

2016 Transportation Technology Deployment Report:

Centralina Clean Fuels Coalition
Expanded Edition

March 2017

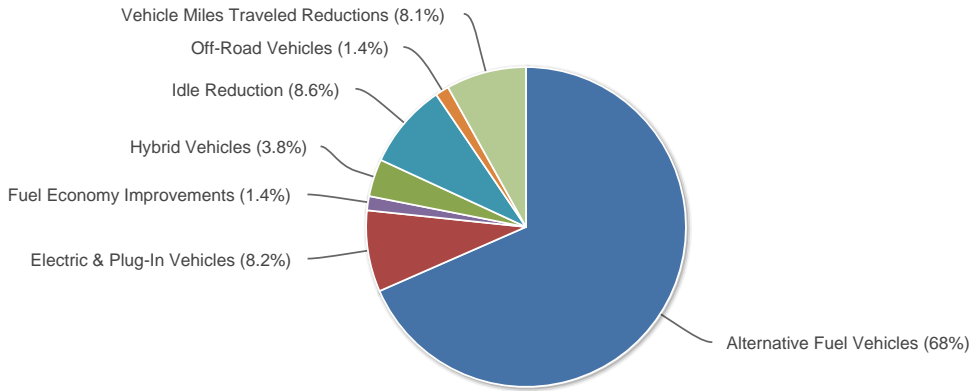
The U.S. Department of Energy's (DOE) Clean Cities program advances the nation's economic, environmental, and energy security by supporting local actions to reduce petroleum use in transportation. A national network of nearly 100 Clean Cities coalitions brings together stakeholders in the public and private sectors to deploy alternative and renewable fuels, idle-reduction measures, fuel economy improvements, and new transportation technologies, as they emerge.

Every year, each Clean Cities coalition submits to DOE an annual report of its activities and accomplishments for the previous calendar year. Coalition coordinators, who lead the local coalitions, provide information and data via an online database managed by the National Renewable Energy Laboratory (NREL). The data characterize membership, funding, projects, and activities of the coalitions. The coordinators also submit data on the sales of alternative fuels, deployment of alternative fuel vehicles and hybrid electric vehicles, idle-reduction initiatives, fuel economy activities, and programs to reduce vehicle miles traveled. NREL and DOE analyze the data and translate them into petroleum-use and greenhouse gas reduction impacts for individual coalitions and the program as a whole. This report summarizes those impacts for Centralina Clean Fuels Coalition.

To view aggregated data for all local coalitions that participate in the Clean Cities program, visit cleancities.energy.gov/accomplishments.

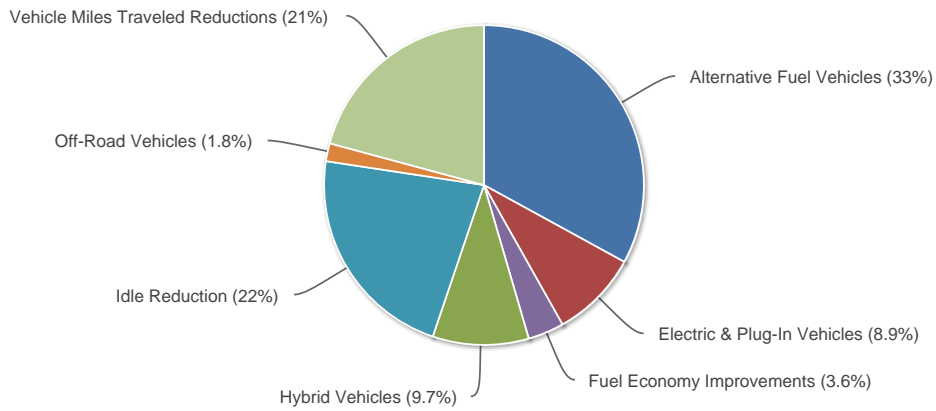
2016 Gallons of Gasoline Equivalent Reduced

