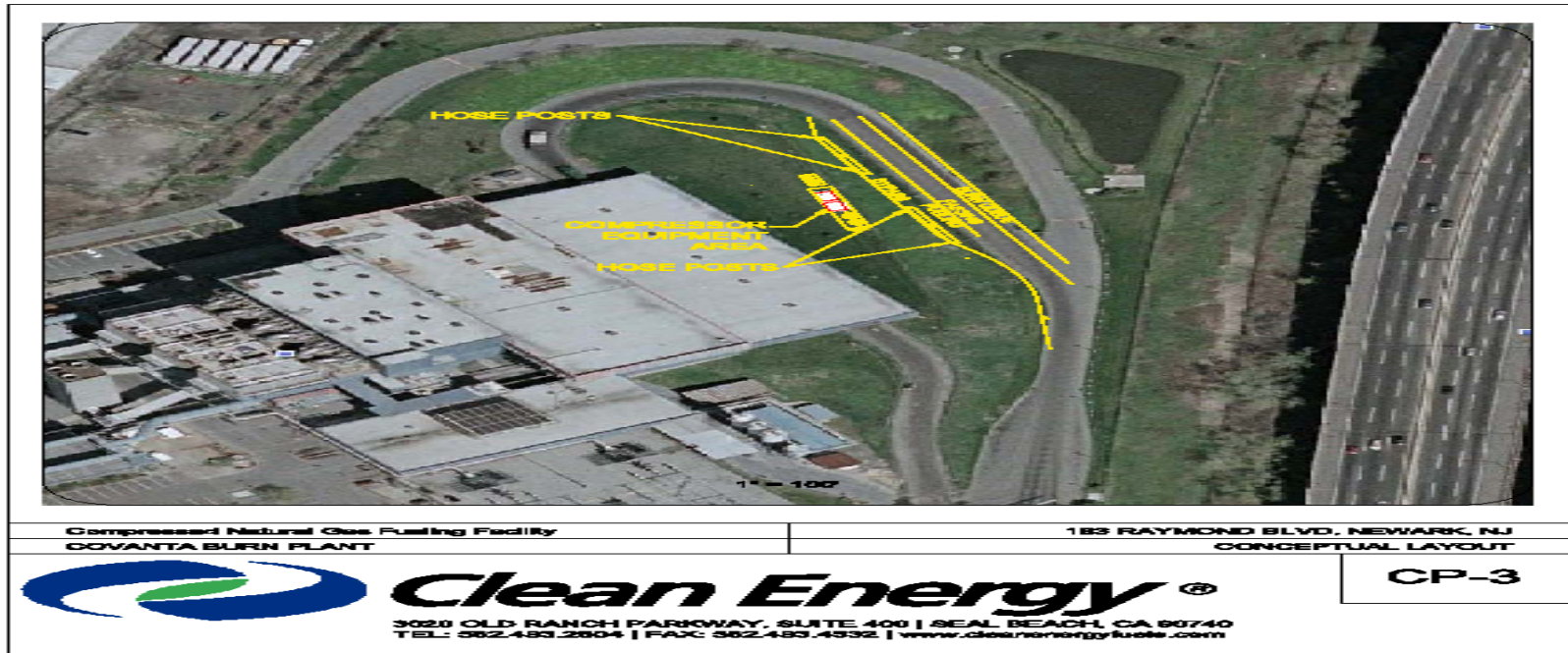
## ACUA CNG Station

- Two ANGI JGQ/2, 3-stage, 150 horsepower compressors capable of providing 456 SCFM each
- Two Dual Hose Fast-Fill Dispensers (4 Fueling Points), two Fuel Card Readers, a 200 kW backup diesel generator
- Has dispensed almost 500,000 GGE since opening in Oct 2010.



# Technical Accomplishments

## NEWARK CNG STATION



- Two Dual Hose Fast-Fill Dispensers (4 Fueling Points), Two Fuel Card Readers, Two 1000 SCFM Compressors, 14 Diesel Gallons a Minute, 863 Diesel Gallons an Hour

# *Technical Accomplishments*

## TRENTON SITE

- Currently a 20 Truck Time-Fill Station
- This station will be upgraded to a hybrid station, which will have both fast-fill and time-fill capabilities
- All of the CNG trucks fuel at the same time over 6-8 hours
- CJW serves Hamilton Township residential contract, which was the first in NJ to mandate alternative fueled refuse trucks



# *Technical Accomplishments*

## MT. ARLINGTON SITE

- 40 Truck Time-Fill Station with plans for a future fleet access fast-fill, became operational this past December
- Deployed 14 new CNG Autocar's, with several more on order, All of the CNG trucks can fuel at the same time over 6-8 hours



# *Technical Accomplishments*

## ATLANTIC CITY JITNEY ASSOCIATION

- Fleet Access Fast-Fill Station will be operational this spring, Four Dual Hose Fast-Fill Dispensers (8 Fueling Points), Two Fuel Card Readers, Two 500 SCFM Compressors, 8 Gasoline Gallons a Minute, 480 Gasoline Gallons an Hour



# *Deployment Accomplishments*

- 35 CNG garbage trucks from four fleets have been deployed.
- 202 CNG shuttle buses from 2 fleets have been deployed.



# Collaboration

- The NJCCC has sub-recipient agreements with 11 public and private sector project partners.
- Project Collaborators have included: the NJ Board of Public Utilities, the NJ Department of Environmental Protection, NJ Transit, the Federal Transit Administration, the Port Authority of NY/NJ, each of NJ's public gas utilities



# *Future Work*

- Order and deploy additional NG vehicles
- Continue construction activities for new stations
- Continue to provide training for fueling and maintaining NGVs
- Continue to provide educational outreach workshops for both the public and for policy makers, and station marketing campaigns





# *Summary*

- NJ Clean Cities Coalition is leading a public/private team to implement the first large-scale deployment of alternative fuel vehicles and infrastructure in NJ
- Highly visible vehicle fleets of trash collection operators and shuttle bus companies being converted to CNG
- Six CNG stations to be built which will ultimately be available to additional fleets and the public.
- Project is stimulating significant interest from other public and private fleets and policy-makers in CNG and other alternative fuels