Ozone Advance Emission Reduction Projects - Oklahoma City MSA

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Emission Reduction Projects	Entity	Status	Description	Schedule/Completion Dates
Air Quality Awareness Grants	ACOG	Ongoing	City, county and tribal governments along with public schools, public school districts and public universities are eligible to receive CMAQ funds for small infrastructure projects and public education programs that assist in the reduction of single-occupancy trips and/or ozone-forming emissions. **2016 Update: Four Air Quality Awareness grant projects have been completed by: Cleveland Area Rapid Transit (CART), City of Oklahoma City, City of Norman, and City of Yukon. Projects included bicycle racks, bicycle repair equipment, vehicle wraps, and educational materials.**	April 2014 - Continuous
Bike to Work Day	ACOG	Ongoing	Every year, the third Friday of May is designated as Bike to Work Day and communities throughout Central Oklahoma participate by holding group bicycle rides and events. Numerous communities have participated in the program since its inception. **2016 Update: The cities of Oklahoma City, Guthrie, Norman, Yukon and Edmond sponsored Bike To Work Day rides.**	2005 - Continuous
Central Oklahoma Commuter Corridors Study (CentralOK!go)	ACOG	**Complete**	Following up on recommendations from the 2005 Regional Fixed Guideway Study, CentralOK!go is the next step in the federal planning process for evaluating the feasibility of a regional transit system. This study will provide more in-depth analysis and information concerning an alignment, technology, ridership forecasts, estimated costs, and potential funding sources for each corridor.	2013 - 2014
GetAroundOK.com	ACOG	Ongoing	Encourages the use of alternative transit by providing information on carpooling, public transit and other means of green transportation. Users can log their green transportation use and search for carpools in their area. **2016 Update: To date, 16,764 commutes have been logged throughout the region, resulting in the reduction of 7,195 trips and reducing fuel use by 14.1K gallons.**	2012 - Continuous
Ozone Alert Day Notifications	ACOG	Ongoing	Email notifications of Ozone Alert Day declarations in Central Oklahoma are serviced to elected officials, policymakers and members of the public via email. Linked content includes information on public transit throughout Central Oklahoma, information on the health impacts of ground-level ozone and a link to the Oklahoma Department of Transportation online camera-based traffic monitoring system. **2016 Update: In 2015, one Ozone Alert Day was declared; notifications were sent to a total of 731 recipients with an average open rate of 28.2% and an average click-through rate of 8.5%.**	Continuous
Public Alternative Fuel Stations	**ACOG**	**Ongoing**	**Within the state, there are currently 28 compressed natural gas (CNG) stations, 19 propane fueling stations, 12 electric vehicle (EV) charging stations, 8 ethanol (E85) stations, and 1 liquefied natural gas (LNG) station.**	**Continuous**
Social Media Public Outreach	ACOG	Ongoing	Central Oklahoma's MPO utilizes Facebook and Twitter to keep members of the public updated on air quality and air quality-related issues throughout the region, state, country and world.	2009 - Continuous
Transportation Alternatives Program	ACOG	Ongoing	Approximately $2.8 million will be administered to bicycle and pedestrian infrastructure projects throughout the Central Oklahoma region as part of MAP-21 through TAP. Eligible projects include on-road and off-road trails, safe routes for non-drivers, rails-to-trails conversions and Safe Routes to Schools projects. **2016 Update: The communities are working with ODOT, making progress toward implementing their projects.**	April 2014 - Continuous

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Transportation Systems Management (TSM) Projects	ACOG	Ongoing	Emission reduction strategies that may include: intersection improvement projects, signal improvements, signal coordination efforts, Intelligent Transportation System (ITS) enhancements and bicycle and pedestrian facilities. These projects reduce transportation-related emissions by improving traffic flow and reducing congestion throughout the region. **2016 Update: ACOG is developing a Congestion Management Plan and Process to identify congestion management strategies and move them to projects as well as determining how to link CMP goals, objectives and performance measures with the Encompass 2040 long-range transportation plan to ultimately make the transportation system more efficient.**	Continuous
Walk to School Day, Bike to School Day	ACOG	Ongoing	These annual events offer schools the opportunity to promote the safe passage of students to school in an effort to encourage active transportation and a reduction in ozone-forming emissions that can form due to long, idling child pickup and drop-off lines. Thus far, 10 schools in Central Oklahoma have participated in these events in a total of seven Central Oklahoma communities. **2016 Update: Jackson Elementary School in Norman hosted a bike rodeo for students and their families.**	Continuous
Open Streets OKC	ACOG, Oklahoma City-County Health Department	Ongoing	The Open Streets event promotes active transportation and the relationship between transportation mode choice and public health and has drawn around 65,000 total attendees from across the region. Businesses and organizations participate all along the route with fun and active activities for families. The event earned significant media coverage and calls for more walkable development, biking infrastructure and accessible, quality transit through Oklahoma City. The event is planned to now occur twice a year beginning in 2015. **2016 Update: The 4th Open Streets OKC event was held in April, with 20,000 to 25,000 participants and 78 community activity vendors.**	Continuous
Clean Fuel use	Central Oklahoma Clean Cities	Ongoing	The Central Oklahoma Clean Cities 2014 annual survey of stakeholder fleets showed a reduction of 6,651,144gallons of gas equivalent (GGEs) of petroleum fuel used. The survey indicated that 97% of the recorded petroleum reduction can be attributed to alternative fuel vehicles. The majority of the remaining reduction can be attributed to idle reduction fleet policies and technologies. Central Oklahoma stakeholder fleets accounted for 4,479 on-road vehicles operating on alternative fuels. Deployment of compressed natural gas (CNG) vehicles and fueling stations resulted in 86% of petroleum fuel reduction, followed by E85 ethanol-blend (8.8%), and LNG, liquefied natural gas (4.1%). **2016 Update: The preliminary results of the Central Oklahoma Clean Cities 2015 annual survey of stakeholder fleets showed a reduction of 8,428,291 GGEs of petroleum fuel used. The survey indicated that 98% of the recorded petroleum reduction can be attributed to alternative fuel vehicles. The majority of the remaining reduction can be attributed to idle reduction fleet policies and technologies. Central Oklahoma stakeholder fleets accounted for 2,760 on-road vehicles operating on alternative fuels. Deployment of compressed natural gas (CNG) vehicles and fueling stations resulted in 86% of petroleum fuel reduction, followed by E85 ethanol-blend (5.0%), and LNG, liquefied natural gas (2.6%).**	1996 - Continuous

