



# ADVANCING NEW MEXICO'S ALTERNATIVE FUELS

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# OVERVIEW

## TIMELINE

- Project Start Date:  
January 28, 2013
- Project End Date:  
January 27, 2015
- Percent Complete: 58%
- Funding received with  
FY13 and FY14 funds

## BUDGET

Total project funding: \$863,070

- DOE share: \$500,000
- Cost share: \$363,070

Percentage of DOE Funds Spent  
to Date (March 2014): 32%  
(\$162,392); Cost Share received  
\$129,568 (March 2014) 35%

## BARRIERS

- Availability of alternative fuels and  
electric vehicle charging stations
- Availability of AFVs and electric  
drive vehicles
- Consumer reluctance to purchase  
new technologies
- Lack of technical expertise with  
new fuels and vehicle technologies

## PARTNERS

- Roush Clean Tech
- City of Farmington
- San Juan College
- City of Santa Fe
- International CNG
- NM Propane Gas Association
- Renewable Energy Lincoln County
- New Mexico Gas Company
- New Mexico Public Transit Association
- Apache Corporation
- San Juan County
- Clean Energy Fuels
- NM Junior College
- Verdek
- Rich Ford

# OVERVIEW (Continued)

## In-kind Partner Contributions

- Roush Clean Tech – training, technology & personnel
- NM Propane Gas Assoc. – contacts, misc. resources & personnel
- City of Farmington – fleet vehicles & personnel
- San Juan College – facilities, equipment & personnel
- Rich Ford – facilities, vehicles , expertise & personnel
- City of Santa Fe – facilities, infrastructure & vehicles
- International CNG -- expertise, misc. resources and personnel
- Apache Corporation – expertise, misc. resources & personnel
- San Juan County – fleet, vehicles & personnel
- Clean Energy Fuels – expertise & infrastructure
- NM Junior College – contacts, facilities & personnel
- NM Public Transit Association – contacts, fleets & misc. resources
- New Mexico Gas Company – expertise, facilities & misc. resources
- Verdek – equipment & personnel
- Plus many “informal” partners not listed

# RELEVANCE

## OBJECTIVES:

- Increase use of NM produced natural gas and propane
- Develop a well-trained workforce; expand CNG & LPG vehicle use; build fleet capacity at existing refueling sites; support public and private entities; and establish future refueling sites and fleets, powered by gaseous fuels

## SUPPORTS VTP DEPLOYMENT GOALS:

- Increase number of and access to CNG & LPG fueling stations as well as CNG & LPG powered vehicles

- Provide technical and educational assistance to communities and promote a understanding of the proper, most beneficial use of these alternative fuels.

## MAJOR BARRIERS:

- Availability of compressed natural gas (CNG) and propane (LPG) station infrastructure
- Lack of funding for incremental cost of CNG and LPG vehicles
- Reluctance to purchase new technologies
- Shortage of well-trained and experienced technical work force

# APPROACH & STRATEGY

## TASK 1: Project Management and Administration

- Project planning and implementation, internal financial and in-kind contribution tracking , DOE reporting

## TASK 2: Policy Initiatives

- Assess current and planned policies, permitting and codes, AFV road signage evaluation, technician licensing, weights and measures standards
- Follow through on Governors' commitment to MOU that urges OEMs to produce natural gas vehicles

## TASK 3: Barrier Reduction Initiatives

- Fleet specific fuel reduction plans, weights and measures conflicts, infrastructure policies, education, local barrier assessment

## TASK 4: Safety and Training Initiatives

- General safety practices, operation and maintenance workshops, training, code and safety concerns, First Responder training, customized fleet training, curriculum development

## TASK 5: Market Development/Outreach Initiatives

- Infrastructure development guidance, CNG & LPG workshops, road maps for AFV development, education on fuel-reduction strategies

## TASK 6: Development of Public Information Products

- Incorporate DOE feedback into information packets

# PROJECT & TECHNICAL ACCOMPLISHMENTS

- ISL G CNG Engine Technology -- December 2013
- Bi-fuel CNG Conversion -- December 2013
- CNG Familiarization/Cylinder Safety -- January 2014
- Roush LPG Vehicle Overview -- February 2014
- CNG Familiarization/Cylinder Safety -- March 2014
- Numerous CNG & LPG light- and medium- duty vehicle classes planned
- 76 Students (as of March 2014)
- City of Albuquerque Transit -- 34 CNG bus replacement
- CNG & LNG legislation (GGE/DGE & CNG, LNG, LPG Fuels Tax)
- NM Gas Company/TECO infrastructure planning
- First Responder Training outreach and scheduling
- CNG & LPG fueling station signage, web and social media posting
- CNG & LPG stations under construction or planned in 2014

# MILESTONES

**Period 1:** Conducted state-wide community meetings for CNG & LPG outreach and education workshops: Farmington, Aztec, Bloomfield, Santa Fe, Albuquerque, Socorro, Deming, Gallup and Hobbs

Established alternative fuel signage and route-finding policies along New Mexico Interstates

Coordinated in-kind support for concentrated efforts around the state

**Period 2:** Complete state-wide community meetings for CNG & LPG outreach and education workshops: Las Cruces, Ruidoso, Artesia, Roswell, Deming, Lordsburg, Hobbs

Conduct First Responder Training Albuquerque and Santa Fe; compile final project report





# COLLABORATION & COORDINATION with PROJECT PARTNERS

- Farmington/Aztec/Bloomfield Economic Development and CNG infrastructure planning
- NM NGV Coalition Networking
- Land of Enchantment and Southern Colorado Clean Cities Collaboration
- NM Governor Martinez' signing of NGV legislation
- Labor, facilities and resource sharing in all project areas
- Cities of Albuquerque, Santa Fe, Gallup, Farmington, Aztec, Bloomfield, Socorro, Deming, Hobbs, Las Cruces infrastructure



# ALTERNATIVE FUEL MARKET EXPANSION

- CNG & LPG Stations:
  - Aztec (CNG & LPG) -- Upgraded in 2014, with expansions planned
  - Deming (CNG) -- Built with station and fleet expansion in 2014
  - Gallup (CNG & LPG)-- Designed, to be built later in 2014
  - Farmington (1 or 2 CNG) -- Designed, to be built later in 2014
  - Albuquerque (1 or 2 CNG)-- Designed, to be built later in 2014
  - City of Santa Fe (CNG) – Upgraded in 2014, with fleet expansion planned

# PROPOSED FUTURE WORK AND ACTIVITIES

- Build CNG infrastructure concurrent with NGV deployment
- Identify LPG “autogas” niche markets, with adequate dispensing
- Reduce fuel prices and payback term – CNG & LPG
- Update state Gas Handlers Licensing requirements
- Expand CNG Cylinder Inspection & Maintenance training
- Establish testing for Weights and Measures inspection
- Develop curricula appropriate for NM fleets/technicians

# SUMMARY

- The State of New Mexico Energy, Minerals and Natural Resources Department is educating agencies and communities on NM produced CNG & LPG.
- Outreach and education remains a critical factor in the expansion of alternative fuels around NM.
- Partnerships are expanding with new companies and community leaders in NM and will continue to grow over time.
- Infrastructure growth is dependent on political will, cost of equipment and CNG/LPG vehicle availability and deployment.