



January 1, 2017- December 31, 2017 Annual Operating Plan

As accepted by the Coalition's Core Stakeholder Group, December 2016

SECTION I: BACKGROUND INFORMATION

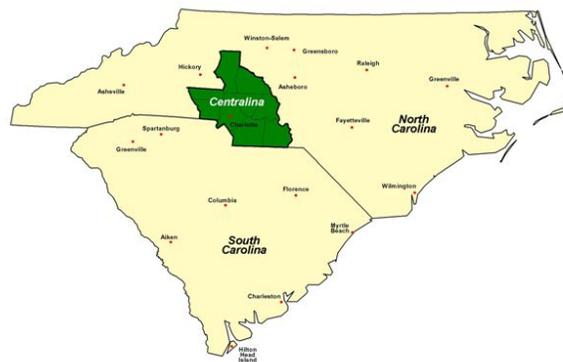
Coalition Information:

The Centralina Clean Fuels Coalition (CCFC) was first designated in the Department of Energy's Clean Cities program in April of 2004 and was most recently re-designated in 2013. The Coalition is housed at, and is a local effort of the Centralina Council of Governments (CCOG), a 9-county state designated regional planning agency in North Carolina, comprising of Anson, Cabarrus, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, Stanly, and Union counties.

The mission of the national Clean Cities Program (locally represented by the CCFC) is to decrease the nation's dependence on petroleum in the transportation sector through public-private partnerships, to improve air quality, and to expand alternative fuel use and technology. Locally, with a primary focus on fleet operations, the CCFC supports its host organization's charge of controlling costs of government, providing for economic opportunity, and improving quality of life.

The CCFC's Core Stakeholder Group, made up of 21 stakeholder representative organizations with a Chair and Vice-Chair, works in an advisory capacity and actively participates in leading and advising staff with targeted initiatives. CCFC staff, with input from the Core Stakeholder Group, develops the annual operating plan to guide the coalition's activities and direct resources. In addition, ad-hoc sub-committees/working groups are pulled together to discuss critical issues, support initiatives, or otherwise meet the mission and goals of Clean Cities. These working groups are often a mix of Core Stakeholders and other interested stakeholder organizations. For day to day accountability, the Coordinator is accountable to CCOG's Planning Director and Executive Director.

CCFC receives funding from multiple sources including federal grants, state grants, sponsorships, fee for services, and matching funds from CCOG. A more detailed breakout can be found in Section V: Coalition Funding and Sustainability below.



**Centralina Clean Fuels Coalition's
9-county region (in green), shown in the context of
North and South Carolina**

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Core Coalition Personnel:

***Jason Wager, AICP CEP, Planning Program Supervisor--Sustainability and CCFC Coordinator
60% FTE on coalition activities***

Jason has worked with the Centralina Council of Governments since 1996 and received his Master's in Geography (Urban/Regional Planning Concentration) from UNC Charlotte in 2001. In addition to his role as Coordinator, Jason has overseen numerous planning projects including annexation studies, development of land use regulations and plans, public input processes, and survey design and analysis. He has been or is involved in several environmentally-based projects grounded in sustainability principles that include local and regional water resource planning, energy project financing and program implementation, and several regional transportation planning engagement and process assessment initiatives. Jason is a member of the American Institute of Certified Planners (AICP), is a Certified Environmental Planner (CEP), has a certificate in Municipal Administration from the UNC-Chapel Hill School of Government, sits on the Sustainability Technologies Advisory Committee at Central Piedmont Community College, is a member of the Catawba-Watauga Water Management Group Advisory Committee, and is a trained group facilitator.

***Jessica Hill, AICP, Senior Planner – Sustainability
20% FTE on coalition activities***

Jessica has been with Centralina Council of Governments since July 2013. She provides support for Centralina Clean Fuels Coalition initiatives as well as other sustainability initiatives within the regional planning department. Jessica is the CCFC project manager for the Southeast Alternative Fuels Demonstration Initiative (SADI), and assists the Coordinator to plan for and hold coalition activities, meetings, and events. Jessica earned her Master in City and Regional Planning with a concentration in land use planning from the University of North Carolina at Chapel Hill and a Master in Business Administration from Wake Forest University. Jessica is a member of the American Institute of Certified Planners (AICP).

***Amanda Wilkinson, CCFC Workforce Development Intern
15 Hours per week on coalition activities***

Amanda began in Fall 2016 with the Coalition. She is currently pursuing an Associate of Science degree in Sustainability at Central Piedmont Community College. Amanda is responsible for several ongoing activities including the Coalition's social media efforts, event support, and stakeholder sustainability program.