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EMBARK - Free fare during ozone season	Central Oklahoma Transportation and Parking Authority	Ongoing	During the ozone season (May-September) Oklahoma City metro transit provides free transportation on all fixed-route buses on the third Friday of every month. This includes express commuter routes operating to and from Norman.	Continuous
Alternative fuels use	City of Edmond	Ongoing	The City approved Resolution 02-06, directing the City Manager to pursue plans supporting the utilization of plug-in hybrid electric vehicles. The City has utilized E85 and B20 blends for the past several years, but now is focused on pursing other options for alternative fuels, such as LPG. Currently, for the bus fleet, 3 buses are CNG, 5 are LPG, and 4 run on ULSD. One Edmond Electric utility truck has been converted to a PHEV, which runs on electrical power provided by wind. A propane fueling station was also installed at Vehicle Maintenance in 2013. **2016 Update: Efforts to pursue alternative fuels and "right-sizing" the vehicle fleet for City employees is ongoing.**	Continuous
Bicycle Master Plan & Alternative Transportation	City of Edmond	Ongoing	The Bicycle Master Plan, completed in 2012, defines a network of trails and on-street bicycle/pedestrian corridors to promote bicycling as a viable form of transportation throughout the City. This enhances the 1999 Edmond Trails and Sidewalk Master Plan to include on-street bicycle facilities. In 2013, 2 miles of bike lanes were completed around the University of Central Oklahoma. Side paths along the arterials Covell Rd and Kelly Rd were also completed, totaling approximately 6 miles. **Arcadia Lake Coalition:** In 2012, a Public/Private partnership was also formed with the goal of creating a bicycle/pedestrian trail around Arcadia Lake. **In 2016 and 2017, after completion of the Spring Creek Trail, the primary focus will be the north side of the lake along Rt 66, and the west side, which will connect two City Parks.** **Spring Creek Trail:** This trail is under construction, and is expected to be completed in August 2016. It will extend from the East side of I-35, under the highway, and along Spring Creek to Spring Creek Park at Arcadia Lake. It will total approximately 2.5 miles. **Fox Lake Trail:** The Fox Lake Trail was completed in 2015, which is behind the Wal-Mart and Sam's at 15th and I-35. It currently extends from 15th St to Fox Lake Ln. **When the north and south extensions to this trail are complete in 2017, it will total approximately 1.3 miles.** **Shared Lane Markings:** In 2015 approximately 13 miles of shared lane markings were added to six primary corridors to encourage users to share the road. **The Arcadia Lake Trail Coalition continues to raise money, while the City is applying for the USDOT Tiger Grant (2016) to help supplement costs for the Arcadia Lake Trail. The City is also applying for the TAP grant through the Oklahoma Department of Transportation to help fund new trail efforts.**	2017

