LOS Clean Vehicles Coalition
Clean Cities Program Plan

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INTRODUCTION

The Land-of-Sky Clean Vehicles Coalition (LOSCVC) Program Plan is submitted to the U.S. Department of Energy as application for designation as a member of the Clean Cities network. The purpose of this document is to outline the coalition’s strategy to increase the community’s existing alternative fuel markets. The Coalition serves a population of 457,948 in the five-county area of Western North Carolina including Buncombe, Haywood, Henderson, Madison and Transylvania counties (2010 Census).

Based on fleets that responded to our 2010 Clean Cities Annual Report the local existing alternative fuels market currently includes 1,310 AFVs utilizing Biodiesel, E85, CNG, LPG and Electrics. The existing Hybrid Electric Vehicle market based on reporting fleets is 63 vehicles. However according to the NC Department of Motor Vehicles (NCDMV) there are 1,718 registered hybrid electric vehicles in the five-county area. See AFV Table in Section 10 for more details.

There are 9 public and 12 private biodiesel fueling stations; 3 public and 1 private CNG station; 1 private E-85 station; 5 public LPG stations; and 2 public and 2 private electric charging stations opened in January 2011. Currently, no truck stop electrification systems, LNG stations or hydrogen fuel stations are located in the region.

The Coalition was launched April 8, 2004 with a kickoff event in Asheville. The LOSCVC is staffed by the Land of Sky Regional Council (LOSRC) and has been funded by State Energy Office grants, North Carolina Department of Transportation (NCDOT), Congestion Mitigation and Air Quality (CMAQ) Improvement Program grants, a US Department of Energy (DOE) Clean Cities Carolina Blue Skies & Green Jobs Initiative Grant (CBS Grant) and Progress Energy donations.

Bill Eaker serves as the Coordinator and is able to dedicate 40% to 70% of each work week to the Coalition depending on funding levels. Mr. Eaker is the Environmental Services Manager with LOSRC. His other responsibilities include air and water quality planning and regional environmental initiatives.

Chris Dobbins serves as the Fleet Consultant for the LOSCVC. Chris is the former City of Asheville Fleet Manager and brings many years of fleet and AFV experience to our LOSCVC team. He spends approximately 10 to 25 hours per week depending on funding levels. Other LOSRC staff and interns assist with project and financial management as needed.

Vision Statement - The Land-of-Sky Clean Vehicles Coalition seeks to reduce petroleum use and improve air quality in the five-county region by creating public/private partnerships to enhance the development of an alternative fuel and advanced technology vehicle marketplace and supporting infrastructure.
A. LOCAL BACKGROUND AND HISTORY

1. Coalition Snapshot

General Overview
The Land of Sky Regional Council (LOSRC) is a multi-county, local government planning and development organization. It is one of 17 such organizations in North Carolina and serves Region B, which includes the counties of Buncombe, Henderson, Madison and Transylvania. LOSRC is made up of chief elected officials – mayors and county commissioners and alternates – from the 19 member governments, one private representative of economic development interests in each county and two at-large members. Members meet monthly to plan programs and set policies and goals to benefit the entire region. LOSRC’s mission is to work with local governments, the Region’s leadership and state and federal agencies to foster desirable social, economic, cultural and ecological conditions in the region. More information about the Council and its programs can be found at www.landofsky.org.

The Land-of-Sky Clean Vehicles Coalition is housed at the LOSRC and its service area is comprised of five counties in the western North Carolina region. This area corresponds to the geographic, economic and political boundaries of the Land-of-Sky Regional Council (Buncombe, Henderson, Madison and Transylvania counties) plus Haywood County that is served by LOSRC’s French Broad River Metropolitan Planning Organization (MPO) and Land of Sky Rural Planning Organization (RPO) transportation planning programs.

The Coalition’s five-county service area lies in western North Carolina in the Blue Ridge and Smoky Mountain regions of the Southern Appalachian Mountain Range. The area includes portions of the Great Smoky Mountains National Park, the Blue Ridge Parkway, and Pisgah National Forest. The area has numerous mountain peaks over 5,000 feet and several wide floodplain valleys drained by the French Broad and Pigeon Rivers. Madison and Haywood counties border the State of Tennessee and Henderson and Transylvania counties border South Carolina. The East Tennessee Clean Fuels Coalition serves the area just north and west of our region. There are 457,948 (2010 census) citizens in our five-county service area as follows:
Counties Population:

- Buncombe County – 238,318
- Henderson County – 106,740
- Haywood County – 59,036
- Transylvania County – 33,090
- Madison County – 20,764
  Total - 457,948

<table>
<thead>
<tr>
<th>Town</th>
<th>Population</th>
<th>Town</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asheville</td>
<td>83,318</td>
<td>Weaverville</td>
<td>2,714</td>
</tr>
<tr>
<td>Hendersonville</td>
<td>10,876</td>
<td>Laurel Park</td>
<td>1,901</td>
</tr>
<tr>
<td>Waynesville</td>
<td>8,414</td>
<td>Mars Hill</td>
<td>1,894</td>
</tr>
<tr>
<td>Black Mountain</td>
<td>8,264</td>
<td>Biltmore Forest</td>
<td>1,624</td>
</tr>
<tr>
<td>Mills River</td>
<td>6,539</td>
<td>Clyde</td>
<td>1,422</td>
</tr>
<tr>
<td>Brevard</td>
<td>6,204</td>
<td>Marshall</td>
<td>836</td>
</tr>
<tr>
<td>Fletcher</td>
<td>5,103</td>
<td>Maggie Valley</td>
<td>776</td>
</tr>
<tr>
<td>Canton</td>
<td>4,084</td>
<td>Montreat</td>
<td>673</td>
</tr>
<tr>
<td>Woodfin</td>
<td>3,183</td>
<td>Rosman</td>
<td>576</td>
</tr>
<tr>
<td>Flat Rock</td>
<td>3,086</td>
<td>Hot Springs</td>
<td>557</td>
</tr>
</tbody>
</table>

Incorporated Town’s Population in the 5-County Area
The City of Asheville is the largest municipality in Western North Carolina (WNC) with a population of 83,318 (2010) and is the economic, medical and cultural center of the area. It has recently received national and international attention as a desirable place to visit, work and live. It is especially known for its natural beauty, abundance of outdoor recreation opportunities, friendly people and now the distinction as Beer City USA for 2010 & 2011. Hendersonville (10,876) and Waynesville (8,414) are the second and third largest municipalities.

Highway systems are good with Interstate 40 travelling east-west and Interstate 26 travelling north-south across the region. The Asheville Transit System operates 21 buses (including five new diesel-electric hybrids) primarily within the city and urbanized portions of Buncombe County. Buncombe County’s Mountain Mobility is the county’s community transportation system and recently switched ten vehicles to propane and has plans to switch twelve vans to compressed natural gas (CNG) in 2011. Henderson, Haywood, Madison and Transylvania counties also operate community transportation systems. Communities are working hard to expand bike and pedestrian facilities to increase alternative modes of transportation.

Major employers in the region include Asheville and Buncombe County Schools, Mission Health System and Hospital, Evergreen Packaging, The Biltmore Company, Grove Park Inn Resort and Spa, Asheville and Buncombe County governments, Ingles Markets, VA Medical Center, BorgWarner Turbo and Emissions Systems and the Eaton Corporation.

The following economic statistics highlight some of the region’s key economic indicators as measured by our Economic Development Commission and their area resources.

**Business Patterns**

<table>
<thead>
<tr>
<th>Area</th>
<th>Number of Establishments</th>
<th>Number of Employees</th>
<th>First Quarter Payroll in $1,000</th>
<th>Annual Payroll in $1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asheville MSA*</td>
<td>12,051</td>
<td>156,832</td>
<td>$1,191,103</td>
<td>$4,912,215</td>
</tr>
<tr>
<td>Buncombe County</td>
<td>7,438</td>
<td>106,056</td>
<td>$814,593</td>
<td>$3,376,600</td>
</tr>
<tr>
<td>Haywood County</td>
<td>1,537</td>
<td>14,213</td>
<td>$99,945</td>
<td>$408,988</td>
</tr>
<tr>
<td>Henderson County</td>
<td>2,722</td>
<td>33,426</td>
<td>$258,389</td>
<td>$1,051,636</td>
</tr>
<tr>
<td>Madison County</td>
<td>354</td>
<td>3,137</td>
<td>$18,176</td>
<td>$74,991</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>24,102</strong></td>
<td><strong>313,664</strong></td>
<td><strong>$2,382,206</strong></td>
<td><strong>$9,749,439</strong></td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau 2008
Cost of Living

<table>
<thead>
<tr>
<th>Area Metros</th>
<th>All Items</th>
<th>Food</th>
<th>Housing</th>
<th>Utilities</th>
<th>Transportation</th>
<th>Health Care</th>
<th>Misc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asheville NC</td>
<td>101.1</td>
<td>104.6</td>
<td>97.6</td>
<td>113.4</td>
<td>94.2</td>
<td>104.5</td>
<td>100.6</td>
</tr>
</tbody>
</table>

Note: Indicates relative price levels for consumer goods and services. The average composite index for the nation is 100%, and each city's index is read as a percentage of the overall average.

Source: ACCRA Cost of Living Index, Third Quarter 2010: Published October 2010

Industry Employment

Source: U.S. Bureau of Labor Statistics, August-August

<table>
<thead>
<tr>
<th>Major Industry Employment</th>
<th>2000</th>
<th>2010</th>
<th>% Total Employment</th>
<th>2000-2010 Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Educational and Health Services</td>
<td>21,300</td>
<td>30,500</td>
<td>18.5%</td>
<td>9,200</td>
<td>43.2%</td>
</tr>
<tr>
<td>Government</td>
<td>22,600</td>
<td>26,200</td>
<td>15.8%</td>
<td>3,600</td>
<td>15.9%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>27,300</td>
<td>17,800</td>
<td>10.8%</td>
<td>-9,500</td>
<td>-34.8%</td>
</tr>
<tr>
<td>Retail</td>
<td>21,800</td>
<td>22,200</td>
<td>13.4%</td>
<td>400</td>
<td>1.8%</td>
</tr>
<tr>
<td>Leisure and Hospitality</td>
<td>19,900</td>
<td>23,500</td>
<td>14.2%</td>
<td>3,600</td>
<td>18.1%</td>
</tr>
<tr>
<td>Professional and Business Services</td>
<td>12,300</td>
<td>13,400</td>
<td>8.1%</td>
<td>1,100</td>
<td>8.9%</td>
</tr>
<tr>
<td>Construction</td>
<td>10,700</td>
<td>7,800</td>
<td>4.7%</td>
<td>-2,900</td>
<td>-27.1%</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>5,200</td>
<td>5,800</td>
<td>3.5%</td>
<td>600</td>
<td>11.5%</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>5,000</td>
<td>4,500</td>
<td>2.7%</td>
<td>-500</td>
<td>-10.0%</td>
</tr>
<tr>
<td>Transportation/Utilities</td>
<td>5,600</td>
<td>4,200</td>
<td>2.5%</td>
<td>-1,400</td>
<td>-25.0%</td>
</tr>
<tr>
<td>Information</td>
<td>2,200</td>
<td>2,100</td>
<td>1.3%</td>
<td>-100</td>
<td>-4.5%</td>
</tr>
<tr>
<td><strong>Total All Industries (nonfarm)</strong></td>
<td><strong>160,000</strong></td>
<td><strong>165,300</strong></td>
<td>-</td>
<td><strong>5,300</strong></td>
<td><strong>3.3%</strong></td>
</tr>
</tbody>
</table>
Taxable Sales - Percentage of Regional Sales in the Five-County Area

Source: North Carolina Department of Revenue

Median Household Income 2010

Source: SRC, LLC 2009
Asheville Metro Economy Snapshot

**March 2011 Year-to-Year Change**

- Unemployment Rate -1.6 percentage points
- Total Employment 0.2%
- Number of Homes Sold -10.9%
- Average Price of Homes Sold 3.1%
- Hotel/Motel Sales (Buncombe County) 15.7%
- Airport Activity - Total Passengers -5.3%
- New Residential Permits (total units) -5.2%
- Value of Building Permits -25.5%

Source: U.S. Bureau of Labor Statistics

Asheville Area Rankings

**2011**

- Named a "high-spirited mountain city" among "four scene-stealing, summertime routes around the nation" Wall Street Journal, May
- Listed as top of 2011 Best Places to Retire TopRetirements.com, February
- Included among the 21 Places We're Going in 2011, Fodors, January

**2010**

- Ranked 6th among all US cities as a place to do business Forbes.com, July
- Boasts four (4) of the Top 50 Most Popular Active Adult Communities for 2010 TopRetirements.com, July
- Voted #1 of Top 25 Small Cities American Style, May
• Ranked #21 of Forbes 200 Best Places for Business and Careers Forbes, April
• Included as one of the 10 Best Places for Second Homes Barron’s, March
• Named as one of the five Best Small Towns to live in for Retirement ehow, March
• Listed as #1 of 100 Best Places to Retire TopRetirements.com, February
• Listed as top retirement destination of the top 10 places to retire Market Watch, February

2009

• Ranked #6 Best Metro Places for Business & Careers Forbes.com, March
• Included in 21 Best U.S. Towns for Baby Boomers’ Active Retirement

Coalition History

The LOSCVC was formed in 2004 when the Director of the NC State Energy Office (SEO) asked the LOSRC if it would be interested in seeking Clean Cities designation for the Asheville metropolitan area. There were already designated Clean Cities coalitions in the Raleigh-Durham area (Triangle Clean Cities Coalition housed at Triangle J Council of Governments) and the Charlotte area (Centralina Clean Fuels Coalition housed at the Centralina Council of Governments). The NC SEO provided funding support to establish the Coalition, expand deployment of alternative fuel vehicles (AFV’s) and infrastructure and began work towards designation. The LOSRC was already promoting the use of alternative fueled vehicles through its air quality planning and education programs including the Regional Clean Air Campaign (CAC). Several Clean Air Car Fairs were held in 2001 and 2002 and the CAC was carrying out other education and outreach events. The region was concerned about the area’s air quality and its impacts on the environment, economy and health of its citizens. The LOSRC welcomed the opportunity and resources to expand its efforts to promote low emission vehicles and reduce petroleum use.

A Kickoff Event for the Land of Sky Clean Vehicles Coalition (Clean Cities project) was held on April 8, 2004 at the Top of the Plaza in the Renaissance Hotel in downtown Asheville. Speakers included Asheville Mayor Charles Worley, Hendersonville Mayor Fred Niehoff, US Department of Energy Clean Cities South East Region Manager David Dunagan, NC State Energy Office Director Larry Shirley, and Blossman Gas representative Henry Bodie. A propane gas fueled school bus on a nationwide tour made a stop at the event. Sponsors included the US Department of Energy, NC State Energy Office, Progress Energy, Friends of Great Smoky Mountains National Park and Blossman Gas.
2. **Organizational Structure**

Land-of-Sky Clean Vehicles Coalition
Organizational Structure

![Organizational Structure Diagram]

**LOSRC Board**

The Land of Sky Regional Council (LOSRC) is a multi-county, local government planning and development organization also known as a Council of Governments (COG). It is one of 16 such organizations in North Carolina and serves Region B, which includes the counties of Buncombe, Henderson, Madison and Transylvania. LOSRC is made up of chief elected officials – mayors and county commissioners and alternates – from the 19 member governments, one private representative of economic development interests in each county and two at-large members. Members meet monthly to plan programs and set policies and goals to benefit the entire region. LOSRC’s mission is to work with local governments, the Region’s leadership and state and federal agencies to foster desirable social, economic, cultural and ecological conditions in the region. The LOSRC Board and management staff hire the COG staff including the LOSCVC Coordinator and Fleet Consultant, approve all grants and contracts, and are responsible for all financial management for the Coalition. More information about the Council, its programs and list of Board members can be found at [www.landofsky.org](http://www.landofsky.org).
Coordinator & Fleet Consultant

Bill Eaker serves as the LOSCVC Coordinator and is able to dedicate 50 to 80% of each work week to the Coalition depending on funding levels. Mr. Eaker is the Council’s Environmental Services Manager and has 31 years of experience with LOSRC. His other responsibilities include air and water quality planning and regional environmental initiatives.

Chris Dobbins serves as the Fleet Consultant for the LOSCVC. Chris is the former City of Asheville Fleet Manager and brings many years of fleet and AFV experience to our LOSCVC team. He spends approximately 10 to 25 hours per week depending on funding levels. Collectively, the Coordinator and Fleet Consultant hours total 2/3 to 1 ½ FTE, depending on funding. Other LOSRC staff and interns assist with project and financial management as needed. The recent Mountains to Sea DOE EV Community Readiness Grant enabled us to hire our former Energy Fellow Brian Taylor as a Regional Planner. Brian is leading our Asheville Region EV Planning Initiative and spends 75% of his time on that project.

The Coordinator’s Responsibilities:

- Serve as the primary contact for coalition stakeholders and the public and serve as the liaison between coalition stakeholders and the US Department of Energy.
- Organize stakeholder meetings and events.
- Act as the project manager for the Coalition’s efforts and coordinate various local events to best leverage resources, increase the number of alternative fuel vehicles, and increase alternative fuel use to facilitate petroleum reduction.
- Build consensus among Coalition members to move forward on such things as grant proposals, legislative agendas, technology evaluation, public education, and infrastructure development.
- Represent the Coalition, and communicate effectively in a variety of public and private forums.
- Research grant opportunities and assist stakeholders in securing grant funding for their projects.
- Complete the Clean Cities Annual Report and submit to US DOE.
- Collect and submit gasoline, diesel and alternative fuel prices as requested quarterly for the Clean Cities Alternative Fuels Price Report.
- Draft and submit success stories as requested by DOE Project Management Staff.
- Participate on monthly regional coordinator calls.
- Provide on-going Alternative Fuel Station updates to the Alternative Fuels Data Center.
- Attend regional and national Clean Cities peer exchanges/leadership retreats and/or major industry conferences.
• Maintain Coalition contract documents and files.
• Complete the Re-designation process every three years.
• Notify DOE staff of Coordinator and Coordinator contact information changes.
• Develop Coordinator Transition Plan.