4,185,508 gallons

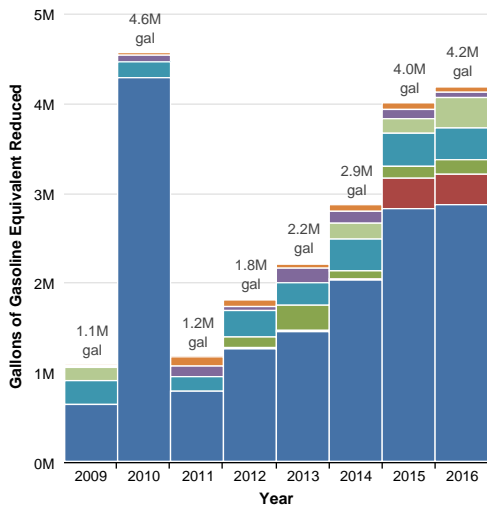


2016 Greenhouse Gas Emissions Reduced

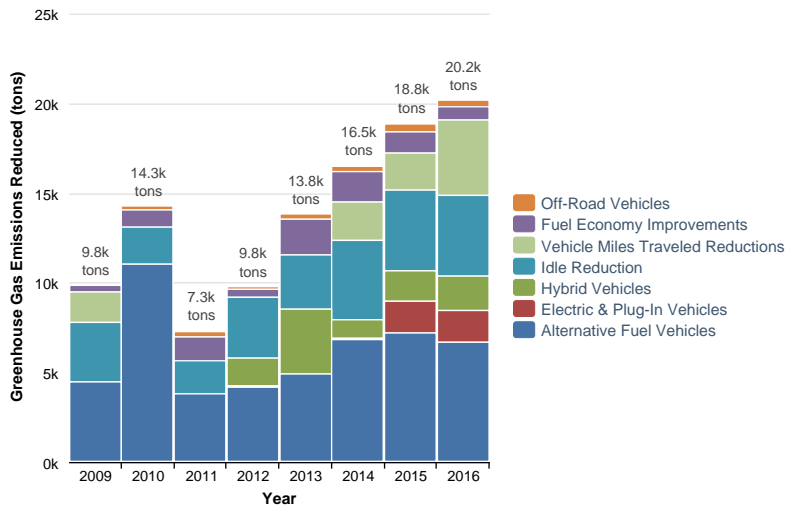
20,150 tons



Historical Gallons of Gasoline Equivalent Reduced

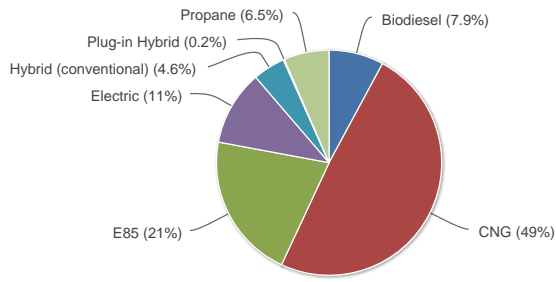


Historical Greenhouse Gas Emissions Reduced



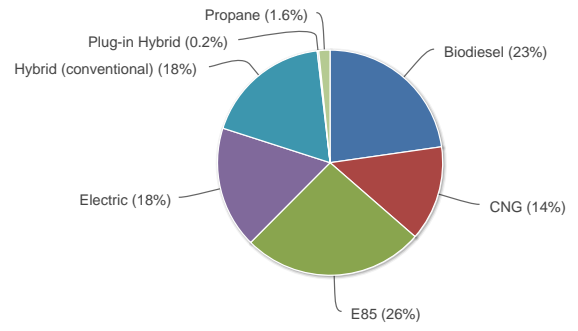
2016 Gallons of Gasoline Equivalent Reduced by Fuel Type for Alternative Fuel Projects

3,425,897 gallons



2016 Greenhouse Gas Emissions Reduced by Fuel Type for Alternative Fuel Projects

10,753 tons



Criteria Pollutant Emissions Reduced

Criteria pollutants are chemicals that have been linked to human health effects and therefore regulated in the Clean Air Act of 1970. The Clean Cities annual report calculates them using the same assumptions and default values as AFLEET 2016, with some adjustments to fit specific data inputs. They are quantified at vehicle tailpipes, as those are the emissions contributing to the regulated “ambient” air quality of a given city. This means that they omit emissions from sources such as electric power plants, refineries, and biofuel feedstock farms (where emissions are sufficiently removed from populations in order to minimize health effects). When a specific pollutant surpasses a given threshold for a given area, the area is considered to be in “nonattainment” for that pollutant. Nonattainment areas for given pollutants can be viewed at www.epa.gov/green-book.

Reductions by Fuel Type*	NOx	VOC	CO	PM10	PM2.5
Biodiesel	0 lb	0 lb	0 lb	0 lb	0 lb
CNG - Compressed Natural Gas	60,401 lb	118 lb	-342,704 lb	0 lb	0 lb
E85 - 85% Ethanol	0 lb	283 lb	0 lb	0 lb	0 lb
Electric (all-electric)	2,188 lb	3,046 lb	35,297 lb	67 lb	64 lb
Hybrid (conventional)	99 lb	378 lb	795 lb	0 lb	0 lb
Plug-in Hybrid	337 lb	46 lb	542 lb	3 lb	3 lb
Propane	0 lb	0 lb	0 lb	0 lb	0 lb
Total:	63,024 lb	3,872 lb	-306,071 lb	69 lb	66 lb

* This table accounts for criteria pollutants from alternative fuel and hybrid vehicle projects only. It does not include VMT reduction, fuel economy, idle reduction, or off-road projects. Negative values indicate an increase in emissions.

COALITION

Centralina Clean Fuels Coalition - NC

<http://www.4cleanfuels.com>

Designated: 10/15/2004

Boundaries: Counties: Anson, Cabarrus, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, Stanly, Union; City of Charlotte

COORDINATORS

	Address	Telephone	Fax
Jason Wager	9815 David Taylor Dr Charlotte, NC 28262		
Number of coordinators			1
Coordinator(s) hours per week on Clean Cities			24 hours
Other staff hours per week on Clean Cities			23 hours
How long have you been the coordinator?			17 years

OPERATING INFORMATION

Host organization	Council of Governments (COG), Municipal Planning Organization (MPO), or Regional Planning Commission (RPC)
--------------------------	--

Stakeholders

Number of stakeholders	200
Number of private stakeholders	100
Does the State Energy Office provide any financial support to the coalition or stakeholders?	No
How would you rate the quality of the data on your survey?	Excellent
How do you obtain most of your data for the survey?	Coalition records, Estimates, Online questionnaire to stakeholders (SurveyMonkey, Google Forms, etc), Paper, e-mail, or spreadsheet questionnaire to stakeholders, Phone calls to stakeholders
Has your coalition registered with www.grants.gov?	Yes

2016 Outside Funding

Stakeholder dues collected	\$6,000
How much funding is obtained from other sources to cover coalition operating expenses?	\$42,000
Non-DOE or ARRA grant and matching funds spent in 2016	\$59,250
Total non-DOE or ARRA funding in 2016	\$107,250