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			Citylink Transit: The City of Edmond has had the Citylink Transit System in place since 2009. It offers citizens an alternative form of transportation to and from work, shopping, medical visits and the University of Central Oklahoma (UCO). There are four fixed routes within Edmond city limits and one commuter route to the OKC bus terminal and the OKC Social Security Office. The City has 3 buses that use CNG fuel, 7 buses that are running on propane, and 3 buses that run on clean diesel. There is also one additional paratransit bus for persons with a disability or seniors who cannot drive. All Citylink regular route buses are equipped with wheelchair lifts and bike racks. **In 2016 the City received 3 new buses, which can all run on alternative fuels, whether it is propane or unleaded. Since the transit systems' inception, there have been more than 1.5 million riders. McDonald Transit manages the Citylink transit system for the City of Edmond, while Edmond staff maintains the vehicles and assists with Planning functions. In 2016-2017 (2) more buses will arrive that are equipped to run on alternative fuel.**	
City Facility Rehabilitation **Facility Maintenance**	City of Edmond	Ongoing	Among improvements that have been made are white roofs, LED lighting, and more energy efficient HVACs. In 2014, three buildings received white roofs. They are Mobile Meals, the Downtown Community Center, and the Historical Museum. Four buildings received LED lighting. They are Mobile Meals, the Historical Museum, Kickingbird Golf Club, and one Zone at the Crosstimbers Municipal Complex. The new Edmond Downtown Health Clinic also has LED lighting. In 2014 four buildings received more energy efficient HVACs. They are Fire Stations 1, 2, and 3, and the Downtown Community Center. In 2015 six out of seven HVAC units were replaced on the Mobile Meals facility with higher SEER ratings. The new Water Distribution Station on Danforth Rd has LED lighting and geothermal heat pumps. Also, the Water Treatment Plant has changed out some large wattage lights (1000 watts each) in the filtering room to LED lights. **In 2016 the Downtown Community Center received a total of 8 new Package HVAC units, and the Planning and Public Works Building received a new 35 ton chiller. In 2016-2017 additional LED lighting replacements are scheduled for the Crosstimbers Municipal Complex, as well as the interior lights for the garage at Vehicle Maintenance. In future fiscal years FY17-18 exterior lights and parking lot lights are scheduled to be changed from Halide to LED, office and remaining lights at Vehicle Maintenance will be changed, and Mobile Meals is also scheduled to receive more energy efficient windows. A new 40 ton heat pump and cooling tower will also be installed for Council Chambers in the near future.**	2017, 2018, 2019

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Decrease Idling Time	City of Edmond	**Complete**	In 2015 the Fleet Maintenance Manager addressed excessive idling with City staff. **2016 Update: In 2016 a Fleet Idle Reduction Departmental Directive was created and distributed to City Staff, approved and supported by City management. All department heads have been made aware of this new policy directive.**	**Complete**
Energy Efficiency	City of Edmond	Ongoing	In 2014 City staff created a new internal committee that will meet every three months made up of City department heads and management staff. The role of the committee is to discuss operational efficiencies for the vehicle fleet, city facilities, and city programs that promote sustainable practices. Water resources, solid waste, energy efficiency, renewable energy and fuel efficiency are among the topics discussedd. **2016 Update: In 2017 the new Water Resources Administration Building is planning on several features that will not only save energy, but also provide a learning experience for the many tours that they offer. The 2015 International Energy Conservation Code (IECC) will be used as a standard part of their new facilities, although this code has yet to be adopted by the State. A small solar project for the building, LED lighting, white roofs and/or green roofs, and geothermal wells are all expected to be incorporated into the design, as well as an area for small groups to be taught. In future years new facilities for water treatment and wastewater treatment, as well as 2 new lift stations will be constructed. As a standard part of these designs, variable frequency drives and soft starts are now a standard practice.**	Continuous
Energy Benchmarking Planning	City of Edmond	In Progress	Benchmarking and Analysis of energy use in City facilities. In 2015 the City switched to new customer billing software for the utility database (CIS Infinity). Reports are run inside the software where usage data can be obtained. As the City becomes more invested in future expansions of the utility software, there are expected to be even better options for energy analysis. **2016 Update: In June 2016 the City will begin the conversion to version 4 of Advanced Infinity. The plan is to go live in January 2017.**	2017

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Energy Management Systems	City of Edmond	Ongoing	Energy Management Systems are a combination of building management and advanced software solutions to assist managing building functions in a more energy efficient way, and to provide demand response controls when situations within the power grid demand it. In 2005 these systems were installed for the Crosstimbers Municipal Complex, Animal Welfare, and Fire Station V. In 2008 this system was installed for the Edmond Historical Museum. In 2011, through the EECBG, eleven additional facilities were upgraded for HVAC and lighting controls. On the newer installations the average savings have been around 23%. Delta Energy Management Systems were upgraded at the Crosstimbers Municipal Complex, Animal Welfare, the Historical Museum and Fire Station V to include lighting management and the use of 2 hour overides when the buildings are being used in off hours. In addition to these four areas, Fire Stations 1, 2, 3, and 4, the Downtown Community Center, the Planning and Public Works building, the Municipal Court, the Council Chambers, the City First Building, and the Mitch Park Activity Center have all received the new version of Delta for controlling lights and HVAC. **2016 Update: the new Public Safety Center has an energy management system that is controlling the 140 ground source HVAC units throughout the 70,000 square foot building. Hot water is provided by a centralized boiler in the basement. Future plans include putting the Delta System in the Mobile Meals facility and the new IT building (includes 4 variable speed ground source heat pumps).**	Continuous
Equipment Replacements and Retrofits	City of Edmond	Ongoing	Provide HVAC equipment in buildings that have older, less efficient, heating equipment and no cooling equipment. Installation of LED lighting at all new Water/Wastewater Facilities. Provide for the most efficient use of electric power when operating bedrock groundwater wells by designing pumps and motors specific to each well site's water pumping volumes thus reducing electric power cost. **2016 Update: New Design practices were developed for all new Water Resource Facilities. These practices include LED lighting for all projects indoor/outdoor – International Dark Sky Association (IDA) compliant outdoor lighting. Also, geothermal HVAC will be used. To minimize heat island effects, roofing/paving materials with a high reflectivity index will be used (concrete also has a much better life cycle cost). Renewable power is used at all Water Resource facilities, utilizing 100% wind power. Pumps and equipment are selected based on life cycle costs, including energy consumption during the anticipated life.**	Continuous
Geothermal Installation	City of Edmond	**Complete**	The new Mitch Park YMCA and Edmond Public Schools Competive Pool has installed 300 geothermal wells, and is expected to save an estimated 50% on energy operating costs. The new Public Safety Center, which now houses the Edmond Police Department, Public Safety Communications, and Emergency Management functions, received 140 geothermal wells, which is expected to save $12K - $15K per year in heating and cooling. **2016 Update: Geothermal wells have been installed for the new Public Safety Center and the facility is now open. These facilities will continue to be monitored for performance.**	**Continuous**