The Coordinator is responsible for developing and updating a Coordinator Transition Plan. This plan will assist the Coalition when the Coordinator leaves his/her position. Currently, our plan is for the LOSCVC Fleet Consultant and other appropriate LOSRC staff (Energy Planners, MPO/RPO Transportation Planners, etc.) to fill in until a new Coordinator can be appointed. All LOSCVC records and files are stored at the LOSRC office and backed up by the LOSRC.

The Coordinator is also responsible for maintaining/improving staff skills through appropriate training. Current training goals include additional EV community readiness, multiple project management, and social media training.

**LOSCVC Steering Committee**

The Steering Committee serves as the primary advisory body to the Coordinator and Fleet Consultant. It is responsible for setting policies, establishing work priorities, overseeing existing programs, developing new initiatives, recruiting new stakeholders, communicating with key stakeholders and local, state and federal agencies and private sector partners, educating local elected officials and state and federal legislators, and assisting in securing funding to sustain the work of the Coalition.

<table>
<thead>
<tr>
<th>Member</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lee McElrath</td>
<td>Manager, Large Accounts, PSNC Energy</td>
</tr>
<tr>
<td>Steve Whaley</td>
<td>Business Development, Alliance Autogas</td>
</tr>
<tr>
<td>Vic Fahrer</td>
<td>Air Quality Engineer, WNC Regional Air Quality Agency</td>
</tr>
<tr>
<td>Keith Bamberger</td>
<td>Information &amp; Communications Specialist, NC Division of Air Quality</td>
</tr>
<tr>
<td>Marcus Jones</td>
<td>Director of Engineering, Henderson County</td>
</tr>
<tr>
<td>Martha Thompson</td>
<td>Community Relations Mgr, Progress Energy</td>
</tr>
<tr>
<td>Matt Raker</td>
<td>Director, Advantage Green, Advantage West</td>
</tr>
<tr>
<td>Terry Albrecht</td>
<td>Director, Waste Reduction Partners, LOSRC</td>
</tr>
<tr>
<td>Melita Kyriakou</td>
<td>Office Manager, Blue Ridge Biofuels, LLC</td>
</tr>
<tr>
<td>Stan Cross</td>
<td>Warren Wilson College/BioWheels RTS</td>
</tr>
<tr>
<td>Reid Conway</td>
<td>Program Manager, State Energy Office</td>
</tr>
<tr>
<td>Maggie Ullman</td>
<td>Energy Coordinator, City of Asheville</td>
</tr>
<tr>
<td>Clint Sheppard</td>
<td>Buncombe County Energy Management</td>
</tr>
<tr>
<td>Chris English</td>
<td>Director, Transportation Sector Project, Blue Ridge Community College</td>
</tr>
</tbody>
</table>
Working Committees

Four working groups were formed as part of the organizational structure to assist with various work related duties. These groups include:

- Education & Outreach Committee (Clean Air Campaign Committee)
- Electric Vehicle Committee
- Gaseous Fuels Committee
- Biofuels Committee

Education and Outreach Committee

This committee assists in developing marketing and educational plans, training programs and materials, newsletters, and informational brochures; and, on outreach activities such as community events, preparing press releases, providing speakers for community meetings and educating fleet operators on AFV’s, fueling stations and the Clean Cities program. This Committee also assists in developing and implementing education and outreach for fuel economy, VMT and idle reduction programs in the region.

<table>
<thead>
<tr>
<th>Member</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Muller</td>
<td>Regional Supervisor, NC Div. of Air Quality</td>
</tr>
<tr>
<td>Keith Bamberger</td>
<td>Information &amp; Communications Specialist, NC Div. of Air Quality</td>
</tr>
<tr>
<td>Victor Fahrer</td>
<td>Air Quality Engineer, WNC Regional Air Quality Agency</td>
</tr>
<tr>
<td>Natalie Murdock</td>
<td>RPO Coordinator, Land of Sky Regional Council</td>
</tr>
<tr>
<td>Lyuba Zuyeva</td>
<td>MPO Planner, Land of Sky Regional Council</td>
</tr>
<tr>
<td>Reid Conway</td>
<td>Program Manager, State Energy Office</td>
</tr>
<tr>
<td>Megan Piner</td>
<td>Environmental Programs Coordinator, Henderson County</td>
</tr>
</tbody>
</table>
**Electric Vehicles Committee**

The EV Committee is responsible for developing a plan to get our communities ready for the roll out of the high speed Plug-In Electric Vehicles and implementing the plan. This includes identifying barriers to the deployment and charging of PEVs and developing strategies to overcome barriers. The Committee works with the Education and Outreach Committee on educational programs re PEVs and charging systems and recommends policy and legislation changes to the Steering Committee for consideration.

<table>
<thead>
<tr>
<th>Member</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harry Brown</td>
<td>Parking Services Manager, City of Asheville</td>
</tr>
<tr>
<td>James Brazell</td>
<td>GM Retired, Chevy Volt owner</td>
</tr>
<tr>
<td>Matt Raker</td>
<td>Director, Advantage Green, Advantage West</td>
</tr>
<tr>
<td>Alison Melnikova</td>
<td>Asst. Town Manager, Town of Waynesville</td>
</tr>
<tr>
<td>Barbara Volk</td>
<td>Mayor, City of Hendersonville</td>
</tr>
<tr>
<td>David Currie</td>
<td>Inspector, Town of Montreat</td>
</tr>
<tr>
<td>Erwin Hani</td>
<td>President, EH Product Development Inc.</td>
</tr>
<tr>
<td>Craig Melby</td>
<td>Owner, The Melby Group, Brevard</td>
</tr>
<tr>
<td>Stan Cross</td>
<td>Warren Wilson College/BioWheels RTS</td>
</tr>
<tr>
<td>Martha Thompson</td>
<td>Community Relations Mgr., Progress Energy</td>
</tr>
<tr>
<td>Maggie Ullman</td>
<td>Energy Coordinator, City of Asheville</td>
</tr>
<tr>
<td>Jeff Joyce</td>
<td>Govt. Relations Mgr., Asheville Chamber of Commerce</td>
</tr>
<tr>
<td>Keith Bamberger</td>
<td>NC Division of Air Quality</td>
</tr>
<tr>
<td>Fred Lewis</td>
<td>President, Haynes Electric Construction Div. of M B Haynes Electric, Asheville, NC</td>
</tr>
<tr>
<td>Keith Fogo/Tom Wooten</td>
<td>City of Hendersonville</td>
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<tr>
<td>Greg Isreal</td>
<td>Dir. of Physical Facilities, Buncombe County</td>
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<tr>
<td>Cyrus Dastur</td>
<td>Project Manager, Advanced Energy</td>
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<tr>
<td>Erika Schneider</td>
<td>Outreach Coordinator, Sundance Power Systems</td>
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<tr>
<td>Mike Waters, PE</td>
<td>Advanced Transportation Manager, Progress Energy</td>
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<tr>
<td>Matt Johnson</td>
<td>Founder, BioWheels RTS</td>
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<tr>
<td>Tracee Humes</td>
<td>Electric Infrastructure Mgr., Eaton Corporation</td>
</tr>
<tr>
<td>Preston Jacobsen</td>
<td>Haywood Community College, Clyde, NC</td>
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<tr>
<td>Dave Erb</td>
<td>Erb Professional Services, Asheville, NC</td>
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<tr>
<td>Garrett Male</td>
<td>Transportation Coordinator, UNC-A</td>
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<tr>
<td>Vernon Daugherty</td>
<td>Dean, Engineering &amp; Applied Tech., AB Tech College</td>
</tr>
<tr>
<td>Jon Snover</td>
<td>Chemistry Faculty, AB Tech College</td>
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Gaseous Fuels Committee

The Gaseous Fuels Committee is responsible for expanding the market for propane and compressed natural gas use in the region. It identifies locations for new fueling infrastructure and approaches fleets with the potential to use these fuels. The committee assists fleet managers interested in developing gaseous fuel vehicle and infrastructure projects and assists in securing funds to implement projects. It works with the Education and Outreach Committee to plan and implement educational programs. It recommends policy and legislation changes to the Steering Committee for consideration.

<table>
<thead>
<tr>
<th>Member</th>
<th>Organization</th>
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<tbody>
<tr>
<td>Lee McElrath</td>
<td>Manager, Large Accounts, PSNC Energy</td>
</tr>
<tr>
<td>Denise Braine</td>
<td>Mountain Mobility, Buncombe County</td>
</tr>
<tr>
<td>David Finder</td>
<td>Director, Energy Smart Products, Blossman Propane</td>
</tr>
<tr>
<td>Tom Wooten</td>
<td>Public Works Director, City of Hendersonville</td>
</tr>
<tr>
<td>Scott Spence</td>
<td>Owner, German Motor Werks of Asheville</td>
</tr>
<tr>
<td>Mike Cervan</td>
<td>Sales Mgr., Altech-Eco Corporation</td>
</tr>
<tr>
<td>Marcus Jones</td>
<td>Director of Engineering, Henderson County</td>
</tr>
<tr>
<td>Par Neiburger</td>
<td>President, Certification Services International</td>
</tr>
<tr>
<td>Steve Whaley</td>
<td>Business Development, Alliance Autogas</td>
</tr>
<tr>
<td>Matt Cable</td>
<td>Henderson Co. Apple Country Transit</td>
</tr>
<tr>
<td>Ray Cockrell</td>
<td>Citizen</td>
</tr>
<tr>
<td>Mark Stevens</td>
<td>Fleet Manager, City of Asheville</td>
</tr>
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</table>

Biofuels Committee

The Biofuels Committee is responsible for expanding the market for biodiesel and ethanol use in the region. It identifies locations for new fueling infrastructure and approaches fleets with the potential to use these fuels. The committee assists fleet managers interested in developing biofuel and infrastructure projects and assists in securing funds to implement projects. It works with the Education and Outreach Committee to plan and implement educational programs. It recommends policy and legislation changes to the Steering Committee for consideration.

<table>
<thead>
<tr>
<th>Member</th>
<th>Organization</th>
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<tbody>
<tr>
<td>Woodrow Eaton</td>
<td>Operations Manager, Blue Ridge Biofuels, LLC</td>
</tr>
<tr>
<td>Steve Wall</td>
<td>Dir. of Policy &amp; Environ. Issues, Biofuels Center of NC</td>
</tr>
</tbody>
</table>
Coalition Contact List – See Appendix A for a Coalition Contact and Stakeholders List including contact information for all Committee members listed above.

3. **Primary Stakeholders**

- **Associations**
  
  - Advantage West’s Advantage Green Program
  - Asheville Chamber of Commerce

- **Businesses**
  
  - Advanced Energy
  - Altech-Eco Corporation
  - Biltmore Estate
  - BioWheels RTS
  - Certification Services International
  - Eaton Corporation
  - MB Haynes Corporation

- **Colleges/Universities**
  
  - Asheville-Buncombe Technical Community College
  - Blue Ridge Community College

<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Role</th>
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<tbody>
<tr>
<td>Ray Cockrell</td>
<td>Citizen</td>
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<tr>
<td>Marcus Jones</td>
<td>Director of Engineering, Henderson County</td>
</tr>
<tr>
<td>Greg Isreal</td>
<td>Director, Physical Facilities, Buncombe County</td>
</tr>
<tr>
<td>Peter Weed</td>
<td>Director, Administrative Services, Metropolitan Sewage District</td>
</tr>
<tr>
<td>Bruce Campbell</td>
<td>Automotive Instructor, Haywood Community College</td>
</tr>
<tr>
<td>Charlie Wilson</td>
<td>Owner, The Organic Mechanic</td>
</tr>
<tr>
<td>Matt Rieger</td>
<td>Automotive Instructor, Blue Ridge Community College</td>
</tr>
<tr>
<td>Garrett Male</td>
<td>Transportation Coordinator, UNC-A</td>
</tr>
<tr>
<td>Megan Piner</td>
<td>Administrative Assistant, Henderson County</td>
</tr>
<tr>
<td>Brian Winslett</td>
<td>Affordable Furnace Service/BRB Board of Directors</td>
</tr>
<tr>
<td>Debbie Northrop</td>
<td>Fleet and Housing Manager, Blue Ridge Parkway, NPS</td>
</tr>
</tbody>
</table>
- Haywood Community College
- University of North Carolina at Asheville
- Warren Wilson College
- Western Carolina University

- Fuel Providers
  - Blossman Propane/Alliance Autogas
  - Blue Ridge Biofuels

- Government Organizations
  - Buncombe County
  - Henderson County
  - City of Asheville
  - City of Hendersonville
  - Town of Black Mountain
  - Town of Montreat
  - Town of Waynesville
  - North Carolina State Energy Office
  - North Carolina Department of Transportation
  - North Carolina Division of Air Quality
  - Western North Carolina Regional Air Quality Agency

- Health Services Provider
  - Mission Health System

- Parks
  - Great Smoky Mountains National Park
  - Blue Ridge Parkway

- Transportation
  - Asheville Transit System
  - Asheville Regional Airport
  - Mountain Mobility (Buncombe County)
  - Apple Country Transit (Henderson County)

- Utilities
  - Metropolitan Sewerage District
  - Progress Energy
  - Public Service of North Carolina (PSNC)
See page (52) for more information on our primary stakeholders.

**Community College Alternative Fuels/Technologies Training**

- **Haywood Community College (HCC) and Blue Ridge Community College (BRCC)** currently offer alternative fuel training programs to students and the community. HCC began offering its Introduction to Alternative Fuel Vehicles in 2009. Bruce Campbell, Automotive Instructor, teaches the course. HCC also received a 2008 NC Biofuels Center grant of $135,848 to develop a small biodiesel production system and to offer courses in biodiesel production. HCC uses the fuel in its diesel vehicles. It collects waste vegetable oil from the county’s schools. The college owns one hybrid and one E-Ride electric. It educates the community about its alternative fuels program during its annual Sustainability Expo held on Earth Day.

- **Blue Ridge Community College (BRCC)** joined the National Alternative Fuels Training Consortium (NAFTC) in 2010 and has integrated many Alternative Fuel designs and concepts into their Automotive Systems Technology Degree program. The LOSCVC organized an Alt Fuels Training meeting in January 2011 to introduce college staff to the alt fuel providers and vehicle experts in the region. BRCC currently offers a curriculum course in emerging automotive technologies which includes an in-depth study of alternative energies for transportation and one Continuing Education course, Introduction to Alternative Fueled Vehicles. BRCC plans to work with local EMS and first responders in 2012 to offer a Hybrid and EV vehicle safety course in continuing education which will prepare these individuals for crash related work procedures. Matt Rieger, one of the Automotive Systems Technology Instructors at BRCC, hosts the Continuing Education courses and has different experts in the field of Alternative Fuels share their experiences as guest speakers.

Blue Ridge Community College has started the initiative for the first Transportation Sustainable Energy Systems Associate Degree Program in the State, which includes training in electric vehicles (EV), Hybrids, Extended Range Electric Vehicles’ (EREV), Compressed Natural Gas (CNG), Propane and Bio-Fuels. Chris English, North Carolina Transportation Curriculum Improvement Project (CIP) Director and Lead Automotive Instructor at Blue Ridge Community College is leading the effort to complete this initiative and develop the first statewide curriculum for alternative fueled vehicles in the NC Community College System. BRCC co-sponsored and hosted the Clean Energy Now Conference on October 8, 2010 that included several sessions on clean transportation and an Odyssey Day event showcasing AFVs and ATVs.

- **Asheville-Buncombe Technical Community College** has established a Sustainability Technology degree program headed up by Mitchell Soren. The program will offer a new Intro to Alternative Fueled Vehicles Program soon. The LOSCVC cosponsored a regional Biodiesel Workshop with AB Tech’s Bio Business Center in 2006. A-B Tech holds an annual Earth Day event and the LOSCVC has a booth and AFV display each year.
• LOSCVC has assisted the National Alternative Fuels Training Consortium (NAFTC) in planning and conducting several AFV/ATV training workshops in the region and we expect to strengthen our partnership with them in the future.

4. Alternative Fuel and Other Petroleum Reduction Technology Activities

The LOSCVC’s stakeholders have worked hard since 2004 to develop AFV markets in the region and we have made significant progress in increasing the use of AFVs/ATVs and building our fueling infrastructure. Stakeholders have shown particular interest in the use of biodiesel, compressed natural gas, propane, gas-electric hybrids, neighborhood low-speed electrics and currently battery and plug-in high speed electrics.

As previously noted, based on responses to our 2010 Clean Cities Annual Report of fleets, the local existing alternative fuels market currently includes 1,310 AFVs utilizing Biodiesel, E85, CNG, LPG and Electrics. The existing Hybrid Electric Vehicle market based on reporting fleets is 63 vehicles. However according to the NC Department of Motor Vehicles there are 1,718 registered hybrid electric vehicles in the five-county area. See AFV Table in Section 10 for more details.

There are 9 public and 12 private biodiesel fueling stations; 3 public and 1 private CNG station; 1 private E-85 station; 5 public LPG stations; and 2 public and 2 private electric charging stations opened in January 2011. Currently, no truck stop electrification systems, LNG stations or hydrogen fuel stations are located in the region.

The following data showing petroleum reductions and Greenhouse Gas reductions by fuel or technology is sourced from the 2010 Clean Cities LOSCVC Annual Report:

![Chart 1 – Gas Gallon Equivalents Reduced By Type -2010](image)
Alternative Fuel Vehicles include Electrics, CNG, LPG and Biodiesel (B5, B20, B50, B90, B100)

Off-Road Vehicles include LPG and Biodiesel

Fuel Economy Improvements include gas electric hybrid, diesel electric hybrid and plug-in gas electric hybrid

VMT Reductions is a reduced work schedule policy 4 - 10hr/day vs. 5 - 8hr/day policy (City of Asheville)

Idle Reduction includes a 31-school idle reduction program

**Biodiesel**

The Coalition’s stakeholders have been very active in expanding the market for biodiesel production and use in the region.

