

## EEI ESG/Sustainability Template – Quantitative Information for Oklahoma Gas and Electric Company (OG&E)

**Parent Company:** *OG Energy Corp.*  
**Operating Company(s):** *OG&E*  
**Business Type(s):** *Vertically Integrated Investor-Owned Utility*  
**State(s) of Operation:** *Oklahoma, Arkansas*  
**State(s) with RPS Programs:** *None*  
**Regulatory Environment:** *Regulated*  
**Report Date:** *8/16/2021*

		Baseline 2005 <i>Actual</i>	Previous Year 2018 <i>Actual</i>	Previous Year 2019 <i>Actual</i>	Current Year 2020 <i>Actual</i>	Comments, Links, Additional Information, and Notes
<b>Portfolio</b>						
<b>1</b>	<b>Nameplate Generation Capacity at End of Year (MW)</b>					
1.1	Owned Coal	2,569	2,524	1,854	1,854	Source of capacity data in this section: annual SEC Form 10-K
1.2	Owned Natural Gas - boiler	2,721	2,092	3,102	3,130	
1.3	Owned and Operated Natural Gas - combined cycle	696	1,697	1,817	1,815	Combined cycle capacity includes 100% of the capacity for the two plants in which OG&E owns an interest and is the operating partner (McClain and Redbud)
1.4	Owned Natural Gas - quick start turbines	243	550	551	553	
1.5.4	Owned Solar	0	12	12	22	See additional notes 1, 2, and 3 below
1.5.5	Owned Wind	0	449	449	449	
1.5.6	Purchased Wind - OG&E PPA	50	342	342	342	
<b>2.i</b>	<b>Owned Generation for the Data Year (MWh)</b>					
2.1.i	Owned Coal	20,709,911	10,755,312	5,295,309	5,032,788	Historical data in this section contains gross generation, generally as measured by 40 CFR 75 continuous emission monitoring systems (CEMS)
2.2.i	Owned and Operated Natural Gas	10,235,668	12,362,011	15,215,123	15,706,711	
2.3.i	Nuclear					
2.4.i	Petroleum					
2.5.i	Total Renewable Energy Resources		1,365,002	1,441,889	1,367,491	
2.5.1.i	Biomass/Biogas					
2.5.2.i	Geothermal					
2.5.3.i	Hydroelectric					
2.5.4.i	Solar	NA	25,920	26,544	35,477	See additional note 3 below
2.5.5.i	Wind	NA	1,339,082	1,415,345	1,332,014	
2.6.i	Other					
<b>2.ii</b>	<b>Purchased Net Generation from RTO for the Data Year (MWh)</b>	3,300,000	12,600,000	14,000,000	12,900,000	Data from SEC 10-K
2.1.ii	Coal - market	NA	1,134,000	1,680,000	2,167,200	
2.1.iii	Coal - self commit	NA	4,208,400	3,220,000	1,831,800	OG&E does not self commit units as part of normal operational practice
2.2.ii	Natural Gas	NA	2,961,000	3,654,000	3,444,300	
2.3.ii	Nuclear	NA	680,400	840,000	825,600	
2.4.ii	Petroleum	NA				
2.5.ii	Total Renewable Energy Resources	NA	2,973,600	3,878,000	4,076,400	
2.5.1.ii	Biomass/Biogas	NA				
2.5.2.ii	Geothermal	NA				
2.5.3.ii	Hydroelectric	NA	609,840	784,000	567,600	
2.5.4.ii	Solar	NA				
2.5.5.ii	Wind	NA				
2.6.ii	Other	NA	11,340	12,600	10,320	
<b>2.7</b>	<b>Bi-lateral Purchased Power Agreements</b>					
2.7i	Purchased Wind - OG&E PPA	159,021	1,277,142	1,111,074	1,120,107	2019 PPA wind MWh from EIA; 2020 data not available yet at EIA, therefore value given is from internal source
<b>3</b>	<b>Investing in the Future: Capital Expenditures, Energy Efficiency (EE), and Smart Meters</b>					
3.1	Total Annual Capital Expenditures (nominal dollars)	\$249,100,000	\$574,000,000	\$635,500,000	\$650,500,000	Data from annual SEC Form 10-K Consolidated Statement of Cash Flows
	Total Annual Capital Expenditures (nominal dollars) - Electric Vehicles	NA	NA	\$1,240,469	\$858,792	Includes vehicles, charging equipment, E-PTO, research
	Incremental Annual Investment in Electric EE Programs (nominal dollars)	NA	\$43,661,000	\$42,300,000	\$40,800,000	From Oklahoma Demand Programs Annual Report and Arkansas Energy Efficiency Program Portfolio Annual Report
	Incremental Annual Electricity Savings from EE Measures (net MWh)	NA	196,474	185,776	196,589	Net MWh from Oklahoma Demand Programs Annual Report and Arkansas Energy Efficiency Program Portfolio Annual Report
	Incremental Annual Investment in Demand Response Measures (nominal dollars)	NA	\$1,800,000	\$350,000	\$100,000	
	Incremental Annual Electricity Savings from Demand Response Measures (MWh)	NA	27,098	10,179	12,036	See additional note 10 below
	Percent of Total Electric Customers with Smart Meters (at end of year)	NA	100%	100%	100%	See additional note 10 below
<b>4</b>	<b>Retail Electric Customer Count (at end of year)</b>					
4.1	Commercial	80,786	96,660	98,565	100,200	Source for values in this section: annual SEC Form 10-K
4.2	Industrial	9,420	3,072	2,965	2,710	
4.3	Residential	630,736	725,440	731,797	740,174	

