Southeast Propane Autogas Development Program

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Virginia Clean Cities at James Madison University

Project ID #ARRAVT065
Prepared March 2011

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

Timeline
- December 7, 2009
- December 6, 2013
- Less than 50% Complete

Barriers & Risks

Barriers
Lack of Familiarity about Propane Autogas as an Alternative Engine Fuel

Top Risks
- Quality Control
- Improper Training & Education
- Service & Performance of Conversion System
- Inadequate Communication

Partners
- Project Lead: DMME, Division of Energy
- Project Manager: Virginia Clean Cities at James Madison University
- Strategic Partners:
  - Alliance Autogas
  - Municipalities & Private Transportation Companies
  - Clean Cities Coalitions
  - MSM Communications

Budget
- Total Project Funding
  - $8,605,100
  - $10,449,184
Project Objectives

- Convert more than 1,000 vehicles to propane autogas as a means to reduce U.S. dependence on imported petroleum, increase fuel economy and improve emissions.

- Install propane fueling infrastructure that supports project vehicle and general public refueling.

- Ensure that converted vehicles use propane autogas fuel to the greatest extent possible and collect quantitative and qualitative data to document the success of the program.

-continued-
Relevance

Project Objectives

Create and retain jobs in the areas of:

- construction of fueling facilities
- the training of conversion center and fleet technicians
- the procurement and distribution of propane autogas
- the administration of the integrated program of Alliance AutoGas.
- marketing and communications specialization for alternative fuels and propane autogas fuel

-continued-
Relevance

Project Objectives

Provide appropriate education and promotion for individuals associated with this project and those in the larger community.

– Create immediate and sustainable interest in propane autogas for fleet applications from Maryland to Florida to Mississippi. Recognize and promote participating fleets.

– Change the way fleet operations as well as the public view propane vehicles and alternative fuels in general from a difficult logistical challenge to a logical business decision with direct, positive economic impacts. Address ability to utilize existing fleet vehicles, and educate about fuel cost savings and tax credits available.
## Approach

<table>
<thead>
<tr>
<th>Month/Year</th>
<th>Project Milestone</th>
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<tbody>
<tr>
<td>May-11</td>
<td>Both public and private web-sites launched for project</td>
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<tr>
<td></td>
<td>Vehicle conversions begin 2nd Phase, with initial beta test at start</td>
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<tr>
<td>Jun-11</td>
<td>Full scale conversion begins and comprehensive conversion schedule coordinated</td>
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<tr>
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<td>Fleet infrastructure for original fleets now operational</td>
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<tr>
<td>Jul-11</td>
<td>Completion of equipment order</td>
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<tr>
<td></td>
<td>Begin full scale advertising and PR campaign with press releases, media pitching, events</td>
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<tr>
<td>Aug-11</td>
<td>35% vehicle deployment; periodic audits for quality control and best practices</td>
</tr>
<tr>
<td>Sep-11</td>
<td>Final equipment order inventory and audit</td>
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<td></td>
<td>Complete production of fueling station leave behind / wayfinding signage</td>
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<tr>
<td>Nov-11</td>
<td>Schedule propane road shows in nine state area with Clean Cities partners</td>
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<tr>
<td></td>
<td>100% infrastructure development complete</td>
</tr>
<tr>
<td></td>
<td>Project success stories video production and case studies development</td>
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<tr>
<td>Dec-11</td>
<td>Production of road show materials</td>
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<tr>
<td></td>
<td>95% vehicle deployment</td>
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<tr>
<td>Mar-12</td>
<td>Vehicle performance audit and maintenance assessment</td>
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<tr>
<td></td>
<td>Phase 2 of video success stories, case studies</td>
</tr>
<tr>
<td>Mar-12</td>
<td>100% completion of training activities for first responders and vehicle operators</td>
</tr>
<tr>
<td></td>
<td>Road show events begin</td>
</tr>
<tr>
<td>May-12</td>
<td>Finalize best practices for vehicle conversions</td>
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<tr>
<td>Sep-13</td>
<td>100% propane road shows complete</td>
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<td>Nov-13</td>
<td>100% outreach/education activities completed</td>
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# 2010 Technical Accomplishments & Progress
(Previous Year Activities Summary)

