

**2012 U.S. DOE HYDROGEN and FUEL CELLS  
PROGRAM and VEHICLE TECHNOLOGIES  
PROGRAM ANNUAL MERIT REVIEW AND PEER  
EVALUATION MEETING  
MAY 14-18, 2012**

DOE Vehicle Technologies Program

Utah Clean Cities Transportation Sector Petroleum  
Reduction Technologies Program

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Project ID #  
**ARRAVTO43**

# Overview

## Timeline

Start: January 28, 2010

Finish: January 27, 2015

***80% completed by  
March 2012***

## Budget

Total project funding

- DOE share:  
\$14,906,648.00
- Recipient share:  
\$37,458,715.00

## Barriers

- Economic recession
- Manufacturer preparedness
  - disproportionate supply & demand

## Partners

Multiple entities are partnered on this project (**33 total**) :

- Governments & Municipalities
- Private Corporations
- Universities
- School Districts

# Objective

## **FY 09 - FY 12 Project:**

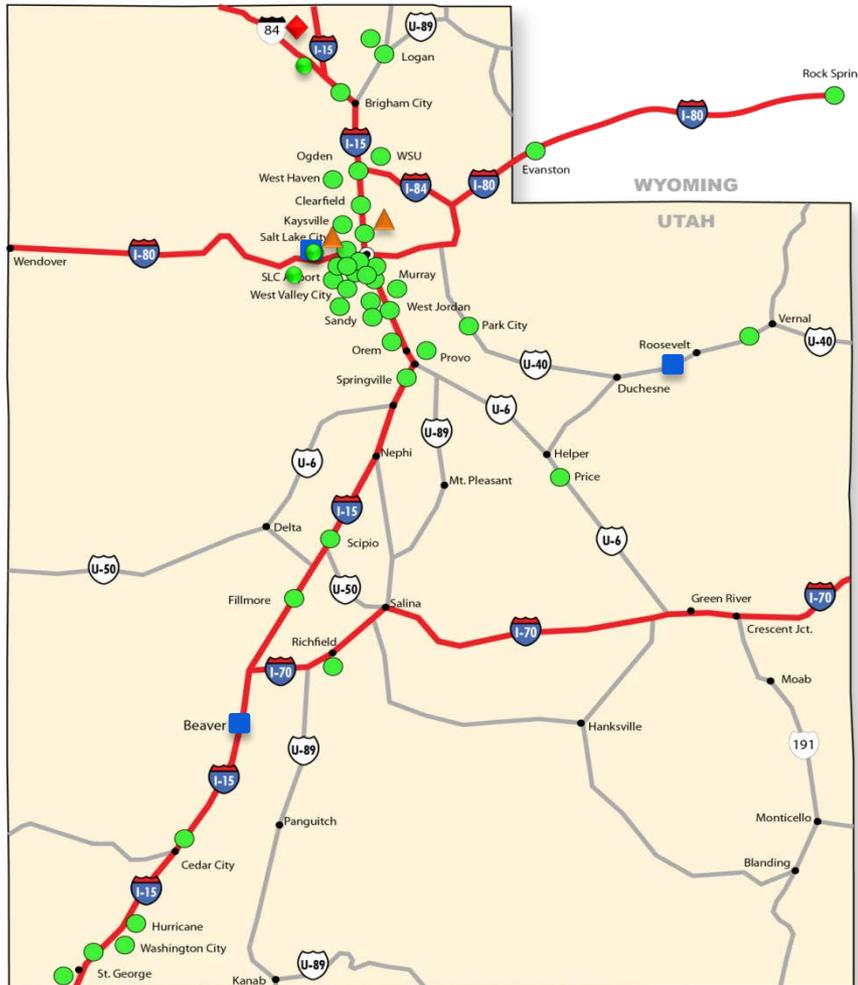
Utah Clean Cities Transportation Sector Petroleum Reduction Technologies Program

## **Project Objective:**

To reduce petroleum use in Utah's transportation sector by:

- increasing the number of CNG, LNG, Hybrid, Electric & biodiesel vehicles on the road
- creating fuel corridors for alternative fuels vehicles (i.e. an I-15 corridor)
- helping to ensure fleets do not have to sacrifice jobs in their efforts to reduce their consumption of petroleum

# Alternative Fuels Station Map



- CNG
- ◆ Biodiesel
- C/LNG
- LNG
- ▲ Electric Charging Stations

# Approach

- Sub-recipient contracts were signed
- All project met with 100% NEPAs were approval
- Once the above parameters were met construction and deployment began
- Partners and plans were adjusted to meet sub-recipient's needs throughout the course of the projects
  - All changes were subject to a new round of NEPA & DOE approval
- **Stations and vehicles were shifted to existing and new partners, in order to meet the grant parameters**
- In the final stages of deployment, mileage & fuel tracking has commenced
- Training courses for ARRA recipients

# Utah Clean Cities Coalition Milestones

<u>May 2010</u>	75 % of the vehicle NEPA's approved 25% of the approval vehicle NEPA's have been ordered 75 % of the infrastructure NEPA's have been approved
<u>June 2010</u>	100% of the sub-contract agreements are signed 80% of the infrastructure NEPA's have been approved 50% of the approved infrastructure is under construction
<u>July 2010</u>	100% of vehicles NEPA's approved
<u>August 2010</u>	25% of the vehicles are deployed and tracking fuel and mileage 50% of the vehicles ordered
<u>June 2011</u>	<b>44% replacement of recipients</b> 25% replacement of approved vehicle NEPA 25% replacement of approved infrastructure NEPA 50% of the infrastructure is completed
<u>August 2011</u>	50% of the vehicles are deployed and tracking fuel and mileage