<b>Emissions</b>						
<b>5</b>	<b>GHG Emissions: Carbon Dioxide (CO2) and Carbon Dioxide Equivalent (CO2e)</b>					<i>When considering sections 5.1 - 5.3, note that emissions from power purchased from the Southwest Power Pool Integrated Market should not be combined with emissions and/or generation from OG&amp;E owned and operated facilities. Please see note 4 below.</i>
<b>5.1</b>	<b>Owned and Operated Generation for the Data Year</b>					
5.1.1	Carbon Dioxide (CO2)					
5.1.1.1	Total Owned Generation CO2 Emissions (Tonnes)	23,992,763	16,374,045	12,083,273	12,287,671	Source: EPA Air Markets Program records of monitored emissions.
5.1.1.2	Total Owned Generation CO2 Emissions Intensity (Tonnes/Gross MWh)	0.775	0.669	0.550	0.556	Data in this section includes 100% of emissions for the two plants in which OG&E owns an interest and is the operating partner (McClain and Redbud)
5.1.2	Carbon Dioxide Equivalent (CO2e)					Rates in this section are per gross MWh, including owned-renewables
5.1.2.1	Total Owned Generation CO2e Emissions (Tonnes)	24,118,609	16,455,748	12,130,523	12,333,768	
5.1.2.2	Total Owned Generation CO2e Emissions Intensity (Tonnes/Gross MWh)	0.779	0.672	0.553	0.558	
<b>5.2</b>	<b>Owned and Operated Generation and Bi-lateral Wind PPA for the Data Year</b>					
5.2.1	Carbon Dioxide (CO2)					
5.2.1.1	Total Owned, Operated, PPA Wind Generation CO2 Emissions (Tonnes)	23,992,763	16,374,045	12,083,273	12,287,671	Source: EPA Air Markets Program records of monitored emissions.
5.2.1.2	Total Owned, Operated, PPA Wind Generation CO2 Emissions Intensity (Tonnes/Gross MWh)	0.771	0.636	0.524	0.529	Data in this section includes 100% of emissions for the two plants in which OG&E owns an interest and is the operating partner (McClain and Redbud)