VEHICLE & FUEL INVENTORY

Alternative Fuel & Vehicles

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Charlotte Mecklenburg Schools White Fleet	Light-Duty	Propane	10	12,788 gal	9,681 gal	13.7 tons
Market: Government - Local Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No						
Charlotte Mecklenburg Schools Yellow Fleet	Heavy-Duty	Propane	2	4,369 gal	2,977 gal	1.2 tons
Market: Government - Local Vehicle type: Bus: School Percentage from coalition: 100% National Clean Fleets Partnership: No						
City of Charlotte	Light-Duty	E85	859	1,185,923 gal	685,463 gal	2,674.0 tons
Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No						
City of Charlotte Solid Waste	Heavy-Duty	CNG	20	152,679 GGE	137,411 gal	115.7 tons
Market: Government - Local Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No						
City of Concord	Heavy-Duty	Biodiesel (20%)	158	32,660 gal	6,963 gal	61.0 tons
Market: Government - Local Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No						
Clean Energy	Heavy-Duty	CNG	0	0 GGE	0 gal	0.0 tons
Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No						
<i>Per Clean Energy... Unfortunately, we cannot provide the data requested, because of its proprietary nature. However, our executive management has approved the following for distribution: "For the year ended December 31, 2016 the Company delivered 329.0 million gallons (GGE) of CNG and LNG to customers (as defined in our corporate SEC filings. Data on individual Clean Energy stations is not available."</i>						
Duke Energy	Heavy-Duty	Biodiesel (20%)	58	100% of time	20,903 gal	183.0 tons
Miles traveled per vehicle: 15,200 mi Average vehicle fuel economy: 7 MPG Market: Utility Vehicle type: Truck: No Trailer Percentage from coalition: 75% National Clean Fleets Partnership: No						
Duke Energy	Heavy-Duty	E85	189	1% of time	1,146 gal	2.8 tons
Miles traveled per vehicle: 14,900 mi Average vehicle fuel economy: 11 MPG Market: Utility Vehicle type: Truck: No Trailer Percentage from coalition: 75% National Clean Fleets Partnership: No						

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Duke Energy	Light-Duty	E85	200	1% of time	789 gal	3.1 tons
Miles traveled per vehicle: 14,100 mi Average vehicle fuel economy: 16 MPG Market: Utility Vehicle type: Pickup/SUV/Van Percentage from coalition: 75% National Clean Fleets Partnership: No						
Excel Truck Group - Johnson North America	Heavy-Duty	CNG	1	100% of time	4,426 gal	3.7 tons
Miles traveled per vehicle: 12,000 mi Average vehicle fuel economy: 3 MPGde Market: Corporate Fleet Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No						
Frito-Lay - Heavy-duty CNG	Heavy-Duty	CNG	54	921,851 GGE	829,666 gal	698.6 tons
Market: Corporate Fleet Vehicle type: Truck: Semi-trailer Percentage from coalition: 100% National Clean Fleets Partnership: Yes <i>Frito-Lay Division Data Only</i>						
GAIN Clean Fuels	Heavy-Duty	CNG	0	130,500 GGE	117,450 gal	98.9 tons
Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No						
Gaston County	Light-Duty	Propane	38	87,570 gal	66,290 gal	93.7 tons
Market: Government - Local Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No <i>22 vehicles are paratransit shuttles.</i>						
God Bless the USA, inc.	Heavy-Duty	CNG	4	56,302 GGE	50,672 gal	42.7 tons
Market: General/Unknown Vehicle type: Truck: Refuse Percentage from coalition: 100% National Clean Fleets Partnership: No						
Iredell County Sheriff's Office	Light-Duty	Propane	27	8,934 gal	6,763 gal	9.6 tons
Market: Government - Local Vehicle type: Patrol Car Percentage from coalition: 100% National Clean Fleets Partnership: No						
Mecklenburg County LUESA	Heavy-Duty	CNG	1	100% of time	9,221 gal	7.8 tons
Miles traveled per vehicle: 25,000 mi Average vehicle fuel economy: 3 MPGde Market: Government - Local Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No						
NC Department of Public Instruction	Light-Duty	Biodiesel (20%)	900	33,320 gal	6,393 gal	58.5 tons
Market: Government - State Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No <i>Estimated number of vehicles</i>						

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
NC Department of Public Instruction	Light-Duty	Propane	82	1,779 gal	1,010 gal	1.4 tons
Market: Government - State Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No <i>Estimated number of vehicles</i>						
NC Department of Transportation	Light-Duty	Biodiesel (20%)	943	1,063,655 gal	204,094 gal	1,867.6 tons
Market: Government - State Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
NC Dept of Administration - Motor Fleet Management	Light-Duty	E85	651	49,000 gal	21,242 gal	82.9 tons
Market: Government - State Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No						
North Carolina Zoo	Heavy-Duty	Propane	2	2,090 gal	1,424 gal	0.6 tons
Market: Government - State Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No						
Piedmont Natural Gas	Heavy-Duty	CNG	1	879 GGE	593 gal	0.5 tons
Market: Utility Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Piedmont Natural Gas	Light-Duty	CNG	120	77,208 GGE	55,011 gal	71.3 tons
Market: Utility Vehicle type: Pickup/SUV/Van Percentage from coalition: 75% National Clean Fleets Partnership: No						
Power Resource Group	Light-Duty	Biodiesel (50%)	1	800 gal	512 gal	4.7 tons
Market: General/Unknown Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No						
Power Resource Group	Light-Duty	CNG	2	2,400 GGE	2,280 gal	3.0 tons
Market: General/Unknown Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No						
PSNC Energy	Light-Duty	CNG	189	80,795 GGE	57,566 gal	74.6 tons
Market: Utility Vehicle type: Pickup/SUV/Van Percentage from coalition: 75% National Clean Fleets Partnership: No <i>GGE calculated based on growth in fleet size from previous year fleet size and fuel consumption.</i>						
Rowan Transit System	Heavy-Duty	Propane	8	18,808 gal	12,814 gal	5.0 tons
Market: Government - Local Vehicle type: Bus: Shuttle Percentage from coalition: 100% National Clean Fleets Partnership: No						