SECTION 2: ACCOMPLISHMENTS

Title	Summary	Why it's important
2016 State Energy Conference	Examined the impacts of energy technologies, policies and finance on customers at all levels of the energy marketplace, including clean transportation.	Session organized by CCFC staff and presenters including several CCFC stakeholders. Also highlighted vehicles and stakeholders active in this space.
2016 UNC Charlotte Transportation Fair	https://www.facebook.com/CentralinaCleanFuels/photos/a.145551175544368.21819.129654490467370/874466369319508/?type=3&theater	Reached students, faculty, and staff regarding alternative transportation options.
3rd Annual Western North Carolina Air Quality Conference	Presentation on role of clean transportation in fleets.	Made by UNC-Charlotte stakeholder representative, and then CCFC Vice-Chair, thereby showcasing the value of our stakeholders and demonstrating that expertise goes far beyond coordinator staff
Agility Fuel Systems	The Centralina Clean Fuels Coalition had the opportunity to meet and received an exclusive plant tour at the Agility Fuel Systems facility in Salisbury, NC. https://www.youtube.com/watch?v=Sw79KBduR10&feature=youtu.be	Demonstrated the value of significant manufacturing going on in our region that supports the alt fuels market and directly connected stakeholder fleets and CNG utilities like UPS and PSNC to this trusted vendor.
City of Charlotte Solid Waste Services CNG	Piedmont Natural Gas has contracted with the City of Charlotte Solid Waste Services to install a CNG station for refuse trucks at their existing facility near uptown.	Will save travel time and cost for the city to use off-site fueling and will demonstrate the value of these fleet arrangements that others may want to replicate
CNG Fire Safety Demonstration	Hosted by PSNC, staff provided detail review of CNG properties and considerations for those that might encounter the fuel, capped off with field demonstration at their onsite training area.	Safety and shared understanding of proper handling.
Earth Day Events	In April of 2016, CCFC tabled two events at UNC Charlotte and the Charlotte-Mecklenburg Government Center	Raised awareness for anti-idling and alternative fuel vehicles
Excel Truck Group	Facility tours for CNG/LNG/LPG clients and Prospects.	Augments education while also support business opportunity that must always be kept in mind.
Excel Truck Group	Factory training on Freightliner's current alternative fuel vehicle options.	Directly connects and exposes potential end users with advanced vehicle and alternative fuel equipment options, which is also providing jobs and being built right here in our backyard.
Excel Truck Group	All newer facilities are certified for CNG, LNG, LPG/Autogas, and Hybrid power repairs. All the diesel vehicles sold in 2017 are certified to	A key element of the deployment of AFV/ATVs is access to competent mechanics and advisors "on the front lines" supporting fleets interested in

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	operate on B5-B20 bio-diesel and will meet the GHG17 emission standards.	purchasing or expanding their alternative fuel and advanced technology vehicle use—this is especially critical for the medium and heavy duty market in our region.
Greater Charlotte Regional Freight Mobility Plan	The efficient, reliable, and safe movement of goods and commodities in the Greater Charlotte region is required to sustain private sector commerce. The Regional Freight Mobility Plan is being developed in partnership with the FHWA, NC & SC DOT, regional transportation planning organizations, local governments, and private sector freight users and providers.	To support our existing businesses and attract new ones, the freight system must provide mobility and reliability to get finished goods to market and efficient supply chains. Finding ways to link CCFC mission with COG mission to strengthen the interest of both parties; have Clean Cities be a part of planning in the region
Mentoring Program	Continued mentoring activities including supporting the development of a Board Best Practices document and working with coalitions, such as Lone Star and Central Oklahoma.	Shared our knowledge and experience while also gaining valuable insights on key issues faced by coalitions overall, including ours
Mobile CARE	Nominated CCFC stakeholders for recognition in the NC Clean Energy Technology Center MobileCARE awards	Raised awareness: important to recognize great accomplishments
National Drive Electric Week Events	In September of 2016, CCFC partnered with the City of Charlotte and Envision Charlotte to host a Transportation Choices event with a static electric vehicle display, electric bicycles, and other modes of transportation for the City of Charlotte/Mecklenburg County employees and the public to learn more about EVs.	Raised awareness for electric vehicles and local government commitment to providing a better quality of life
Petroleum Reduction	Last year, CCFC stakeholders reduced 4.1 million gallons of gasoline equivalent	This is the single best measurement of how successfully our stakeholders are meeting the national Clean Cities program mission of displacing petroleum
Propane Roundtable	Focus on the use of propane as an alternative fuel for fleet vehicles and review of area fleets that have seen financial and performance benefits with propane vehicles.	Allows private and public-sector attendees to interact and discuss their questions or concerns.
PSNC Fleet Investment	PSNC now operates 55 CNG work trucks and a Freightliner Class 8 CNG tractor in the Region based, out of Gastonia	Another example of our regional CNG utilities taking a leadership role and demonstrating that economic, environmental, and corporate sustainability goals can be met in parallel with achieving the Clean Cities mission.
PSNC	On 3/16/16, stakeholders gathered at PSNC Energy in Gastonia, NC to learn about fire safety and compressed natural gas (CNG). After	This event reminded stakeholders of this resource in our region (PSNC's safety education efforts) and ultimately

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	discussing CNG safety, the risks CNG presents, and the factors that can cause or mitigate a CNG fire, attendees observed a live fire demonstration showing several different sized fires from a variety of gas pressures.	helped fleets in real world situations! As one National Clean Fleet Partner and stakeholder reported later in 2016, the information learned at this event was used to address a real world accident with one of their CNG fleet vehicles.
Region of Excellence Awards	CCFC presented stakeholders with the 2016 region of excellence awards to leaders in our region—this year’s winner: Town of Matthews DC Fast Charger installation in their Downtown	The awards congratulate CCFC stakeholders on the great work they are doing to reduce petroleum dependence. The awards also encourage others to follow and create more innovative ways to reduce petroleum consumption.
SADI	In partnership with four other coalitions, CCFC received the Southeast Alternative Fuel Demonstration Initiative (SADI) grant. In April 2016, Alternative Fuel vehicles were made available for fleets to demo for an extended period.	This grant has allowed interested parties to test out alternative fuel vehicles. Which will hopefully lead to increased alternative fuel vehicle purchases and integrated use of them in fleets.
Smart fleet program	Assisted NC Clean Energy Technology Center in Smart Fleet program	Raised awareness; important to recognize great accomplishments; incentivize alt fuels
Success Story-UNC-Charlotte	https://youtu.be/hq82qM_b48c	Raised awareness and recognized good work by stakeholders
UNC-Charlotte	Engineering Students installed solar panel on GEM for a project.	We were able to interact directly with the students on the project and everyone including the Professors learned about what we do in fleet management.
UNC-Charlotte	Presented at the State Energy Conference on what we do here at UNC Charlotte.	We are proud of our work here and was honored to speak on it at the conference that could pass on our lessons learned to other state fleets and many others.