5.2.2	Carbon Dioxide Equivalent (CO <sub>2</sub> e)					Rates in this section are per gross MWh, including owned-renewables and wind purchased power agreements listed above
5.2.2.1	Total Owned, Operated, PPA Wind Generation CO <sub>2</sub> e Emissions (Tonnes)	24,118,609	16,455,748	12,130,523	12,333,768	
5.2.2.2	Total Owned, Operated, PPA Wind Generation CO <sub>2</sub> e Emissions Intensity (Tonnes/Gross MWh)	0.775	0.639	0.526	0.531	
<b>5.3</b>	<b>Power Purchased from the Southwest Power Pool Integrated Market</b>					
5.3.1	Carbon Dioxide (CO <sub>2</sub> ) from Southwest Power Pool (SPP)					<i>Please see note 4 below.</i>
5.3.1.1	Total Purchased Generation CO <sub>2</sub> Emissions (Tonnes)	NA	6,669,721	6,363,001	5,863,051	2019 and 2020 emissions derived as: total purchased net MWh from SEC Form 10-K multiplied by EPA eGRID 2019 emission factor for the SPP - South
5.3.1.2	Total Purchased Generation CO <sub>2</sub> Emissions Intensity (Tonnes/MWh)	NA	0.529	0.455	0.455	eGRID emission factor not yet available for 2020, therefore emissions are estimated with 2019 eGRID factor
5.3.2	Carbon Dioxide Equivalent (CO <sub>2</sub> e) from Southwest Power Pool					eGRID emission factor not available for 2005, therefore emissions are not available
5.3.2.1	Total Purchased Generation CO <sub>2</sub> e Emissions (Tonnes)	NA	6,669,721	6,392,848	5,890,553	
5.3.2.2	Total Purchased Generation CO <sub>2</sub> e Emissions Intensity (Tonnes/MWh)	NA	0.529	0.457	0.457	
<b>5.4</b>	<b>Non-Generation CO<sub>2</sub>e Emissions</b>					
5.4.1	Fugitive CO <sub>2</sub> e emissions of sulfur hexafluoride (Tonnes)	NA	39,809	43,771	32,903	Source: GHG emissions records as reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subpart DD)
	<b>Avoided Carbon Dioxide Emissions (MT) - Company Operations and Programs</b>					
	Annual Avoided CO <sub>2</sub> Emissions from RTO (SPP) Participation (Tonnes)	NA	1,757,296	1,343,055	1,307,123	
	Incremental Annual CO <sub>2</sub> e Avoided with Electric Vehicles (Tonnes)	NA	8	13	18	OG&E plans to electrify the company light duty vehicles by 2030
	Incremental Annual CO <sub>2</sub> Avoided from EE Measures (Tonnes)	NA	130,038	102,685	112,370	From Oklahoma Demand Programs Annual Report; also see additional note 10 below
	Incremental Annual CO <sub>2</sub> Avoided from Demand Response Measures (Tonnes)	NA	18,123	5,603	6,690	See additional note 10 below
<b>6</b>	<b>Nitrogen Oxide (NO<sub>x</sub>), Sulfur Dioxide (SO<sub>2</sub>), Mercury (Hg)</b>					
6.1	Generation basis for calculation	Total				Rates are per gross MWh, including renewables
<b>6.2</b>	<b>Nitrogen Oxide (NO<sub>x</sub>)</b>					
6.2.1	Total NO <sub>x</sub> Emissions (Tonnes)	35,690	9,444	7,608	9,404	Source of historical emissions data: EPA Air Markets Program records of monitored emissions for OG&E-owned and operated facilities
6.2.2	Total NO <sub>x</sub> Emissions Intensity (Tonnes/Gross MWh)	0.0012	0.0004	0.0003	0.0004	Rates are per gross MWh, including renewables
<b>6.3</b>	<b>Sulfur Dioxide (SO<sub>2</sub>)</b>					
6.3.1	Total SO <sub>2</sub> Emissions (Tonnes)	45,777	18,351	2,507	3,936	Source of historical emissions data: EPA Air Markets Program records of monitored emissions for OG&E-owned and operated facilities
6.3.2	Total SO <sub>2</sub> Emissions Intensity (Tonnes/Gross MWh)	0.0015	0.0007	0.0001	0.0002	Rates are per gross MWh, including renewables See additional note 5 below
<b>6.4</b>	<b>Mercury (Hg)</b>					
6.4.1	Total Hg Emissions (kg)	240.5	28.0	13.6	15.4	Source: EPA-provided estimates from Air Markets Program MATS data reported by OG&E for Sooner and Muskogee coal-fueled facilities
6.4.2	Total Hg Emissions Intensity (kg/Gross MWh)	0.000008	0.000001	0.000001	0.000001	Rates are per gross MWh, including renewables See additional note 6 below

