



Electric Company ESG/Sustainability Quantitative Information

Parent Company:
Operating Company(s):
Business Type(s): *(e.g., vertically integrated, T&D only, competitive integrated)*
State(s) of Operation:
State(s) with RPS Programs:
Regulatory Environment: *(e.g., deregulated, regulated, both)*
Report Date:

Ref. No.	Refer to the 'EEI Definitions' tab for more information on each metric	Current Year	Comments, Links, Additional Information, and Notes
		2018	
Portfolio			
1	Owned Nameplate Generation Capacity at end of year (MW)		
1.1	Coal	313	
1.2	Natural Gas	452	
1.3	Nuclear	0	
1.4	Petroleum	54	
1.5	Total Renewable Energy Resources	0	
1.5.1	Biomass/Biogas	0	
1.5.2	Geothermal	0	
1.5.3	Hydroelectric	0	
1.5.4	Solar	0	
1.5.5	Wind	123	
1.6	Other	0	
Use the data organizer on the left (i.e., the plus/minus symbol) to open/close the alternative generation reporting options			
2	Net Generation for the data year (MWh)		
2.1	Coal		
2.2	Natural Gas		
2.3	Nuclear		
2.4	Petroleum		
2.5	Total Renewable Energy Resources		
2.5.1	Biomass/Biogas		
2.5.2	Geothermal		
2.5.3	Hydroelectric		
2.5.4	Solar		
2.5.5	Wind		
2.6	Other		
Use the data organizer on the left (i.e., the plus/minus symbol) to open/close the alternative generation reporting options			
2.i	Owned Net Generation for the data year (MWh)	2,480,037	
2.1.i	Coal	1,869,981	
2.2.i	Natural Gas	492,291	
2.3.i	Nuclear		
2.4.i	Petroleum	578	
2.5.i	Total Renewable Energy Resources	117,187	
2.5.1.i	Biomass/Biogas		
2.5.2.i	Geothermal		
2.5.3.i	Hydroelectric		
2.5.4.i	Solar		
2.5.5.i	Wind	117,187	
2.6.i	Other		
2.ii	Purchased Net Generation for the data year (MWh)	1,092,825	
2.1.ii	Coal		
2.2.ii	Natural Gas		
2.3.ii	Nuclear		
2.4.ii	Petroleum		
2.5.ii	Total Renewable Energy Resources		
2.5.1.ii	Biomass/Biogas	37,923	
2.5.2.ii	Geothermal		
2.5.3.ii	Hydroelectric		
2.5.4.ii	Solar	3,593	
2.5.5.ii	Wind	194,945	
2.6.ii	Other	856,364	
3	Investing in the Future: Capital Expenditures, Energy Efficiency (EE), and Smart Meters		
3.1	Total Annual Capital Expenditures (nominal dollars)	\$ 212,197,000	
3.2	Incremental Annual Electricity Savings from EE Measures (MWh)	45,044	
3.3	Incremental Annual Investment in Electric EE Programs (nominal dollars)	\$ 4,838,205	
3.4	Percent of Total Electric Customers with Smart Meters (at end of year)	6%	
4	Retail Electric Customer Count (at end of year)		
4.1	Commercial	20,594	
4.2	Industrial	37	
4.3	Residential	133,857	