SECTION 3: MARKET ANALYSIS

Current Alternative Fuel and Advanced Vehicle Technology Market Analysis

Infrastructure Availability for Alternative Fuels:

Current public infrastructure for alternative fuels in the greater Charlotte region:

- 3 E85 station
- 0 B20 stations
- 18 LPG stations
- 1 LNG Station
- 7 CNG stations
- 86 PEV charging stations

The number of PEV charging stations in the greater Charlotte area has increased over the past several years while a single LNG and several CNG fueling stations located at or near distribution centers and refuse hauling services remain, although addition of new stations has tapered off. A number of CCFC stakeholders have received funding awards through the NC Clean Energy Technology Center’s Clean Fuel Advanced Technology (CFAT) grant (CMAQ funds from NC DOT), of which the CCFC is our region’s lead education and outreach partner. The CFAT project has continued to support an increase in the number of alternative fuel vehicles and fueling / charging infrastructure in our region as well as the state. Recent investments by Sheetz convenience stores have helped add some new E85 fueling opportunities in the region, offsetting the removal of this fueling option in the region in recent years prior to this. Finally, B20 is effectively only used by EPACT mandated and environmentally progressive fleets thus its availability through public stations is non-existent at this time.

Alternative Fuel/Advanced Technology Vehicles:

Insert description of the major types of AFVs adoption increase and other niche markets that could be developed.

- o New stakeholders since last year include: Agility Fuel Systems, e-Energy Alternatives, Renewable Energy Group, and Clean Energy.
- o Major types of alternative fuel vehicles (AFVs) in the region include CNG refuse trucks, LPG medium-duty shuttles, and plug in electric vehicles (PEVs) across both the local government and private sectors.
- o Adoption of more light and medium duty propane vehicles for use in transit and maintenance vehicle applications, heavy-duty CNG applications, and light-duty plug-in vehicle and EVSE opportunities remain of strong interest.
- o In an environment of relatively low priced traditional petroleum fuel, new vehicle purchases are especially being made by those fleets that have already committed to and have experienced the benefits of alternative fuels.

Major Fleets using AFVs or Alternative Fuel Providers:

Major fleets and fuel/advanced technology users, purchases, and/or other clean transportation technologies adopters in our region:

Organization	Activity	Fuel Type
AT&T’s Charlotte area	Operates 47 vans that are dedicated CNG vehicles	CNG
Cabarrus County	49 hybrid-electric vehicles	HEV
Celgard	1 electric vehicle and 1 plug-in hybrid electric vehicle	PEV & PHEV
Centralina Council of Governments	5 hybrid-electric vehicles	HEV
Charlotte Area Transit System (CATS)	28 heavy-duty hybrid-electric vehicles	HEV
Charlotte Douglas International Airport	10 heavy-duty hybrid-electric vehicles, 2 light-duty HEVs, 3 light-duty plug-in electric vehicles, 2 off-road electric vehicles, 2 off-road propane vehicles 10 vehicles with auxiliary power units, and 10 vehicles with onboard batteries for idle-reduction	HEV, PEV, LPG
Charlotte Mecklenburg Utilities	5 heavy-duty PEVs and 10 light-duty PEVs	PEV
Excel Truck Group	All the diesel vehicles sold in 2017 are certified to operate on B5-B20 bio-diesel and will meet the GHG17 emission standards. All newer facilities are certified for CNG, LNG, LPG/Autogas, and Hybrid power repairs. Expanded alt fuels service shop to 6 bays and building shop in SC with 6 alt fuel bays.	B20, LPG, LNG, CNG, HEV