<table>
<thead>
<tr>
<th>Month/Year</th>
<th>Project Milestone</th>
<th>Progress To-Date as of December 31, 2010</th>
</tr>
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<tbody>
<tr>
<td>May-10</td>
<td>All Conversion Center NEPA EQs submitted and approved 91% conversion equipment ordered</td>
<td>All Conversion Center NEPA EQs submitted and approved 67% Conversion Equipment ordered</td>
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<tr>
<td>Jun-10</td>
<td>All Infrastructure NEPA EQs submitted and approved 100% conversion centers certified</td>
<td>Site preparation complete for 75% of original infrastructure locations; with 90% of original fleet Infrastructure NEPA's submitted 7 fleets with 16 refueling facilities operational 8 of 9 conversion centers certified Marketing strategy and marketing plan complete</td>
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<tr>
<td>Jul-10</td>
<td>Full marketing plan complete 50% web presence developed (not to include final online reporting)</td>
<td>On-line reporting launched, 75% web presence developed</td>
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<tr>
<td>Aug-10</td>
<td>100% sub-recipient agreements executed</td>
<td>Sub-recipient agreements signed with 27 of 31 sub-recipients; only new fleet agreements remaining 10% of conversions completed, but schedule delayed while installation process reviewed and revised.</td>
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<tr>
<td>Oct-10</td>
<td>25% vehicle deployment</td>
<td>Partner revisions to installation process and revisions to manuals, process; technical consultation.</td>
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<tr>
<td></td>
<td>25% infrastructure development complete</td>
<td>Education and outreach strategy under development</td>
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<tr>
<td>Nov-10</td>
<td>50% vehicle deployment 50% infrastructure development complete 100% web presence developed including online reporting</td>
<td></td>
</tr>
<tr>
<td>Dec-10</td>
<td>75% vehicle deployment 75% infrastructure development complete</td>
<td></td>
</tr>
<tr>
<td>Jan-11</td>
<td>91% vehicle deployment 100% infrastructure development complete</td>
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<tr>
<td>Feb-11</td>
<td>100% completion of training activities for first responders and vehicle operators 100% conversion equipment ordered</td>
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<tr>
<td>Mar-11</td>
<td>100% vehicle deployment</td>
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<td>Apr-11</td>
<td>100% propane road shows complete</td>
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<td>May-11</td>
<td>Vehicle conversions begin 2nd Phase, with initial beta test at start</td>
<td>DOE approval of new project management plan</td>
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<td>Both public and private web-sites launched for project</td>
<td>Quality control measures documented and thorough training before conversions restart; all 9 conversion centers certified</td>
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<td>Jun-11</td>
<td>Full scale conversion begins and comprehensive conversion schedule coordinated</td>
<td>Coordinate with fleets to schedule vehicle conversions</td>
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<td>Fleet infrastructure for original fleets now operational</td>
<td>Conversion process Phase 2 underway</td>
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<td>Completion of equipment order</td>
<td>Fleet infrastructure for original fleets now operational</td>
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<td>Begin full scale advertising and PR campaign with press releases, media pitching, events</td>
<td>First group of 108 converted vehicles on the road</td>
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<td>Aug-11</td>
<td>35% vehicle deployment; periodic audits for quality control and best practices</td>
<td>Data tracking and documentation system in place for all project partner groups</td>
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<td>Sep-11</td>
<td>Final equipment order inventory and audit</td>
<td>Planning with conversion kits vendor for July order</td>
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<td>Complete production of fueling station leave behind / wayfinding signage</td>
<td>Regular communications with partners on project activity for support and information</td>
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<td>Nov-11</td>
<td>Schedule propane road shows in nine state area with Clean Cities partners</td>
<td>Marketing, PR and advertising campaign implementation underway</td>
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<td></td>
<td>100% infrastructure development complete</td>
<td>Website launched, vehicle decals, signage, logo's produced and distributed</td>
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SOUTHEAST PROPANE AUTOGAS DEVELOPMENT PROGRAM
ORGANIZATIONAL CHART

SPONSOR/FUNDING AGENCY
Department of Energy (DOE)
Primary Role: Oversee project activities and ensure they are in accordance with negotiated terms and conditions, and meet DOE goals and objectives.

PRIME AWARD RECIPIENT
Virginia Department of Mines, Minerals, and Energy (DMME)
Primary Role: Award administrator and pass-through entity. Ensure compliance with ARRA, DOE and state terms & conditions.

PROJECT MANAGER
Virginia Clean Cities (VCC) at James Madison University (JMU)
Primary Role: Overall award and project manager. Ensures project is completed on-time, within budget, and exceeds expectations. Daily project monitor and liaison between sponsor agency (DOE) and project partners. Responsible for ensuring information and data is collected to comply with reporting duties. Identifies and mitigates risks.