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Ref. No.	Refer to the 'EEI Definitions' tab for more information on each metric	Current Year 2018	Comments, Links, Additional Information, and Notes
Emissions			
5	GHG Emissions: Carbon Dioxide (CO2) and Carbon Dioxide Equivalent (CO2e) <i>Note: The alternatives available below are intended to provide flexibility in reporting GHG emissions, and should be used to the extent appropriate for each company.</i>		
5.1	Owned Generation (1) (2) (3)		
5.1.1	Carbon Dioxide (CO2)		
5.1.1.1	Total Owned Generation CO2 Emissions (MT)	2,177,238	
5.1.1.2	Total Owned Generation CO2 Emissions Intensity (MT/Net MWh)	0.878	
5.1.2	Carbon Dioxide Equivalent (CO2e)		
5.1.2.1	Total Owned Generation CO2e Emissions (MT)		
5.1.2.2	Total Owned Generation CO2e Emissions Intensity (MT/Net MWh)		
5.2	Purchased Power (4)		
5.2.1	Carbon Dioxide (CO2)		
5.2.1.1	Total Purchased Generation CO2 Emissions (MT)	462,808	Calculated using 7-State Average emission factor
5.2.1.2	Total Purchased Generation CO2 Emissions Intensity (MT/Net MWh)	0.423	
5.2.2	Carbon Dioxide Equivalent (CO2e)		
5.2.2.1	Total Purchased Generation CO2e Emissions (MT)		
5.2.2.2	Total Purchased Generation CO2e Emissions Intensity (MT/Net MWh)		
5.3	Owned Generation + Purchased Power		
5.3.1	Carbon Dioxide (CO2)	2,640,046	
5.3.1.1	Total Owned + Purchased Generation CO2 Emissions (MT)	0.74	
5.3.1.2	Total Owned + Purchased Generation CO2 Emissions Intensity (MT/Net MWh)		
5.3.2	Carbon Dioxide Equivalent (CO2e)		
5.3.2.1	Total Owned + Purchased Generation CO2e Emissions (MT)		
5.3.2.2	Total Owned + Purchased Generation CO2e Emissions Intensity (MT/Net MWh)		
5.4	Non-Generation CO2e Emissions		
5.4.1	Fugitive CO2e emissions of sulfur hexafluoride (MT) (5)		
5.4.2	Fugitive CO2e emissions from natural gas distribution (MT) (6)	14,040	
6	Nitrogen Oxide (NOx), Sulfur Dioxide (SO2), Mercury (Hg)		
6.1	Generation basis for calculation (7)		Denominator includes all owned generation MWh
6.2	Nitrogen Oxide (NOx)		
6.2.1	Total NOx Emissions (MT)	804	
6.2.2	Total NOx Emissions Intensity (MT/Net MWh)	0.000324	
6.3	Sulfur Dioxide (SO2)		
6.3.1	Total SO2 Emissions (MT)	376	
6.3.2	Total SO2 Emissions Intensity (MT/Net MWh)	0.000151	
6.4	Mercury (Hg)		
6.4.1	Total Hg Emissions (kg)	5.24	
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	0.0000211	

Use the data organizer on the left (i.e., the plus/minus symbol) to open/close the Emissions section notes



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Ref. No.	Refer to the 'EEI Definitions' tab for more information on each metric	Current Year 2018	Comments, Links, Additional Information, and Notes
Resources			
7	Human Resources		
7.1	Total Number of Employees	706	
7.2	Total Number on Board of Directors/Trustees	11	
7.3	Total Women on Board of Directors/Trustees	3	
7.4	Total Minorities on Board of Directors/Trustees	1	
7.5	Employee Safety Metrics		
7.5.1	Recordable Incident Rate	2.01	
7.5.2	Lost-time Case Rate	0.52	
7.5.3	Days Away, Restricted, and Transfer (DART) Rate	0.14	
7.5.4	Work-related Fatalities	0.00	
8	Fresh Water Resources		
8.1	Water Withdrawals - Consumptive (Billions of Liters/Net MWh)	0.0000021	
8.2	Water Withdrawals - Non-Consumptive (Billions of Liters/Net MWh)	0.0000450	
9	Waste Products		
9.1	Amount of Hazardous Waste Manifested for Disposal	95.1	
9.2	Percent of Coal Combustion Products Beneficially Used	67.8%	
Additional Metrics (Optional)			
<i>Insert additional rows in this section as necessary.</i>			