**Blue Ridge BioFuels, LLC**

Blue Ridge Biofuels, LLC (BRB) is the region’s only biodiesel producer. BRB began as the Asheville Biodiesel Coop, a group of biofuels advocates who collaborated to make their own biodiesel for personal use. In 2005, four members of the Cooperative created BRB to provide biodiesel to customers across WNC.
The BRB facility was one of the first businesses to open in the former industrial area now being revitalized and known as the River Arts District along the French Broad River in Asheville.

BRB produces biodiesel using *solely waste grease* as its feedstock collected from over 300 restaurants and kitchens across WNC. With grants, loans and support from the State Energy Office, NC Division of Air Quality, US DOE, NC Green Business Fund, NC Biofuels Center and other organizations (see Grants Table on page 48), BRB has grown tremendously and increased production capacity to 1 million gallons by 2010.

The BRB staff and board members have collaborated with LOS CVC staff and other stakeholders to increase awareness of the benefits of biodiesel to expand the market for biodiesel across the region. Early Coalition activities included:

- Biodiesel workshop to educate petroleum distributors in the region on local biodiesel along with Biodiesel Forums in Haywood and Transylvania counties.
- Partnered with Asheville-Buncombe Technical College’s Bio-Center to conduct a regional Biofuels workshop in 2008.
- Biodiesel presentations have been made at numerous other workshops and conferences in the region including the Clean Energy Now Conference on October 8, 2010.
- Partnered with BRB and stakeholders to educate the public about biodiesel through numerous community events.

BRB has applied to a number of state and federal organizations for biodiesel project funding. The coalition has endorsed most of BRB’s grant and loan proposals. BRB has used their grants to assist commercial station owners to install biodiesel tanks and dispensers at several locations. Several projects were supported through a US DOE Southeast Biofuels Initiative (SEBI) grant.

There are currently 8 commercial stations across the region offering biodiesel ranging from B20 to B99. Most stations are located within Buncombe County and the Coalition plans to work with BRB and others to establish biodiesel pumps in other WNC counties in the next three years. For BRB’s federal, state and other grant funding sources see Table - *Grant Funding* page 48.

Several petroleum suppliers, including Biltmore Oil, Grace Fuel, and Henderson Oil distribute BRB’s biodiesel to their customers thus increasing the market for biodiesel in WNC. BRB markets Bio-Heat directly to its customers. The biodiesel petroleum reduction for Bio-Heat is not included in the petroleum reduction reported in our Clean Cities Land of Regional Council Clean Vehicles Coalition (LOSCVC) Annual Report.

Currently BRB’s production of biodiesel is limited by the amount of waste cooking oil the company can collect. BRB is working to expand its collection program. Part of this
expansion includes a new public cooking oil recycling program in collaboration with the Metropolitan Sewerage District of Buncombe County and Green Opportunities, a community-based green-jobs organization that targets underserved populations. This new initiative is supported by a recent grant from the NC Biofuels Center that aims to increase the availability of biodiesel feed stocks.

- For its efforts to expand biodiesel use in the region, Blue Ridge BioFuels received a 2011 MobileCare Award from the NC Solar Center.

**Other Biodiesel Activities**

The Coalition has assisted several entities in the region to secure grants for biodiesel infrastructure projects including:

- Grant from the State Energy Office to Buncombe County to install a biodiesel tank and dispenser at the County’s solid waste transfer station.

**Buncombe County B20 Pump**

- Assisted Great Smoky Mountains National Park to secure a Clean Fuel Advanced Technology (CFAT) grant from the NC Solar Center to install tanks and a dispenser.

- Recently the City of Asheville and Henderson County have secured Biodiesel Buy-down grants from the NC Division of Air Quality to help offset the cost of using biodiesel.

- Biodiesel use and number of users in the region has grown significantly in the last seven years. Current users include those listed above and:

  Metropolitan Sewerage District  Warren Wilson College
  UNC Asheville              City of Hendersonville
  Mission Hospital          Progress Energy
  Haywood Community College  NC DOT
Biodiesel Crop Research

Biodiesel Crop Research on new feedstocks is underway. Currently no crops are being grown for biofuel production within our five-county region.

- The Mountain Horticultural Crops Research Station in Mills River conducts ongoing agronomic research in perennial grass production crops for biofuels use. Currently, giant miscanthus crops are being grown.

- Appalachian State University is conducting research on Asian grass and different types of algae for use as feedstock for “second generation” biofuels. Supporting this research is the US Environmental Protection Agency (EPA) P3 Awards: A National Student Design Competition for Sustainability Focusing on People, Prosperity and the Planet (2010) for $10,000.

- Statewide, the NC Biofuels Center in Oxford and NC State University in Raleigh lead research efforts. The NC Biofuels Center’s goal is to implement the North Carolina Strategic Plan for Biofuels whereby 10% of liquid fuels sold in North Carolina by 2017 come from biofuels locally grown and produced.

Ethanol

Compared to biodiesel, regional interest in ethanol is more limited. Most regular grade gasoline sold in the region is now E10 but E85 use is very limited. Most state and federal fleets and some local governments have flex fuel vehicles (FFVs) but are not using E85 fuel because these fleets do not have their own E85 tanks and dispensers.

- **City of Asheville** purchased E10 for use at its own fuel station beginning in May 2007 before virtually all gasoline in North Carolina became E10 at retail service stations. This policy has continued to specify E10 through local competitive bids and the North Carolina state contract procurement system even though state contracts permit the use of blends less than E10.
• **Blue Ridge Parkway** has a 500 gallon E85 tank and dispenser that serves 18 FFVs within its Oteen District in Asheville. Parkway staff is interested in securing grant funds to install additional tanks to serve FFVs in other districts and our Coalition is investigating funding sources (e.g., DOE National Parks Initiative funds).

![Blue Ridge Parkway E-85 Station](image)

**Blue Ridge Parkway E-85 Station**

• **Great Smoky Mountains National Park** is also investigating E85 infrastructure funding.

• **UNC Asheville** has a fleet of FFVs and applied for a grant from the NC Division of Air Quality to install an E85 dispenser but did not receive funding.

• **Three commercial stations in Buncombe County** installed E85 pumps in recent years but removed them after experiencing compliance issues with state underground storage tank regulations. We plan to work with them and other stations to install E85 equipment in the future.

• **An Alternative Fuel Revolving Fund (AFRF)** was established by the state and AFRF proceeds are generated through the sale of excess EPAct credits as part of the EPAct Credit Banking and Selling Program. NC DOT is currently installing E85 pumps at several depots across the state (including one in Marion, NC near our region) using funds from the Alternative Fuel Revolving Fund (AFRF). The Coalition encouraged the NC DOT to install an E85 pump at its Buncombe County depot to serve the hundreds of government owned FFVs in the region. The Buncombe County depot is high on DOT’s list for a future dispenser. When this occurs, our Coalition will work with DOT and NC Motor Fleet Management to encourage state employees with FFVs to use the E-85 pump.
Ethanol Production

A new 60 million gallon ethanol production plant, Clean Burn Fuel, has been constructed in eastern North Carolina (first in the state). Well situated on a rail spur, corn is delivered directly to the plant with arrangements in place for nearby farmers to utilize the distiller grains as feed. Currently, however, the plant is in “hot” shut-down until corn prices come down enough to allow production to be competitive with gasoline.

Our Coalition has done quite a bit of work to increase awareness of the benefits of ethanol use and we expect to increase these efforts in the future. The NC Solar Center produced a new E85 brochure as part of the Carolina Blue Skies Initiative and we will distribute 1,000 copies to auto dealerships, FFV owners, and others in 2012.

Ethanol Research

Our Coalition encourages the Biofuels Center of North Carolina, state and federal governments, and universities to support research and the rapid production of cellulosic based ethanol. Several supporting pilot projects are currently underway throughout the state. This will increase citizen and fleet interest in and use of ethanol as a more sustainable means of petroleum reduction.

Compressed Natural Gas (CNG)

A lot of work has been done in our region to expand the market for the use of CNG.

City of Asheville received a $400,000 grant from the NC Division of Air Quality’s Mobile Source Emissions Reduction Grant Program (MSERG) in 2003 to construct the region’s first public access CNG station. The Grand Opening was held in November 2005 with city and county officials, community leaders and the media in attendance. The station is located in downtown Asheville directly across from McCormick Field, home of the Asheville Tourists Class A baseball team. The station was initially used by the City, Buncombe County and Mission Hospital System to fuel their vehicles. Chris Dobbins, former City Fleet Manager and now Fleet Consultant for the LOSCVC, oversaw the construction of the station.
TransEco Corporation opened its Altech-Eco CNG vehicle conversion facility in 2006 and its NC-CNG fueling station on Hendersonville Road in July 2007. Both are located in Arden, NC just south of Asheville. Altech-Eco Energy is a Small Volume Manufacturer and CNG vehicle conversion facility using EPA certified components. It specializes in conversions of Ford vehicles.
Certification Services International opened in 2009 and is located in Fletcher. CSI converts vehicles and certifies alternative fuel conversion systems and engines through the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB). The company specializes in Compressed Natural Gas (CNG), Liquefied Natural Gas (LNG), Liquid Propane (LPG), Hydrogen and Hythane (Hydrogen and Natural Gas Blends).

CNG Partnerships

- The Clean Vehicles Coalition secured a Honda Civic GX demonstration vehicle in 2005 and loaned the vehicle to interested fleet managers over a two year period.

- The LOSCVC Coordinator partnered with Barry Carr, Honda GX representative, to set up our region’s Honda dealership (Apple Tree Honda) for sales and service of the GX. Apple Tree ran TV ads promoting the GX.

- The LOSCVC has partnered with Honda, Altech-Eco and other stakeholders to showcase NGVs at conferences, workshops and numerous community events.

- The LOSCVC partnered with NGV America, PSNC Energy and Altech-Eco to sponsor a Compelling Case for NGVs Conference in Asheville on March 25, 2008 that attracted 135 fleet managers, CEOs and others from across the region.

- The LOSCVC partnered with NGVA and other Clean Cities Coalitions to sponsor another CNG conference in Raleigh in March 2010.

NGV Usage

Use of NGV’s has grown significantly especially in the past year. Fleets using NGVs include:

- Asheville
- Mission Health Systems
- Henderson County
- PSNC Energy
- UNC Asheville

- AT&T deployed 16 CNG vans to its Asheville fleet in November 2010 and hopes to deploy NGVs to its Henderson County fleet in the future.

- Mountain Mobility, Buncombe County’s community transportation system, operates 12 NGV shuttle buses using a NC DOT Stimulus grant.
• **Carolina Blue Skies and Green Jobs Initiative Grant** (CBS Grant) In 2010 LOSCVC partnered with Triangle Clean Cities and other stakeholders to secure a $12 million dollar grant from the US DOE Clean Cities Program (ARRA grant). The funding is for over twenty alt fuel vehicles and infrastructure projects across North and South Carolina in 2010. Under this grant:

  o City of Asheville will receive funds to purchase 27 NGVs and expand the capacity of its existing CNG station.
  o City of Hendersonville will purchase its first NGVs including two dump trucks, one pickup truck, street sweeper and recycle truck.
  o Mission Hospital will purchase 3 NGV Ford Transit Connects and 2 shuttle buses.

• **Henderson County** will open the region’s **third public access CNG station** in downtown Hendersonville in 2012. The County’s Apple Country Transit system is purchasing several CNG shuttle buses, the City of Hendersonville is purchasing several CNG vehicles and both will use the station. The County hopes to secure grant funds soon to purchase several additional NGVs.

• **PSNC Energy**, our region’s natural gas utility, is a key stakeholder in the LOSCVC and is working to build or upgrade CNG stations across the state. PSNC plans to open a new public access CNG station in late 2012 near its Asheville office off Brevard Road. There is interest in constructing a station in Haywood County and the LOSCVC will work with interested parties in 2011 to explore this possibility.

**Propane**

Our **Blossman Gas** partnership began in the earliest days of the Coalition. Blossman assisted us in planning our Coalition Kickoff Event in April 2004. Blossman officials presented at the event and worked with us to bring a propane school bus on a national tour to our event. They have participated in many of our education and outreach events over the years, providing speakers for workshops and vehicles for events. We held a Propane Road Show on February 1, 2010 in partnership with Ferrellgas and Blossman and received excellent media coverage. Another Propane Road Show is planned for spring 2012.

Propane is used in vehicles, forklifts and lawn mowers in the region.

**Propane Usage**

Propane (Autogas) use has been somewhat limited in our region to date but is gaining momentum rapidly. Users include:
• Asheville Airport
• Blossman Gas
• Ferrelgas
• Schwans
• Warren Wilson College
• City of Hendersonville

• Mountain Mobility received a NC DOT Stimulus grant in 2010 and worked with Blossman Gas and Alliance AutoGas officials to convert ten of its shuttle vans to autogas. This is the largest deployment of autogas vehicles in the region. The success of the Mountain Mobility deployment is getting the attention of other fleets in the area. We will use this success story to inform others about the benefits of autogas use.

Alliance Autogas (Propane) Station Development

Alliance AutoGas officials worked with German Motorwerks officials to install the region’s first public access autogas vehicle fueling station on Sweeten Creek Road in Asheville in 2010.

German MotorWerks Propane Fueling Station Grand Opening Oct 2010

Alliance AutoGas is also installing a private fueling system at the Mountain Mobility facility on Riverside Drive in Asheville. There are three other public access on-road fueling sites and one private fueling site in the region.
**Electricity**

**Neighborhood Electric Vehicles**

Prior to 2010, most of our Coalition’s activity was focused on promoting the use of Neighborhood Electric Vehicles (NEVs) and assisting stakeholders in securing grants for these low speed vehicles. Use of NEVs has expanded considerably with use by:

- Asheville
- Montreat
- Black Mountain
- UNC Asheville
- Haywood Community College
- Asheville Buncombe Technical College
- Great Smoky Mountains National Park
- **And others** using them in parks and recreation, parking enforcement, security, maintenance, shuttle and other applications.

Most of the NEVs used in the region are E-Ride or GEM vehicles. Egoff Motors in Henderson County is a GEM dealer and has provided vehicles for our Clean Air Car Fairs and other outreach events.

**EV Planning and Charging Station Initiative**

In March 2010, the Coalition established a new EV Committee to develop and implement an EV Initiative in the Asheville region. Raleigh, the NC Capitol, was selected as one of the first communities in the nation to participate in the Rocky Mountain Institutes’ Project Get Ready.

We approached Progress Energy and Advanced Energy who were leading the effort in Raleigh and expressed our interest in partnering with them to get the Asheville region ready for the roll out of the high speed electrics.

Our EV Committee participated in several DOE EV Webinars to increase members’ awareness of EVs and charging systems. We held two educational EV Forums for stakeholders in 2010 in partnership with Advanced Energy and Progress Energy. We also organized an EV breakout session during the Clean Energy Now Conference in October at Blue Ridge Community College. Duke Energy’s EV Program Coordinator led the session.

In August 2010, our Coalition assisted Advanced Energy in applying for a State Energy Office grant for an EV Initiative in the Triangle and Asheville regions. We identified stakeholders interested in securing EV charging systems through the grant.
The proposal was successful and Advanced Energy was awarded a $500,000 grant to install a DC Fast Charger and deploy 40 EVs in the Triangle and install some Level II charging systems in the Asheville region.

We continue to identify stakeholders interested in EVSEs and the list is growing rapidly. LOSRC secured an Energy Fellow through a partnership with Advantage West, our region’s economic development commission. Brian Taylor spent a portion of his time working on the Coalition’s EV Initiative. He developed an EV Committee website and a Google map showing potential locations for EVSEs. We worked with Advanced Energy to develop site selection criteria and find potential EVSE hosts. Thirteen Level II EVSEs were installed in December 2011.

In December 2010, we partnered with Advanced Energy to train local electrical inspectors and planners on EVs and EVSE permitting and installation.

The Eaton Corporation has a manufacturing facility in Arden, just south of Asheville and is manufacturing EVSEs for distribution across the US. We met with Eaton officials in December 2010 and identified potential locations for EVSEs. Biltmore Park Town Square, a mixed use development in Arden was identified as a prime location for an early EVSE installation. Eaton donated two Level II EVSEs to Biltmore Park and the region’s first public access EVSEs were installed in January 2011.
Our EV Committee will continue its work to get our region ready and develop an EV Readiness Plan to guide this process. We are exploring several new funding opportunities and continuing to develop new partnerships. We will work with fleet managers to begin incorporating plug-in electric vehicles (PEV’s) into their fleet as they become available. PEV’s have already been delivered to the Asheville area and we are working with all the dealerships to market them.

An Asheville resident and member of our EV Committee, has already taken delivery of one of the first Chevy Volts sold in the US. He has been eager to showcase his Volt at our outreach events and has received extensive media coverage already.

**DOE EV Community Readiness Planning Grant**

The LOSCVC recently partnered with the Centralina Clean Fuels Coalition, Triangle Clean Cities Coalition, Advanced Energy, NC Solar Center and Piedmont Triad Council of Governments to secure a $500,000 EV Community Readiness Planning Grant from the US DOE. On September 8, 2011, Energy Secretary Steven Chu announced awards for 16 EV projects in 24 states totaling $8.5 million. The NC Mountains to Sea EV Planning Project will establish a plug-in EV readiness plan and task force for North Carolina and strengthen local and regional initiatives in NC communities and coordinate efforts across the state. The LOSCVC will participate in the NC PEV Task Force and lead the regional planning initiative in the Asheville metropolitan area. This 12 month project will include additional workshops for local government energy, planning and permitting staff and electrical contractors and additional education and outreach programs for citizens and elected officials.

**Gas-Electric and Diesel-Electric Hybrids**

The LOSRC has educated citizens and fleet managers on the benefits of gas-electric hybrids and encouraged their use for many years through our Clean Air Campaign and Clean Vehicles Coalition. Hybrids have been showcased at our Clean Air Car Fairs, Earth Day celebrations, holiday parades, county fairs, workshops, conferences, and other events.