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Green Power Community Designation	City of Edmond	Ongoing	The City of Edmond became the first municipality in Oklahoma to receive Green Power Community designation from the Environmental Protection Agency through their use of renewable energy. With overall use of more than 97 million kilowatt-hours of green power per year, close to 75% of the City of Edmond's facilities are powered by wind energy technology and 11% of residents and businesses in Edmond opt to use green power as a portion of their electricity via the Oklahoma Municipal Power Authority. Geothermal energy is utilized to save energy on the YMCA facility as well as the 70,000 square foot Public Safety Center. These forms of energy reduce the use of power generated from point sources of emissions. **2016 Update: The City keeps this designation for the fourth year. According to the program the City is ranked 14th in the country, based on annual amount of green power used.**	Continuous
ITS Engineering	City of Edmond	In Progress	Intelligent Transportation Systems are being installed at signalized intersections. ITS should facilitate the management of traffic during congested periods, allowing better mobility and resulting in less idle time. **2016 Update: Phase I of Edmond ITS includes 21 intersections along Edmond Rd/2nd St from Santa Fe to Saints Blvd. Intersections are hard wired via fiber optics. There is also a wireless component that connects four water towers, which will also be hard wired with fiber optics. The intersection controllers are using the latest NTCIP commuications protocol and are connected to the Traffic Management Center. The intersections have a battery backup system, emergency pre-emption system, CCTVs, redundant vehicle detection systems, LED signal indications, flashing yellow left turn arrows, and audible pedstrian systems. This phase is projected to be complete by June 2016. Phase II of Edmond ITS will include 22 intersections. Funding is secured and construction is expected to begin in the spring/summer 2017.**	2017
Open Streets Edmond	City of Edmond	Ongoing	On November 3rd, 2013, the City of Edmond held Oklahoma's first Open Streets event, closing off a stretch of University Drive near the University of Central Oklahoma campus to celebrate the opening of Edmond's first bike lane. From 2PM to 4PM University Drive was closed to vehicular traffic to allow for pedestrians and bicyclists to participate along with a series of activities and local vendors. **2016 Update: This is an event that the City hopes to host every year, which helps to promote bicycling as an alternate and recreational form of transportation. In addition the Edmond Bicycle Committee promotes bicycling through different venues, such as Citizen Bank's 'Heard on Hurd', where information is distributed about places to ride. Bike to Work events and Moonlight rides are also hosted by the organization, giving recognition to this important mode of transportation.**	Continuous

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Renewable Energy - Edmond Electric	City of Edmond	Ongoing	**Renewable Energy Program:** Sale of the available wind power to Edmond Electric customers. Free residential and commercial energy audits for Edmond Electric customers. Approximately 25% of the energy supplied by the OMPA to its Members is renewable, coming from wind, hydro, and landfill gas. **Customer Rebates and Financing:** Edmond Electric offers rebates to customers for the purchase of geothermal and energy efficient HVAC. Customers of Edmond Electric can finance the installation of a ground source loop to support a ground source heat pump system through Edmond Electric. **Customer Outreach:** Powerlines is an outreach newsletter on energy efficiency for key accounts. **Equipment and operations:** Utilize high efficiency transformers to reduce energy losses. Investigation of the cost and impact of converting electric and water use meters to electronic read and data capture systems. (AMR/AMI) **2016 update: In 2016 the City is not currently accepting new applications for the wind power program. However, accounts wanting to switch to Pure and Simple wind power will be opened again in the future. The anticipated date for this program to be opened again to new customers is in November 2016.**	Continuous
Solar Installation	**City of Edmond**	**New/In progress**	**While solar is not expected to play a large role in the City's energy portfolio, the Water Resources Department is incorporating it into the design of the new Water Treatment Plant in 2017.**	**2017**