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Natural Gas Distribution

1	METHANE EMISSIONS AND MITIGATION FROM DISTRIBUTION MAINS		
1.1	Number of Gas Distribution Customers	161000	
1.2	Distribution Mains in Service		
1.2.1	Plastic (<i>miles</i>)	1899	
1.2.2	Cathodically Protected Steel - Bare & Coated (<i>miles</i>)	1001	
1.2.3	Unprotected Steel - Bare & Coated (<i>miles</i>)	0	
1.2.4	Cast Iron / Wrought Iron - without upgrades (<i>miles</i>)	0	
1.3	Plan/Commitment to Replace / Upgrade Remaining Miles of Distribution Mains (<i># years to complete</i>)		MGE only has plastic and cathodically protected coated steel.
1.3.1	Unprotected Steel (Bare & Coated) (<i># years to complete</i>)	0	
1.3.2	Cast Iron / Wrought Iron (<i># years to complete</i>)	0	
2	Distribution CO ₂ e Fugitive Emissions		
2.1	CO ₂ e Fugitive Methane Emissions from Gas Distribution Operations (<i>metric tons</i>)	14,040	
2.2	CH ₄ Fugitive Methane Emissions from Gas Distribution Operations (<i>metric tons</i>)	561.6	
2.2.1	CH ₄ Fugitive Methane Emissions from Gas Distribution Operations (MMSCF/year)	28.5	
2.3	Annual Natural Gas Throughput from Gas Distribution Operations in thousands of standard cubic feet (<i>Mscf/year</i>)	282	
2.3.1	Annual Methane Gas Throughput from Gas Distribution Operations in millions of standard cubic feet (MMscf/year)	253.8	
2.4	Fugitive Methane Emissions Rate (<i>MMscf of Methane Emissions per MMscf of Methane Throughput</i>)	0.11	

Natural Gas Transmission and Storage

1	Onshore Natural Gas Transmission Compression Methane Emissions		MG&E does not have any natural gas transmission or storage operations.
1.1.1	Pneumatic Device Venting (metric tons/year)		
1.1.2	Blowdown Vent Stacks (metric tons/year)		
1.1.3	Transmission Storage Tanks (metric tons/year)		
1.1.4	Flare Stack Emissions (metric tons/year)		
1.1.5	Centrifugal Compressor Venting (metric tons/year)		
1.1.6	Reciprocating Compressor Venting (metric tons/year)		
1.1.7	Equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters (metric tons/year)		
1.1.8	Other Leaks (metric tons/year)		
1.2	Total Transmission Compression Methane Emissions (metric tons/year)		



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Ref. No.	Refer to the "Definitions" tab for more information on each metric.	Current Year 2018	Comments, Links, Additional Information, and Notes
1.3	Total Transmission Compression Methane Emissions (CO2e/year)		
1.4	Total Transmission Compression Methane Emissions (MSCF/year)		
2	Underground Natural Gas Storage Methane Emissions		
2.1.1	Pneumatic Device Venting (metric tons/year)		
2.1.2	Flare Stack Emissions (metric tons/year)		
2.1.3	Centrifugal Compressor Venting (metric tons/year)		
2.1.4	Reciprocating Compressor Venting (metric tons/year)		
2.1.5	Equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters (metric tons/year)		
2.1.6	Other Equipment Leaks (metric tons/year)		
2.1.7	Equipment leaks from valves, connectors, open-ended lines, and pressure relief valves associated with storage wellheads (metric tons/year)		
2.1.8	Other equipment leaks from components associated with storage wellheads (metric tons/year)		
2.2	Total Storage Compression Methane Emissions (metric tons/year)		
2.3	Total Storage Compression Methane Emissions (CO2e/year)		
2.4	Total Storage Compression Methane Emissions (MSCF/year)		
3	Onshore Natural Gas Transmission Pipeline Blowdowns		
3.1	Transmission Pipeline Blowdown Vent Stacks (metric tons/year)		
3.2	Transmission Pipeline Blowdown Vent Stacks (CO2e/year)		
3.3	Transmission Pipeline Blowdown Vent Stacks (MSCF/year)		
4	Other Non-Sub W Emissions Data		
4.1	Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (metric tons/year)		
4.2	Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (CO2e/year)		
4.3	Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (MSCF/year)		
5	Summary and Metrics		
5.1	Total Transmission and Storage Methane Emissions (MMSCF/year)		
5.2	Annual Natural Gas Throughput from Gas Transmission and Storage Operations (MSCF/year)		
5.2.1	Annual Methane Gas Throughput from Gas Transmission and Storage Operations (MMSCF/year)		