The LOSCVC Coordinator was one of the first in the region to own a first generation Toyota Prius and currently owns a third generation vehicle. These vehicles have been used in numerous events and featured in news stories over the years. The LOSRC purchased a Civic Hybrid and this vehicle is also used in our outreach programs.

Data recently obtained by the NC Division of Motor Vehicles shows 1,718 hybrids registered in our five-county region in 2010. The number of hybrids per capita in Buncombe County is second in the state behind Wake County (Raleigh). These figures are being used by our EV Committee and utilities to estimate future PEV sales in the region.

- **Great Smoky Mountains National Park** has a sizeable fleet of hybrids. Toyota donated seven Prius sedans to the Park in 2008. These beautifully wrapped vehicles are used by the Park’s Resource Education Rangers to inform visitors and school groups about air quality issues and solutions including low emission vehicles. The Coalition assisted the
The Coalition helped the Great Smoky Mountains National Park in securing CMAQ funds to help create a traveling air quality exhibit and hire an additional ranger to educate the public. The Coalition also assisted the Park in securing CMAQ funds to purchase seven Ford Escape Hybrids in 2010. We are currently exploring DOE Clean Cities National Park Initiative funds to further expand the Park’s hybrid and AFV fleet.

![Great Smoky Mountains National Park Prius & Haywood Community College E-Ride at the Haywood Fair](image)

- **Asheville Transit System** deployed in May 2011 five Diesel-Electric Hybrid transit buses obtained with funds from the Federal Transit Administration and has plans to purchase more in the near future.

![City of Asheville Transit – Diesel-Electric Hybrid Buses](image)

- **Progress Energy** has several plug-in hybrid electric vehicles and PHEV bucket trucks in its fleet.
Additional fleets using hybrids include:

- Asheville
- Buncombe County
- Waynesville
- Haywood Community College
- Warren Wilson College
- Land of Sky Regional Council
- Blue Ridge Parkway
- NC Dept. of Environment and Natural Resources

**Idle Reduction**

- **Truck Stop Electrification Systems (TSE)** Several years ago we investigated the feasibility of TSE’s in our region. We worked with IdleAire staff in Knoxville, Tennessee to identify potential truck stops in our five-county region. There are only three truck stops in our region with at least 50 parking spaces (minimum for a TSE project). Unfortunately CMAQ funds were not available to fund projects at any of these sites since all are located in attainment areas. We will reexamine the feasibility of TSE projects in the near future and investigate other funding sources.

- **Ricker Trucking Company** that is based in Madison County, in 2010 secured a NC Division of Air Quality diesel emission reduction grant with our assistance to purchase and install **Auxiliary Power Units (APUs)** on 10 tractor trailers. These APUs will save collectively 2,652 gallons of petroleum per year. Ricker is interested in placing APUs on its 11 additional trucks and we hope to assist them in securing funds.

- **NC Division of Air Quality’s Air Awareness Program** launched an **Idle Reduction Campaign** in NC in 2010. Idle Reduction signs are provided by the NC DAQ to interested schools and other entities. Stakeholder WNC Regional Air Quality Agency worked with Buncombe County and Asheville City Schools and erected signs at 31 schools. The WNCRAQA, NC DAQ and Coalition staff also teamed up to promote this program across the region. Signs have been provided to and erected at schools in Henderson, Haywood and Madison counties over the last year. Haywood Community College also erected a dozen signs on campus as part of their sustainability program. NC DAQ has produced an idle reduction brochure that includes links to a DAQ Idle
Reduction website at http://www.ncair.org/motor/idle/. The brochure is being distributed to schools and the public at community events.

Buncombe County Schools Idle Reduction Program

- **The NC Department of Public Instruction** adopted an Idle Reduction Policy several years ago, limiting idling by school buses. The State also adopted an Idle Reduction Rule in July 2010 that requires operators of heavy duty vehicles (loaded weights >10,000 lbs. GVWR) to limit idling to no more than five minutes in any 60-minute period except for certain cases dealing with safety, health or economic concerns. (www.ncair.org/motor/idle/).

- **Idle Reduction Expansion** In the next three years we plan to expand our work on idle reduction including working with the Asheville Chamber of Commerce’s WNC Transportation Alliance to promote IR and other petroleum reduction measures.

**Fuel Economy/VMT Reduction**

The Coalition’s stakeholders have been promoting fuel economy and VMT reduction measures for many years.

- **Fuel Economy Measures** (e.g., trip chaining, vehicle maintenance, proper tire pressure, speed control, hybrids and other fuel efficient vehicles, etc.) are encouraged as part of many education and outreach efforts by its LOSCVC partners.

- **NREL’s Oak Ridge National Lab** staff have presented on fuel economy measures at our clean vehicle conferences. We promote the use of the FuelEconomy.Gov website.
• **Our Fleet Consultant** encourages downsizing of fleets and use of more efficient vehicles as part of his fleet assessments for stakeholders. In the future, we plan to conduct Green Driving workshops in the region and hope to incorporate these measures into driver education classes.

• **Transit Systems** in the region are being expanded and bus use promoted heavily by the LOSCVC partners.

• **Carpooling** has been promoted as well. There are more than 10,000 area workers that commute into Buncombe County every day from surrounding counties.

• **The NC DOT** and our region’s MPO and RPO promote carpooling using the *Share the Ride NC* website developed to pair up potential carpoolers. The NC DOT has developed park and ride lots including a new one in Haywood County along I-40. The LOSCVC Coordinator worked with the *Mountaineer* newspaper to write a story in May 2011 about the new lot which tripled its use.

• **Annual Strive Not to Drive** Alternative modes of transportation are encouraged during the event each May.

• **Bike and Pedestrian Plans** have been developed for Buncombe County and one is under development for Haywood County. New bike lanes, greenways and sidewalks are being built across the region. A Regional bike plan by the French Broad River MPO.

• **Transportation Demand Management Program (TDM)** The City of Asheville managed and implemented a Van Pool Program for certain city employees, installed bike lockers downtown, and established a 4 day – 10 hour work week for certain city departments cutting VMT significantly. TDM Plan funds are being sought to develop a regional model.

• **The WNC Transportation Alliance** of the Asheville Chamber of Commerce is working with large manufacturers and other employers on a transportation logistics initiative to reduce backhauling (empty trucks) to save fuel and reduce emissions. Several Alliance members are participating resulting in 46,472 gas gallon equivalents reduced annually for a $307,652 in savings.
Clean Diesel

Even though clean diesel is not an alternative fuel, it is a viable emission reduction strategy. The Coalition became a Founding Partner in the EPA Southeast Diesel Collaborative and has worked for years to inform stakeholders about clean diesel vehicles and retrofit technologies.

- Showcased a VW Clean Diesel Jetta at the Bele Chere Festival and informed citizens of the federal clean diesel vehicle tax credits.

- In 2007, the LOSCVC co-sponsored a Clean Diesel Conference in Asheville with the Diesel Technology Forum to inform stakeholders and build support for Diesel Emission Reduction Act (DERA) funding. Eleventh District Congressman Charles Taylor presented and supported DERA.

- WNCRAQA secured two separate EPA grants in 2002-2003 to retrofit all the school buses in Buncombe, Haywood, Madison and Transylvania counties with diesel oxidation catalysts (DOCs).

- Several agencies assisted Henderson County in 2005 in securing a grant from the NC Division of Air Quality to install DOCs on all its school buses.
In 2009, the WNCRAQA secured a $31,550 grant from the NC DAQ to install DOCs on 20 fire trucks in Buncombe County. This represents one of the first retrofits of emergency response vehicles in the nation and EPA Region IV is promoting this as a successful case study.

Retrofitted Fire Truck in 2010 Asheville Holiday Parade

Fire Truck Diesel Oxidization Catalyst (DOC) Installation
5. Energy Policy Act

**Federal Fleets**

The Energy Policy Act (EPAct) of 1992 requires certain "covered" federal agency fleets to acquire a percentage of alternative fuel vehicles (AFVs) each year. In addition, EPAct 2005 requires federal fleets to use alternative fuels in dual-fuel vehicles the majority of the time if alternative fuel is available within five miles or 15 minutes of the garaged location of the vehicles unless a waiver has been requested. Federal agency fleets must also comply with Executive Order (E.O.) 13423, signed by then President George W. Bush in January 2007. E.O. 13423 requires agencies to decrease petroleum consumption by 2% per year (relative to their fiscal year 2005 baseline) through fiscal year 2015. In addition, the mandate requires agencies to increase alternative fuel use by 10%, compounded annually, based on their fiscal year 2005 baseline use. E.O. 13423 revokes E.O. 13149, which was signed by then President William Clinton in 2000.

**State and Alternative Fuel Provider Fleets**

The Energy Policy Act (EPAct) of 1992 requires certain state government and alternative fuel provider fleets to acquire a percentage of alternative fuel vehicles (AFVs) each year. Fleets can earn credits for biodiesel use and for AFVs acquired beyond their requirements. These credits can be traded or sold to other fleets to help them meet their requirements.

State or alternative fuel provider fleets are considered "covered fleets" if they own, operate, lease, or otherwise control 50 or more non-excluded light-duty vehicles (less than or equal to 8,500 lbs) and, of those 50 vehicles, at least 20 are used primarily within a single Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area and are capable of being centrally fueled.

**EPAct-Covered State Entities**

State government fleets are covered by and must meet the requirements of the Energy Policy Act of 1992 (EPAct 1992), as amended, if all of the following conditions are met:

- A state entity owns, operates, leases, or otherwise controls 50 or more light-duty vehicles within the United States that are not on the list of excluded vehicles
- At least 20 of those vehicles are used primarily within a single Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area
- Those same 20 vehicles are centrally fueled or "capable of being centrally fueled." Vehicles are considered capable of being centrally fueled if they are capable of being fueled at least 75% of the time at a location that is owned, operated, or controlled by any fleet or under contract with that fleet for fueling purposes.
States are responsible for determining the appropriate reporting entity or entities for purposes of the Alternative Fuel Transportation Program. For example, a state might report as a single entity, agency by agency, or in some combination of the two. In addition, state universities and colleges that meet the coverage criteria are subject to the requirements of the program as if they were state agencies.

After review with Dana O’Hara, Regulatory Manager, U.S. DOE, State and Alternative Fuel Provider Program, there are no current EPAct federal, state and alternative fuel provider mandated fleets for the Asheville MSA area served by the Land of Sky Clean Vehicles Coalition. However, many state, federal and utility stakeholders within the region are voluntarily using alternative fueled and advanced technology vehicles. Examples include:

<table>
<thead>
<tr>
<th>Coalition Stakeholder</th>
<th>Type of Fuel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Smoky Mountains National Park</td>
<td>Biodiesel, Gas-Electric Hybrids, NEV’s</td>
</tr>
<tr>
<td>Blue Ridge Parkway</td>
<td>E85, Gas-Electric Hybrids</td>
</tr>
<tr>
<td>NC Department of Environment and Natural Resources</td>
<td>Gas-Electric Hybrids</td>
</tr>
<tr>
<td>NC Department of Transportation</td>
<td>Biodiesel</td>
</tr>
<tr>
<td>Public Service NC</td>
<td>Natural Gas</td>
</tr>
<tr>
<td>Progress Energy</td>
<td>Plug-in Gas-Electric Hybrids, Heavy Duty Diesel-Electric Hybrid</td>
</tr>
<tr>
<td>University of NC at Asheville</td>
<td>NEV’s, CNG, Biodiesel</td>
</tr>
<tr>
<td>Asheville-Buncombe Technical Community College</td>
<td>NEV’s</td>
</tr>
</tbody>
</table>

6. **Clean Air Act Amendments**

The Clean Air Act Amendments require the protection of public health through compliance with federal National Ambient Air Quality Standards (NAAQS), which have been established for six principal pollutants including ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter and lead. When an area exceeds the set limits of any of the pollutants, that area will be declared “non-attainment” by the U.S. Environmental Protection Agency (EPA) and will be required to prepare special NAAQS attainment plans detailing pollutant emission reduction and control strategies.

**Non-Attainment Status**

Fortunately, the majority of our five-county region is currently classified as an attainment area. The only non-attainment area is the Haywood County portion of the Great Smoky Mountains National Park which is non-attainment for ground level ozone pollution. The entire park in both NC and Tennessee is a non-attainment area. The park is being impacted by ozone blown in from neighboring communities and states. Most emissions within the park are due to vehicles travelling along US 441 and other roads within the park. Park staff has been very active in
educating visitors and neighboring communities about the region’s air quality issues and encouraging them to take action to reduce emissions. Park staff has been quite active in our region’s Clean Air Campaign and Clean Vehicles Coalition. The Coalition has assisted the park in securing a series of grants to green its fleet and the park plans to participate in the DOE Clean Cities National Parks Initiative.

There are several high elevation air quality monitors in the region outside the park that have had high levels of ozone. These monitors are currently meeting the existing eight-hour ozone standard but there is concern that these monitors may exceed the standard if EPA lowers the current standard of 75 parts per billion. If EPA lowers the standard to 65 ppb, our valley level monitors may violate and the entire multicounty MSA could be designated as a non-attainment area.

**Southern Appalachian Mountains Initiative**

Community leaders, local, state and federal agencies, utilities, businesses, and community organizations have worked together for years to address the region’s air quality issues. In the mid-to-late 90’s, NC was a leader in the eight state air quality program called the Southern Appalachian Mountains Initiative (SAMI). SAMI modeled air quality issues and solutions and determined that the three air quality issues of concern were ozone, haze and acid deposition. SAMI presented a set of strategies to be implemented by the federal and state agencies and utilities. In NC, the state and utilities agreed to an emissions reduction program and the legislature enacted the NC Clean Smokestacks Act in 2002. This landmark legislation calls for a significant reduction of emissions from the state’s 14 coal fired power plants. Emission reductions are about complete. NC also expanded its vehicle emissions inspection program to reduce mobile source emissions. It established a Mobile Source Emissions Reduction Grant Program and our stakeholders have secured many grants to green their fleets.

The state is currently implementing an Idle Reduction Program and our Coalition is active. The Land of Sky Regional Council established a regional Clean Air Campaign (CAC) in 1999 to help increase public awareness of air quality issues and solutions. The LOSCVC Coordinator also serves as the CAC Coordinator.

The NC Division of Air Quality’s Asheville Regional Office and WNC Regional Air Quality Agency are the primary air quality management agencies for our region and are active in both the LOSCVC and CAC. Air quality concerns and strategies are well integrated into the work of both the LOSCVC and CAC. The Land of Sky Regional Council also administers the region’s MPO and RPO transportation planning agencies. The MPO and RPO staff and boards are increasing their involvement in air quality and clean vehicles initiatives.

**Climate Change and Greenhouse Gas Emissions**

Climate change and greenhouse gas reduction initiatives are growing in the region. Asheville is the home of the NOAA National Climatic Data Center and is fortunate to have climate experts
here working on several climate change programs. The City of Asheville is a leader in addressing climate change as it has set a goal of GHG reductions of 2% per year and is implementing numerous programs to meet that goal. The LOSRC received a $500,000 EPA Climate Showcase Communities grant and is working with Asheville and Buncombe County schools systems to reduce energy use and GHGs. The Asheville Schools fleet manager hopes to use some grant funds to convert a portion of his fleet to natural gas vehicles.

Becoming a Clean Cities coalition will bring more alternative fuel vehicles to the region—these typically have far less harmful emissions than petroleum powered vehicles. Using fewer fossil fuels will decrease ozone levels in the region, helping to maintain the status of attainment areas and bring non-attainment areas into attainment.

7. Local/State Laws and Incentives

Local Laws and Incentives

As mentioned above, the City of Asheville has its GHG Reduction Policy. Several local governments have fleet policies encouraging the purchase of fuel efficient and alternative fueled vehicles. There are no known local government financial incentives in place. Haywood Community College does offer preferred parking for owners of hybrids and AFVs. We hope to encourage more local incentives in the future.

State Laws and Regulations

- Ethanol Blend Requirement

Suppliers that import gasoline for sale in North Carolina must offer fuel that is not pre-blended with fuel alcohol but that is suitable for future blending. Future contract provisions that restrict distributors or retailers from blending gasoline with fuel alcohol are void. (Reference North Carolina General Statutes 75-90, 105-449.60)

- Biodiesel Warranty Requirement

All new state government diesel vehicles must have a manufacturer's warranty that allows the use of biodiesel blends of 20% (B20) in the vehicle. This requirement does not apply if the North Carolina Department of Administration determines that there is no vehicle available that is suited for the intended use and that has a manufacturer's warranty allowing the use of B20. (Reference North Carolina General Statutes 20-351.11, 136-28.15, and 143-341(8)(i))
• **Biodiesel Requirement for School Buses**

Every school bus that is capable of operating on diesel fuel must be capable of operating using biodiesel blends of at least 20% (B20). At least 2% of the total volume of fuel purchased annually by local school districts statewide for use in diesel school buses must be a minimum of B20, to the extent that biodiesel blends are available and compatible with the technology of the vehicles and the equipment used. (Reference North Carolina General Statutes 115C-240(c) and 115C-249(a))

• **Fuel-Efficient Vehicle Acquisition Requirements**

The North Carolina Department of Administration must give purchase preference to new state vehicles with fuel economy ratings that rank among the top 15% of comparable vehicles in their class. (Reference North Carolina General Statutes 143-341(8)(i))

• **Alternative Fuel Vehicle (AFV) Acquisition Requirements**

At least 75% of new or replacement state government light-duty cars and trucks with a gross vehicle weight rating of 8,500 pounds or less must be AFVs or low emission vehicles. (Reference North Carolina General Statutes 143-215.107C)

• **School Bus Idle Reduction Requirement**

All local boards of education in North Carolina have adopted idle reduction policies prohibiting school buses from idling unnecessarily on school grounds or warming up for longer than five minutes. The North Carolina School Boards Association provided a sample policy and administrative procedure to school districts to meet these requirements.

**State Incentives**

**N C BioFuels Incentives**

North Carolina has placed a big emphasis on the development of Biofuels.

