

## 2018 - Tulsa Area Ozone Advance Program Annual Update - New and Ongoing Projects

Path Forward Action Plan Category	Emission Reduction Project	Administrative Entity	Description	Status	Implementati on Schedule and/or Completion Date
Energy Efficiency	Mandated Energy Efficiency Requirements	State of Oklahoma	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.	Ongoing	2008 -
	The Oklahoma Energy Security Act	State of Oklahoma	The Oklahoma Energy Security Act (17 O.S., Section 801.2 et seq.), which became effective in 2010, set statewide goals 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. <u>2017 Update:</u> In response to a proposal by Tulsa Area Clean Cities, INCOG, ACOG, and ODOT, the Federal Highway Administration designated all of the interstates in Oklahoma as Alternative Fuel Corridors. Under this designation, there are two categories, "signage ready," meaning the fueling infrastructure exists in sufficient quality and intervals to denote the corridor; and "signage is pending," meaning corridor is prioritized for future fueling infrastructure development. Oklahoma was the only state to have all of its interstates designated as "signage ready" for CNG. OK also received a "signage pending" designation for EVs, paving the way to prioritize and coordinate EV infrastructure projects along those routes.	Ongoing	2010 - 2025

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	Oklahoma First Energy Plan	State of Oklahoma	The Oklahoma First Energy Plan lays out policy guidance for a diverse energy portfolio that includes energy efficiency and encourages technologies such as combined heat and power (CHP) and geothermal. <a href="https://www.ok.gov/governor/documents/Governor%20Fallin's%20Energy%20Plan%20-%20Jan%202012.pdf">https://www.ok.gov/governor/documents/Governor%20Fallin's%20Energy%20Plan%20-%20Jan%202012.pdf</a>	Ongoing	2011 -
	Oklahoma State Facilities Energy Conservation Program	State of Oklahoma	The Oklahoma State Facilities Energy Conservation Program, established in 2012 (27A O.S. Section 3-4-106.1), directs all state agencies and higher education institutions to achieve an energy and conservation improvement target of at least 20% by 2020 when compared with 2012 utility expenditures. Oklahoma's energy reporting and resulting savings occur through the Energy CAP calculation and reporting software system. The energy savings database can be accessed from the <a href="http://20x2020.ok.gov/resources">20x2020.ok.gov/resources</a> website, the Energy Database menu; then <a href="https://web.energycap.com">https://web.energycap.com</a> . Login access information for each of the three (Username, Password, and Data source) is the word: Oklahoma. The software tracking system was initiated in 2014 and each reporting year reflects greater state building energy savings. September 2015 - August 2016 reflects a 34.7% daily average cost savings over the previous year with 69.4% of those occurring from reductions in electricity usage.	Ongoing	2012-2020

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	Demand Response Energy Performance Reduction Program – Residential and Commercial	Public Service Company of Oklahoma	<p>Public Service Company of Oklahoma's (PSO) Energy Efficiency and Demand Response portfolio is multi-faceted portfolio of programs for residential and business customers encouraging and incentivizing the reduction in energy usage and peak energy demand. Since 2010, PSO has successfully implemented programs to help customers save energy, reduce peak demand and make the most efficient use of electricity. The programs attempt to successfully reach all demographics including limited income, hard to reach, new construction, existing construction, non-profit, state and local governments and business customers of all sizes. PSO continues to refine and update offerings for customers to enhance energy efficiency and demand response opportunities. <b>2018 Update: PSO's most recent 2017 Annual Report indicates an annual net EE Lifetime Energy Savings total of 1,406,447,000 kWh. Since 2010, PSO estimates net EE Lifetime Energy Savings total more than 7,000,000,000 kWh. Using the eGRID annual emission rates for the SPP South (SPSO) sub region, lifetime emission reduction estimates are: 1,060,026 tons of CO2, 77 tons of CH4, and 12 tons of N2O.</b></p>	Ongoing	2012 -