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Charlotte-Mecklenburg Schools	5 light-duty vehicles using propane, 2 propane busses, 5 bi-fuel E350 vans, 5 F550s	LPG
City of Charlotte	933 light-duty E85 vehicles, 9 light-duty electric vehicles, 3 light-duty PHEVs, and 2 hybrid-electric vehicles	HEV, PHEV, EV
City of Charlotte Solid Waste Services	15 CNG refuse trucks	CNG
City of Concord	155 heavy-duty biodiesel vehicles, 1 light-duty propane vehicle, 4 light-duty electric vehicles, 15 hybrid-electric vehicles, and 60 off-road biodiesel vehicles	Biodiesel, LPG, PEV, & HEV
Duke Energy	228 light-duty E85, 18 plug-in hybrid-electric vehicles, 4 PEVs, and 88 off-road electric vehicles	E85, PHEV, PEV
Frito Lay	27 CNG Class 8 tractors	CNG
Gaston County	6 heavy-duty biodiesel semi-trailers, 4 light-duty biodiesel vehicles, 10 light-duty propane vehicles, 22 propane busses, 26 off-road biodiesel vehicles, and 28 hybrid-electric vehicles	Biodiesel, LPG & HEV
Mecklenburg County	1 plug-in hybrid-electric vehicle,	PHEV
Mecklenburg County Parks	1 electric vehicle and 3 off-road propane vehicles.	PEV & LPG
NC Department of Administration	2 heavy-duty biodiesel vehicles, 1330 light-duty E85 vehicles, and 21 hybrid-electric vehicles	B20, E85, & HEV
NC Department of Agriculture and Consumer Services	24 heavy-duty E85 vehicles and 1 electric vehicle	E85, PEV
NC Department of Corrections	357 light-duty biodiesel vehicles	B20
NC Department of Crime Control and Public Safety	12 light-duty biodiesel vehicles	B20
NC Department of Environment and Natural Resources	11 heavy-duty biodiesel shuttles, 13 electric vehicles, and 3 off-road E85 vehicles	B20, PEV, & E85
NCDOT	943 light-duty biodiesel vehicles and 325 light-duty E85 vehicles	B20 & E85
Piedmont Natural Gas	1 heavy-duty compressed natural gas vehicle and 81 light-duty CNG vehicles- About one-third of Piedmont's own corporate fleet now runs on CNG.	CNG
Power Research Group	1 light-duty biodiesel vehicle and 2 light-duty compressed natural gas vehicles	B50 & CNG
PSNC Energy	55 light-duty and CNG vehicles	CNG
Rowan County Transit System	10 transit vans	LPG
Schwans	15 heavy-duty propane vehicles	LPG
Time Warner Cable	10 light-duty propane vehicles	LPG
UNC Charlotte	32 light-duty E85 vehicles and 126 light-duty PEVs on campus	E85, PEV
UPS	26 light-duty propane vehicles	LPG
Waste Management	28 heavy-duty compressed natural gas vehicles and 4 liquid natural gas vehicles	CNG & LNG

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Drivers of AFV Adoption:

There have been no significant new policies in 2016 that affect AFV deployment in our area, however, we are anecdotally hearing about an increasing interest in some organization's adopting policies or simply taking management direction regarding growing their presence in areas such as EV Friendly communities and more resilient fleets which could include the use of alternative fuels and vehicles.

Incentives that affect AFV deployment in our area are mostly relegated to offerings such as the Southeast Alternative Fuel Demonstration Initiative (SADI) and industry enticements that would include those of Propane Education Research Council (PERC). In addition, it appears that OEMs such as Nissan are interested in bringing significant discounts on a limited basis for the purchase of vehicles such as the Leaf to NC, however, this has not officially taken place as of the writing of this plan. The following links provide more information on each of the programs noted above:

- <https://trianglecleancities.org/resources/sadi-demonstration-grant/>
- <http://www.propane.com/incentive-programs/>

It is also important to note that the historically offered Clean Fuel Advanced Technology (CFAT) grant in NC has been "on hold" for much of 2016 as the primary administrator (NC State's Clean Energy Technology Center) and the funding agency (NCDOT) have updated their agreement terms and programmatic relationship, thus grant opportunities for fleets across the 24 non-attainment counties of NC have not been available to the same degree as in the past. CFAT is expected to be ramped back up in 2017.

Favorable pricing differentials related to alternative fuels in our area include:

1. Negotiated LPG contracts between propane distributors and fleets,
2. Electricity which sells below the national average of 11 cents per kilowatt-hour thus is costing less than \$1 to \$1.50 a day to fuel electric vehicles, and
3. CNG is \$.50 to \$1.00 or more per GGE cheaper than gasoline and diesel in our region and often the \$.50 per GGE federal tax credit is being passed through to customers helping to keep this cost very low.

The key messages that resonate in our area tend involve cost savings, energy independence, and environmental stewardship, in that order.

Public Awareness:

Fleet receptiveness

Fleets generally support our efforts to move toward adopting technologies in the Clean Cities portfolio, however, the business case must exist. Related to this, finding funding for projects often remains a needed "enticement" for decision makers to approve these fleet changes, however, such funding is only getting more challenging with reduced grant availability in recent times.

For those that have already invested, continued investment and activities is generally taking place. Some larger fleets tied to global/national corporations range from being tremendous partners (e.g.-UPS) to others that have vehicles and fuel in the area but do not have representatives available to participate actively.

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Topics such as connected and autonomous vehicles and route optimization are increasingly of interest to transit providers and transportation planners looking to address and prepare for long term trends.

Public receptiveness

The messages that resonate with the public in the region with respect to AFVs are petroleum independence, cost savings, environmental benefits, and air quality improvement and vary in importance by geography. Air quality has continued to be a topic of interest in the Charlotte region mainly due to the region's past non-attainment status for ground level ozone, however, while the link between air quality and petroleum reduction is understood by some it is not at the forefront of discussions, especially as the air quality in our region is now being measured as clean and meeting national standards.

The perception of natural gas being tied to fracking is an increasingly difficult barrier and discussion with many. Further, there is very little recognition of renewable natural gas as another more sustainable pathway.

Finally, low gas and diesel costs make the traditional discussion around alternative fuels less urgent and there is simply more interest in emerging technologies like smart city/smart mobility applications as they tend to get lots of attention in the popular media and in economic development circles presently.