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Schwan's - Medium-duty Propane	Heavy-Duty	Propane	15	62,648 gal	42,682 gal	16.7 tons
Market: Corporate Fleet Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: Yes						
Time Warner Cable - E85	Light-Duty	E85	1	1,047 gal	605 gal	2.4 tons
Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: Yes <i>Includes E85 use from Class 1-6, but fleet only reports 10 light-duty E85 vehicles</i>						
UNC Charlotte	Light-Duty	Biodiesel (20%)	40	6,285 gal	1,206 gal	11.0 tons
Market: Government - State Vehicle type: Pickup/SUV/Van Percentage from coalition: 75% National Clean Fleets Partnership: No						
UNC Charlotte	Light-Duty	Biodiesel (20%)	106	7,953 gal	1,526 gal	14.0 tons
Market: Government - State Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
UNC Charlotte	Light-Duty	E85	32	8,013 gal	3,474 gal	13.6 tons
Market: Government - State Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
UNC Charlotte	Light-Duty	E85	280	14,335 gal	6,214 gal	24.2 tons
Market: Government - State Vehicle type: Pickup/SUV/Van Percentage from coalition: 75% National Clean Fleets Partnership: No <i>E85</i>						
UPS - Heavy-duty Propane	Heavy-Duty	Propane	31	115,464 gal	78,665 gal	30.8 tons
Market: Corporate Fleet Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: Yes						

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Waste Management - Heavy-duty CNG	Heavy-Duty	CNG	53	463,356 GGE	417,020 gal	351.1 tons
Market: Corporate Fleet Vehicle type: Truck: Refuse Percentage from coalition: 100% National Clean Fleets Partnership: Yes						
Total:			5,078		2,864,153 gal	6,643 tons

Electric, Hybrid & Plug-in Vehicles

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Cabarrus County	Light-Duty	HEV	58	10,591 gal	130.5 tons
Average vehicle fuel economy: 30 MPG Miles traveled per vehicle per year: 18,000 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No					
Celgard	Light-Duty	Electric	1	257 gal	1.3 tons
Electricity used: 1,800 kWh Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No					
Celgard	Light-Duty	PHEV	1	257 gal	1.3 tons
Electricity used: 1,800 kWh Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No					
Centralina Council of Governments	Light-Duty	HEV	5	1,521 gal	18.7 tons
Average vehicle fuel economy: 40 MPG Miles traveled per vehicle per year: 17,170 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No					
Chargepoint	Light-Duty	Electric	0	8,852 gal	46.0 tons
Electricity used: 61,987 kWh Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No <i>Electric vehicle Charging Stations</i>					
Charlotte Area Transit Systems	Heavy-Duty	HEV	36	127,563 gal	1,571.3 tons
Average vehicle fuel economy: 5 MPG Miles traveled per vehicle per year: 30,000 mi Market: Government - Local Vehicle type: Bus: Transit Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No					