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	Oklahoma Natural Gas (ONG) Energy Efficiency Program	Oklahoma Natural Gas (ONG)	<p>ONG's energy efficiency programs provide incentives for residential and commercial customers.</p> <p><b>2018 Update: ONG's latest Energy Efficiency Program Portfolio's reporting (dated March 2018) reflects a total cumulative energy savings from all programs of 23,460,739 Dth, with 17,570,944 Dth from Residential Sector Programs, 537,030 Dth from Small Commercial Sector Programs, and 5,352,765 Dth from Large Commercial Sector Programs.</b></p> <p><b>Annual energy savings by program and the resulting **estimated emissions reductions are:</b></p> <p><b>1) Low Income Heating System Checkup: 321,611 therms saved resulting in 4,346.17 CO2e, 1000 lbs and 5,074.96 lbs of NOx reductions;</b></p> <p><b>2) Water Heater Replacement Program: 57,364 therms saved resulting in 775.19 17 CO2e, 1000 lbs and 905.19 lbs of NOx reductions;</b></p> <p><b>3) Heating System Replacement Program: 1,522,511 therms saved resulting in 20,574.85 CO2e, 1000 lbs and 24,024.94 lbs of NOx reductions;</b></p> <p><b>4) Clothes Dryer Replacement Program: 93,151 therms saved resulting in 1,258.83 CO2e, 1000 lbs and 1,469.91 lbs of NOx reductions;</b></p> <p><b>5) Range Replacement Program: 31,901 therms saved resulting in 431.10 CO2e, 1000 lbs and 503.39 lbs of NOx reductions;</b></p> <p><b>6) New Homes Program: 1,213,218 therms saved resulting in 16,395.00 CO2e, 1000 lbs and 19,144.36 lbs of NOx reductions;</b></p> <p><b>7) Commercial Custom EE Program: 1,581,400 therms saved resulting in 21,370.66 CO2e, 1000 lbs and 24,954.20 lbs of NOx reductions;</b></p> <p><b>**Reduced emissions estimates use the Source Energy and Emissions Analysis Tool (SEAT), developed by the Gas Technology Institute</b></p>	Ongoing	2012 - 2019

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	OG&E Energy Efficiency Programs- Commercial	OGE Energy Corp.	<p>System wide, OG&amp;E currently projects energy efficiency and demand reductions of up to 549 MW and 1,130 MWh through 2024.</p> <p><b>2018 Update: In 2017 Commercial Energy Efficiency Program (CEEP) - total savings of 71,541,185 kWh. Includes:</b></p> <ol style="list-style-type: none"> <li><b>1) Commercial HVAC Tune-up and Plenum Seal</b></li> <li><b>2) C&amp;I HVAC Equipment, Chillers, Air Compressor, motor rebates</b></li> <li><b>3) Midstream LED lighting discounts at commercial distributors</b></li> <li><b>4) Schools and Government, HVAC &amp; Lighting rebates and assessments</b></li> <li><b>5) Small Business direct install measures</b></li> </ol>	Ongoing	<b>2016 through 2018</b>

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	OG&E Energy Efficiency Programs- Residential	OGE Energy Corp.	<p>Oklahoma Gas and Electric Company (OG&amp;E) has the most widespread Smart Grid technology in the country, which offers variable pricing through their Smart Hours program.</p> <p><b>2018 Update: In 2017 OG&amp;E offered the following energy efficiency programs targeting Residential Customers:</b></p> <p><b>2017 Home Energy Efficiency Program (HEEP)</b></p> <ol style="list-style-type: none"> <li><b>1) Residential Free HVAC Tune-up and Plenum Seal</b></li> <li><b>2) OK Schools outreach; Educational Kit including install items for 5th grade students</b></li> <li><b>3) Upstream LED lighting discounts in select stores</b></li> <li><b>4) Insulation and HVAC equipment rebates;</b></li> </ol> <p><b>Estimated savings -- 51,270,492 kWh.</b></p> <p><b>Weatherization—free energy efficiency improvements for lower-income customers which includes ceiling insulation, general air infiltration improvements, LED lighting installations and performance testing; 2017 savings of 12,519,108 kWh.</b></p> <p><b>Positive Energy Home—certification for homes that are shown to be 50% more efficient than code; 2017 savings of 3,673,856 kWh.</b></p>	Ongoing	2013 -