Barriers to AFV Deployment:

Obstacles to deployment of alternative fuel vehicles, infrastructure and other Clean Cities technologies in our region include:

- Traditional petroleum fuel prices make the business case a tougher sell to those that aren't already using alternative fuels.
- Although the economy is improving, both the public and private sector are constrained by lean budgets and/or access to capital. There is a need to better understand how alternative fuel projects can be best structured to better attract private investment and support, especially given our region's strong financial sector ties.
- Unavailable, insufficient, or unpredictable tax credits and/or incentives to expand alternative fuel infrastructure or to help with the purchase of AFVs. Without such tools in place and the knowledge that they will remain in place for the foreseeable future, it is more challenging for municipalities and private companies to make the business case and "leap" for cleaner, alternative fuels.
- We continue to have limited success with fleets adopting E85. Many fleets use fuel cards and/or simply do not have a retail E85 station located nearby. Ethanol also often carries with it the "baggage" of its besmirched image that has been so successfully deployed in the media over the past several years.
- Biodiesel is not widely used in our region. Biodiesel tends to cost more than its diesel counterpart in NC and we have limited production facilities. Furthermore, we have minimal incentives for production, distribution, or use of this fuel.
- Truck stop electrification (TSE) projects have been limited by the many logistical considerations of developing the necessary public-private partnerships, as well as funding red tape that inhibit flexibility and leave all the risk on local project sponsors (often a smaller and rural municipality) that are simply not willing to take this on. In addition, the success of TSE projects after completion is tied to significant and intentional marketing by the TSE provider and truck stop host, individual behavior change and getting truckers to try the technology – which can be difficult to do without extensive outreach and

education built in to the process. Grant funds for the projects typically do not see this latter issue as eligible for funding. Finally, as the fleet of Class 8 tractors turns over, their ability to run cleaner, deploy simplified shore power scenarios, etc. increasingly makes traditional TSE infrastructure obsolete and excessive.

- Policy and regulation changes at the state level have created an environment of uncertainty. Funding levels continue to be reduced and in some cases cease for resources related to alternative fuel and alternative fuel education. Policy and regulations have drastically changed with the easing of many restrictions and requirements related to air quality and the environment, creating a lack of long term predictability about the environment in which investments will be made. In addition, several state departments have been consolidated requiring offices and personnel to relocate. This in turn has created confusion and in some cases has resulted in the loss of information.

SECTION 4: MARKET DEVELOPMENT PLAN

The CCFC staff and stakeholders recognize their critical role in contributing to the national Clean Cities program-wide goal of 2.5 billion GGEs of petroleum reduction per year by 2020, requiring each coalition to achieve 16% growth or more per year in petroleum displacement. The following short-term (1 year) goals seek to take this overarching mission into consideration.

Market Development Goals and Actions for the Upcoming 12-Month Period:

1. **Vehicles:** Increase number of AFVs and/or Advanced Technology Vehicles in the coalition area (vehicle purchases, conversions and/or retrofits)
 - Coalition growth goals are to increase the overall number of on-road alternative fuel and electric/hybrid/plug-in vehicles by 3% as compared to the prior year.
 - Given this region's market, the preponderance of growth to support this displacement provided by vehicles is expected to be through CNG, LPG, and electric vehicles.
- a) To support our stakeholders' in growing the number of alternative fuel vehicles in the region, CCFC will provide a minimum of two (2) technology-specific meetings, webinars, or other forms of engagement by December 2017. Topics may include, but are not limited to, the following technologies and fuels from the Clean Cities portfolio: CNG/LNG, electric, LPG, ethanol, biodiesel, and hydrogen.
- b) Through the Southeast Alternative Fuel Demonstration Initiative (SADI), CCFC will facilitate on-road demonstrations with fleets. This two-year project, in partnership with Clean Cities coalitions in North Carolina, Tennessee, and South Carolina, will allow CCFC stakeholders to experience AFVs and clean transportation technology. The CCFC's goal is to have at least 4 new organizations test a vehicle of their choosing in 2017.
- c) Given that Charlotte-Mecklenburg School's yellow fleet alone travels approximately 22.1 million miles, uses 2.7 million gallons of diesel and 290K gallons of gasoline a year and has recently begun the use of LPG fueled buses in its fleet, utilize this experience to assist CMS and other school systems in the greater Charlotte region with understanding the benefits and best ways to convert to LPG in their yellow bus fleets. Our goal would be to support a doubling (100% increase) of LPG buses in use at CMS and to see one (1) additional school system add LPG buses to their fleet in CT 2017.

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- d) The Draft Greater Charlotte Regional Freight Mobility Plan is expected to be finalized by early 2017 and includes several recommendations that relate to the CCFC. Specifically, the following excerpt from this plan is included for the purposes of this section:
 1. Support the accelerated retirement of older model year heavy duty vehicles and rail equipment focusing on idle reduction and low emissions technology.
 - i. “Partner with Centralina Clean Fuels Coalition to identify grant programs for upfitting outdated equipment with more efficient engines/technologies.”
 - e) Participate in and promote a “group buy” program for electric vehicles, such as Nissan has done for the Leaf in various areas around the country recently with specific partnering and resource leveraging to address implementation with Duke Energy throughout CY 2017.
2. **Infrastructure:** Increase the number of alternative fueling stations and/or charging stations in the coalition area. Additionally, increase fuel volume at existing stations.
- As a fuel displacement goal, the CCFC proposes to meet or exceed the 16% increase in GGEs displaced as compared to the prior year.
- a) CCFC will provide fleet and associated vendor outreach assistance for a collective 150 hours in 2017 to support those interested in a new or expanded alternative fuel or clean transportation technology for their fleet.
 - b) To support our stakeholders in growing the availability of alternative fuels in the region, CCFC will provide a minimum of two (2) fuel-specific meetings, webinars, or other forms of engagement by December 2017. Topics may include, but are not limited to, the following fuels from the Clean Cities portfolio: CNG/LNG, electric, LPG, ethanol, biodiesel, and hydrogen.
 - c) The CCFC will develop materials related to best practices for local governments interested in incentivizing the installation of EVSE and the EV market through local land development codes (i.e.- zoning, subdivision, and similar regulations). This document will be posted the CCFC website by June 2017.
 - d) Given new CNG and Electric corridors designated under the FAST Act in NC and our region, seek to educate and inform the staff at all four (4) regional MPOs and key fleets including the Mobility Management Program’s transit provider members and local governments about additional corridor designation opportunities as well as ways to leverage this designation when seeking to implement projects and obtain funding for them.
 - e) The Draft Greater Charlotte Regional Freight Mobility Plan is expected to be finalized by early 2017 and includes several recommendations that relate to the CCFC. Specifically, the following excerpt from this plan is included for the purposes of this section:
 1. Participate in the FAST Act Alternative Fuel Corridors program
 - i. “Partner with Centralina Clean Fuels Coalition, NCDOT and SCDOT on statewide and multistate planning efforts to identify long distance corridors qualifying for federal designation.”
3. **Awareness:** Increase awareness of alternative fuels and advanced vehicle technologies.
- a) By January 2017 Survey Core Stakeholders to gather from them what is important and to guide the CCFC for the year. Have compilation of results ready for review at the first “Events and Engagement Sub-committee, as described in Section 5, Subsection 4, “Coalition Meeting/Event Plan for Next 12 Months.”
 - b) Events and engagement subcommittee formed by January 2017 to inform what outreach activities we prioritize for 2017 and how we best implement these activities. All meetings should be completed and priorities reported out by March 2017.

