Carolina Blue Skies & Green Jobs Initiative

Kathy Boyer
Triangle J Council of Governments
May 16, 2012

Project ID #
ARRAVT064

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

Timeline

- May 1, 2010
- April 30, 2014
- 40% Federal Funds Expended as of March 15, 2012

Budget

- Budget: $31,536,659
- $12,004,174 Federal (15% operating/marketing)
- $19,532,485 Contractor

Barriers

- Economic Downturn/Tax Credit Expirations
- Availability of EPA-Verified Technology
- Quality of Vendor/OEM Training

Partners

- Five investigative leads
- 43 sub-recipients
- 88 vendors to date
The Carolina Blue Skies & Green Jobs Initiative is a bi-state effort to create and retain green collar jobs & reduce dependence on foreign oil by increasing availability and use of alternative fuels in North and South Carolina.

**Impact after 18 months of Program Work**

- Over 19.3 FTE created/retained and 73 lives touched
  - (based on FederalReporting.gov allowable calculations—does not account for downstream job creation or cost shared labor)
- Over 325,000 gallons petroleum displaced
- Allowed local governments and businesses to invest in green, money-saving technologies that they would not otherwise be able to do due to the economic downturn.

*Results: increased economic activity and long-term economic growth*
Technical Approach

• Phase I: Execute sub-awards, obtain NEPA approval, deploy vehicles and infrastructure, train end users
  – Large number of sub-recipient required extensive coordination and clear communication
  – Sub-award execution required understanding of unique organizational approval processes, which affected timelines
  – Project partners worked closely with PI’s and vendors to identify appropriate & available technology
    • Vehicle conversions require EPA-verified technology. Verification process was delayed in many cases.
    • EPA released new guidance that allowed for a broader range of vehicle conversions
    • Specific circumstances were examined to determine whether time extensions were needed to complete projects (e.g., municipal requirements for ordering vehicles vs. availability of vehicle technology)
Technical Approach

• **Phase II: Re-focused to include more comprehensive training for sub-recipients**
  – Primary Investigators surveyed sub-recipients to identify training needs
  – Three training categories identified: Operator, Maintenance, and First Responder
  – Primary Investigators attend all trainings in person and submit evaluations and documentation to TJCOG and DOE
  – Follow-up training and/or additional materials is sometimes required

• **Phase III: Data Collection & Monitoring**
  – Sub-recipients upload reports online by the 5th day after quarter ending
  – Primary Investigators review reports and work with sub-recipients to make corrections or fill gaps
  – Primary Investigators work with DOE to coordinate site visits
## Milestones

<table>
<thead>
<tr>
<th>Project Management</th>
<th>Original Date</th>
<th>Revised Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Milestone 1.1</strong>: All subcontract agreements with project partners are finalized.</td>
<td>May 2011</td>
<td>March 2012</td>
</tr>
<tr>
<td><strong>Milestone 1.2</strong>: Revised PMP finalized.</td>
<td>June 2010</td>
<td>June 2010</td>
</tr>
<tr>
<td><strong>Milestone 1.3</strong>: All NEPA submitted and approved.</td>
<td>July 2011</td>
<td>March 2012</td>
</tr>
<tr>
<td><strong>Vehicles (Task 2) &amp; Infrastructure (Task 3)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Milestone 2.1 &amp; 3.1</strong>: 50% of vehicles &amp; infrastructure deployed</td>
<td>August 2011</td>
<td>March 2012</td>
</tr>
<tr>
<td><strong>Milestone 2.2 &amp; 3.2</strong>: 100% of vehicles &amp; infrastructure deployed</td>
<td>April 2012</td>
<td>June 2012</td>
</tr>
<tr>
<td><strong>Training</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Milestone 4.1</strong>: 50% of training to applicable audiences completed</td>
<td>October 2011</td>
<td>May 2012</td>
</tr>
<tr>
<td><strong>Milestone 4.2</strong>: 100% of training to applicable audiences completed</td>
<td>October 2012</td>
<td>October 2012</td>
</tr>
<tr>
<td><strong>Marketing &amp; Outreach</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Milestone 5.1</strong>: Conduct first 2 workshops, complete all templates for brochures, fact sheets, and other marketing materials</td>
<td>Marketing materials, brochures, completed</td>
<td></td>
</tr>
<tr>
<td><strong>Milestone 5.2</strong>: Conduct remaining workshops, complete Drive Clean &amp; Green Tour</td>
<td>Outreach workshops re-focused to training</td>
<td></td>
</tr>
</tbody>
</table>
Technical Accomplishments and Progress

Task 1: Project Management

In eighteen months of program work, Carolina Blue Skies has:

• Executed 43 sub-awards (12 from April 2011-March 2012)
• Negotiated change/expansion of scope with 17 project partners (9 in 2011/2012)
• Identified 20 new partners (10 in 2011/2012)
• Obtained NEPA approval for part or all of 44 projects (16 in 2011/2012)
• Retained over 20 Full-Time Equivalents and 63 lives touched through ARRA funding alone
Technical Accomplishments and Progress

General locations of Blue Skies Projects
Additional vehicles resulted from lower costs than expected and re-allocated funding
Economic downturn and tax credits expiring resulted in reduction in biofuels stations in early 2012.