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Urban Forestry	City of Edmond	Ongoing	Urban Forestry, a division of Community Image, is involved in multiple tree plantings and/or tree distributions each year. Row plantings have been the majority of plantings by the City. **2016 Update: The Urban Forestry Commission has also taken initiatives to plant trees at Edmond schools, starting with Edmond North High School in March 2015, and then Sunset Elementary School in November. In 2015 there were four tree distributions. This is the first year that strides were taken to make these events a priority, rather than waiting until donated trees were available. A new initiative through Edmond Electric and the Arbor Day Foundation provided Edmond Electric customers with 125 trees through a program called "Energy Saving Trees." Through this new program, customers were able to access the program website, enter their address, and view an aerial photo of their home. Using this view, the program helped them determine the most appropriate species (from six available) and the best location to plant the tree in order to obtain the largest amount of energy savings from it. Trees continually reduce concentrations of air pollutants, including ozone. Urban Forestry is also marketing information about trees in their distributions with "tree tags," which include descriptions of air quality benefits. The Urban Forestry Department will continue ambitious planting strategies through initiatives such as Foster-A-Tree, community planting events, public landscapes, tree distributions, and partnership plantings. They also intend to continue a successful informational campaign through "Edmond Tree Mail" and the Urban Forestry Facebook page.**	Continuous
CNG and Alternative fuel use	City of Norman	Ongoing	The City of Norman operates 30 light-duty CNG pickups and sedans, and three heavy duty CNG refuse haulers. In 2012, the city installed both fast-fill and time-fill fueling facilities to serve its growing fleet of natural gas-powered vehicles. Norman also has an idle reduction policy currently applied to approximately 90 of its heavy duty vehicles that reduces engine idling by up to 90 minutes per day per vehicle and saves up to 0.75 gallons of fuel per day per vehicle. **2016 Update: Norman added 10 light duty and 4 heavy duty CNG vehicles. They also programmed into vehicles' onboard computers to limit idle time to 5 minutes in 56 refuse haulers.**	Continuous
CNG and Alternative fuel use	City of Oklahoma City	Ongoing	**2016 Update: The City of Oklahoma City (transit, utilities, airport vehicles) operates a fleet of 167 light and heavy duty CNG vehicles, 4 electric cars, 17 hybrid vehicles and 159 heavy duty diesel trucks using B20 currently in the City-wide fleet.**	Continuous
Energy Efficiency and Conservation Strategy	City of Oklahoma City	**Complete**	The City of Oklahoma City received a $5,482,300 formula grant through the Department of Energy's Energy Efficiency and Conservation Block Grant program, to develop an EECS. Programs listed in strategy include: sustainability plan, energy audits and upgrades of city facilities, lighting and energy management system upgrades of city facilities, revolving loan fund for homeowners to make energy efficiency upgrades, downtown recycling receptacles, downtown and ward 4 drop-off recycling centers, compressed natural gas fast-fill fueling station, review and recommendations to increase energy efficiency standards in the city's building code and historic preservation guidelines, downtown bike-share program, and public outreach and education.	April 2010 - 2015

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MAPS 3 Modern Streetcar	City of Oklahoma City	**Ongoing**	$130 million from Oklahoma City's MAPs 3 program has been designated for the construction of a rail-based streetcar serving the downtown vicinity. This will reduce downtown congestion and provide more public transport options for the citizens of Oklahoma City. Construction of five to six miles of track is anticipated; however the ultimate number of miles of track constructed will be determined by available construction dollars. The project will also include infrastructure to connect other rail-based systems and/or a multi-modal transit hub. The first phase of procurement/construction will complete an initial loop, a maintenance facility and other transit infrastructure as appropriate, such as connections to other rail-based systems and/or a transit hub. The second phase, scheduled to begin mid-2017, will complete as many additional route miles as the remaining available construction dollars allow. **2016 Update: The system is in the design phase. Santa Fe Railroad was acquired for use as an intermodal transit hub and design is underway on its renovation. Design is underway on the maintenance facility. Streetcars have been ordered from the manufacturer.**	2014-2018
Sustainability Plan	**City of Oklahoma City**	**New/Planned**	**The City of Oklahoma City is creating a sustainability plan to track and report both community and government operations indicators. This plan will align with the elements of planOKC, the City's comprehensive plan, and serve as an implementation tool for the recommended policies.**	**2017**
CNG and Alternative fuel use	Cleveland Area Rapid Transit (CART) - University of Oklahoma	Ongoing	**2016 update: The University of Oklahoma currently has 154 on-road vehicles fueled by alternative energy sources including 114 flex-fuel light-duty vehicles and SUVs fueled with E85; 48 light-duty vehicles fueled with CNG, 18 Cleveland Area Rapid Transit buses fueled with B20; 19 heavy-duty natural gas buses and shuttles fueled with CNG; 17 fuel-efficient hybrid-electric cars; and 49 low-speed electric vehicles.**	Continuous
CNG Fleet Addition	DEQ	Ongoing	DEQ has plans to replace up to 12 gasoline fueled vehicles with CNG fueled vehicles on a rolling basis. These will be distributed around the state with at least 4 located in Oklahoma City. **2016 update: The fleet includes 23 bi-fuel trucks and one dedicated CNG vehicle.**	Continuous
Air Quality Public Outreach	DEQ	Ongoing	The Department participates in multiple public outreach and education programs, which emphasize the importance of informing individuals about the effects of ozone on citizens' health. This includes producing/supplying ozone education materials, creating online videos encouraging energy efficiency and issuing ozone watches for the Oklahoma City MSA. DEQ began its Air Quality Health Advisory Program in 2006, issuing real time email notifications of unhealthy concentrations of ozone. In 2014 the Air Quality Division added an infographics gallery featuring original infographics with a local focus on the relationship between air quality and weather. **2016 update: DEQ revised its infographic and notification system to reflect the new lower ozone standard.**	Continuous