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Charlotte Douglas Airport Average electric fuel economy: - kWh/100mi Miles traveled per vehicle per year: 1,000 mi Market: Airport Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Light-Duty	Electric	2	87 gal	0.5 tons
Charlotte Douglas Airport Average vehicle fuel economy: 30 MPG Miles traveled per vehicle per year: 5,000 mi Market: Airport Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Light-Duty	HEV	2	255 gal	3.1 tons
Charlotte Mecklenburg Schools White Fleet Average electric fuel economy: - kWh/100mi Miles traveled per vehicle per year: 500 mi Market: Government - Local Vehicle type: Low-Speed/Neighborhood Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No <i>Miles traveled per vehicle per year estimated.</i>	Light-Duty	Electric	4	92 gal	0.5 tons
Charlotte Mecklenburg Schools White Fleet Average vehicle fuel economy: 35 MPG Miles traveled per vehicle per year: 14,000 mi Market: Government - Local Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Light-Duty	HEV	2	494 gal	6.1 tons
Charlotte Water Electricity used: 598 kWh Market: Government - Local Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Heavy-Duty	Electric	5	51 gal	0.2 tons
Charlotte Water Average electric fuel economy: - kWh/100mi Miles traveled per vehicle per year: 66 mi Market: Government - Local Vehicle type: Low-Speed/Neighborhood Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Light-Duty	Electric	10	30 gal	0.2 tons
City of Charlotte Average electric fuel economy: - kWh/100mi Miles traveled per vehicle per year: 11,244 mi Market: Airport Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Light-Duty	Electric	675	324,208 gal	1,685.1 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
City of Charlotte Average electric fuel economy: - kWh/100mi Miles traveled per vehicle per year: 10,614 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Light-Duty	Electric	7	3,174 gal	16.5 tons
City of Charlotte Average electric fuel economy: - kWh/100mi Miles traveled per vehicle per year: 675 mi Market: Airport Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Light-Duty	Electric	2	58 gal	0.3 tons
City of Charlotte Average vehicle fuel economy: 22 MPG Miles traveled per vehicle per year: 10,741 mi Market: Airport Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Light-Duty	HEV	2	814 gal	10.0 tons
City of Charlotte Average vehicle fuel economy: 37 MPG Miles traveled per vehicle per year: 10,614 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Light-Duty	PHEV	3	500 gal	2.6 tons
City of Charlotte Solid Waste Average vehicle fuel economy: 37 MPG Miles traveled per vehicle per year: 11,244 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Light-Duty	PHEV	2	353 gal	1.8 tons
City of Concord Average electric fuel economy: - kWh/100mi Miles traveled per vehicle per year: 2,000 mi Market: Government - Local Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Light-Duty	Electric	2	182 gal	0.9 tons
City of Concord Average vehicle fuel economy: 32 MPG Miles traveled per vehicle per year: 9,000 mi Market: Government - Local Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Light-Duty	HEV	14	3,474 gal	42.8 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Duke Energy Average vehicle fuel economy: 20 MPG Miles traveled per vehicle per year: 5,575 mi Market: Utility Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: No <i>Odyne - 1 fuel tanker, 2 step vans, 4 material handlers; these trucks use the battery power to power the vehicle during idling rather than running the engine, they can idle up to 8 hours a day but typically around 5; when running up and down the road they run off the diesel engine.</i>	Heavy-Duty	PHEV	7	3,778 gal	15.1 tons
Duke Energy Average electric fuel economy: - kWh/100mi Miles traveled per vehicle per year: 3,500 mi Market: Utility Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: No <i>Tesla S</i>	Light-Duty	Electric	1	114 gal	0.6 tons
Duke Energy Average vehicle fuel economy: 35 MPG Miles traveled per vehicle per year: 5,580 mi Market: Utility Vehicle type: Pickup/SUV/Van Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: No <i>VIA</i>	Light-Duty	PHEV	3	380 gal	2.0 tons
Gaston County Average vehicle fuel economy: 48 MPG Miles traveled per vehicle per year: 18,000 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Light-Duty	HEV	28	11,029 gal	135.9 tons
Mecklenburg County Average vehicle fuel economy: 35 MPG Miles traveled per vehicle per year: 15,000 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No <i>Per Management & Financial Services</i>	Light-Duty	HEV	15	3,183 gal	39.2 tons
Mecklenburg County LUESA Average vehicle fuel economy: 35 MPG Miles traveled per vehicle per year: 1,523 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No	Light-Duty	PHEV	1	22 gal	0.1 tons
Mecklenburg County LUESA Average vehicle fuel economy: 40 MPG Miles traveled per vehicle per year: 15,000 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: No <i>Solid Waste</i>	Light-Duty	PHEV	1	266 gal	1.4 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
UNC Charlotte	Light-Duty	Electric	150	2,018 gal	10.5 tons
Average electric fuel economy: - kWh/100mi Miles traveled per vehicle per year: 287 mi Market: Government - State Vehicle type: Low-Speed/Neighborhood Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: No					
Total:			1,039	503,602 gal	3,744 tons

Off-Road Vehicles

Fleet Name	Application	Method	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Charlotte Douglas Airport	Forklifts	Alternative fuel or vehicles	Electric	2	2 gal	0.0 tons
Fuel used: 25 kWh Percentage from coalition: 100% National Clean Fleets Partnership: No						
Charlotte Douglas Airport	Forklifts	Alternative fuel or vehicles	Propane	2	150 gal	0.1 tons
Fuel used: 220 gal Percentage from coalition: 100% National Clean Fleets Partnership: No						
City of Concord	Construction equipment	Alternative fuel or vehicles	Biodiesel (20%)	65	3,795 gal	33.2 tons
Fuel used: 17,800 gal Percentage from coalition: 100% National Clean Fleets Partnership: No						
Duke Energy	Recreational equipment	Alternative fuel or vehicles	Electric	8	11,119 gal	44.5 tons
Fuel used: 174,626 kWh Percentage from coalition: 75% National Clean Fleets Partnership: No <i>Estimate 150 hours/month.</i>						
Duke Energy	Forklifts	Alternative fuel or vehicles	Electric	42	18,720 gal	75.0 tons
Fuel used: 294,000 kWh Percentage from coalition: 75% National Clean Fleets Partnership: No <i>Estimate 167 hours/month using 3 - 4 kW. 167 x 3.5 x 12 months x 42 forklifts = ~294000 kWh/year</i>						
Gaston County	Construction equipment	Alternative fuel or vehicles	Biodiesel (20%)	26	24,329 gal	213.0 tons
Fuel used: 114,114 gal Percentage from coalition: 100% National Clean Fleets Partnership: No						
Mecklenburg County Parks and Rec	Construction equipment	Alternative fuel or vehicles	Electric	1	4 gal	0.0 tons
Fuel used: 50 kWh Percentage from coalition: 100% National Clean Fleets Partnership: No						
Mecklenburg County Parks and Rec	Landscaping and lawn equipment	Alternative fuel or vehicles	Propane	2	8 gal	0.0 tons
Fuel used: 12 gal Percentage from coalition: 100% National Clean Fleets Partnership: No						

Fleet Name	Application	Method	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Mecklenburg County Parks and Rec	Other	Alternative fuel or vehicles	Propane	1	14 gal	0.0 tons
Fuel used: 21 gal Percentage from coalition: 100% National Clean Fleets Partnership: No						
Total:				149	58,143 gal	366 tons

FUEL ECONOMY

Fuel Economy Improvements

Fleet Name	Previous Fuel	Current Fuel	Number of Vehicles	Miles Traveled per Vehicle	GGE Reduced	GHG Reduced
Charlotte Area Transit System	16 MPG	17 MPG	98	18,000 mi	6,485 gal	79.9 tons
Method: Telematics Vehicle class: Light-Duty Market: Government - Local Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No <i>Miles traveled is an estimate.</i>						
Charlotte Douglas Airport	15 MPG	22 MPG	8	8,000 mi	1,358 gal	16.7 tons
Method: Vehicle - More efficient Vehicle class: Light-Duty Market: Airport Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No						
City of Charlotte	18 MPG	26 MPG	41	27,000 mi	18,923 gal	233.1 tons
Method: Vehicle - More efficient Vehicle class: Light-Duty Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No						
City of Concord	11 MPG	14 MPG	169	10,000 mi	32,922 gal	405.5 tons
Method: Vehicle - More efficient Vehicle class: Light-Duty Market: Government - Local Vehicle type: Patrol Car Percentage from coalition: 100% National Clean Fleets Partnership: No						
Total:			316	63,000 mi	59,688 gal	735 tons