SUB-RECIPIENTS

FLEET PARTNERS:
Primary Role: Convert vehicles for propane usage
- ABS Vans
- Blossman Gas
- Carroll County Sheriff's Office
- Cobb County
- Frederick County Sheriff's Office
- Greenville County
- Hopewell
- James Madison University
- Kingsport
- Lewis Pest Control
- Limousine Livery
- Muscogee County Sheriff's Office
- Newport News
- Old Dominion University
- Peninsula Propane
- Pickens County
- Red Top Cab
- Veolia Transportation
- Vestavia Hills

CLEAN CITIES COALITION PARTNERS
Primary Role: Support education & outreach
- Alabama Clean Cities
- Clean Cities Atlanta
- Mississippi Economic Development Partnership
- Palmetto State Clean Cities Coalition
- Tennessee Clean Fuels Coalition

CONVERSION CENTERS
- American Alternative Fuel
- Baker Equipment
- Brooks Chevrolet
- Bus Group
- Force 911
- German Motor Werks
- Greenville
- Light-N-Up
- Peninsula Propane

BLOSSMAN GAS / ALLIANCE AUTOGAS
Primary Role: Support refueling infrastructure installation and maintenance.

AMERICAN ALTERNATIVE FUEL
Primary Role: Provide conversion equipment for vehicles (PRINS), support vehicle conversions, train technicians, and provide support to conversion centers.

MSM COMMUNICATIONS
Primary Role: Support marketing, education and outreach efforts.

PROPANE EDUCATION AND RESEARCH COUNCIL
Primary Role: Support education and training efforts.
Partners and Collaborators

- Veolia Transportation Baltimore
- Limousine Livery
- City of Vestavia Hills, Alabama
- Kingsport, Tennessee
- Frederick County, Maryland
- Cobb County, Georgia
- Lewis Pest Control, Inc.
- City of Hopewell, Virginia
- James Madison University
- Peninsula Oil & Propane
- Greenville County
- Veolia Transportation Dulles
- Red Top
- ABS Vans
- Peck's County, South Carolina
- Blossman Propane Gas & Appliance
Planned Activities for 2011

May - December 2011

- Complete “beta test” for conversion resumption May 2011
- Complete equipment ordering July 2011
- Complete vehicle conversions with target completion (35% by August 2011; 95% by Dec 2011)
- Complete remaining NEPA actions for new fleet infrastructure
- Complete new fleet infrastructure development November 2011
- Marketing and PR Campaign underway with media releases, events
- Website and online reporting site launched April 2011
- Collaborate with Argonne on analysis of data collected
Summary

- This is the first comprehensive and coordinated southeast region propane autogas program in the nation and in our history.
- Specific and comprehensive data will be collected on around 1,000 vehicles all being converted using the same system; variety of public and private fleets participating.
- Team assembled brings unique ability to leverage program far beyond proposed objectives and market program through the southeast region in a variety of ways – media, internet, video, road show events.
- Estimated that 12 million gallons of gasoline will be displaced and over 12,000 tons of air pollutants averted over the 4 years of the project.
- Estimated that around 100 jobs will be created or retained throughout the 4 years of the project.
- We are well positioned to spend 70% of funds within 18 months.
The Whole Package!

FLEET VEHICLES
- Cars / Trucks / Van & Shuttles

CERTIFIED CONVERSION CENTER
CONVERSION + TRAINING
- Alliance AutoGas provides training for Certified Technicians
- Prins Vapor Sequential Injection Systems Installed
- Alliance ensures Prins system is EPA-certified for make/model
- Dot Certified fuel tanks installed

FUELING + SUPPORT
- Alliance installs AutoGas station at fleet base
- Provides operational & safety training for operators
- Provides fuel with 100% availability guarantee
- Provides ongoing technical/safety support & service

Our Fleet Customers make a commitment to achieve:
- Lower fuel costs
- Lower emissions
- Less dependence on foreign oil
- Without sacrificing power
- Without sacrificing performance

When Alliance AutoGas converts vehicles into AutoGas hybrids, we use Certified Technicians working in Certified Conversion Centers. That means our fleet customers receive:
- The highest quality equipment
- Installed by the best technicians
- With tight quality & process control

Each of our fleet customers is:
- Displacing thousands of gallons of gasoline with propane AutoGas
- Using a fuel that is 90% produced in the U.S.
- Fueling their vehicles right at the home base
- Using a cleaner, less expensive alternative to foreign oil