Resources						
<b>7</b>	<b>Human Resources</b>					
7.1	Total Number of Employees	3,044	2,292	2,425	2,360	Source of employee count and Board composition: annual SEC Form 10-K
7.1.1	Percentage of Women in Total Workforce	---	---	---	18	See additional note 8 related to employee demographics.
7.1.2	Percentage of Minorities Total Workforce	---	---	---	24	
7.2	Total Number on Board of Directors/Trustees	10	10	10	10	2020 value reflects the ten Directors re-elected to the board in 2021
7.3	Percentage of Women on Board of Directors/Trustees	10	20	20	20	2020 value reflects the percentage of the ten Directors re-elected in 2021
7.4	Percentage of Minorities on Board of Directors/Trustees	0	10	10	10	2020 value reflects the percentage of the ten Directors re-elected in 2021
7.5	Employee Safety Metrics					Source of historical safety metrics: filed OSHA 300a records
7.5.1	Recordable Incident Rate	2.51	0.58	0.89	0.68	
7.5.2	Lost-time Case Rate	0.75	0.12	0.44	0.25	
7.5.3	Days Away, Restricted, and Transfer (DART) Rate	1.68	0.23	0.58	0.38	
7.5.4	Work-related Fatalities	0.00	0.00	0.00	0.00	
<b>8</b>	<b>Fresh Water Resources</b>					
8.1	Water Withdrawals - Consumptive (Liters)	43,943,850,000	22,805,278,000	26,245,190,000	21,354,970,000	
8.2	Water Withdrawals - Non-consumptive (Liters)	159,677,795,000	57,013,195,000	33,921,170,000	66,161,800,000	See additional note 7 below.
8.3	Water Use Intensity - Consumptive (Liters/Gross MWh)	1,419	1,079	1,192	965	Source for historical data in this section: Oklahoma Water Resources Board - Annual Use Report for OG&E-owned facilities
8.4	Water Use Intensity Non-consumptive (Liters/Gross MWh)	5,159	2,702	1,544	2,994	Baseline data in this section is from 2008. See additional note 7 below.
	<b>Fresh Water Avoided - Company Operations and Programs</b>					
	Annual Avoided Freshwater use from Generation (Liters)	4,979,187,194	9,450,659,060	9,866,607,106	9,737,041,595	McClain and Redbud combined-cycle plants (~1,800 MW total) do not use fresh water, only treated municipal effluent. See additional note 11 below.
	Annual Freshwater Use Avoided RTO (SPP) Participation (Liters)	NA	13,591,935,000	16,691,850,000	12,450,757,500	
	Annual Freshwater Use Avoided from Demand Response Measures (Liters)	NA	29,230,772	12,136,430	11,617,310	
<b>9</b>	<b>Waste Products</b>					
9.2	Percent of Coal Combustion Products Beneficially Used	65%	87%	97%	96%	Earliest baseline data is 2008. 2019 and 2020 for Sooner and Muskogee Fly Ash and Bottom Ash. Please see additional note 9 below.

#### Additional notes

- Coal capacity accounts for the 2019 conversion of coal-fueled Muskogee units 4 and 5 to natural gas and the 2019 acquisition of the River Valley facility
- Gas capacity accounts for the 2019 conversion of coal-fueled Muskogee units 4 and 5 to natural gas, the 2019 acquisition of the Frontier facility, and the 2018 addition of natural gas-fueled combustion turbines at the Mustang Energy Center
- Solar capacity and generation includes the Mustang Energy Center (online in late 2016) the Covington Solar Farm (online in 2018) and the Choctaw and Chickasaw Nations' facilities (online in 2020)
- Note that emissions from power purchased from the Southwest Power Pool (SPP) Integrated Marketplace and OG&E-owned and operated facilities should not be combined. The SPP Integrated Marketplace functions as a centralized dispatch, where market participants throughout a 14-state region in the central United States, including OG&E, submit offers to sell power to the SPP from their resources and bid to purchase power from the SPP for their customers. The SPP Integrated Marketplace is intended to allow the SPP to optimize supply offers and demand bids based upon reliability and economic considerations and to determine which generating units will run at any given time for maximum cost-effectiveness within the SPP area. As a result, the generating units OG&E owns and operates produce output that is different from OG&E's customer consumption. Therefore, the emission profile for the generating units OG&E owns and operates and has wind PPAs with is different than the emission profile for electricity consumed by OG&E's customers.
- 2019 and 2020 actual emissions reflect the addition of SO<sub>2</sub> emission control equipment at the Sooner facility and the conversion of Muskogee units 4 and 5 to natural gas
- In 2016, OG&E installed mercury emission monitoring systems
- Non-consumptive use reflects the retirement of legacy gas boiler units and the 2018 addition of natural gas-fueled combustion turbines at the Mustang Energy Center
- Employee age ranges as of 12/31/2020: under 30 = 234; ages 30-50 = 1223; over 50 = 841. Voluntary annual turnover rate of 5.7% for 2020 with 3.5% attributed to retirement while involuntary turnover was 1%; 2019 and 2018 voluntary retirement rates were 5.6% (2% retirements) and 9.1% (6% retirements) respectively, while involuntary turnover was 1% and 1.9%, respectively.
- In 2021, River Valley became OG&E's third power plant to enter an agreement to have its Fly Ash reused in road base construction and cement production.
- Implemented 100 percent deployment of smart meters with OG&E SmartHours™ program. The program enables and empowers customers to manage their usage, reducing annual capacity and energy demand on the grid and avoiding the associated emissions. Emissions avoided are based on the OG&E owned and operated CO<sub>2</sub> emission rate given above multiplied by the average avoided electricity consumption of customers participating in the SmartHours™ program.
- Note that avoided water use in 2005 appears comparatively low – this is because the Redbud facility experienced relatively low demand in 2005.