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Energy Conservation Program	**DEQ**	**Ongoing**	**The Oklahoma Department of Environmental Quality received an award from Governor Fallin on November 10, 2015 for being the first state agency to hit the 20% energy savings goal. The award for 20% reduction was based on a month to month normalized electric savings, using 2012 as the baseline year. Currently, DEQ averages an annual normalized electric reduction of 19.9% since the program's inception in 2012. Some of these savings result from behavior change, but many of DEQ's energy savings derive from mechanical building improvements. The annual normalized average of 19.9% savings equates to 1,135,705 kWh. DEQ has volunteered to set a new goal to achieve 30% electric reduction by 2020.**	**2012-2020**
Lawnmower Exchange Program	DEQ	Ongoing	Citizens of the Oklahoma City MSA can exchange their old gas-powered lawn mower for a cash waiver toward the purchase of a new electric lawn mower.In 2015, 95 gas-powered mowers were traded in for recycling, and 71 new electric mowers were purchased with vouchers. Emissions reductions were estimated to be approximately 63 lbs of NOx, 47 lbs of PM, 17,121 lbs of CO and 2,561 lbs of HC. Three exchange events were held in the spring of 2015. Oklahoma County had the most exchanges (72), followed by Cleveland (15), Canadian (5), and one each for Garvin, Logan, and Lincoln counties. **2016 update: No activity is planned for 2016.**	2013 - Ongoing
Oil & Gas Permit By Rule	DEQ	Complete	DEQ has updated its permitting rules (OAR 252:100-7) to include an Oil and Gas permit by rule (O&NG PBR). The main purpose of this rule is to streamline the permitting process for these numerous small sources and reduce associated permitting fees; however, this measure will also provide better emissions data about the oil and natural gas sector which could be used to develop future control strategies. The Department has registered 2,907 O&NG facilities under the PBR, of which 222 were conversions from the Area Source NESHAP and Small NSPS facilities General Permit (GP), 798 were conversions from the Oil and Gas GP and 19 were conversions from individual permits. From those numbers, there are 1868 facilities previously unpermitted that were permitted under the O&NG PBR.	Effective October 2013
Open Burning Rule	DEQ	Ongoing	This rule is expected to reduce PM, VOC and NOx emissions within the Oklahoma City and Tulsa Metropolitan Statistical Areas (MSAs) by requiring the use of an air curtain incinerator in place of open burning. This will significantly reduce the amount of ozone precursors generated by the burning of wood waste, with an approximate 90% reduction in total air pollutants. Additionally, this rule will prohibit open burning of waste in areas for which an ozone or PM Alert is in effect. In 2014, DEQ performed outreach to fire departments in the OKC and Tulsa Metropolitan areas to explain the rule. These fire departments are now assisting in enforcement of this rule, and as a result, many land clearing operations that would have just piled and burned in years past are either using an ACI, chipping, or having the waste removed from their property.	Effective July 2013

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Solar Powered Monitoring Station	**DEQ**	**New/Ongoing**	**The Air Quality Division has installed a 10.5 kW solar array at our Oklahoma City North monitoring site. The array consists of 35 LG 300 watt solar panels that are ground-mounted and grid-tied. It will generate approximately 16,280 kWh per year. This new solar array will lower the electric bill at the OKC North monitoring site by reducing the amount of electricity pulled from the power grid. The array is expected to produce approximately 75% of the power the site requires. There are no batteries to store power at the site, and excess power is fed directly into the grid.**	**2015-Present**
Village Green Park Benches	DEQ	New/Planned	**The DEQ and EPA installed a Village Green Bench (funded by an EPA grant) at the Children's Garden of the Myriad Botanical Gardens in Downtown Oklahoma City in 2015. The bench was officially opened at a November 10, 2015 ribbon-cutting ceremony which included EPA Region 6 Administrator Ron Curry, DEQ Executive Director Scott Thompson, state and city officials, and students from nearby John Rex Elementary School. Another bench totally funded by DEQ is planned for installation in 2016 at the University of Oklahoma's Norman campus in front of the Carson Engineering Center. Both benches are equipped with portable instruments to measure ozone, fine particulate matter, and critical weather data. Monitoring data is collected in real time and sent to DEQ, the Village Green website, and an LCD display sign next to the bench. Visitors can use QR codes on the sign to see the mobile website data with graphs and look at what other benches around the country are measuring. Also, DEQ has added an Air Quality Flag that shows the Air Quality Index (AQI) forecast of the day through colored flags. Flags are changed daily after DEQ staff review the current and near-term air quality data, and often visiting children and their parents assist in the flag change. The Village Green project goal is to increase air pollution awareness by providing the public direct information about the air quality in their local communities.**	2015-2016
Weather Festival	National Weather Center, Norman	Ongoing	The annual weather festival showcases the many weather related organizations and activities in central Oklahoma. This event features weather balloon launches, storm research vehicle displays, children's activities, amateur radio demonstrations and weather related information and products. The Air Quality Division is responsible for presentation space showcasing the division's programs and the air quality themed children's activity room.	2008 - Present
Solar Energy Pilot Projects	OGE Energy Corp.	Complete	In 2014, Oklahoma Gas and Electric (OG&E) launched a solar energy pilot project to test the deployment and operation of solar power on grid safety, maintenance, and reliability. Rooftop solar panels and battery storage facilities have been installed at several OG&E locations, and two community solar farms were developed at OG&E's Mustang Power Plant in 2015. The solar farms have a generating capacity of 2.5 MW which is roughly the equivalent of powering 500 homes.	Continuous
Electric Vehicle Fleet	OGE Energy Corp.	Ongoing	**OG&E encourages the adoption of electric vehicles (EVs) and added 10 new EVs to the fleet in 2015 with additional vehicle acquisitions planned for 2016. In addition, the company is installing charging stations in several of its facilities in the metro OKC area so employees can conveniently charge their vehicles.**	Continuous