• **Biofuels Commercialization Grants**

The Biofuels Center of North Carolina (Center) is a private, nonprofit corporation the Legislature funds to implement the goal that by 2017, 10% of liquid fuels sold in North Carolina will come from biofuels grown and produced within the state. The Center awards funds to academic institutions, economic development organizations, nonprofit corporations, and other entities through an annual competitive awards process. Grants and contracts are designed to identify and bridge gaps in knowledge and information, speed up the
development of technology, and create a seamless continuum between agriculture and transportation fuels.

- **Biofuels Industry Development Grants**

The North Carolina Green Business Fund (Fund) provides grants to private businesses with fewer than 100 employees, nonprofit organizations, local governments, and state agencies to encourage the expansion of small and medium sized businesses and to help grow a green economy. One of the Fund’s priority areas is the development of the biofuels industry in the state. The North Carolina Department of Commerce may make grants available to maximize development, production, distribution, retail infrastructure, and consumer purchase of biofuels, including grants to enhance biofuels workforce development. (Reference North Carolina General Statutes 143B-437.4)

- **Renewable Fuel Production Facility Tax Credit**

A taxpayer that constructs and places into service three or more commercial facilities for processing biodiesel, ethanol, or ethanol/gasoline blends consisting of at least 70% ethanol (E70) in North Carolina and invests at least $400 million in total in the facilities is eligible for a credit equal to 35% of the cost of constructing and equipping the facilities. To claim the credit, the taxpayer must obtain a written determination from the North Carolina Department of Commerce that the taxpayer is expected to invest at least $400 million in three or more facilities within a five-year period. The credit applies to qualified facilities placed into service before January 1, 2013. (Reference North Carolina General Statutes 105-129.16D)

- **Renewable Energy Property Tax Credit**

Taxpayers who construct, purchase, or lease renewable energy property are eligible for a tax credit equal to 35% of the cost of the property. Renewable energy property includes equipment that uses renewable biomass resources to produce ethanol, methanol, biodiesel, or methane produced from anaerobic biogas, using agricultural and animal waste or garbage; and related devices for converting, conditioning, and storing the liquid fuels and gas produced with the biomass equipment. The taxpayer must take the credit in five equal installments beginning with the taxable year in which the property is placed in service. There is a maximum funding amount of $2.5 million per installation, which applies to renewable energy property placed in service for any purpose other than residential. Property must be placed in service before January 1, 2016. (Reference North Carolina General Statutes 105-129.15 and 105-129.16A)

- **Biodiesel Tax Exemption**

An individual that produces biodiesel for use in that individual's private passenger vehicle is exempt from the state motor fuel excise tax. (Reference North Carolina General Statutes 105-449.88(9))
• **Bond Exemption for Small Biofuels Suppliers**

Fuel blenders or suppliers of ethanol or biodiesel are not required to file a bond with the North Carolina Department of Revenue when the expected motor fuel tax liability is less than $2,000. (Reference North Carolina General Statutes 105-449.72(a))

**Other NC Incentives**

• **Alternative Fuel and Idle Reduction Grants**

_Diesel Emission Reduction Grants_ are available from the North Carolina Department of Environment and Natural Resources Division of Air Quality for the incremental cost of purchasing original equipment manufacturer alternative fuel vehicles, vehicle conversions, implementing idle reduction programs, and constructing or installing public alternative fueling facilities. The 2011 funding cycle is reserved for projects related to diesel vehicles; future funding may include additional technologies and vehicles.

• **Alternative Fuel Vehicle (AFV) and Hybrid Electric Vehicle (HEV) Support**

The _Clean Fuel Advanced Technology_ (CFAT) project focuses on reducing transportation related emissions in non-attainment and maintenance counties for National Ambient Air Quality Standards. Projects that are adjacent to areas may also be eligible if the project will reduce emissions in the eligible counties. The North Carolina Department of Transportation funds the CFAT project, which covers three broad areas: education and outreach; project funding; and recognition of exemplary activities. In previous years, we have assisted the Great Smoky Mountains National Park to secure several CFAT grants. As of October 2011, funding is not available. Future financial support may be available for AFVs, fueling infrastructure, idle reduction technologies, heavy-duty HEVs, heavy-duty buses, and diesel retrofits.

• **Alternative Fuel and Alternative Fuel Vehicle (AFV) Fund**

The North Carolina State Energy Office administers the Energy Policy Act (EPAct) Credit Banking and Selling Program, which enables the state to generate funds from the sale of EPAct 1992 credits. The funds EPAct credit sales generate are deposited into the Alternative Fuel Revolving Fund (Fund) for state agencies to offset the incremental costs of purchasing biodiesel blends of at least 20% (B20) or ethanol blends of at least 85% (E85), developing alternative fueling infrastructure, and purchasing AFVs and hybrid electric vehicles. Funds are distributed to state departments, institutions, and agencies in proportion to the number of EPAct credits generated by each. For the purposes of this program, the definition of alternative fuel includes 100% biodiesel (B100), biodiesel blends of at least B20, ethanol blends of at least E85, compressed natural gas, propane, and electricity. The Fund also covers additional projects approved by the Energy Policy Council. (Reference North Carolina General Statutes 143-58.4, 143-58.5, 143-341(8)i, and 136-28.13)
• **Alternative Fuel Tax Exemption**

The retail sale, use, storage or consumption of alternative fuels is exempt from the state retail sales and use tax. (Reference North Carolina General Statutes 105-164.13(11))

**Private Incentives**

• **Alternative Fuel Vehicle (AFV) and Hybrid Electric Vehicle (HEV) Loans**

The State Employees' Credit Union and the Local Government Federal Credit Union offer green vehicle loans to purchase new and used qualified fuel-efficient vehicles. Vehicles with a combined fuel economy rating of a minimum of 28 miles per gallon, according to revised fuel economy ratings posted on www.fueleconomy.gov, qualify. The loan interest rates are 0.5% lower than traditional new or used vehicle loan rates.

**8. Grants and Funding**

**Coalition Funding**

The LOSCVC is staffed and housed by the Land of Sky Regional (LOSRC) and has been funded by the following:

- State Energy Office grants
- NCDOT CMAQ Program grants
- DOE Clean Cities Carolina Blue Skies & Green Jobs Initiative Grant (CBS Grant)
- Progress Energy donations

We have successfully used college interns, AmeriCorps members and Energy Fellows to help implement our programs. The Coalition does not currently have a stakeholder dues structure but will study the feasibility of a dues structure over the next year. However, several stakeholders have sponsored our education and training events and we have collected registration fees as well. Several stakeholders have signed technical assistance contracts with us to provide a higher level of service on specific AFV projects.

Our sustainability strategy includes securing grants from numerous sources including those listed above. New sources will be investigated including the:

- Environmental Protection Agency,
- HUD Sustainable Communities Initiative
- Climate Showcase Communities Program
- Economic Development Administration
- Tennessee Valley Authority
- NC Rural Center
- Appalachian Regional Commission
- NC Biofuels Center
- USDA
- DOE Clean Cities Project Grants
- Clean Cities Coalition Support Contract once designated.

We will expand our technical assistance contract program. We will increase our efforts to secure event sponsorships and donations. We will explore the feasibility of fundraising events. We will continue to pursue college interns, AmeriCorps members and Energy Fellows if available. The Coordinator and our Steering Committee will be responsible for developing and implementing this sustainability strategy. Depending on available funding, the FY2011-12 budget will be $75,000 to $125,000.

**Stakeholder Funding**

We have been very successful in assisting our stakeholders in securing grants to support their AFV and infrastructure projects. We see that as a major role of the Coalition.

We assisted stakeholders with many of the following grants:

<table>
<thead>
<tr>
<th>Year</th>
<th>Source</th>
<th>Grant Applicant</th>
<th>Amount</th>
<th>Summary</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>EPA Funding</td>
<td>Western NC Regional Air Quality Agency</td>
<td>$ 349,455</td>
<td>Diesel Oxidation Catalyst (DOC) for 238 School Buses</td>
<td>Complete</td>
</tr>
<tr>
<td>2003</td>
<td>NC DAQ Mobile Source Emission Reduction Grant (MSERG)</td>
<td>City of Asheville</td>
<td>$ 400,000</td>
<td>Construct a Public Access CNG Station</td>
<td>Complete</td>
</tr>
<tr>
<td>2003</td>
<td>EPA Funding</td>
<td>Western NC Regional Air Quality Agency</td>
<td>$ 274,455</td>
<td>DOCs for 321 School Buses</td>
<td>Complete</td>
</tr>
<tr>
<td>2005</td>
<td>NC DAQ Mobile Source Emission Reduction Grant (MSERG)</td>
<td>City of Asheville</td>
<td>$ 12,000</td>
<td>Purchase (2) electric vehicles for community policing</td>
<td>Complete</td>
</tr>
<tr>
<td>Year</td>
<td>Project</td>
<td>Recipient</td>
<td>Funding</td>
<td>Description</td>
<td>Status</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------------</td>
<td>---------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>2005</td>
<td>NC DAQ Mobile Source Emission Reduction Grant (MSERG)</td>
<td>Blue Ridge Biofuels, LLC</td>
<td>$25,000</td>
<td>Purchase tank truck for waste cooking oil collection and biodiesel distribution and purchase oil collection containers</td>
<td>Complete</td>
</tr>
<tr>
<td>2005</td>
<td>Henderson County Public Schools</td>
<td>$100,000</td>
<td>DOCs for 100 School Buses</td>
<td>Complete</td>
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<tr>
<td>2006</td>
<td>Asheville-Buncombe Tech Community College</td>
<td>$27,000</td>
<td>Purchase three NEV electric vehicles</td>
<td>Complete</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>Friends of the Great Smoky Mountains National Park</td>
<td>$33,680</td>
<td>Purchase a tank to store and dispense biodiesel fuel</td>
<td>Complete</td>
<td></td>
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<tr>
<td>2006</td>
<td>Blue Ridge Biofuels, LLC</td>
<td>$143,050</td>
<td>Install biofuel infrastructure at (6) stations</td>
<td>Complete</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>Blue Ridge Biofuels, LLC</td>
<td>$68,750</td>
<td>Biodiesel distribution rack, biodiesel tanks and modify vehicles to run on biodiesel</td>
<td>Complete</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Great Smoky Mountains National Park</td>
<td>$31,922</td>
<td>Purchase (2) E-Ride NEV’s</td>
<td>Complete</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Town of Black Mountain</td>
<td>$10,504</td>
<td>Purchase an electric vehicle for community police</td>
<td>Complete</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>City of Asheville</td>
<td>$40,000</td>
<td>(1) Compressed Natural gas vehicles/trucks for the Public Works Department</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Haywood Community College</td>
<td>$16,029</td>
<td>Partial cost of one fully electric vehicle</td>
<td>Complete</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Town of Montreat</td>
<td>$12,800</td>
<td>Partial cost of (2) electric vehicles to be shared by two organizations</td>
<td>Complete</td>
<td></td>
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<tr>
<td>2008</td>
<td>Western Carolina University</td>
<td>$9,704</td>
<td>Partial cost of (2) electric vehicles</td>
<td>Complete</td>
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</tr>
<tr>
<td>Year</td>
<td>Funding Source</td>
<td>Recipient</td>
<td>Amount</td>
<td>Project Description</td>
<td></td>
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<tr>
<td>2008</td>
<td>Biofuels Center of North Carolina</td>
<td>Blue Ridge Biofuels, LLC</td>
<td>$250,000</td>
<td>Biodiesel production expansion</td>
<td></td>
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<td></td>
<td>Haywood Community College</td>
<td>$135,848</td>
<td>Production, Education &amp; Training (PET) Project Haywood Community College Foundation</td>
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<td></td>
<td>NC Green Business Fund</td>
<td>Blue Ridge Biofuels, LLC</td>
<td>$77,737</td>
<td>develop and commercialize an innovative purification method to convert low-quality fatty acids into Biofuels</td>
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<td></td>
<td>Organo Fuels of Asheville</td>
<td>$81,944</td>
<td>To manufacture an algae-based fuel for gasoline engines.</td>
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<tr>
<td>2009</td>
<td>American Recovery and Reinvestment Act (ARRA) Grant for Diesel Emissions Reductions</td>
<td>City of Asheville</td>
<td>$30,000</td>
<td>Biodiesel purchase offsets</td>
<td></td>
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<td></td>
<td>Western NC Regional Air Quality Agency</td>
<td>$31,500</td>
<td>Diesel controls (DOC’s) on (20) fire trucks</td>
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<td></td>
<td>Biofuels Center of NC</td>
<td>Blue Ridge Biofuels, LLC</td>
<td>$14,000</td>
<td>To install biodiesel refueling infrastructure at public stations</td>
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<tr>
<td>2009</td>
<td>NCDOT - American Recovery and Reinvestment Act (ARRA) Grant</td>
<td>Great Smoky Mountains National Park</td>
<td>$197,550</td>
<td>purchase (7) Ford Hybrid Escapes</td>
<td></td>
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<td></td>
<td>NC DAQ Mobile Source Emission Reduction Grant (MSERG)</td>
<td>Haywood Community College</td>
<td>$35,500</td>
<td>Biodiesel yellow grease collection/manufacturing program.</td>
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<td></td>
<td>University of NC - Asheville</td>
<td>$23,333</td>
<td>(1) above ground 2,000-gal biodiesel storage tank with fuel dispenser system</td>
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<td></td>
<td>NCDOT - American Recovery and Reinvestment Act (ARRA) Grant</td>
<td>Henderson County</td>
<td>$610,000</td>
<td>Construction of a Public Access CNG station</td>
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### Notes:
- Funding delayed to 2010
- Spring 2011
- On-Going
<table>
<thead>
<tr>
<th>Year</th>
<th>Source/Program</th>
<th>Project Details</th>
<th>Budget</th>
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<tbody>
<tr>
<td>2009</td>
<td>NCDOT – American Recovery and Reinvestment Act (ARRA) Grant</td>
<td>Henderson County/City of Asheville: Purchase 3+ Para-Transit CNG buses</td>
<td>$585,841</td>
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<td>2009</td>
<td>NCDOT - American Recovery and Reinvestment Act (ARRA) Grant</td>
<td>Mountain Mobility: Purchase (12) CNG vehicles &amp; convert (10) existing vehicles to propane</td>
<td>$1,147,710</td>
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<td>2009</td>
<td>NC DAQ Mobile Source Emission Reduction Grant (MSERG)</td>
<td>Asheville Airport: Replace diesel ramp equipment with electrified equipment</td>
<td>$142,500</td>
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<tr>
<td>2009</td>
<td>USDOT – Federal Transit Administration</td>
<td>City of Asheville: Purchase (5) hybrid diesel electric 30’ buses</td>
<td>$2,625,000</td>
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<tr>
<td>2010</td>
<td>NC DAQ – DERA</td>
<td>Ricker Trucking: Purchase (11) aux power units for trucking</td>
<td>$27,500</td>
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<tr>
<td>2010</td>
<td>DOE Clean Cities Carolina Blue Skies &amp; Green Jobs Initiative Grant ARRA Funded</td>
<td>City of Asheville: Purchase (27) CNG vehicles &amp; CNG station upgrade</td>
<td>$779,020</td>
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<tr>
<td>2010</td>
<td>NC State Energy Office</td>
<td>Advanced Energy: (25) EV Charging Stations</td>
<td>$150,000</td>
</tr>
<tr>
<td>2010</td>
<td>DOE Clean Cities Carolina Blue Skies &amp; Green Jobs Initiative Grant ARRA Funded</td>
<td>Mission Hospital: Purchase (5) CNG vehicles</td>
<td>$88,372</td>
</tr>
<tr>
<td>2010</td>
<td>DOE Clean Cities Carolina Blue Skies &amp; Green Jobs Initiative Grant ARRA Funded</td>
<td>City of Hendersonville: Purchase (5) CNG vehicles</td>
<td>$219,704</td>
</tr>
<tr>
<td>2011</td>
<td>DOE Clean Cities Carolina Blue Skies &amp; Green Jobs Initiative Grant ARRA Funded</td>
<td>Henderson County: CNG Station upgrade &amp; (2) CNG light duty vehicles</td>
<td>$147,505</td>
</tr>
<tr>
<td>2011</td>
<td>NC Green Business Fund</td>
<td>BioWheels RTS: Install (12) Level II Charging Stations; 9 solar supported</td>
<td>$376,000</td>
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<tr>
<td>2011</td>
<td>DOE Clean Cities Electric Readiness</td>
<td>Centralina Council of: Support of regional and statewide EV planning</td>
<td>$500,000</td>
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</tbody>
</table>
9. **Stakeholder Descriptions and Commitments**

Since our Coalition does not have a dues structure or formal membership application, we have considered anyone with a strong interest in alternative fueled and advanced technology vehicles or other Clean Cities technologies to be a stakeholder. We have been focused on increasing the number of AFVs/ATVs and infrastructure and desired to work with all interested parties.

We have approximately 500 individuals on our Coalition Contact List that receive newsletters, meeting announcements, workshop and conference notices, etc. We add approximately 20 to 30 new organizations to the list each year.

There are 34 public and private organizations in the region that we consider key or primary stakeholders. These organizations are described below. These are the organizations that have been most active, attended Coalition meetings and events, and that we have assisted with projects. We have a good mix of public and private stakeholder organizations including local, state and federal agencies, national park units, universities and community colleges, fuel providers and utilities, businesses and business support organizations, non-profits focused on clean energy issues, the regional airport, transit systems, the largest hospital system in the region and others.

There are approximately 100 individuals within these 34 key stakeholder organizations that are active in our Coalition. In the future, we hope to bring in more local governments in the region and more private sector businesses including car rental and taxi companies, delivery companies including beverage and food distributors, local auto dealers, the region’s paper manufacturer and other groups.