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- c) CCFC will increase awareness by posting to social media platforms. CCFC's platforms, including Facebook, twitter, a LinkedIn Group, CCFC's website, and electronic newsletter that can disseminate posts, articles, and pictures about alternative fuels and advanced vehicle technologies. CCFC will post to Facebook or Twitter at least three (3) times a month; update CCFC website content weekly; and send out an electronic newsletter monthly.
- d) Review and potentially update the Mountains to Sea Readiness plan in 2017 as needed to make sure it is most relevant to our region today, however, the Core Stakeholder Group specifically advises *against* use of resources to undertake a comprehensive plan authoring exercise given the pace at which the EV market is moving and our region's existing relatively strong understanding of what is needed for EV Readiness.
- e) In order to increase awareness in the region relative to success stories, lessons learned, and contacts for further information, CCFC will complete at least two (2) two blog features for the NC Clean Energy Technology Center's (CETC) Fuel What Matters education campaign by November 2017. Content will be 100-150 words and include a high-quality image to be made public.
- f) CCFC will partner with stakeholders such as Duke Energy to host one (1) or more VW settlement education and outreach workshops that should be targeted at the eligible grant recipients for our area to convey how the program will be administered, learn what the top priorities for our stakeholders are, and discuss ways we can provide project development and application support.
- g) The Draft Greater Charlotte Regional Freight Mobility Plan is expected to be finalized by early 2017 and includes several recommendations that relate to the CCFC. Specifically, the following excerpt from this plan is included for the purposes of this section:
 1. Support improved inspection and maintenance of vehicles to minimize emissions.
 - i. "Partner with Centralina Clean Fuels Coalition to identify programs to support maintenance programs for equipment in the freight industry."

4. **Behavior:** Increase the use of smart driving or idle reduction.

- Allow what is learned and clarified through Goals 3a. and 3b. above to guide the execution of events, training, etc. that relate to this goal subsection.
- a) Assist the NC CETC with the promotions of their programs and projects through extending existing content they have developed to our region (TV ads, billboards, radio, etc.) via our communication channels throughout CY 2017.
 - b) Air Awareness coordination within our region. CCFC staff will continue to partner with the Air Awareness program housed at Mecklenburg County Land Use and Environmental Services Agency and related air quality stewards to promote the reduction of petroleum through an air quality lens throughout CY 2017.
 - c) Consider the steps that would need to be taken to integrate Transportation Demand Management (TDM) practices into CCFC's promotional work more formally in support of CATS and others in the region seeking to move people out of their single occupancy vehicles throughout CY 2017.
 - d) Actively seek out at least one (1) opportunity in 2017 to co-present with the Triangle and Land of Sky Clean Cities Coalition staff at key transportation and energy events in NC about the programs that Clean Cities can support, including those that implement behavior changes that reduce the use of petroleum.
 - e) The Draft Greater Charlotte Regional Freight Mobility Plan is expected to be finalized by early 2017 and includes several recommendations that relate to the CCFC. Specifically, the following excerpts from this plan are included for the purposes of this section:
 1. Partner with local, state and federal agencies to expand programs that support fuel efficiency in the transportation industry.
 - i. "Partner with Centralina Clean Fuels Coalition to engage freight industry in efforts."

2. Identify anti-idling policies to enact in freight districts around the region (railyards, queuing areas).
 - i. “Partner with Centralina Clean Fuels Coalition to engage freight industry in efforts.”