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Ref. No.	Refer to the "Definitions" tab for more information on each metric.	Current Year 2018	Comments, Links, Additional Information, and Notes
5.3	Fugitive Methane Emissions Rate (MMscf of Methane Emissions per MMscf of Methane Throughput)		
Natural Gas Gathering and Boosting			
1	METHANE EMISSIONS		MG&E does not have any gathering and boosting operations.
1.1	Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions		
1.1.1	Total Miles of Gathering Pipeline Operated by gas utility <i>(miles)</i>		
1.1.2	Volume of Gathering Pipeline Blow Down Emissions <i>(scf)</i>		
1.1.4	Gathering Pipeline Blow-Down Emissions outside storage and compression facilities <i>(metric tons CO2e)</i>		
2	CO2e COMBUSTION EMISSIONS FOR GATHERING & BOOSTING COMPRESSION		
2.1	CO2e Emissions for Gathering & Boosting Compression Stations <i>(metric tons)</i>		
3	CONVENTIONAL COMBUSTION EMISSIONS FROM GATHERING & BOOSTING COMPRESSION		
3.1	Emissions reported for all permitted sources (minor or major)		
3.1.1	NOx <i>(metric tons per year)</i>		
3.1.2	VOC <i>(metric tons per year)</i>		
Additional Metrics (Optional)			
	<i>Insert additional rows in this section as necessary.</i>		

Definitions for Electric Company ESG/Sustainability Metrics

Ref. No.	Metric Name	Definition	Units Reported in	Time Period (if applicable)	Reference to Source (if applicable)
Portfolio					
1	Owned Nameplate Generation Capacity at end of year (MW)	Provide generation capacity data that is consistent with other external reporting by your company. The alternative default is to use the summation of the nameplate capacity of installed owned generation in the company portfolio, as reported to the U.S. Energy Information Administration (EIA) on Form 860 Generator Information . Note that data should be provided in terms of equity ownership for shared facilities. Nameplate capacity is defined as the maximum rated output of a generator, prime mover, or other electric power production equipment under specific conditions designated by the manufacturer. Installed generator nameplate capacity is commonly expressed in megawatts (MW) and is usually indicated on a nameplate physically attached to the generator.	Megawatt (MW): One million watts of electricity.	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ . Form 860 instructions available at: www.eia.gov/survey/form/eia_860/instructions.pdf .
1.1	Coal	Nameplate capacity of generation resources that produce electricity through the combustion of coal (a readily combustible black or brownish-black rock whose composition, including inherent moisture, consists of more than 50 percent by weight and more than 70 percent by volume of carbonaceous material. It is formed from plant remains that have been compacted, hardened, chemically altered, and metamorphosed by heat and pressure over geologic time).	MW	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
1.2	Natural Gas	Nameplate capacity of generation resources that produce electricity through the combustion of natural gas (a gaseous mixture of hydrocarbon compounds, the primary one being methane).	MW	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
1.3	Nuclear	Nameplate capacity of generation resources that produce electricity through the use of thermal energy released from the fission of nuclear fuel in a reactor.	MW	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
1.4	Petroleum	Nameplate capacity of generation resources that produce electricity through the combustion of petroleum (a broadly defined class of liquid hydrocarbon mixtures. Included are crude oil, lease condensate, unfinished oils, refined products obtained from the processing of crude oil, and natural gas plant liquids).	MW	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
1.5	Total Renewable Energy Resources	Energy resources that are naturally replenishing but flow-limited. They are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time. Renewable energy resources include biomass, hydro, geothermal, solar, wind, ocean thermal, wave action, and tidal action.	MW	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
1.5.1	Biomass/Biogas	Nameplate capacity of generation resources that produce electricity through the combustion of biomass (an organic nonfossil material of biological origin constituting a renewable energy source).	MW	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