**Key Stakeholders**

**Associations**

- **AdvantageWest’s Advantage Green Program** - promotes a vibrant green business habitat to enhance building, transportation, biotechnology and environment. Advantage Green is a partner in the LOSRC’s Clean Energy Economy Project and assists the LOSCVC in promoting clean transportation fuels and technologies. It cosponsored the Clean Energy Now conference in 2010 with the LOSCVC and others. AdvantageGreen serves on the LOSCVC Steering Committee and Electric Vehicles Committee.
This program is facilitated by Advantage West’s Economic Development Group, western North Carolina’s regional economic development commission. Advantage West’s 23-County region covers nearly 10,000 square miles—larger than eight other U.S. states and roughly the size of the State of Maryland. Chartered by the North Carolina General Assembly in 1994, AdvantageWest is a non-profit public-private partnership whose primary focus is marketing the North Carolina mountains to corporations seeking to relocate or open a new facility, expand an existing business within our region, and those who might otherwise improve the quality of life for citizens within our region through activities such as filmmaking, entrepreneurship and tourism.

- **Asheville Area Chamber of Commerce** - a non-profit, membership-based organization dedicated to protecting and improving the business climate and quality of life in the region. To do this, the Asheville Chamber divides its work into several departments: Member Services & Communications, Economic Development, Public Policy and the Convention & Visitors Bureau. The Chamber is a partnership of over 2,000 businesses, organizations and coalitions that work toward common goals of supporting the community and fellow businesses.

The Chamber’s Western North Carolina Transportation Alliance was launched by local manufacturers to efficiently manage regional transportation assets, increase fleet utilization and combat rising costs of fuel and deadhead miles. The association of companies has grown to include over 40 transportation, logistics and supply chain professionals from the manufacturing sector. In 2010, Buncombe County employers Southeastern Container and Ingles Markets collaborated to share a common route in and out of Florida. The partnership has eliminated thousands of dead-head miles and cut in half the average fuel consumption and carbon emissions resulting from those miles. Southeastern Container estimates the backhaul partnership with Ingles Markets has the potential to realize annual savings of $100,000.

Chamber staff serves on the LOSCVC EV Committee and assists the Coalition in communicating with their member businesses. LOSCVC staff participates in the Chamber’s WNC Transportation Alliance. The Chamber is currently investigating the feasibility of installing an EV charging system on their site.

- **Environmental and Conservation Organization (ECO)** - ECO’s mission is to preserve the natural heritage of Henderson County and the mountain region as an effective voice for the environment. They fulfill this mission through focusing on four key areas: green infrastructure, water quality, energy conservation/renewable energy and recycling. Founded 20 years ago as a hiking group, it became increasingly alarmed by the degradation of the environment. Since then, ECO has risen to become a preeminent and influential leader in promoting environmental issues affecting our region. It works with citizens, business leaders, like-minded environmental groups and government officials to create a balance between growth and environmental preservation. ECO has coordinated with the LOSCVC to sponsor several Clean Air
Car Fairs as part of the Southern Energy and Environment Expo. ECO serves on our Education and Outreach Committee.

Businesses

- **Advanced Energy** - founded in 1980 and located in Raleigh, N.C., is a North Carolina and global resource that focuses on energy efficiency for commercial and industrial markets, electric motors and drives, plug-in transportation and applied building science. Their facility houses state-of-the-art laboratories, where they perform testing and applied research in all of these evolving disciplines. Advanced Energy leads a nationwide plug-in hybrid school bus evaluation project and has assisted our stakeholders in exploring this technology. AE partnered with the LOSCVC in 2010 and secured a $500,000 State Energy Office grant to install EVSEs and deploy EVs in the Triangle and Asheville regions. AE will spend $150,000 of the grant to install 25 Level II electric vehicle charging stations in the Asheville area. The first 25 station sites have been selected as of October 2011. AE has assisted the LOSCVC in conducting several EV training sessions for stakeholders and will continue this assistance in the future. Advanced Energy staff serves on the LOSCVC Electric Vehicles Committee.

- **Altech-Eco Corporation** - a wholly owned subsidiary of TransEco Energy Corp in business since 2006. Altech-Eco’s CNG conversion facility in Arden, NC is responsible for research and development of alternative fuel conversion systems certified by the Environmental Protection Agency. CNG conversion product offerings are Ford 150/250/350 pickups and vans, Ford Transit Connect, Ford Focus and Fusion. The sales force utilizes 10 CNG conversion vehicles for trade shows and promotions. Altech-Eco has been very active in the Coalition assisting with education and outreach programs including cosponsoring our Compelling Case for Natural Gas Vehicles workshop in 2008. Altech-Eco serves on the LOSCVC Gaseous Fuels Committee.

- **Biltmore Company (Biltmore Estate)** - completed in 1895 it is one of America’s premier tourist destinations. Complemented in recent years by the addition of the Winery, lodging at the Inn on Biltmore Estate and an Outdoor Center in a natural setting of 8,000 acres. Total vehicle fleet is 123 with 27 utilizing biodiesel, 6 LPG, 2 electric utility carts and 14 Segways for guest tours. The company will investigate the use of other AFVs in the future.

- **BioWheels Responsible Transportation Solutions** - established in 1994 promotes electric bikes and now EVs and EV charging systems. Received grant from the NC Green Business Fund to install 12 Level II Charging Stations; 9 solar supported in the
Asheville area. BioWheels is currently negotiating to install these systems at strategic locations by the end of 2011. It actively serves on the Steering and EV Committees.

- **Eaton Corporation** - Celebrating its 100th anniversary in 2011, Eaton is an industry leader in electric vehicle (EV) and hybrid electric vehicle (HEV) components, including systems that provide fuel savings ranging from 30 to 60 percent. In addition, Eaton now provides a robust, flexible offering of electric vehicle supply equipment (EVSE). The EVSE units are manufactured in Eaton’s Arden plant near Asheville. Eaton collaborated with Biltmore Park to implement the first electric vehicle charging station in the Asheville area in January 2011. Eaton plans to add 2 additional EVs to its fleet in the next 3 years. It will work with the Coalition to promote EVs and EVSEs. Eaton serves on the LOSCVC EV Committee.

- **MB Haynes Corporation** - Since 1921, MB HAYNES has been the leader in WNC for providing electrical, HVAC, security, industrial, and technological services to area businesses and residents. Will investigate the use of AFVs in its fleet in 2011-12. New stakeholder and serves on EV Committee.

**Colleges/Universities**

- **Asheville-Buncombe Technical Community College** - a public two-year college established in 1959 with campuses in Buncombe and Madison counties. Their fleet includes 3 NEV GEM’s and 1 hybrid electric. The LOSCVC participates in AB Tech’s Earth Day event each year. The College will expand its fleet of AFVs/ATVs in the future funding permitting. A-B Tech serves on the LOSCVC Electric Vehicles Committee.

- **Blue Ridge Community College** - a public two-year college established in 1969. Joined the National Alternative Fuels Training Consortium based at the University of West Virginia in 2010. It has developed alternative fuels/vehicles course curriculum. BRCC serves on the LOSCVC Steering Committee and Biofuels Committee.

- **Haywood Community College** - a public two-year college established in 1965. Received a grant for the development of a yellow grease biodiesel collection and manufacturing program. Total fleet size is 7 with 1 NEV E-Ride, 1 NEV GEM and 1 hybrid electric. Offers an Introduction to AFVs course and biodiesel production course. HCC serves on the LOSCVC Biofuels and EV Committees.

- **University of North Carolina–Asheville** - from its beginnings as Buncombe County Junior College, where 86 students enrolled in 1927 to further their educations beyond high school, the University has valued liberal arts ideals and community engagement. Its special commitment to student learning and undergraduate education was
reaffirmed when it joined the University of North Carolina system in 1969 as the University of North Carolina at Asheville. The University maintains its liberal arts imperative, as the designated undergraduate Liberal Arts University of the 17-campus University of North Carolina system. Total fleet is 60 vehicles with 5 utilizing biodiesel, 1 CNG and 15 NEV’s. Has an onsite biodiesel fueling station and plans to install E-85 and CNG infrastructure, funding permitting. Also interested in installing EV charging systems. UNC-A serves on the LOSCVC Biofuels Committee and Electric Vehicles Committee.

- **Warren Wilson College** - founded 1893 by the Women’s Board of Home Missions of the Presbyterian Church. Today, Warren Wilson is a four-year college committed to sustainable environmental programs. Total fleet is 95 vehicles with 22 utilizing biodiesel, 1 LPG and 2 hybrid electrics. Warren Wilson College is a charter member of the LOSCVC and serves on the LOSCVC Steering Committee and Electric Vehicles Committee.

- **Western Carolina University** - founded in 1889 to bring higher education and career opportunities to the western region of North Carolina. A member of the University of North Carolina system, WCU now provides an education to more than 9,000 students from 38 states and 32 countries. Located in Cullowhee, NC just outside our region but has been active in our LOSCVC initiatives. Has a fleet of NEVs and is investigating the use of other AFVs.

**Fuel Providers**

- **Blossman Propane** - founded in 1951, Blossman Gas has always strived toward one goal: to provide superior service to its customers. Following that business philosophy has allowed it to grow from one truck and one office in Mississippi to over 60 retail stores across the Southeast today, ranking it the 10th largest propane dealer in the country. Blossman Gas promotes Alliance AutoGas propane for vehicle applications. Opened the first AutoGas station in collaboration with German Motorwerks of Asheville in November 2010 and assisted Mountain Mobility in the conversion of 10 shuttle vans. Currently, their sales force utilizes 8 propane powered vehicles with plans to expand to 17 vehicles. Blossman Propane/Autogas Alliance is a charter member of the LOSCVC and serves on the LOSCVC Steering Committee and Gaseous Fuels Committee.

- **Blue Ridge Biofuels** - a worker-owned business committed to building the local alternative energy economy by producing affordable clean fuels for the community of
Western North Carolina through sustainable business practices that offer opportunities for community development, local jobs, and biofuel education. Produce sustainable biodiesel from regional resources; provide biodiesel distribution to the WNC region and state-wide; create jobs in the Biofuels and related industries; install multiple biodiesel fuel outlets throughout WNC; offer regional expertise on biodiesel and other Biofuels; stimulate public, fleet, and municipal awareness and use of Biofuels; and conduct research on new Biofuels technology and markets. 2010 production /sales of 100,000 gallons B100. Future capacity of 1 million gallons solely from waste grease. Blue Ridge Biofuels is a charter member of the LOSCVC and serves on its Steering Committee and Biofuels Committee.

**Government Organizations**

- **Buncombe County** - founded in 1791 it consists of 646 square miles with a population of 238,318. Lying on the western slopes of the eastern continental divide, it is bounded on the north by Madison and Yancey counties, on the east by McDowell and Rutherford, on the west by Madison again and Haywood, and finally on the south by Henderson county. It is roughly bisected by the French Broad River which has the distinction of being the third oldest river in the world as well as one of the few rivers to flow from south to north. Total fleet 415 vehicles with 10 utilizing biodiesel and 25 hybrid electrics. Future plans to install Level II electric charging stations in the county public access parking garages. Buncombe County is a charter member and serves on the LOSCVC Steering Committee, Biofuels and Electric Vehicles Committees.

- **City of Asheville** - incorporated in 1797 is the largest city in western North Carolina with a population of 83,318 encompassing 45 square miles. Located in the Appalachian Mountains near the Blue Ridge Parkway and Great Smoky Mountains National Park. It is a popular destination with tourists and retirees. The City of Asheville is an active supporter of alternative fuel technologies. Opened a public access CNG station in 2006. Total fleet size of 680 units utilizing CNG vehicles, neighborhood electric vehicles, hybrid electric vehicles, B5 biodiesel and E10 for its city and transit fleet. VMT reduction plan. Increasing its CNG fleet with 27 vehicles and expanding its CNG station through the Carolina Blue Skies Grant. City of Asheville is a charter member of the LOSCVC and serves on its Steering Committee, Gaseous Fuels, and Electric Vehicles Committees.

- **City of Hendersonville** - incorporated January 7, 1847 with a population of 10,876 and encompasses 6.93 square miles on a plateau about 2,200 feet above sea level. The City lies at the southern edge of the Blue Ridge Mountains, 40 miles north of Spartanburg and 22 miles south of Asheville on Interstate 26. Current total fleet is 201 vehicles utilizing 30 biodiesel vehicles and 3 LPG vehicles. Partnered in the Carolina Blue Skies grant for 2 CNG dump trucks and planning to purchase 3 or more
additional CNG vehicles in 2011. City of Hendersonville serves on LOSCVC Gaseous Fuels and Electric Vehicles Committees.

- **Henderson County** - founded in 1838 it consists of 375 square miles located on an intermountain plateau and is almost circled by mountains. To the west, the county touches the Pisgah Ledge, and to the east and south borders the Blue Ridge and Saluda Mountains. The county is bordered on the north side by Buncombe County, to the east by Rutherford and Polk counties, to the west by Transylvania County and to the south by South Carolina. Total fleet 360 vehicles utilizing biodiesel in 7 landfill vehicles and 1 NEV GEM for the Sheriff’s Department. Recently completed a public access CNG station, plans to expand the capacity of the station and purchase 3 CNG transit vans and 3 CNG pickups in 2011-12. Henderson County serves on the LOSCVC Steering Committee, Electric Vehicles Committee, Education and Outreach Committee and Gaseous Fuels Committee.

- **North Carolina Department of Transportation** - one of North Carolina’s largest state government agencies, with more than 14,000 employees. NCDOT provides high-quality transportation for travelers throughout North Carolina, including highways, rail, aviation, ferries, bicycle and pedestrian facilities, and public transit. Division 13 & 14 within our region operates a total of 716 vehicles with 394 utilizing biodiesel. Future plan is to expand biodiesel use to Madison County and install an E-85 pump at the Buncombe County depot if funding permits. An E-85 pump would allow hundreds of state owned FFVs to fuel there significantly increasing alternative fuel use in the region.

- **North Carolina Division of Air Quality** - part of the N.C. Department of Environment and Natural Resources (DENR), also enforces state and federal air pollution regulations. In North Carolina, the General Assembly enacts state air pollution laws, and the Environmental Management Commission adopts most regulations dealing with air quality. In addition, the U.S. Environmental Protection Agency (EPA) has designated the DAQ as the lead agency for enforcing federal laws and regulations dealing with air pollution in North Carolina. Facilitates several grant programs for clean transportation projects reducing petroleum use and mobile source emissions. DAQ administers a motor vehicle emission inspections program, Idle reduction program and the NC Air Awareness Program. DAQ is a charter member and staff serves on the LOSCVC Steering Committee and Education & Outreach Committee.

- **North Carolina State Energy Office** – located within the NC Department of Commerce it works to increase the use of renewable energy, alternative fuels and energy efficiency throughout the state, serving as the principal source of information for these energy areas. Staffs the NC Energy Policy Council and Low Carbon Transportation Committee. Facilitates various clean transportation grant fund
opportunities. Has been main source of funding supporting the two designated Clean Cities Coalitions in NC and the LOSCVC since its inception. SEO is a charter member of the LOSCVC and its Western NC field staff serves on the LOSCVC Steering Committee and Education and Outreach Committee.

- **Town of Black Mountain** - founded in 1893. Population of 8,264. It was named for the Black Mountain range of mountains that border the Town to the north. At the time of incorporation, the Town of Black Mountain had become a major pathway for westbound immigrants, commercial trade, and the mountain railroad. This strategic location helped establish Black Mountain as one of the most prosperous and picturesque communities in the country. Total fleet 75 vehicles utilizing 1 NEV GEM for community policing. Town is interested in installing several EV charging stations in the community in the next 2 years.

- **Town of Montreat** - founded as a spiritual retreat in the early 1900's with a population of 673. Home of Billy Graham. Located in the far eastern portion of Buncombe County near the Eastern Continental Divide and adjacent to Town of Black Mountain. Home of Montreat College and Montreat Conference Center. There is no commercial development in Montreat, not even a traffic light. Most of the streets are narrow and winding, with much less vehicle traffic than larger town or cities. This is an advantage to its preferred method of travel - walking. Total fleet 10 vehicles utilizing 1 NEV GEM for administrative use. The LOSCVC assisted the town in securing a DAQ grant to purchase the GEM.

- **Town of Waynesville** - founded in 1805 it consists of 7.8 square miles located in Haywood County in the Appalachian Mountains 27 miles west of Asheville. Currently, total fleet is 106 vehicles including 2 hybrid electrics. Town of Waynesville has an interest in utilizing alternative fuel/technologies as vehicles are replaced and installing EV charging stations. Town of Waynesville serves on the LOSCVC Electric Vehicles Committee.

- **Western North Carolina Regional Air Quality Agency** - enforces air quality regulations in Buncombe County and the City of Asheville. Regulations cover everything from open burning to asbestos demolition, as well as industrial facilities. WNCRAQA also has an air monitoring program that measures ozone and particulate matter in the county. The Agency is overseen by an independent board of five members, of which three are appointed by the Buncombe County Commission, and two by the Asheville City Council. Promotes idle reduction programs in the Buncombe County Schools and facilitated diesel emissions reduction grants to retrofit over 400 school buses and 21 fire trucks in the region. Staff supports Clean Air Campaign displays at events throughout the year. One vehicle utilizing biodiesel. WNCRAQA is a charter member and serves on the LOSCVC Steering Committee, Education and Outreach and Electric Vehicles Committees.
Health Service Providers

- **Mission Hospital** - formed when St. Joseph's Hospital and Memorial Mission Medical Center started an organizational partnership in 1996. This partnership was followed by a full merger on October 27, 1998, when St. Joseph's Hospital was purchased from the Sisters of Mercy by Memorial Mission Medical Center. Today these hospitals are part of the Mission Health System. Total fleet is 141 vehicles with 100 vehicles utilizing biodiesel, 9 CNG vehicles and 3 NEV GEM’s. Mission is a charter member of the LOSCVC and a partner in the Carolina Blue Skies grant and will purchase 6 additional CNG vehicles in 2011.