Staff worked quickly to expand scope of existing partners and identify new partners.

### Task 3: Infrastructure Deployment

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodiesel</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>CNG</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>E85</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td>EV</td>
<td>112</td>
<td>110</td>
</tr>
<tr>
<td>LPG</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Technical Accomplishments and Progress

Task 3: Infrastructure Deployment

137 Total Stations
59 Operational
### Technical Accomplishments and Progress: Sub-recipient Spotlights

<table>
<thead>
<tr>
<th>City of Asheville</th>
<th>Midlands Biofuels</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Doubled capacity of the CNG station</td>
<td>• Recovery Act funds significantly increased Midlands Biofuels capacity</td>
</tr>
<tr>
<td>– Support hospital, AT&amp;T and university</td>
<td>– Staff has increased from 3 full time to 10 full time employees</td>
</tr>
<tr>
<td>• Upgraded 25 vehicles to convert to CNG</td>
<td>– B100 distribution has displaced 34,000 gallons of petroleum</td>
</tr>
<tr>
<td>– In all they’ll have 33 vehicles</td>
<td></td>
</tr>
</tbody>
</table>
Technical Accomplishments and Progress

NC Propane Gas Association F150

City of Asheville CNG Upgrade

City of Hendersonville Street Sweeper

City of Fayetteville Hybrid Bucket Truck
Technical Accomplishments and Progress

OM Biofuels biodiesel infrastructure (left/below)

Midlands Biofuels biodiesel distribution infrastructure (above)
Technical Accomplishments and Progress

- Raleigh deploys 10 propane police vehicles
- Biogen Idec deploys 10 charging stations
Charlotte Airport / DesignLine

- DesignLine manufactured five hybrid buses for Charlotte Airport
- Equipment malfunctions revealed operator, maintenance, and first responder training needs
- After initial training review, DesignLine made extensive improvements to materials and training protocol
- Charlotte Airport & DesignLine will conduct periodic standardized training for all operators, mechanics, and first responders
Collaborations/Partnerships

• Investigative Leads
  – Provide technical and administrative support to primary lead
  – Organize & participate in training activities
  – Review invoices
  – Serve as liaison to project partners in respective regions
  – Serve on Program Committee
Collaborations/Partnerships

- Piedmont Biofuels
- Forest Foundation
- Chatham County
- Orange County
- NC Propane Gas Association
- Mainor Legacy
- City of Fayetteville
- Town of Knightdale
- Advanced Energy
- City of Raleigh
- Durham County
- Greenwood County
- City of Rock Hill
- Midlands Biofuels
- OM Biofuels LLC
- North Carolina State University
- Biogen Idec
- Charlotte/Mecklenburg Utilities
- Glaxo-Smith Kline
- BuildSense
- Frito-Lay
- City of Hendersonville
- Henderson County
- Mission Hospital System
- City of Asheville
- City of Winston-Salem
- City of Greensboro
- City of Rocky Mount
- Guilford County
- City of Charlotte (Charlotte Airport)
- Duke Energy
- Time Warner Cable
- Monroe Oil
- God Bless America
- Palmetto Gas (plus 6 subs)
- Plug In Carolina
- Spinx Company
- University of South Carolina
- Innovation Drive (consultant)
- Charlotte/Mecklenburg Solid Waste
- City of Simpsonville
- Town of Cary
- Cleveland Petroleum
Future Work: April 2012-2013

• Deploy all vehicles and infrastructure by June 30, 2012
• Complete invoicing for vehicles and infrastructure
• Continue to organize ribbon-cuttings and media outreach for completed projects
• Complete training of all sub-recipients
• Organize regular calls with investigative leads
• Continue to ensure compliance with all grant requirements
  – Davis Bacon Wage Compliance
  – Quarterly reporting to FederalReporting.gov
  – Quarterly mileage and fuel dispensing reports
  – Special status reports as needed, including equipment malfunctions and repairs
The Carolina Blue Skies & Green Jobs Initiative is projected to:

- Create/retain over 120 jobs from ARRA funds by 2014
- Displace over 3.7 million gallons per year of gasoline gallon equivalents at project completion

Progress as of March 2012 (18 months of program work):

- 203 vehicles and 59 alternative fuel stations operational
- Millions reached via media, education, and online exposure
- Jobs created and retained with Federal funding