1.5.2	Geothermal	Nameplate capacity of generation resources that produce electricity through the use of thermal energy released from hot water or steam extracted from geothermal reservoirs in the earth's crust.	MW	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
1.5.3	Hydroelectric	Nameplate capacity of generation resources that produce electricity through the use of flowing water.	MW	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
1.5.4	Solar	Nameplate capacity of generation resources that produce electricity through the use of the radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity.	MW	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
1.5.5	Wind	Nameplate capacity of generation resources that produce electricity through the use of kinetic energy present in wind motion that can be converted to mechanical energy for driving pumps, mills, and electric power generators.	MW	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
1.6	Other	Nameplate capacity of generation resources that are not defined above.	MW	End of Year	
2	Net Generation for the data year (MWh)	Net generation is defined as the summation of the amount of gross generation less the electrical energy consumed at the generating station(s) for station service or auxiliaries. Data can be provided in terms of total, owned, and/or purchased, depending on how the company prefers to disseminate data in this template. Provide net generation data that is consistent with other external reporting by your company. The alternative default is to provide owned generation data as reported to EIA on Form 923 Schedule 3 and align purchased power data with the Federal Energy Regulatory Commission (FERC) Form 1 Purchased Power Schedule , Reference Pages numbers 326-327. Note: Electricity required for pumping at pumped-storage plants is regarded as electricity for station service and is deducted from gross generation.	Megawatthour (MWh): One thousand kilowatt-hours or one million watt-hours.	Annual	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ . Form 923 instructions available at: www.eia.gov/survey/form/eia_923/instructions.pdf .
2.1	Coal	Net electricity generated by the combustion of coal (a readily combustible black or brownish-black rock whose composition, including inherent moisture, consists of more than 50 percent by weight and more than 70 percent by volume of carbonaceous material. It is formed from plant remains that have been compacted, hardened, chemically altered, and metamorphosed by heat and pressure over geologic time).	MWh	Annual	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
2.2	Natural Gas	Net electricity generated by the combustion of natural gas (a gaseous mixture of hydrocarbon compounds, the primary one being methane).	MWh	Annual	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
2.3	Nuclear	Net electricity generated by the use of the thermal energy released from the fission of nuclear fuel in a reactor.	MWh	Annual	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
2.4	Petroleum	Net electricity generated by the combustion of petroleum (a broadly defined class of liquid hydrocarbon mixtures. Included are crude oil, lease condensate, unfinished oils, refined products obtained from the processing of crude oil, and natural gas plant liquids).	MWh	Annual	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
2.5	Total Renewable Energy Resources	Energy resources that are naturally replenishing but flow-limited. They are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time. Renewable energy resources include biomass, hydro, geothermal, solar, wind, ocean thermal, wave action, and tidal action.	MWh	Annual	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
2.5.1	Biomass/Biogas	Net electricity generated by the combustion of biomass (an organic nonfossil material of biological origin constituting a renewable energy source).	MWh	Annual	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
2.5.2	Geothermal	Net electricity generated by the use of thermal energy released from hot water or steam extracted from geothermal reservoirs in the earth's crust.	MWh	Annual	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
2.5.3	Hydroelectric	Net electricity generated by the use of flowing water.	MWh	Annual	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .

