



# Clean Start

## **Development of National Liquid Propane (Autogas) Refueling Network, Clean School Bus/Vehicle Incentive & Green Jobs Outreach Program**

David Day (P.I.)

Todd Ewing-Presenter

Texas State Technical College

May 18, 2012

Project ID #

ARRAVT059

# OVERVIEW



## TIMELINE

Start Jan 2010  
End Dec 2013  
>50% complete

## BARRIERS

- Site Incompatibility
- Delay in Site Permitting
- Equipment/Construction Delay

## BUDGET

-DOE	- \$12.3M
-Cost Share	- \$24.5M
<hr/>	
-Total	- \$36.8M

## PARTNERS

- CleanFUEL Holdings, Inc.
- Public Solutions Group, Ltd.
- Rush Truck Centers
- Clean Cities Coalitions

# OBJECTIVES



- Increase use of Autogas AFVs, reduce dependence on imported petroleum, improve emissions
- Install infrastructure to support alternative fuels
- Ensure support to Autogas vehicles
- Provide program training & benefits analysis
- Measure success through implementation of vehicle deployment, infrastructure creation and alternative fuel technician training efforts

# Project Scope



- Develop nationwide Autogas refueling network
- Provide “green” job training for U.S. military veterans and “at-risk” service technicians
- Incremental cost support for LP school buses
- State-of-the-Art training/maintenance facility in major metropolitan areas
- Educate public of economic and environmental benefits of using Autogas

# Develop Refueling Network



- Develop a total of 184 public accessible Autogas refueling stations in the following targeted cities:
  - Atlanta, Chicago, Houston, Denver, Sacramento, Los Angeles, Dallas, Phoenix, Indianapolis, Seattle, Orlando, San Diego, St. Louis, San Antonio, Oklahoma City, Austin and southwest Louisiana
  - Site revision depending on need and existing barriers

# Training



- Train U.S. Veteran and “At Risk” service technicians
  - Identify trainee personnel through Clean City Coalitions
  - Use marketing and outreach to identify potential trainees
  - Target metropolitan areas for training ASE technician in Alternative Fuels certification

# Cost Support for New Autogas Buses/Vehicles



- Los Angeles Unified School District (LAUSD)
  - Purchase 90 LP buses in Los Angeles Fleet
- LPG Utility Trucks/Shuttles
  - Delta Liquid Energy (Qty. 2 trucks)
  - Anaheim Resort (Qty. 8 shuttles)
  - City of Torrance, CA (Qty. 3 trucks)
  - UC Irvine , CA (Qty. 2 trucks)
  - LB Gas Company, CA (Qty. 1 Truck)
  - Salley Propane, CA (Qty. 1 Truck)
  - Plumas, CA (Qty. 1 Truck)

# State-of-the-Art Training



- Training by Texas State Technical College
- Training in partner cities:
  - Over 150 technicians trained:
  - Austin, Houston, St. Louis, Atlanta, Waco, Sacramento, Cincinnati, Kansas City, Birmingham, Denver, San Antonio
  - Site revision depending on need and existing barriers



# Marketing & Outreach



- Program Announcements
- Station Grand Opening Events
- LPG Vehicle & Fuel Education
- Vehicle Signage
- Participating Clean Cities Partners
  1. Central Texas Clean Cities
  2. Alamo Area Council of Governments
  3. North Central Texas Clean Cities
  4. Atlanta Clean Cities
  5. Middle Georgia Clean Cities
  6. Chicago Area Clean Cities
  7. Houston-Galveston Area Council
  8. Greater Sacramento Clean Air Coalition
  9. St. Louis Regional Clean Cities
  10. Central Indiana Clean Cities
  11. Greater Baton Rouge Clean Cities
  12. SE Louisiana Clean Fuel Partnership
  13. Central Oklahoma Clean Cities
  14. Florida Space Coast Clean Cities
  15. Puget Sound Clean Cities
  16. Southern California Association of Governments
  17. San Diego Regional Clean Cities

# Collaboration



Working in partnerships with:

- CleanFUEL Holdings, Inc.
- Public Solutions Group, Ltd.
- Rush Truck Centers
- Clean Cities Coalitions

# Future Work



Develop 184 public accessible refueling stations

Operational sites:

- California (Qty. 9)
- Arizona (Qty. 4)
- Colorado (Qty. 4)
- Texas (Qty. 3)

Pending Sites:

Arizona (Qty. 8)  
California (Qty. 6)  
Colorado (Qty. 5)  
Georgia (Qty. 6)

Texas (Qty. 12)  
Florida (Qty. 1)  
Indiana (Qty. 1)  
Washington (Qty. 10)

# Summary



- Build public awareness through Clean City Coalition activities
- Build infrastructure for public access of autogas refueling stations
- Train ASE certified technicians to service LP vehicles
- Reduce emissions
- Reduce dependency on foreign oil