Vehicle Miles Traveled Reductions

Project Name	Method	Vehicle Class	GGE Reduced	GHG Reduced
Charlotte Area Transit System	Mass transit	Light-Duty	210,000 gal	2,586.7 tons
Fuel saved: 4,200,000 gallons Percentage from coalition: 5% National Clean Fleets Partnership: No <i>This is based on transit ridership, assuming that transit takes cars off the road. It is CATS passenger miles minus their bus miles or 105,000,000 VMTs annually divided by an assumed 25mpg vehicle being taken off the road. Further, CCFC staff is estimating a 5% contribution to account for greater than single occupancy vehicles, some passengers not owning a vehicle at all, and to allocate reasonable credit toward our augmented outreach and transportation demand management (TDM) efforts in 2016.</i>				

Project Name	Method	Vehicle Class	GGE Reduced	GHG Reduced
Charlotte B-Cycle	Non-motorized locomotion (e.g., bicycles)	Light-Duty	225 gal	2.8 tons
Fuel type of vehicles driven less: Gasoline Fuel economy of vehicles driven less: 23 MPG Number of vehicles driven less: 207 VMT reduction per vehicle being driven less: 25 mi Percentage from coalition: 100% National Clean Fleets Partnership: No				
Charlotte Mecklenburg Schools Yellow Fleet	Route Optimization	Heavy-Duty	126,454 gal	1,568.0 tons
Fuel type of vehicles driven less: Diesel Fuel economy of vehicles driven less: 7 MPG Number of vehicles driven less: 1,600 VMT reduction per vehicle being driven less: 500 mi Percentage from coalition: 100% National Clean Fleets Partnership: No				
UNC Charlotte	Route Optimization	Light-Duty	2,500 gal	30.8 tons
Fuel type of vehicles driven less: Gasoline Fuel economy of vehicles driven less: 15 MPG Number of vehicles driven less: 150 VMT reduction per vehicle being driven less: 250 mi Percentage from coalition: 100% National Clean Fleets Partnership: No				
Total:			339,179 gal	4,188 tons

IDLE REDUCTION

Idle Reduction

Project Name	Number of Vehicles	Idling Reduced per Vehicle	Fuel Saved per Vehicle	GGE Reduced	GHG Reduced
Charlotte Area Transit System	316	8 mins/day 365 days/year	1 gal/hr	15,379 gal	190.7 tons
Type of project: Policies Type of vehicle: Heavy-Duty - Other Percentage from coalition: 100% National Clean Fleets Partnership: No					
Charlotte Douglas Airport	65	45 mins/day 365 days/year	2 gal/hr	35,588 gal	441.3 tons
Type of project: Policies Type of vehicle: Heavy-Duty - Other Percentage from coalition: 100% National Clean Fleets Partnership: No					
Charlotte Douglas Airport	10	631 mins/day 365 days/year	1 gal/hr	38,386 gal	476.0 tons
Type of project: Onboard batteries Type of vehicle: Heavy-Duty - Other Percentage from coalition: 100% National Clean Fleets Partnership: No					
Charlotte Douglas Airport	126	25 mins/day 365 days/year	2 gal/hr	38,325 gal	475.2 tons
Type of project: Policies Type of vehicle: Light-Duty Percentage from coalition: 100% National Clean Fleets Partnership: No					

Project Name	Number of Vehicles	Idling Reduced per Vehicle	Fuel Saved per Vehicle	GGE Reduced	GHG Reduced
Charlotte Douglas Airport	10	631 mins/day 365 days/year	1 gal/hr	38,386 gal	476.0 tons
Type of project: Auxiliary power unit (APU) Type of vehicle: Heavy-Duty - Other Percentage from coalition: 100% National Clean Fleets Partnership: No					
Charlotte Mecklenburg Schools Yellow Fleet	1,200	15 mins/day 180 days/year	1 gal/hr	54,000 gal	669.6 tons
Type of project: Policies Type of vehicle: Heavy-Duty - Bus: School Percentage from coalition: 100% National Clean Fleets Partnership: No					
Duke Energy	8,000	10 mins/day 365 days/year	0 gal/hr	59,928 gal	743.1 tons
Type of project: Policies Type of vehicle: Heavy-Duty - Other Percentage from coalition: 47% National Clean Fleets Partnership: No <i>Statewide data, 47% of which falls within CCFC region.</i>					
Food Lion	10	299 mins/day 365 days/year	3 gal/hr	54,568 gal	676.6 tons
Type of project: Auxiliary power unit (APU) Type of vehicle: Heavy-Duty - Truck: Delivery Percentage from coalition: 100% National Clean Fleets Partnership: No					
North Carolina Zoo	129	2 mins/day 360 days/year	1 gal/hr	1,548 gal	19.2 tons
Type of project: Policies Type of vehicle: Light-Duty Percentage from coalition: 100% National Clean Fleets Partnership: No					
UNC Charlotte	15	180 mins/day 365 days/year	2 gal/hr	24,638 gal	305.5 tons
Type of project: Policies Type of vehicle: Heavy-Duty - Other Percentage from coalition: 75% National Clean Fleets Partnership: No					
Total:	9,881			360,744 gal	4,473 tons