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	State Energy Program American Recovery & Reinvestment Act Revolving Loan Funds	Tulsa Area Clean Cities Program / INCOG	<p>In November 2013, a State Energy program - American Recovery and Reinvestment Act (SEP ARRA) revolving loan program previously administered by the Oklahoma Department of Commerce was transferred to INCOG for administration. This loan program consists of \$1,600,000 in funding to provide the capital necessary for the implementation of building energy efficiency retrofits, renewable energy and demand management projects, and alternative fuel infrastructure or fleet conversion. A 1% interest rate for public entities and 2% private interest rate applies. In July 2014, Tulsa County was awarded \$1,055,000 in cooperation with the county's Energy Efficiency and Conservation Strategy (EECS) for the purpose of updating the HVAC systems throughout the County Courthouse, Annex, and Administration buildings. The project entails replacing the inefficient controls with computerized direct digital control systems thereby dramatically improving the energy efficiency of the buildings. TACC/INCOG announced solicitation for the remaining \$652,000 loan program dollars in November 2015. 2016 Update: The Tulsa County EE retrofits are completed. Energy savings are being tracked by total reduced energy cost compared to the 3-year (2014-2015) energy usage average. The 2016 9-month (Jan. - Sept.) cost savings from the combined projects is \$123,811.00. In November 2015, two new EE loan program projects were awarded: \$310,000 to Rogers County to restore the County Courthouse Depression Era building; and \$320,000 to Tulsa County for HVAC and lighting replacements and upgrades critically needed at the O'Brian Park Recreation Center. The Rogers County project has experienced multiple delays due to staffing turnover and is not yet complete. The Tulsa County Parks project is complete and the energy savings data reporting will begin in Quarter 1 of 2018. The Tulsa County Courthouse project has yielded the following energy savings: 78753.33 therms of steam saved, representing a 25.5% reduction in steam used; and 380,620 kWh of electricity saved, representing an 8.1% reduction in electricity usage.</p>	Ongoing	2013 -

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	Tulsa International Airport Energy Efficiencies	Tulsa Airport Authority (TAA)	<p>Tulsa International Airport (TIA) is a modest facility located approximately five miles northeast of downtown Tulsa. Facility operations for this 1961 era building are handled by the Tulsa Airport Improvement Trust (TAIT). In conjunction with the planning for major building renovations, TAIT took the opportunity to turn the Airport into a clean energy and environmentally resourceful model for the Tulsa region. Tulsa's attainment status precludes many funding opportunities intended to encourage voluntary emission reductions projects, such as the Federal Aviation Administration's Voluntary Aviation Low Emissions (VALE) Program which is only available to areas that are in non-attainment or maintenance of the NAAQS. However, even without funding incentive, TAIT's renovation efforts strategically included unique projects and achievements to reduce ground-level air emissions during the renovations and build clean air efficiencies into the Airport's future.</p> <p><b>2018 Update:</b></p> <ul style="list-style-type: none"> <li>• <b>While TAIT is not eligible for Oklahoma Volkswagen Beneficiary Mitigation Plan funding, TAA continues to monitor the progress on Plan implementation and promote Category 7, Airport Ground Support Equipment, opportunities to the Commercial Airlines' local and corporate contacts.</b></li> <li>• <b>TAA participates in the Sustainable Tulsa's Scor3card program.</b></li> <li>• <b>In 2018, the Taxiway Juliet reconstruction project generated approximately 52,000 tons (65,600 square yards) of base material and concrete that was crushed on site and used as fill material to elevate airport property that would otherwise be unfit for business development. The same amount of weight and volume of base material and concrete used to rebuild the taxiway is being produced on site at the mobile concrete batch plant. Both activities are preventing vehicle emission pollutants from trucks.</b></li> <li>• <b>TAA's ongoing LED retrofit projects include 184 pole lights in various locations, 535 can light fixtures throughout the airport facility, and retrofit 60 canopy light fixtures on the 2nd level of the parking garage for an estimated yearly savings of</b></li> </ul>	Ongoing	2012 -