SECTION 5: COALITION FUNDING AND SUSTAINABILITY

1. *Organizational/Coalition Growth Targets*

- a) Staff will use 2017 to prepare for re-designation of the Coalition within the Clean Cities program scheduled for October 2018 (Note: this date is now tentative based on recent DOE Headquarters communication), beginning with clarifying what actions stakeholders will be expected to have taken by that time so that advance work can be occurring.
- b) Staff will involve a working committee of stakeholders in the updating of the coalition’s “sustaining partners” program to reflect stakeholder needs and interests based on experiences during our first year of what was referred to as a “stakeholder dues” program in early 2016. This will likely include a completely 501(c)3-based donation process and a simplified benefits program.
- c) CCFC has specific goals regarding stakeholder/fleet recruitment, relationship building, and board development/recruitment.
- d) Through hosting bi-monthly (up to six (6)) Core Stakeholder meetings by November 2017, CCFC will continue to build relationships with key partners. Stakeholders will be asked to host/sponsor and present at these meetings, which will strengthen relationships and build knowledge among stakeholders and interested parties.
- e) Promote the opportunity for member governments of the Centralina Council of Governments to participate as CCFC stakeholders, also serving to increase our local government stakeholders.
- f) Review and update the Core Stakeholder “Procedural By-laws” document in 2017 to address current needs and expectations for the coalition and its stakeholders.

2. *Coalition Funding*

The Centralina Clean Fuels Coalition (CCFC) expects to remain active in a variety of areas during this current fiscal year ending June 30, 2017 and into the start of our FY18. Ongoing grant programs that will provide funding and demand attention include the Southeast Alternative Fuel Demonstration Initiative (SADI), the regional administration of the Clean Fuels Advanced Technology (CFAT) grant led by the NC Clean Energy Technology Center, the NREL led Mentoring Program, and the DOE Programmatic Support grant. We do not anticipate State Energy Office funding in the coming year.

Clean Fuel Advanced Technology (CFAT) Program

This project is funded through the CMAQ program, sponsored by and in partnership with the NC Clean Energy Technology Center and NCDOT and is expected to run through September 2018. With this funding, CCFC will be able to educate the public and regional fleets on air quality benefits of alternative fuels and clean transportation technologies and will be able to assist with funding of alternative fuel projects across the region.

Southeast Alternative Fuel Demonstration Initiative (SADI)

This project is funded by the Office of Energy Efficiency and Renewable Energy (EERE) and is managed by the Triangle J Council of Governments. Initiated in July of 2014 with grant funded work starting in August 2015 and running 24 months, this program will result in the deployment of advanced highway transportation technologies that reduce petroleum consumption and greenhouse gas emissions, while meeting or exceeding vehicle performance and cost expectations. With this funding, CCFC will be able to reach out to fleets to test out alternative fuels and vehicle technology, with the goal of stakeholder adoption.

Clean Cities Mentoring Program

CCFC staff has been continuing to mentor coalitions across the US Department of Energy Clean Cities network. Our focus is around coalition sustainability and fleet outreach. During the most recent round, CCFC has been paired with the Ohio, Lone Star and Central Oklahoma Clean Cities Coalitions. This program is currently set to conclude in early 2017.

Taken together, grant funding is expected to be less available than it has been in recent years. Staff recognizes that new partnerships, non-traditional funding paths, and innovative revenue generation will be a requirement for future coalition sustainability.

Currently, the expectation is that staff will be heavily focused on Clean Fuel Advanced Technology education and outreach and Southeast Alternative Fuel Demonstration Initiative deployment activities, and communication of success stories. Mixed within these activities, staff will also be meeting standard Clean Cities deliverables, including implementing strategic activities and initiating targeted fuel specific outreach and deployment events identified by stakeholders, fulfilling any mentoring requests that may emerge, and seeking out impactful professional development opportunities.

Centralina Council of Governments also has initiatives that support the CCFC mission. There may be approximately an additional \$5,000 to work on these projects. These projects can include: CONNECT our Future, which contains tools dealing with freight, transit, transportation, alternative fuels, and Healthy Communities, which can potentially link alternative fuels with healthier overall communities and clean transportation.

3. Coalition Sustainability

CCFC staff is anticipating a steadily decreasing portion of its funding coming from government grant (federal or state) sources. As such, the CCFC continues to explore a variety of opportunities for future years. These include:

1. Private foundations that could be accessed through Centralina COG's 501(c)3 non-profit "Centralina Foundation."
2. Standard grant opportunities as appropriate.
3. Assessment and continuation of an annual "sustaining partners" program. This program was designed and launched as a "stakeholder dues" program in January 2016 and the CCFC staff has learned much about what works and what doesn't for this program based on first year experiences.
4. Proactive seeking of in-kind donations such as meeting space, event sponsorship, etc. that offset Coalition costs.
5. Provision of technical assistance services that might consist of following MAY offer occasional opportunities to work on fee-for-service basis:
 - a. Collective fleet purchasing initiatives that reduce vehicle purchase costs for stakeholder members.
 - b. Implementation of fleet and fuel management/maintenance systems that help control costs for end users.
 - c. Alternative Fuel and Vehicle Feasibility studies and fleet analysis services that identify baseline trends, fleet manager and organizational goals, "best fits" for a given fleet, and resources to move from the baseline toward the expressed goals; and
 - d. Grant writing and management.

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Although resources are increasingly harder to come by, the CCFC is excited about the critical role clean transportation technology, efficiency, and alternative fuels will play in a future that is energy and funding constrained. Our region is consistently ranked one of the fastest growing areas in the country and we continue to see an ever-expanding platform for collaboration in meeting the challenges that population growth can bring.

4. Coalition Meeting/Event Plan for Next 12 Months:

At its November 16, 2016 meeting, the Core Stakeholder Group agreed to try a different approach to setting our calendar for 2017. Our events and engagement calendar will be developed through an “Events and Engagement” Sub-committee that includes at least the following stakeholders:

- Chris Facente, UNC-Charlotte
- Megan Green, Mecklenburg County Land Use and Environmental Services Agency
- Mike McDonald, UPS
- Bryan Steiner, Charlotte-Mecklenburg Schools (CMS)

We expect that this group will take 2-3 meetings between Jan-March 2017 to decide and propose what events and engagement opportunities should be prioritized for 2017 and how we will best implement these activities given the resources available.