FUEL STATIONS

New Stations

Fuel	Public Stations	Private Stations
Biodiesel	0	2
CNG - Compressed Natural Gas	-	1
E85 - 85% Ethanol	-	1
Electric Charging Outlets	5	50
Hydrogen	-	-
LNG - Liquefied Natural Gas	-	-
Propane	-	-
Total:	5	54

OUTREACH ACTIVITIES

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
Stakeholder Meeting Technology: Biodiesel, E85, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: Delivery, Government, Private Fleets, Transit, Utility, Waste, Other	01/20/2016	Meeting - Stakeholder	100%	15
Energy Independence Summit 2016 Technology: Biodiesel, E85, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Hydrogen, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: Government, Other	02/08/2016	Conference participation	10%	50
Non-Residential Charging Station Cost Webinar Technology: Electric vehicles Audience: Airport, Delivery, Government, Private Fleets, Transit, Utility, Waste, Other <i>costs associated with purchasing, installing, and owning non-residential charging stations</i>	02/17/2016	Conference participation	10%	10
Propane Roundtable Technology: Propane Audience: Delivery, Government, Private Fleets, Utility, Waste, Other <i>LPG 101 workshop discussing infrastructure installation, vehicle conversion, and fleet basics.</i>	02/23/2016	Workshop held by coalition	100%	30
Stakeholder Meeting Technology: Biodiesel, E85, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Hydrogen, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: Delivery, Government, Private Fleets, Transit, Utility, Waste, Other <i>PSNC Energy CNG Fire Safety Demonstration</i>	03/16/2016	Meeting - Stakeholder	100%	20
Southeast Alternative Fuel Vehicle Demonstration Initiative (SADI) Kickoff Webinar Technology: Electric vehicles, Natural gas vehicles, Propane Audience: Airport, Delivery, Government, Private Fleets, Transit, Utility, Waste, Other	03/31/2016	Workshop held by coalition	75%	20
UNC Charlotte Earth Day Technology: Biodiesel, E85, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: General Public, Transit, Utility, Other	04/19/2016	Literature Distribution	100%	200
2016 State Energy Conference Technology: Biodiesel, E85, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: Airport, Delivery, General Public, Government, Private Fleets, Transit, Utility, Waste, Other <i>Chris Facente attended the conference sponsored by the NC State Energy Program.</i>	04/20/2016	Conference participation	50%	250
Stakeholder Meeting Technology: Biodiesel, E85, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: Delivery, Government, Private Fleets, Utility, Waste, Other <i>Held at Mecklenburg County Air Quality. Connected/autonomous vehicles, Change and Resiliency</i>	05/18/2016	Meeting - Stakeholder	100%	10
NC State Clean Transportation Coordinating Committee Meeting Technology: Biodiesel, E85, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: Airport, Delivery, Government, Private Fleets, Transit, Utility, Waste, Other <i>Research Triangle Park, NC</i>	06/08/2016	Conference participation	50%	35

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
CNG From Sea to Shining Sea Road Rally - Rock Hill, SC Technology: Natural gas vehicles Audience: Delivery, Government, Private Fleets, Transit, Utility, Waste	06/08/2016	Meeting - Stakeholder	10%	50
GRADE Grant Information Session Technology: Biodiesel, Electric vehicles, Hybrid electric vehicles, Natural gas vehicles, Propane Audience: Airport, Delivery, Government, Private Fleets, Transit, Utility, Waste, Other <i>Meck Co Air Quality Grants to Replace Aging Diesel Engines</i>	06/14/2016	Meeting - Other	10%	20
Charlotte Clean Commute Olympics Kick Off Technology: Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: Airport, Delivery, General Public, Private Fleets, Transit, Utility, Waste, Other <i>Charlotte Air Awareness</i>	06/20/2016	Media Event	10%	50
Stakeholder Meeting Technology: Biodiesel, E85, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: Delivery, Government, Private Fleets, Utility, Waste, Other <i>Agility Compressed Natural Gas Fuel Systems</i>	07/20/2016	Meeting - Stakeholder	100%	20
Western NC Air Quality Conference Presentation Technology: Biodiesel, E85, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Propane Audience: General Public, Government, Other <i>Evs and Air Quality presentation.</i>	08/05/2016	Conference participation	100%	15
Duke Energy Electric Vehicle Charging Infrastructure Rebate-Informational Webinar Technology: Electric vehicles Audience: Delivery, Government, Private Fleets, Transit, Utility, Waste <i>Hosted in partnership with ChargePoint and ABM Electrical Power Solutions</i>	08/18/2016	Workshop held by coalition	50%	30
PEV Market Trends, SMART Charging, and Renewables Webinar Technology: Electric vehicles Audience: Airport, Delivery, Government, Private Fleets, Transit, Utility, Waste <i>Dan Welch, Center for Climate and Energy Solutions, and Dr. Dan Santini, Argonne National Laboratory</i>	08/25/2016	Conference participation	10%	10
City of Charlotte National Drive Electric Week and Transportation Choice Event Technology: Electric vehicles, Hybrid electric vehicles Audience: General Public, Government, Transit, Other <i>National Drive Electric Week in partnership with City staff and static vehicle display.</i>	09/12/2016	Workshop held by coalition	100%	100
NC State's Sustainable Transportation Showcase Technology: Biodiesel, E85, Electric vehicles, Hybrid electric vehicles, Natural gas vehicles, Propane Audience: Airport, Delivery, General Public, Government, Private Fleets, Transit, Utility, Waste, Other	09/14/2016	Conference participation	50%	100
Stakeholder Meeting Technology: Biodiesel, E85, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Hydrogen, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: Delivery, Government, Private Fleets, Transit, Utility, Waste, Other <i>Low Speed Electric Vehicles and Fleet Applications, Volkswagen Settlement Overview, FAST Act alternative fuel corridor designations</i>	09/21/2016	Meeting - Stakeholder	100%	20
Webinar: Types of Electric Vehicle Charging Stations at the Workplace Technology: Electric vehicles Audience: Airport, Delivery, General Public, Government, Private Fleets, Transit, Utility, Waste, Other	10/04/2016	Conference participation	100%	10