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2.5.4	Solar	Net electricity generated by the use of the radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity.	MWh	Annual	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
2.5.5	Wind	Net electricity generated by the use of kinetic energy present in wind motion that can be converted to mechanical energy for driving pumps, mills, and electric power generators.	MWh	Annual	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
2.6	Other	Net electricity generated by other resources that are not defined above. If applicable, this metric should also include market purchases where the generation resource is unknown.	MWh	Annual	
3 Investing in the Future: Capital Expenditures, Energy Efficiency (EE), and Smart Meters					
3.1	Total Annual Capital Expenditures	Align annual capital expenditures with data reported in recent investor presentations. A capital expenditure is the use of funds or assumption of a liability in order to obtain physical assets that are to be used for productive purposes for at least one year. This type of expenditure is made in order to expand the productive or competitive posture of a business.	Nominal Dollars	Annual	Accounting Tools, <i>Q&A</i> , http://www.accountingtools.com/questions-and-answers/what-is-a-capital-expenditure.html
3.2	Incremental Annual Electricity Savings from EE Measures (MWh)	Incremental Annual Electricity Savings for the reporting year as reported to EIA on Form 861 . Incremental Annual Savings for the reporting year are those changes in energy use caused in the current reporting year by: (1) new participants in DSM programs that operated in the previous reporting year, and (2) participants in new DSM programs that operated for the first time in the current reporting year. A "New program" is a program for which the reporting year is the first year the program achieved savings, regardless of when program development and expenditures began.	MWh	End of Year	U.S. Energy Information Administration, <i>Form EIA-861 Annual Electric Power Industry Report Instructions</i> . Available at: www.eia.gov/survey/form/eia_861/instructions.pdf .
3.3	Incremental Annual Investment in Electric EE Programs (nominal dollars)	Total annual investment in electric energy efficiency programs as reported to EIA on Form 861 .	Nominal Dollars	End of Year	U.S. Energy Information Administration, <i>Form EIA-861 Annual Electric Power Industry Report Instructions</i> . Available at: www.eia.gov/survey/form/eia_861/instructions.pdf .
3.4	Percent of Total Electric Customers with Smart Meters (at end of year)	Number of electric smart meters installed at end-use customer locations, divided by number of total electric meters installed at end-use customer locations. Smart meters are defined as electricity meters that measure and record usage data at a minimum, in hourly intervals, and provide usage data to both consumers and energy companies at least once daily. Align reporting with EIA Form 861 meter data, which lists all types of meter technology used in the system as well as total meters in the system.	Percent	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
4 Retail Electric Customer Count (at end of year)					
4		Electric customer counts should be aligned with the data provided to EIA on Form 861 - Sales to Utility Customers .			U.S. Energy Information Administration, <i>Form EIA-861 Annual Electric Power Industry Report Instructions</i> . Available at: www.eia.gov/survey/form/eia_861/instructions.pdf .
4.1	Commercial	An energy-consuming sector that consists of service-providing facilities and equipment of businesses; Federal, State, and local governments; and other private and public organizations, such as religious, social, or fraternal groups. The commercial sector includes institutional living quarters. It also includes sewage treatment facilities. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a wide variety of other equipment. Note: This sector includes generators that produce electricity and/or useful thermal output primarily to support the activities of the above-mentioned commercial establishments.	Number of end-use retail customers receiving electricity (individual homes and businesses count as one).	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
4.2	Industrial	An energy-consuming sector that consists of all facilities and equipment used for producing, processing, or assembling goods. The industrial sector encompasses the following types of activity manufacturing (NAICS codes 31-33); agriculture, forestry, fishing and hunting (NAICS code 11); mining, including oil and gas extraction (NAICS code 21); and construction (NAICS code 23). Overall energy use in this sector is largely for process heat and cooling and powering machinery, with lesser amounts used for facility heating, air conditioning, and lighting. Fossil fuels are also used as raw material inputs to manufactured products. Note: This sector includes generators that produce electricity and/or useful thermal output primarily to support the above-mentioned industrial activities. Various EIA programs differ in sectoral coverage.	Number of end-use retail customers receiving electricity (individual homes and businesses count as one).	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
4.3	Residential	An energy-consuming sector that consists of living quarters for private households. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a variety of other appliances. The residential sector excludes institutional living quarters. Note: Various EIA programs differ in sectoral coverage.	Number of end-use retail customers receiving electricity (individual homes and businesses count as one).	End of Year	U.S. Energy Information Administration, <i>Online Glossary</i> , https://www.eia.gov/tools/glossary/ .
Emissions					
5	GHG Emissions: Carbon Dioxide (CO2) and Carbon Dioxide Equivalent (CO2e)				
5.1	Owned Generation				
5.1.1	Carbon Dioxide (CO2)				
5.1.1.1	Total Owned Generation CO2 Emissions	Total direct CO2 emissions from company equity-owned fossil fuel combustion generation in accordance with EPA's GHG Reporting Program (40 CFR, part 98, Subpart C – General Stationary Fuel Combustion and Subpart D – Electricity Production), using a continuous emission monitoring system (CEMS) or other approved methodology.	Metric Tons	Annual	U.S. Environmental Protection Agency, <i>Greenhouse Gas Reporting Program</i> (40 CFR, part 98, Subparts C and D).
5.1.1.2	Total Owned Generation CO2 Emissions Intensity	Total direct CO2 emissions from 5.1.1.1, divided by total MWh of <u>owned</u> net generation reported in the Utility Portfolio section.	Metric Tons/Net MWh	Annual	
5.1.2	Carbon Dioxide Equivalent (CO2e)				