The following table outlines stakeholder meetings, outreach/education activities and other events that have already been proposed for the CCFC and its stakeholders in the upcoming 1-year period, however, the above-mentioned committee will have the “final say” regarding what will ultimately take place in 2017.

Stakeholder Meeting and Outreach/Education Activity Plan			
Activity Description	Target Date	Target Audience	Topics to be Addressed
Bi-monthly CCFC Core Stakeholder Group Meetings*	January 2017; March 2017; May 2017; July 2017; Sept 2017; Nov 2017	Core Stakeholder Group	Coalition business; Reports from subcommittees; Presentations by technology providers or coalition partners
2 Fuel Specific Stakeholder Webinar/Meetings*	TBD	Stakeholders; fleets interested in alt fuel TBD; fleet managers	Presentations by technology providers or coalition partners
2 Technology Specific Stakeholder Webinar/Meetings*	TBD	Stakeholders; fleets interested in transportation technology TBD; fleet managers	Presentations by technology providers or coalition partners
VW settlement outreach*	TBD	Fleets by niche market	Build awareness of the opportunity, identify those interested in participating to build a “coalition” for proposals that can be supported by a maximum of stakeholders. Partner with stakeholders such as Duke Energy
Agility Fuel Systems	TBD	Potential customers	Plant Tour

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Roush Racing Shop	TBD	TBD	LPG
Greater Charlotte Freight Plan Implementation Workshop	TBD	TBD	TBD
“Fresh Expo” participation	TBD	TBD	TBD
Eco-driving/idle reduction workshops	TBD	Fleets and Decision Makers	Partnership with LUESA and/or Derive/ Intelligent Fleet Solutions
Connected Vehicles workshop	TBD	MPOs	Partner with local and national partners as appropriate
“After Hours” Social event	TBD	Stakeholders and guests	PSNC sponsored
EVSE For Developers	Q1 2017	To meet expected demand, local government will not be able to provide/address all charging needs, thus educating developers is imperative to driving this change.	In partnership with City of Charlotte planning this workshop for early 2017 to prepare developers for responding to the increasing popularity of EVs and expected charging needs.
Centralina COG Conference	4/6/2017	Local Government elected officials and leaders	Participation and Sponsorship including Scale Matters: Linking Land Use and Transportation Investments in transportation systems, in combination with local policy, strongly affect land use patterns and densities and play an important role in channeling growth and determining the shape of a community. Likewise, characteristics of the built environment, such as the siting of jobs and housing, influence travel demand. How can local governments tackle this complex issue and work towards shorter commutes, congestion mitigation, and an improved quality of life for residents? This session highlights strategies to link land use and transportation for

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			transportation access, innovation, and job development, for efficient freight movement, for and healthier communities. Speakers: Michelle Nance, CCOG (MODERATOR); Jason Wager, CCOG, Jessica Hill, CCOG; Katherine Hebert, CCOG
National Alternative Fuel Vehicle (AFV) Day Odyssey	4/20/2017	TBD	In partnership with Dave Favre of Central Piedmont CC
EPACT workshop	Summer 2017	TBD	Ted Sears of DOE, coordinated via UNCC/Chris Facente
National Drive Electric Week Events	September 2017	Stakeholders; interested parties; fleets interested in electricity as fuel	Advancing the use of electricity as a fuel for vehicles
2017 Eastern Fleet Technology Conference*	October 2017	Fleets and Vendors	Support logistics, agenda development, speaker recruitment, and participant recruitment

** This is not expected to be taken out of consideration by the Events and Engagement Sub-committee due to past experiences, inclusion in this plan or as part of an ongoing program, and similar existing commitments.*

Coordinator Travel and Training Plan for Next 12 Months:

The following describes meetings, conferences and events the coalition coordinators plan to attend in order to remain informed on key Clean Cities' topics.

Conference/ Meeting Name	Date	Location
Energy Independence Summit	February 2017	Washington DC
Plug-in NC Summit	TBD 2017	TBD-various NC
Clean Cities National Meeting	TBD 2017	TBD
Southeast Diesel Collaborative	TBD 2017	TBD

Coordinator/Coalition Training Activities

In addition to the above specific events and training workshops, the following items have been identified as specific needs to be mindful of as opportunities arise.

- Continue to refine social networking abilities
- Seek out and, where practical, participate in training related to:
 - Project and financial management
 - Public speaking and communication skills
 - Grant administration courses
 - Board involvement and engagement
 - Communications and/or Marketing Plan development
- Continue taking advantage of Clean Cities University online courses

LOOKING AHEAD

The CCFC is well positioned to continue and grow the work that has been done in the region since its inception in 1997. Staffing resources will continue to be outpaced by the needs for training, technical assistance, and engagement support activities, thus a ramped-up effort to involve stakeholders in coalition initiatives that also provide for mutually beneficial outcomes to their organization and the seeking of staffing alternatives that better align costs with skills required must be made for the CCFC to be as effective and efficient as it desires. Despite these challenges, the CCFC is underpinned by highly knowledgeable and qualified fleet and alternative fuel/advanced vehicle professionals that capably guide, and increasingly financially support, the Coalition in fulfilling its mission. It is through and because of these stakeholders that the CCFC will only grow in its relevance, capabilities, and reputation in 2017.