Parks

- **Great Smoky Mountains National Park** - Established in 1934 ridge upon ridge of forest straddles the border between North Carolina and Tennessee in Great Smoky Mountains National Park. World renowned for its diversity of plant and animal life, the beauty of its ancient mountains, and the quality of its remnants of Southern Appalachian mountain culture, this is America’s most visited national park. The 40 vehicle fleet utilizes biodiesel in 27 vehicles, 2 NEV E-Rides and 7 hybrid electrics funded through a $197,500 grant from NCDOT – CMAQ. The Park plans to increase its fleet of AFVs/ATVs in the future and is investigating support through the DOE Clean Cities National Parks Initiative. The Park has an excellent air quality education program for visitors and students and collaborates with our LOSCVC Education and Outreach Committee.

Transportation

- **Asheville Regional Airport** - operates an 8,000 foot runway with seven commercial airlines, rental car facility and general aviation aircraft and maintenance facilities. Total vehicle fleet is 41 with 38 utilizing biodiesel and 3 using LPG. Recently completed a baggage conveyor electrification project eliminating diesel powered equipment funded by a NCDAQ MSERG for $142,500. The Airport will expand its use of AFVs and assist the Coalition in working with rental car, taxi and shuttle companies to use AFVs.

- **Asheville Transit System** - provides bus service throughout the City of Asheville and other local areas with 24 bus routes running from 6 a.m.-11:30 p.m., Monday through Saturday. Routes originate from the Transit Center, located at 49 Coxe Avenue in downtown Asheville. Recently, placed in service five 30-foot diesel electric hybrid transit buses funded with a FTA grant. The Systems plans to obtain four additional diesel electric hybrids in the near future.
• **Mountain Mobility** – established in 1989 currently provides transportation services to clients of human service agencies, departments of local governments, and general public transportation services for persons residing outside of the City of Asheville. Mountain Mobility is administered and operated through contracts between Buncombe County and the Land-of-Sky Regional Council and McDonald Transit Associates, Inc., d/b/a Buncombe County Transit Management, Inc. Mountain Mobility serves on the LOSCVC Gaseous Fuels Committee.

Utilities

• **Metropolitan Sewerage District** - a public body and body politic and corporate of the State of North Carolina, exercising public and essential governmental functions and organized under the provisions of the North Carolina Metropolitan Sewerage Districts Act, being Article 5, Chapter 162A of the General Statutes of North Carolina, as amended. The District is comprised of 16 political subdivisions located within Buncombe County. Total fleet is 114 vehicles with 94 vehicles utilizing biodiesel, 2 NEV GEM’s and 2 Segways. One of the first fleets in region to use biodiesel. MSD is a charter member of the LOSCVC and serves on the LOSCVC Biofuels Committee.

• **Progress Energy** - headquartered in Raleigh, N.C., is a Fortune 500 energy company with more than 22,000 megawatts of generation capacity and approximately $10 billion in annual revenues. Progress Energy includes two major electric utilities that serve about 3.1 million customers in the Carolinas and Florida. The company has earned the Edison Electric Institute's Edison Award, the industry's highest honor, in recognition of its operational excellence, and was the first utility to receive the prestigious J.D. Power and Associates Founder's Award for customer service. The company is pursuing a balanced strategy for a secure energy future, which includes aggressive energy-efficiency programs, investments in renewable energy technologies and a state-of-the-art electricity system. Progress Energy celebrated a century of service in 2008. Current total fleet of 110 units with 11 hybrid electric vehicles in our region. By the end of 2011, Progress Energy will install 10 level II electric vehicle charging stations in our region. Provides technical and financial assistance to the LOSCVC especially to our EV Readiness Initiative. Progress Energy is a charter member of the LOSCVC and serves on the Steering and Electric Vehicles Committees.

• **PSNC Energy** - headquartered in Gastonia, NC, PSNC Energy is a regulated public utility engaged primarily in purchasing, transporting, distributing and selling natural gas to approximately 482,000 customers throughout a 28-county service area in 96 cities and communities, including the Raleigh, Durham, and Chapel Hill areas in the
north central part of the state; the Concord, Statesville, Gastonia, and Forest City areas in the Piedmont; and the Asheville, Hendersonville, Brevard, and Sylva areas in the western part of North Carolina. PSNC operates 5 CNG stations in North Carolina. Within our region PSNC operates a total fleet of 40 vehicles with 7 CNG light-duty pickups. Future plan expansion for the Asheville area is a total of 34 CNG light-duty pickups and an additional CNG station. PSNC is a charter member of the LOSCVC and serves on its Steering Committee and Gaseous Fuels Committee.
10. Fleet and Infrastructure Report

This section presents our AFV, hybrid and alternative refueling/recharging sites and idle reduction technology tables. Information contained in the tables comes from our 2010 Annual Report of Stakeholders. Stakeholders are sent a Report Data Template early each year to document their AFVs/ATVs and fueling infrastructure. Some information is obtained through emails or phone calls. Stakeholders are asked to project AFV/ATV purchases and new stations over a three year period. The projected numbers in the tables are the sum of current and the projected numbers.

<table>
<thead>
<tr>
<th>Current and Projected AFVs and HEVs</th>
<th>Projected AFVs and Hybrids (3 yrs. from date of program plan)</th>
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**Notes:**
- * Total Fleet includes all vehicles in fleet
- # Biodiesel includes 592 vehicles using B5

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(not included in 2010 CC Annual Report)

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3-Year Projected Petroleum Reductions

Based on the Clean Cities LOSCVC 2010 Annual Report, actual petroleum reduction in 2010 was 319,737 gas gallon equivalents (GGE). The stakeholder responses for a 3-year planned increase (2011-13) in alternative fuel vehicles and technologies indicate a projected additional petroleum fuel reduction of 322,564 gas gallon GGE during that period. The projected total displacement for 2013 is 642,301 GGE. This projects a 101% increase over the 3-year period for an estimated annual average increase of 26% in petroleum displacement.

The methodology for the projection utilized the coalition stakeholders’ plans for implementing alternative fuel vehicles and technologies over the next 3 years. This information was gathered when completing the 2010 Clean Cities LOSCVC Annual Report in March 2011. The data collected from the stakeholders was entered in the online 2011 Clean Cities Annual Report Database to project the petroleum reductions. The detail by stakeholder is in Appendix B.

The following graph is a comparison of the actual petroleum reductions for 2010 and the 3-year projection by type.
B. GOALS, ACTION STEPS AND MONITORING

1. Goals, Action Steps and Commitments

The Land-of-Sky Clean Vehicles Coalition Program Plan has been developed using input received during stakeholder meetings and one-on-one consultations. Stakeholders and staff worked together to identify barriers to developing an AFV marketplace and implementing a successful Clean Cities Program in our region.

To achieve the goals of the Clean Cities Program, and to increase petroleum reduction in the region by 17% per year, our Coalition outlined the following goals and objectives.

Goal A: Increase the number of AFVs and hybrid-electric vehicles in the region on the road; increase the amount of alternative fuel used in AFVs.

- **CMAQ Funds**: Assist entities operating within the region’s Non-Attainment Areas (currently only Great Smoky Mountains National Park) to develop additional AFV/ATV projects and apply for CMAQ funds through the NC DOT, the respective transportation planning organizations (MPO/RPOs) or the NC Solar Center’s Clean Fuel and Advanced Transportation (CFAT) grant program.

  Completion Date: 2013
  Responsible Party: LOSCVC Staff, Entities in NAA

- **National Parks Initiative**: Assist the National Park units in the region develop AFV/ATV projects and apply to the DOE Clean Cities Program’s National Parks Initiative. Units include Great Smoky Mountains National Park, Blue Ridge Parkway and Carl Sandburg Historic Site.

  Completion Date: Ongoing as funding permits
  Responsible Party: LOSCVC staff; National Park Units in region

- **Transit in Parks Program**: Investigate the Paul S. Sarbanes Transit in Parks Program as a funding source for AFV/ATV projects in the National Park units and US Forest Service units in the region and assist them in applying for funds.

  Completion Date: Ongoing
  Responsible Party: LOSCVC staff; National Park and US Forest Service Units in region
• **Fleets Assistance for Flex Fuel Vehicles:** Assist all fleets with existing Flex Fuel Vehicles (FFVs) to utilize E-85 fuel as it becomes more available in the region. Work especially with state and federal fleets to educate drivers and encourage them to use the fuel instead of gasoline. Create maps of E-85 station locations to be placed in vehicle glove boxes.

  Completion Date: Ongoing
  Responsible Party: Biofuels Committee, NC Motor Fleet Management, State and Federal Fleet Managers, LOSCVC Staff

• **Collaborate with National Fleets on AFV/ATV Projects:** Work with the DOE Clean Cities National Petroleum Reduction Partnership Program to approach national partner fleets in the region (e.g., UPS, Federal Express, Verizon, PepsiCo, Coca-Cola) and assist them in developing and implementing AFV/ATV projects. Work with AT&T to expand its current CNG vehicle fleet or use of other AFVs/ATVs in the region.

  Completion Date: 2014
  Responsible Party: LOSCVC staff, Committees, DOE National Partners Program Coordinator

• **AFV/ATV Demonstration Fleet Program:** Provide AFV/ATV demonstration vehicles for assessment by potential fleet purchasers and for opportunities to educate the general public in an effort to influence purchasing decisions.

  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff, AFV Dealers and Owners

• **AFV/ATV Fleet Assessments:** Meet with fleet managers and others to assess the feasibility of using AFV/ATVs or more fuel efficient vehicles in their fleets. Provide technical assistance as necessary and assist them in securing grant funding for their projects.

  Completion Date: Ongoing (5 fleets per year)
  Responsible Party: LOSCVC Staff (especially the LOSCVC Fleet Consultant)

• **Biofuel Feedstock Feasibility Project:** Work with the NC Biofuels Center, US Forest Service, local agricultural research stations and others to assess the potential for biofuel feedstock production in the region.

  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff; NC Biofuels Center; Ag Research Stations

• **City of Asheville CNG Vehicle Conversion Initiative:** Provide technical and administrative assistance to the City of Asheville to convert 27 new vehicles to
compressed natural gas (CNG) as part of the Carolina Blue Skies and Green Jobs Initiative.

Completion Date: 2012
Responsible Party: City of Asheville Staff; LOSCVC Staff

- **City of Hendersonville CNG Vehicle Conversion Initiative:** Provide technical and administrative assistance to the City of Hendersonville to purchase 2 new CNG dump trucks as part of the Carolina Blue Skies and Green Jobs Initiative. Secure additional funding for a CNG street sweeper, recycling truck, and several pickup trucks.

Completion Date: 2012
Responsible Party: City of Hendersonville Staff; LOSCVC Staff

- **Henderson County CNG Vehicle Conversion Initiative:** Provide technical and administrative assistance to Henderson County to convert several pickup trucks to CNG as part of the Carolina Blue Skies and Green Jobs Initiative.

Completion Date: 2012
Responsible Party: Henderson County Staff; LOSCVC Staff

- **Mission Health System CNG Vehicle Conversion Initiative:** Provide technical and administrative assistance to Mission Hospital Systems to purchase 4 new CNG sedans and 2 new CNG shuttle vans as part of the Carolina Blue Skies and Green Jobs Initiative.

Completion Date: 2012
Responsible Party: Mission Hospital Systems Staff; LOSCVC Staff

- **Mountain Mobility CNG Vehicle Conversion Initiative:** Provide technical assistance to Buncombe County’s Mountain Mobility community transportation system to convert 12 shuttle vans and buses to CNG under a NC DOT Stimulus Grant.

Completion Date: 2012
Responsible Party: Mountain Mobility Staff; LOSCVC Staff

- **Henderson County CNG Shuttle Bus Initiative:** Provide technical assistance to Henderson County’s Apple Country Transit to purchase 3 new CNG shuttle buses under a NC DOT Stimulus Grant.

Completion Date: 2012
Responsible Party: Apple County Transit Staff, LOSCVC Staff
- **State and Federal Fleets:** Work with state and federal agencies with fleets in the Coalition area (e.g. NC Motor Fleet Management, GSA, etc.) to encourage the acquisition and utilization of alternative fuel vehicles.

  Completion Date: 2013  
  Responsible Party: LOSCVC Staff

- **Asheville Regional Airport AFV/ATV Expansion Project:** Work with Asheville Regional Airport to promote greater AFV use in and around the airport facility. Work with the Airport Director and staff to encourage related industries (e.g., car rental companies, taxi and shuttle companies, etc.) to use AFVs and ATVs.

  Completion Date: Ongoing  
  Responsible Party: LOSCVC Staff

- **Stakeholder AFV/ATV Information Resource:** Act as a clearinghouse of information on alternative fuels and alternative fuel vehicles. Information will be made available to stakeholders through meetings, periodic mailings, coalition newsletters, the LOS LOSCVC web site, etc. Additionally, staff will continue to make presentations to various groups and will conduct educational outreach on an on-going basis.

  Completion Date: Ongoing  
  Responsible Party: LOSCVC Staff, Education and Outreach Committee

- **Mobile Source Emissions Reduction Measures Integration:** Integrate LOSCVC efforts with all air quality mobile source reduction efforts in the region and state. Coordinate efforts with the NC Division of Air Quality, WNC Regional Air Quality Agency, US Forest Service and Great Smoky Mountains National Park Air Resource Specialists. Obtain additional information from these agencies and transportation planning agencies on the most cost effective mobile source emission reduction measures within the region.

  Completion Date: Ongoing  
  Responsible Party: LOSCVC Staff, Steering Committee, Education and Outreach Committee, Air quality and transportation planning agencies

- **Clean Cities Tools Education & Outreach:** Make fleet managers more aware of the various Clean Cities Tools found on the Clean Cities and AFDC websites to assist them in finding appropriate vehicles and determining emission reductions, fuel properties, and costs. Convey this information through our LOSCVC newsletter and website, demonstrations of tools at meetings, etc.

  Completion Date: Ongoing  
  Responsible Party: LOSCVC Staff; All Committees
**AFV/ATV State Contract Availability:** Ensure that alternative fuel vehicles and alternative fuels are available on the State Contract purchasing lists. Make local governments aware since they may purchase from the State Contract List.

Complete Date: Ongoing
Responsible Party: LOSCVC Staff; Bidders; Purchasing Agents

**City/County Schools AFV/ATV Development Initiative:** Provide technical assistance in developing AFV/ATV projects and securing funding sources for Asheville and Buncombe County schools as part of the Reading, Riding and Retrofit Program funded by an EPA Climate Showcase Communities grant. Specifically continue assistance to Asheville City Schools Fleet Manager as they evaluate CNG vehicle options.

Completion Date: Ongoing
Responsible Party: LOSCVC Staff; RRR Program Coordinator; School System Fleet Managers

**Investigate Grant Funding to Support PHEV’s & BEV’s:** Secure grant funding to assist interested stakeholders in purchasing Plug-In Electric Vehicles including the high speed electric drive vehicles offered in 2011 and beyond. Partner with Advanced Energy, NC’s utilities, other Clean Cities Coalitions, etc. to secure funding as appropriate.

Completion Date: 2014
Responsible Party: LOSCVC Staff; Electric Vehicles Committee; Partners

**Expand the Use of Propane Powered Vehicles:** Work with Blossman Propane, Alliance Autogas, and other propane providers to encourage existing fleets to consider converting vehicles to clean burning autogas. Target fleets including law enforcement fleets and transit fleets that have gasoline powered vans, small buses, and cutaways. Use the Mountain Mobility propane project (10 vans) as a success story. Stress the low conversion costs, little or no cost of fueling infrastructure and quick return on investment.

Completion Date: Ongoing
Responsible Party: LOSCVC Staff; Propane providers; Gaseous Fuels Committee

**Expand the Use of CNG Powered Vehicles:** Work with Public Service of North Carolina (PSNC) to encourage fleets to consider the use of natural gas vehicles. Target low MPG, high fuel use fleets including garbage trucks, food and beverage distribution fleets, city and county utility trucks, delivery business fleets, and transit.

Completion Date: Ongoing
Responsible Party: LOSCVC Staff; PSNC; Gaseous Fuels Committee
**Goal B: Increase the number of refueling/recharging stations to meet AFV growth projections.**

- **Promote the Use of Cellulosic Ethanol Feedstocks:** Encourage the ethanol industry to move rapidly toward cellulosic feedstocks and investigate the potential for producing such feedstocks in the region.
  
  Completion Date: 2014  
  Responsible Party: Biofuels Committee; Agricultural Research Stations; NC Biofuels Center

- **Expand the Use of Biofuels & Fueling Infrastructure:** Encourage the NC Department of Transportation to continue using B20 in its fleet region-wide (and expand use to Madison County) and to begin installing E-85 pumps in the region beginning with the Buncombe County DOT depot. Encourage DOT to allow other state agencies in the region to use these pumps. Assist DOT in securing funding as appropriate.
  
  Completion Date: 2014  
  Responsible Party: Biofuels Committee, NC DOT

- **Develop New Biofuels Retail Outlets:** Address the issue of alternative fuel availability by identifying retail stations/travel centers in the region that want to offer Biofuels and assist with infrastructure retrofit, fuel delivery, and promotion. Establish biodiesel pumps at stations in counties currently without retail pumps. Focus on new stations near major highways and interstates to tap into the trucking market.
  
  Completion Date: 2014 (Three new stations over three years)  
  Responsible Party: Biofuels Committee, Blue Ridge Biofuels, Other Distributors

- **Expand Production of Biofuels Locally:** Assist Blue Ridge Biofuels in Asheville to increase its production of biodiesel by increasing the amount of feedstock (waste vegetable oil) collected in the region. Assist them by reaching out to producers of waste vegetable oil (schools, restaurants, etc.) and securing their participation. Create an incentive for waste grease producers to recycle their oil with biodiesel producers.
  
  Completion Date: Ongoing  
  Responsible Party: Biofuels Committee, Blue Ridge Biofuels, Feedstock providers
• **Support City of Asheville CNG Grant Effort:** Provide technical and administrative assistance to the City of Asheville to expand the capacity of its existing public access CNG fast fill station as part of the Carolina Blue Skies and Green Jobs Initiative. This will allow additional vehicles/fleets to use the station (Mountain Mobility, AT&T, Mission Hospital, etc.).