Definitions for Electric Company ESG/Sustainability Metrics

Ref. No.	Metric Name	Definition	Units Reported in	Time Period (if applicable)	Reference to Source (if applicable)
5.1.2.1	Total Owned Generation CO2e Emissions	Total direct CO2e emissions (CO2, CH4, and N2O) from company equity-owned fossil fuel combustion generation in accordance with EPA's GHG Reporting Program (40 CFR, part 98, Subpart C – General Stationary Fuel Combustion and Subpart D – Electricity Production), using a continuous emission monitoring system (CEMS) or other approved methodology.	Metric Tons	Annual	U.S. Environmental Protection Agency, <i>Greenhouse Gas Reporting Program</i> (40 CFR, part 98, Subparts C and D).
5.1.2.2	Total Owned Generation CO2e Emissions Intensity	Total direct CO2e emissions from 5.1.2.1, divided by total MWh of owned net generation reported in the Utility Portfolio section.	Metric Tons/Net MWh	Annual	
5.2	Purchased Power				
5.2.1	Carbon Dioxide (CO2)				
5.2.1.1	Total Purchased Generation CO2 Emissions	Purchased power CO2 emissions should be calculated using the most relevant and accurate of the following methods: (1) For direct purchases, such as PPAs, use the direct emissions data as reported to EPA. (2) For market purchases where emissions attributes are unknown, use applicable regional or national emissions rate: - ISO/RTO-level emission factors - Climate Registry emission factors - E-Grid emission factors	Metric Tons	Annual	
5.2.1.2	Total Purchased Generation CO2 Emissions Intensity	Total purchased power CO2 emissions from 5.2.1.1, divided by total MWh of purchased net generation reported in the Utility Portfolio section.	Metric Tons/Net MWh	Annual	
5.2.2	Carbon Dioxide Equivalent (CO2e)				
5.2.2.1	Total Purchased Generation CO2e Emissions	Purchased power CO2e emissions should be calculated using the most relevant and accurate of the following methods: (1) For direct purchases, such as PPAs, use the direct emissions data as reported to EPA. (2) For market purchases where emissions attributes are unknown, use applicable regional or national emissions rate: - ISO/RTO-level emission factors - Climate Registry emission factors - E-Grid emission factors	Metric Tons	Annual	
5.2.2.2	Total Purchased Generation CO2e Emissions Intensity	Total purchased power CO2e emissions from 5.2.2.1, divided by total MWh of purchased net generation reported in the Utility Portfolio section.	Metric Tons/Net MWh	Annual	
5.3	Owned Generation + Purchased Power				
5.3.1	Carbon Dioxide (CO2)				
5.3.1.1	Total Owned + Purchased Generation CO2 Emissions	Sum of total CO2 emissions reported under 5.1.1.1 and 5.2.1.1.	Metric Tons	Annual	
5.3.1.2	Total Owned + Purchased Generation CO2 Emissions Intensity	Total emissions from 5.3.1.1, divided by total MWh of owned and purchased net generation reported in the Utility Portfolio section.	Metric Tons/Net MWh	Annual	
5.3.2	Carbon Dioxide Equivalent (CO2e)				
5.3.2.1	Total Owned + Purchased Generation CO2e Emissions	Sum of total CO2e emissions reported under 5.1.2.1 and 5.2.2.1.	Metric Tons	Annual	
5.3.2.2	Total Owned + Purchased Generation CO2e Emissions Intensity	Total emissions from 5.3.2.1, divided by total MWh of owned and purchased net generation reported in the Utility Portfolio section.	Metric Tons/Net MWh	Annual	
5.4	Non-Generation CO2e Emissions				
5.4.1	Fugitive CO2e emissions of sulfur hexafluoride	Total fugitive CO2e emissions of sulfur hexafluoride in accordance with EPA's GHG Reporting Program (40 CFR Part 98, Subpart DD).	Metric Tons	Annual	U.S. Environmental Protection Agency, <i>Greenhouse Gas Reporting Program</i> (40 CFR, part 98, Subpart DD).
5.4.2	Fugitive CO2e emissions from natural gas distribution	Total fugitive CO2e emissions from natural gas distribution in accordance with EPA's GHG Reporting Program (40 CFR Part 98, Subpart W)	Metric Tons	Annual	U.S. Environmental Protection Agency, <i>Greenhouse Gas Reporting Program</i> (40 CFR, part 98, Subpart W).
6	Nitrogen Oxide (NOx), Sulfur Dioxide (SO2), Mercury (Hg)				
6.1	Generation basis for calculation	Indicate the generation basis for calculating SO2, NOx, and Hg emissions and intensity. Fossil: Fossil Fuel Generation Only Total: Total System Generation Other: Other (please specify in comment section)			
6.2	Nitrogen Oxide (NOx)				
6.2.1	Total NOx Emissions	Total NOx emissions from company equity-owned fossil fuel combustion generation. In accordance with EPA's Acid Rain Reporting Program (40 CFR, part 75) or regulatory equivalent.	Metric Tons	Annual	U.S. Environmental Protection Agency, <i>Acid Rain Reporting Program</i> (40 CFR, part 75).
6.2.2	Total NOx Emissions Intensity	Total from above, divided by the MWh of generation basis as indicated in 6.1.	Metric Tons/Net MWh	Annual	
6.3	Sulfur Dioxide (SO2)				
6.3.1	Total SO2 Emissions	Total SO2 emissions from company equity-owned fossil fuel combustion generation. In accordance with EPA's Acid Rain Reporting Program (40 CFR, part 75) or regulatory equivalent.	Metric Tons	Annual	U.S. Environmental Protection Agency, <i>Acid Rain Reporting Program</i> (40 CFR, part 75).
6.3.2	Total SO2 Emissions Intensity	Total from above, divided by the MWh of generation basis as indicated in 6.1.	Metric Tons/Net MWh	Annual	
6.4	Mercury (Hg)				
6.4.1	Total Hg Emissions	Total Mercury emissions from company equity-owned fossil fuel combustion generation. Preferred methods of measurement are performance-based, direct measurement as outlined in the EPA Mercury and Air Toxics Standard (MATS). In the absence of performance-based measures, report value aligned with Toxics Release Inventory (TRI) or regulatory equivalent for international operations.	Kilograms	Annual	EPRI, <i>Metrics to Benchmark Electric Power Company Sustainability Performance</i> , 2018 Technical Report.
6.4.2	Total Hg Emissions Intensity	Total from above, divided by the MWh of generation basis as indicated in 6.1.	Kilograms/Net MWh	Annual	
Resources					
7	Human Resources				