Ozone Advance Emission Reduction Projects - Oklahoma City MSA

Progress Report 6-1-15 through 5-31-16

Emission Reduction Projects	Entity	Status	Description	Schedule/Completion Dates
OG&E Energy Efficiency Programs-Residential	OGE Energy Corp.	Ongoing	Oklahoma Gas and Electric Company (OG&E) has the most widespread Smart Grid technology in the country, which offers variable pricing through their Smart Hours program. **2016 Update: OG&E offered the following energy efficiency programs targeting Residential Customers:** **Smart Hours-Summer time of use pricing servicing 115,000 total customers and deploying 113,000 programmable thermostats since inception. Estimated savings for the 2013-2015 period are 147 MW. In 2015, OGE installed 15,793 thermostats and enrolled 26,693 customers.** **HEEP—a free on-line energy audit, free HVAC tune-up, duct seal and repair; in 2015, this resulted in savings of 11,268,226 kWh and 11,343 kW.** **Weatherization—free energy efficiency improvements for lower-income customers which includes ceiling insulation, general air infiltration improvements, CFL lighting installations and performance testing; in 2015 this resulted in savings of 11,900,957 kWh.** **Geothermal Rebates—rebates for the installation of geothermal HVAC systems; in 2015 this resulted in savings of 843,421 kWh.** **Positive Energy Home—certification for homes that are shown to be 50% more efficient than code; in 2015 this resulted in savings of 2,430,927 kWh.** **NOTE: All numbers are preliminary findings pending finalization of OGE's EM&V analysis.**	These programs will run from 2013 through 2016
OG&E Energy Efficiency Programs-Commercial	OGE Energy Corp.	Ongoing	Systemwide, OG&E currently projects energy efficiency and demand reductions of up to 549 MW and 1,130 MWh through 2024. **2016 Update: In 2015, OG&E offered the following energy efficiency programs targeting Commercial and Industrial Customers:** **Commercial Lighting Rebates—rebates for lighting and lighting control improvements; in 2015 this resulted in savings of 36,458,870 kWh and 6,524 kW.** **Commercial Energy Efficiency Program (CEEP)—rebates for efficiency improvements such as more efficient motors, HVAC systems and Chillers; in 2015 this resulted in savings of 8,914,696 kWh and 4,414 kW.** **Industrial Energy Efficiency Program (IEEP)—rebates for efficiency improvements for more efficient motors, HVAC systems and Chillers; in 2015 this resulted in savings of 982,553 kWh and 237 kW.** **NOTE: All numbers are preliminary findings pending finalization of OGE's EM&V analysis.**	These programs will run from 2013 through 2016
Paperless Billing	OGE Energy Corp.	Ongoing	OG&E promotes paperless billing to reduce the number of electric bills that must be mailed. Customer Participation: 2012 - 36,882, 2013 - 38,038, 2014 – 48,048. **2015 - 56,358.**	Continuous
OG&E Wind Power	OGE Energy Corp.	Ongoing	OG&E has 7 Wind farms providing 841 MW of Wind Power to the company, which accounts for approximately 10% of OG&E's generating capacity (MW) and approximately 15% of Oklahoma's power generation (MWh).	Continuous