  Completion Date: 2012  
  Responsible Party: LOSCVC Staff; City of Asheville Staff

• **Support Henderson County CNG Grant Effort:** Provide technical and administrative assistance to Henderson County to expand the capacity of its existing public access CNG fast fill station as part of the Carolina Blue Skies and Green Jobs Initiative. This will allow additional vehicles/fleets to use the station (City of Hendersonville, AT&T, etc.).

  Completion Date: 2012  
  Responsible Party: LOSCVC Staff; Henderson County Staff

• **Collaborate with PSNC to Develop New CNG Fueling Infrastructure in Buncombe County:** Assist Public Service NC (PSNC) to develop a new public access CNG fueling station in Buncombe County (third in county) near the PSNC Operations Center off Brevard Road.

  Completion Date: 2012  
  Responsible Party: LOSCVC Staff; PSNC Staff

• **Collaborate with PSNC to Develop New CNG Fueling Infrastructure in Other Counties:** Work with PSNC, county officials and private operators to identify central CNG fueling locations in other counties, investigate ownership, and work to form partnerships and secure funding to locate fueling stations in these locations.

  Completion Date: 2013  
  Responsible Party: LOSCVC Staff; Gaseous Fuels Committee

• **Collaborate with Fuel Providers to Educate the Public on AF Availability:** Work with AFV station owners to make fleet managers and the public aware of existing refueling and recharging stations in the region. Use handouts, maps, the AFDC Station Locator, presentations, and other means to convey this information.

  Completion Date: Ongoing  
  Responsible Party: LOSCVC Staff; Station Owners

• **EV Community Readiness and Charging Station Site Plan:** Utilize the new DOE EV Community Readiness Planning Grant to NC to develop statewide and regional plans to deploy EVs and Electric Vehicle Charging Stations in the state/region. Prepare a map of
potential strategic sites. Work with local government permitting officials to streamline the EVSE permitting process for both residential units and public access stations.

Completion Date: 2012-13
Responsible Party: LOSCVC Staff; EV Committee

- **EV Charging Station Deployment Project:** Work with Advanced Energy and local site hosts to install 25 Level II Electric Vehicle Charging Stations in the region under a State Energy Office grant to Advanced Energy. Use site criteria to determine appropriate sites and then work with hosts and Advanced Energy to deploy the stations. Assist in planning and conducting PR events to make the public aware of these new sites.

  Completion Date: 2012
  Responsible Party: LOSCVC Staff; Advanced Energy Staff; EV Committee

- **Support Bio Wheels RTS EV Project:** Assist BioWheels RTS (Responsible Transportation Solutions) implement its EV Project that will purchase 3 NEVs and install 12 EV Charging Stations (including 3 solar powered Brightfields) in the region under a NC Green Business Fund grant.

  Completion Date: 2012
  Responsible Party: LOSCVC Staff; EV Committee

- **Promote the Use of Existing Propane Fueling Infrastructure & Develop Future Sites:** Make fleet managers and other stakeholders aware of the new public access propane fueling station at German Motor Werks in South Asheville and work with Blossman Propane and Alliance Autogas officials to establish two additional public access fueling stations in the region.

  Completion Date: 2014
  Responsible Party: LOSCVC Staff; Gaseous Fuels Committee; Propane Providers

- **Collaborate with Other States to Expand Interstate Highway Clean Corridors:** The Asheville region is at the crossroads of two major interstates – I-40 and I-26. We will partner with other states (e.g., Tennessee and South Carolina) to support the development of Clean Corridors along these and other routes to allow alternative fuel vehicles to easily travel along or near major highways by assuring the availability of adequate fueling and recharging stations.

  a) Work with the Southeast Alternative Fuels Task Force, EPA SE Diesel Collaborative, etc. to establish “clean corridors” throughout Georgia, North Carolina, South Carolina, and Tennessee.
b) Coordinate with the Triangle Clean Cities Coalition, Centralina Clean Fuels Coalition and NC Solar Center’s Clean Transportation Program on corridor projects within NC.

c) Work with the NC DOT, Advanced Energy and others to install DC Fast Chargers at selected rest areas and other strategic locations along interstates.

Completion Date: 2014  
Responsible Party: LOSCVC Staff, Appropriate Committees

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**Goal C: Recruit new stakeholders.**

- **Recruit New AFV/ATV Government and Private Fleets:** Increase the number of new stakeholders by ten over three years, specifically, targeting public fleets not currently using AFVs/ATVs (Weaverville, Woodfin, Biltmore Forest, Fletcher, Brevard, Mars Hill, Waynesville, Canton, Clyde, Madison, Haywood and Transylvania counties, US Forest Service) and private fleets (UPS; Federal Express; Verizon, Pepsi, Coca Cola, Ingles, SE Container, Evergreen Packaging, waste haulers, other delivery fleets, etc.).

  Completion Date: Annually (Ten over three years)  
  Responsible Party: LOSCVC Steering Committee

- **Recruit American Automobile Association:** Recruit AAA Carolinas to become a stakeholder and assist us in promoting AFVs/ATVs, fuel efficient vehicles and green driving techniques.

  Completion Date: 2012  
  Responsible Party: LOSCVC Steering Committee

- **Increase Relationships with Area Chambers of Commerce to Recruit New Stakeholders:** Strengthen existing relationships with the Asheville and Haywood Chambers of Commerce and begin partnering with Chambers in the other 3 counties to recruit more businesses as stakeholders. Participate in the Asheville Chamber’s WNC Transportation Alliance and Haywood Chamber’s Green Business Initiative.

  Completion Date: Ongoing  
  Responsible Party: LOSCVC Steering Committee

- **Develop Contacts with Product Manufacturers & Dealers:** Recruit product manufacturers and local dealers: Honda America; Ford Motor Company; General Motors, Toyota America; Nissan, Freightliner, Eaton Corporation, General Electric, etc.
Completion Date: 2012 (four members over three years)
Responsible Party: LOSCVC Steering Committee

- **Develop Local AFV Success Stories:** Package local success stories, such as the City of Asheville that uses a variety of AFVs/ATVs, Mountain Mobility that uses CNG and Propane shuttles, MSD that uses biodiesel in its entire fleet, and others, and use them as examples to demonstrate the benefits of being a LOSCVC stakeholder.

  Completion Date: Ongoing
  Responsible Party: LOSCVC Steering Committee; Education and Outreach Committee

- **Participate in Education & Outreach Activities:** Attend and participate in association meetings and workshops addressing alternative fuels and the benefits of LOSCVC membership.

  Completion Date: Ongoing (10 over three years)
  Responsible Party: LOSCVC Staff and Committee Members

- **Seek New Stakeholders Through College AFV Curriculum Attendees:** Recruit new stakeholders from those enrolled in the region’s technical colleges’ new Alternative Fuels Courses and those attending related workshops and conferences.

  Competition Date: Ongoing
  Responsible Party: LOSCVC Staff; Technical College Stakeholders

- **Celebrate Stakeholder Success Stories:** Give current stakeholders recognition. Make it attractive for others to sign on.

  a) Press releases
  b) Success Stories on the web site and in LOSCVC newsletter
  c) Links to stakeholder web sites
  d) Publicity through the various events
  e) Nominations for awards

  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff; Education and Outreach Committee

- **Recruit Regional Retail Fuel Providers:** Seek out regional retail fuel providers to encourage them to join as LOSCVC stakeholders. As retail fuel providers become more acquainted with LOSCVC initiatives, they will be encouraged to begin offering alternative fuels to businesses, government agencies and the general public.
Goal D: Develop and Promote incentives to increase the use of alternative fuels and vehicles and idle reduction technologies in the region.

- **Recruit New Private Fleets:** Target private fleets that currently have AFVs but are not stakeholders. Work with fuel and AFV providers to identify and recruit these entities.
  
  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff; Fuel and AFV providers

- **Legislative Outreach with State’s Regional Political Leaders:** Maintain excellent relations with staff of Senators Richard Burr and Kay Hagan and Representative Heath Shuler, keep them informed on legislative issues and include them in LOSCVC meetings and events as appropriate. Also continue or establish relations with our region’s NC legislative delegation and inform and involve them as appropriate.
  
  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff, Steering Committee

- **Collaborate with Other AFV Organizations on Legislative Goals:** Collaborate with the Longleaf Pine Coalition (NC Solar Center, Triangle Clean Cities Coalition, Centralina Clean Fuels Coalition) and other alternative fuel organizations to identify annual legislative goals and actions. Support the introduction of a legislative incentives package in the 2012 session of the NC General Assembly that would establish state and local level incentives for the use of alternative fuels and AFVs that would complement current federal incentives.
  
  Completion Date: 2012
  Responsible Party: Steering Committee

- **Collaborate with NC Energy Policy Council on AFV Public Policy:** Provide input to the deliberations of the Low Carbon Transportation Committee of the NC Energy Policy Council to influence public policy relating to alternative fuels in the state.
  
  Completion Date: Ongoing
Responsible Party: Steering Committee

- **Promote Low Interest Loans for AFV’s:** Encourage the State Employees Credit Union and Local Government Employee Credit Union to continue and expand their existing lower interest Green Vehicle Loans for new and used fuel efficient/low emission vehicles. Encourage other credit unions and commercial banks to establish such incentive programs.

  Completion Date: 2014
  Responsible Party: Steering Committee

- **Promote the Use of State & Federal AFV/ATV Grant Programs:** Support continuation and expansion of the NC Mobile Source Emissions Reduction Grant Program (MSERG) that provides grants for AFV/ATV and infrastructure projects. Also support reauthorization of the federal Diesel Emission Reduction Act (DERA) and its associated grant program. Continue the LOSCVC’s participation in the EPA Southeast Diesel Collaborative. Encourage fleets to apply for NC and EPA DERA funds for idle reduction projects.

  Completion Date: 2014
  Responsible Party: Steering Committee

- **Promote Vehicle Parking Incentives for AFV’s:** Provide draft policies for consideration of local governments and operators of parking facilities that establishes free/VIP parking areas for AFVs/ATVs.

  Completion Date: 2014
  Responsible Party: LOSCVC Staff, Steering Committee, LOS Council, MPO, RPO

- **Promote the Use of Idle Reduction Incentives:** Work with the NC Division of Air Quality, WNC Regional Air Quality Agency and other partners to develop incentives to use idle reduction technologies and measures in the region.

  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff, Education and Outreach Committee
Goal E: Communicate the Clean Cities message to the Public.

- **Organize Stakeholder Success Story Presentations to the Public:** Arrange speaking engagements for LOSCVC stakeholders to make presentations on experiences with alternative fuels, AFV/ATVs, and other Clean Cities technologies at Stakeholder meetings, other group meetings, forums, workshops and conferences.

  Completion Date: Ongoing  
  Responsible Party: LOSCVC Staff, Education and Outreach Committee, Key Stakeholders

- **Collaborate with Technical Community Colleges for AFV/ATV Training:** Assist the region’s technical community colleges in developing and promoting training classes and programs on AFVs/ATVs and other Clean Cities technologies. Training should include mechanic certification programs. Work with Blue Ridge Community College to cosponsor Odyssey Day Events every other year in partnership with the National Alternative Fuels Training Consortium. Conduct AFV training for First Responders in the region.

  Completion Date: Ongoing  
  Responsible Party: All Committees, Blue Ridge Community College, Asheville-Buncombe Technical Community College, Haywood Community College, NAFTC.

- **Maintain and Update LOSCVC Website:** Create a new LOSCVC web site and keep information on site current.

  Completion Date: Ongoing  
  Responsible Party: LOSCVC Staff, Web Designer, and Education and Outreach Committee

- ** Produce and Distribute E News:** Produce and distribute electronic newsletter to all LOSCVC stakeholders.

  Completion Date: Ongoing  
  Responsible Party: LOSCVC Staff, Education and Outreach Committee

- **Update Educational Materials:** Update materials and other handouts for distribution at meetings, conferences, demonstrations and through the mail.
- **Provide AFV Information to Media Outlets:** Increase public awareness of benefits and availability of AFVs/ATVs by continuing our strong working relationships with key media staff. Feed the media ideas for stories on a regular basis. Issue press releases on key events and stories. Arrange and/or conduct interviews as requested.

  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff and Education and Outreach Committee

- **Participate in Regional Public Events:** Continue participation in community events such as the Bele Chere Festival, Earth Day events, employee health fairs, holiday parades, etc. to educate the general public.

  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff and Education and Outreach Committee

- **Organize Celebrations of AFV Successes within the Region:** Plan and participate in celebrations of conversions of fleets and fuels throughout the region in order to influence decisions of others.

  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff and Education and Outreach Committee

- **Promote AFV/ATV Education within the Regional School System:** Work with the NC Division of Air Quality’s Air Awareness Program staff, WNC Regional Air Quality Agency staff and others to educate teachers and students about air quality issues and solutions including AFVs/AFVs, Fuel Economy measures, Idle Reduction programs, etc. Continue working with these entities to encourage schools and other institutions to erect Idle Reduction signs.

  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff, NC DAQ Staff, WNCRAQA and Education/Outreach Committee

- **Conduct an Annual Ozone Event:** Plan and conduct an Annual Ozone Season Kickoff Event and Press Conference to increase public awareness of air quality issues and solutions including AFVs/ATVs and other Clean Cities Technologies.

  Completion Date: Each Spring at beginning of Ozone Forecast Season
  Responsible Party: LOSCVC Staff and Education and Outreach Committee

- **Update AFV Station Location Websites:** Make fleet managers and the public aware of fueling opportunities by sending updates to the DOE Alternative Fueling Station Locator
and other mapping tools as new fueling and recharging stations come on line in the region. Link to the Station Locator from the LOSCVC website.

Completion Date: Ongoing  
Responsible Party: LOSCVC Staff and Committees

- **Conduct a Media Event to Celebrate the LOSCVC Clean Cities Designation:** Apply for and obtain Clean Cities designation. Plan a media event with DOE and stakeholders to celebrate designation and to spread the Clean Cities message.

  Completion Date: 2012  
  Responsible Party: LOSCVC Steering Committee and Education/Outreach Committee

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**Goal F: Achieve Coalition financial sustainability.**

- **Evaluate a Coalition Dues Structure:** Conduct a feasibility study examining the costs and benefits of creating a Coalition dues structure and implement recommendations of the study.

  Completion Date: Study - 2012, Implement - 2014  
  Responsible Party: LOSCVC Staff, Steering Committee

- **Investigate Grant Opportunities for Coalition Support:** Continue to identify and apply for grants for operations and infrastructure through various agencies such as US DOE; TVA; ARC; USDA, EPA, NC DAQ, NC Energy Office, NC Biofuels Center, NC Green Business Fund.

  Completion Date: Ongoing  
  Responsible Party: LOSCVC Staff, Steering Committee

- **Recruit Sponsors:** Identify and secure sponsors for LOSCVC workshops and other activities to defray operating expenses.

  Completion Date: Ongoing  
  Responsible Party: LOSCVC Staff; Steering Committee

- **Collaborate with Partners on Joint Grants:** Work with partners (e.g., other Coalitions, NC Solar Center, Advantage West, Advanced Energy, MPO, RPO, key stakeholders, etc.) to develop joint grant applications to fund staff and activities.
• **Evaluate Promoting Fund-Raising Events:** Consider fund-raising events such as trade shows, dinners, races and golf tournaments.

  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff, Steering Committee

• **Develop Fee-Based AFV Workshops:** Develop AFV, Biofuels, Eco Driving and other workshops and conferences that include registration fees.

  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff, Steering Committee

• **Utilize Interns, Etc. for Operational Support:** Utilize College Interns, Energy Fellows, AmeriCorps Volunteers, Waste Reduction Partners members, etc. to research grant opportunities, conduct fundraising activities and assist in implementing various LOSCVC programs to reduce Coalition operational costs.

  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff

• **Continue Technical Assistance Contracts:** Utilize technical assistance and grant writing contracts to support staff and provide a higher level of service to stakeholders.

  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff

• **Collaborate with Groups Regionally to Expand the Clean Energy Economy:** Work with the Leadership Group of the WNC Clean Energy Economy Project to expand the clean energy economy in the 26 WNC counties especially the alternative fuels and vehicles sectors. This will provide more opportunities for stakeholder involvement and support as the economy improves.

  Completion Date: Ongoing
  Responsible Party: LOSCVC Staff, Steering Committee
Goal G: Educate policy makers about the benefits of the Clean Cities portfolio of technologies.

- **Educate Regional Policy Decision Makers:** Make presentations to the LOS Council Board, MPO, RPO and other policy boards on Clean Cities technologies, benefits and use in the region.
  
  Completion Date: Ongoing  
  Responsible Party: LOSCVC Staff, Steering Committee

- **Conduct meetings with Local Officials:** Meet with local elected officials and senior staff to provide information on activities in AFV and Biofuels market.
  
  Completion Date: Ongoing (5 annually)  
  Responsible Party: LOSCVC Staff; Appropriate Committee members

- **Conduct Clean Cities Technologies Workshops for Policy Makers:** Plan and host workshops for policy makers on the benefits of Clean Cities’ technologies and Clean Cities Program.
  
  Completion Date: Ongoing  
  Responsible Party: LOSCVC Staff, Appropriate Committees

- **Promote Petroleum Reduction:** Continue to encourage and support local decisions to adopt practices that contribute to the reduction of petroleum consumption in the transportation sector through the meetings noted above and by identifying funding opportunities for the installation of alternative fuels infrastructure and retrofit projects.
  
  Completion Date: Ongoing  
  Responsible Party: Steering Committee
1. Monitoring Program

The LOSCVC’s Steering Committee and LOSRC management will be responsible for monitoring projects and activities and for providing guidance to the parties responsible for implementing the actions required for implementation of the plan.

The LOSCVC Coordinator will complete the Department of Energy’s (DOE) Clean Cities Annual Report. Responses constitute a list of the LOSCVC’s petroleum displacement accomplishments and activities for the previous calendar year. The Steering Committee will also use this information to measure its effectiveness and its progress in achieving the goals.

The Coordinator, Fleet Consultant and Committee Chairs will provide progress reports to the Steering Committee at regular meetings.