# Utah Clean Cities Coalition Milestones

## New Recipient Turning Point

<u>Sept. 2011</u>	75% of the new recipient vehicle NEPA's approved 75% of the new recipient infrastructure NEPA 's have been approved
<u>Nov.2011</u>	75% of the new recipient vehicles are ordered
<u>Dec. 2011</u>	60% of the vehicles are deployed and tracking fuel and mileage 59% of the infrastructure is completed 75% of the vehicles are deployed and tracking fuel and mileage
<u>Jan. 2012</u>	80% of the new recipient infrastructure NEPA's have been approved
<u>March 2012</u>	90% of the infrastructure NEPA's are approved 85% of the vehicles are deployed and tracking fuel and mileage 25 % of the training & outreach completed 100% of the new sub-contract agreements signed
<u>June 2012</u>	100% of the vehicles are deployed and tracking fuel and mileage 100% of the training & outreach completed
<u>Sept. 2012</u>	100% of the infrastructure completed

# Technical Accomplishments

## 34 alternative fuel stations:

Fully operational: 100% NEPA approval & construction

### 1 Biodiesel station:

Plymouth

### 3 LNG stations:

SLC, Beaver & Myton

### 11 Electric charging stations:

SLC

### 19 CNG stations:

Along the I-15 Corridor from southern to northern Utah



# Technical Accomplishments

- 100% NEPA approval and retrofit of **19 CNG stations**
- 100% NEPA approval and deployment of **544 vehicles**
- 100% of the **33 Sub-recipients agreements signed**
- 15 % of the vehicle mileage and gallons tracking completed for 2 years.



# Project Partners

<u>Allied Waste:</u>	7 CNG refuse haulers
<u>CH<sub>4</sub> Energy:</u>	1 L/CNG & 2 LNG public stations
<u>CNG America:</u>	3 CNG public stations
<u>Go Natural Towing:</u>	3 CNG tow trucks
<u>Jordan School District:</u>	24 CNG School buses 1 private CNG station with time fill hoses
<u>Kennecott Copper Mine:</u>	14 CNG & hybrid vehicles 1 private CNG station with time fill hoses
<u>Kenworth Sales:</u>	2 LNG tractors & 2 CNG tractors
<u>Carbon Cutter:</u>	2 LNG tractors & 1 CNG tractor
<u>Iowa Tanklines:</u>	3 LNG tractors
<u>SLCC:</u>	1 CNG heavy duty
<u>Momentum Recycling:</u>	2 CNG refuse haulers
<u>Ogden City:</u>	1 CNG private station & time fill

# Project Partners

★ <u>Questar Gas Company:</u>	7 CNG public stations, 12 CNG upgrades & 115 CNG vehicles
<u>Robinson Waste:</u>	3 CNG refuse haulers
<u>Salt Lake City:</u>	57 CNG & hybrid vehicles
<u>Semi-Service Inc:</u>	1 CNG public station & 7 CNG vehicles
<u>St. George Express:</u>	5 CNG airport shuttle vans
<u>Student Movement:</u>	3 transit shuttle buses
<u>State of Utah:</u>	135 CNG & hybrid vehicles, 6 CNG station upgrades & 6 electric charging stations
<u>Syracuse City:</u>	10 hybrid vehicles
<u>Sysco Intermountain:</u>	5 CNG tractors
<u>Utah Clean Cities:</u>	2 CNG vehicles
<u>Uintah School District:</u>	1 CNG wheelchair school bus

# Project Partners

<u>University of Utah:</u>	8 CNG shuttle buses & 4 hybrid vehicles 1 CNG public station
<u>UPS:</u>	34 LNG tractors
<u>Utah Paper Box:</u>	1 Chevrolet Volt & 2 Nissan Leafs 5 electric charging stations
<u>Utah State University:</u>	5 CNG shuttle buses & 15 hybrid vehicles
<u>Utah Transit Authority:</u>	20 hybrid electric mass transit buses
<u>Washington City:</u>	26 CNG vehicles & 1 CNG street sweeper 1 CNG station
<u>Waste Management:</u>	20 CNG refuse haulers & 1 CNG station
<u>Wasatch CNG:</u>	1 CNG public station
<u>Washakie Renewable:</u>	1 Biodiesel station
<u>Williams/Northwest Pipeline:</u>	7 CNG vehicles

# Future Work

- Complete Alternative Fuels workshop training with partners
- Collaboration with highway signage for station locations
- Partner's Success Stories
- Continued tracking of miles and gallons
- Utah's Fueling the Future educational supplement for schools



# Why Support Clean Cities?

- Expert advise on cost share & match for grant applications
- Technical support from stakeholders to potential fleets
- Establish resale market: Resale 10% to 30% higher than OEM vehicles
- Establish economic & air quality benefits
- Short term & long term goals for fleets
- Provides expertise in grant writing
- Share your success story
- Partner network



# Summary

- Significant increase in public awareness
- 19 CNG station upgrades
- 34 Alternative fueling stations
- 544 new alternative fuel vehicles deployed
- Over 300 jobs created during construction
- **Over 100 jobs retained**
- Over 1 million GGE's a year  
= **Reduced foreign oil dependence**
- Growth in partnership & resale market for fleets & consumers



# Contact Information

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