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Emission Reduction Projects	Entity	Status	Description	Schedule/Completion Dates
CNG Fleet Addition	Oklahoma Department of Transportation (ODOT) / Oklahoma Turnpike Authority (OTA)	In Progress	In the past 3 years, ODOT has replaced 675 of its approximately 1190 light duty vehicle fleet with CNG vehicles. The agency is working toward its goal of 90 percent CNG by the end of 2016. The projected savings realized could be as much as $20,000 over the useful life of each vehicle. OTA currently has 75 CNG fleet vehicles and 8 CNG pool vehicles. Plans are to add another 34 CNG fleet vehicles and 6 pool vehicles this fiscal year, which will bring the total percentage CNG to 75%.	2013-2016
ScienceFest Oklahoma	Oklahoma DEQ OGE Energy Corp Oklahoma Department of Commerce Oklahoma Secretary of Energy and Environment	Ongoing	ScienceFest Oklahoma is an annual education event which brings 2500-5000 4th and 5th grade students to Oklahoma City each spring. ScienceFest is a day-long outing for Oklahoma school children that provides hands-on learning activities focused on the environment, conserving natural resources, and using alternative fuels and technologies. **Ozone awareness and air pollution prevention are highlighted as well.**	2002 - Present
Rebate for CNG Vehicles and Home Fueling products	Oklahoma Natural Gas	Ongoing	**Currently offering rebates of $2,000 for the purchase of a dedicated or bi-fueled vehicle and $3,000 for the purchase of a residential home-fueling system.** The program is expected to continue, with no set cut-off or termination date. In 2014, ONG processed 248 total NGV rebates, which included 158 bi-fuel NGV rebates, 70 dedicated NGV rebates, and 20 home refueling rebates. **No update is currently available for 2015 rebate totals.**	Continuous
Alternative Fuel Vehicle (AFV) Tax Credit	State of Oklahoma	Ongoing	For tax years beginning before January 1, 2015, a one-time income tax credit is available for 50% of the incremental cost of a new AFV or converting a vehicle to operate on an alternative fuel. The state also provides a tax credit for 10% of the total vehicle cost, up to $1,500, if the incremental cost of a new AFV cannot be determined or when an AFV is resold, as long as a tax credit has not been previously taken on the vehicle. Equipment used for conversions must be new. The alternative fuels eligible for the credit are compressed natural gas, liquefied natural gas, hydrogen, and liquefied petroleum gas (propane). Tax credits may be carried forward for up to five years. (68 O.S. §2357.22)	1990-Present
Alternative Fueling Infrastructure Tax Credit	State of Oklahoma	Complete	For tax years beginning before January 1, 2015, a tax credit is available for up to 75% of the cost of alternative fueling infrastructure. Eligible alternative fuels include CNG, liquefied natural gas, liquefied petroleum gas (propane), hydrogen, and electricity. The infrastructure must be new. A tax credit is also available for up to 50% of the cost of installing a residential CNG fueling system, for up to $2,500. The tax credit may be carried forward for up to five years. (68 O.S. §2357.22)	2014
Oklahoma First Energy Plan	State of Oklahoma	Ongoing	Oklahoma First Energy Plan lays out policy guidance for a diverse energy portfolio that includes energy efficiency and encourages efficiency technologies such as Combined Heat and Power (CHP) and geothermal.	2011- Present
Oklahoma State Facilities Energy Conservation Program	State of Oklahoma	Ongoing	During the 2012 legislative session, Oklahoma lawmakers passed SB 1096, which created a conservation program. The law includes a provision that sets forth a goal to target a cumulative energy savings of not less than 20% by the year 2020, when compared with 2012 utility expenditures (27A O.S., §3-4-106.1)	2012-2020

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Emission Reduction Projects	Entity	Status	Description	Schedule/Completion Dates
Oklahoma State Mandated Energy Efficiency Requirements	State of Oklahoma	Ongoing	61 O.S. § 213, Enacted 6/3/2008, requires the state to develop a high-performance building certification program for state construction and renovation projects; program must meet the certification guidelines of either the LEED system or the Green Globes rating system. The requirement applies to new construction or substantial renovation projects that begin the design phase after July 1, 2008 in buildings larger than 10,000 square feet. "Substantial renovations" is defined as projects that cost in excess of 50% of the value of the facility. In order to be considered a "state project" for purposes of the requirements, state funds or state-insured funds must constitute at least 50% of the project cost. State agencies are directed to meet the highest level of certification attainable under a payback period of 5 years or less. Public schools (K-12) and state archive buildings are exempted from the requirements.	2009 - Present
Private Alternative Fuel Vehicle (AFV) Loans	State of Oklahoma	Ongoing	Private loan program with a 3% interest rate for the cost of converting private fleets to operate on alternative fuels, for the cost of purchasing an original equipment manufacturer AFV, and for the installation of AFV fueling infrastructure. Maximum repayment period is six-years.	1990-Present
The Oklahoma Energy Security Act	State of Oklahoma	Ongoing	Established state wide goals (O.S. 17, Section 801.1 et seq.) for alternative and domestically produced energy, including: 15% of energy from renewables by 2015, and CNG fueling stations every 100 miles by 2015 and every 50 miles by 2025.	Present - 2025
Emergency and Transportation Revolving Fund	State of Oklahoma	New	SB 656 (2015) allows counties to apply for no-interest loans, for a maximum of 5 years, for the purchase of CNG vehicles or the conversion of existing fleet vehicles to CNG.	2015- Onward
Idle Reduction Policy	**Tinker Air Force Base**	**Ongoing**	**An idle reduction policy memo was signed by the base Wing Commander in May 2016. The goal is a 50% reduction in idling on the base.**	**2017**
Environmental Protection Agency College and University Green Power Challenge	University of Central Oklahoma	Ongoing	For the sixth consecutive year, the Environmental Protection Agency ranked the University of Central Oklahoma (UCO) first among schools in the Mid-American Intercollegiate Athletics Association and 23rd among 33 collegiate conferences and 78 schools overall. UCO uses 26 million kilowatt-hours of wind power annually and has on-site biodiesel productions.	2010 - 2016
OU Spirit Wind Farm	University of Oklahoma	Complete	One hundred percent of the University of Oklahoma's Norman campus purchased electricity is renewable, as part of a 2008 agreement made with OG&E. Under the agreement, the per-kWh wind power premium OU pays to OG&E has substantially helped fund the 101 MW OU Spirit Wind Farm. The university has not seen a noticeable change in its electric bill since switching to renewables and expects the use of wind power will help it overcome any future spikes in energy prices. The university has been ranked 1st in the Big 12 and 6th in the country for campus wind power use.	February 2013