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
UNC Charlotte Transportation Fair Technology: Biodiesel, E85, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Hydrogen, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: General Public, Government, Other <i>Predominantly students and faculty</i>	10/05/2016	Literature Distribution	100%	1,000
NC State VW EPA Settlement & Future Fleet Fuels and Technologies for Today Technology: Biodiesel, E85, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: Delivery, General Public, Government, Private Fleets, Transit, Utility, Waste, Other <i>Webinar</i>	10/06/2016	Advertisement	100%	60
EVSE (DCFC) Promotion Technology: Electric vehicles Audience: <i>Communicating the value of EVs through educational signage in downtown at charger location</i>	10/12/2016	Meeting - Other	100%	2
Ventilation needed in parking decks while charging-UNCC Technology: Electric vehicles Audience: Government <i>Several inputs and data resources provided from across Clean Cities Coordinator and DOE network. Reported that this was just what was needed to make their case. (10/21/16)</i>	10/18/2016	Meeting - Other	100%	2
NC State-Playbook for Sustainable Fleet Management Technology: Biodiesel, E85, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: Airport, Delivery, General Public, Government, Private Fleets, Transit, Utility, Waste, Other	10/19/2016	Website	50%	100
NC State-Coordinating Committee Meeting Technology: Biodiesel, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Propane Audience: Delivery, General Public, Government, Private Fleets, Transit, Utility, Waste, Other <i>Finding Money for Your Fleets & Manufacturing Tour</i>	11/02/2016	Conference participation	100%	30
NC PEV Taskforce Summit Technology: Electric vehicles, Hybrid electric vehicles Audience: General Public, Government, Private Fleets, Other <i>Participate as Steering Committee member and served on planning committee</i>	11/15/2016	Conference participation	100%	60
Stakeholder Meeting Technology: Biodiesel, E85, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: Delivery, Government, Private Fleets, Utility, Other <i>VW Settlement Updates, Plug-in Summit Review, FAST Act Alt Fuel Corridors- NC Update, Regional Freight Plan update</i>	11/16/2016	Meeting - Stakeholder	100%	15
eGSE for CLT airport in support of local grant program options Technology: Electric vehicles Audience: Airport, Government <i>Megan Green, MCAQ</i>	12/02/2016	Meeting - Stakeholder	100%	1
Total:				2,335

GRANTS

Grantor	Total Grant Amount	Total Matching Funds	Total Project Funding	Grant Amount Spent in 2016	Matching Funds Spent in 2016	Total Project Funding Spent in 2016
Department of Energy Length of grant: 2 Year grant began: 2015 Sources of the grant: Department of Energy Partners: Land of Sky Clean Cities, NC Clean Energy Technology Center, Palmetto State Clean Cities, Tennessee Clean Fuels, Triangle Clean Cities Technologies: CNG - Compressed Natural Gas, Electricity, Propane Purpose: to provide opportunities for fleets to demonstrate a wide range of alternative fuel vehicles <i>The SADI Demonstration grant is a US Department of Energy project focused on the increased adoption of Alternative Fuels in the Southeast region of the United States. Project partners for this grant include Alliance Autogas, Enterprise, ICOM, Palmetto Gas, Penske and others.</i> <i>Clean Cities Coalitions throughout South Carolina, North Carolina and Tennessee will work with technology partners to provide opportunities for fleets to demonstrate a wide range of alternative fuel vehicles.</i>	\$39,500	\$7,900	\$47,400	\$16,860	\$3,350	\$20,210
NC Clean Energy Technology Center Additional grant money added since start \$90,000 Additional matching funds added since start \$23,000 Length of grant: 4 Year grant began: 2013 Sources of the grant: Congestion Mitigation and Air Quality Improvement (CMAQ) Program Partners: Land of Sky Clean Cities, NC Clean Energy Technology Center- primary, Triangle Clean Cities Technologies: B100 - 100 percent Biodiesel, Biodiesel Blends, CNG - Compressed Natural Gas, E85 - 85 percent Ethanol, Electricity, Fuel Economy Improvements, Idle Reduction, LNG - Liquefied Natural Gas, Propane, Vehicle-Miles Traveled Reductions, Other Purpose: Education and outreach for Clean Fuel Advanced Technology Program--AQ Improvements <i>The Clean Fuel Advanced Technology (CFAT) 2013-15 project is currently in a third phase of support from the N.C. Department of Transportation with \$6.2 million in federal Congestion Mitigation Air Quality (CMAQ) funding.</i> <i>The CFAT project is focused on reducing transportation related emissions in NC counties that have air quality concerns. The 2013 through 2015 project is funded by the N.C. Department of Transportation and covers three broad areas: education and outreach, project funding, and recognition of exemplary activities (Mobile CARE).</i>	\$112,500	\$28,125	\$253,625	\$44,700	\$11,200	\$55,900
Total:	\$152,000	\$36,025	\$188,025	\$61,560	\$14,550	\$76,110