Definitions for Electric Company ESG/Sustainability Metrics

Ref. No.	Metric Name	Definition	Units Reported in	Time Period (if applicable)	Reference to Source (if applicable)
7.1	Total Number of Employees	Average number of employees over the year. To calculate the annual average number of employees: (1) Calculate the total number of employees your establishment paid for all periods. Add the number of employees your establishment paid in every pay period during the data year. Count all employees that you paid at any time during the year and include full-time, part-time, temporary, seasonal, salaried, and hourly workers. Note that pay periods could be monthly, weekly, bi-weekly, and so on. (2) Divide the total number of employees (from step 1) by the number of pay periods your establishment had in during the data year. Be sure to count any pay periods when you had no (zero) employees. (3) Round the answer you computed in step 2 to the next highest whole number.	Number of Employees	Annual	U.S. Department of Labor, Bureau of Labor Statistics, Steps to estimate annual average number of employees, www.bls.gov/respondents/iif/annualavghours.htm . EPRI, <i>Metrics to Benchmark Electric Power Company Sustainability Performance</i> , 2018 Technical Report.
7.2	Total Number of Board of Directors/Trustees	Average number of employees on the Board of Directors/Trustees over the year.	Number of Employees	Annual	
7.3	Total Women on Board of Directors/Trustees	Total number of women (defined as employees who identify as female) on Board of Directors/Trustees.	Number of Employees	Annual	U.S. Equal Employment Opportunity Commission, EEO Terminology, www.archives.gov/eoo/terminology.html . EPRI, <i>Metrics to Benchmark Electric Power Company Sustainability Performance</i> , 2018 Technical Report.
7.4	Total Minorities on Board of Directors/Trustees	Total number of minorities on Board of Directors/Trustees. Minority employees are defined as “the smaller part of a group. A group within a country or state that differs in race, religion or national origin from the dominant group. Minority is used to mean four particular groups who share a race, color or national origin.” These groups are: “(1) American Indian or Alaskan Native. A person having origins in any of the original peoples of North America, and who maintain their culture through a tribe or community; (2) Asian or Pacific Islander. A person having origins in any of the original people of the Far East, Southeast Asia, India, or the Pacific Islands. These areas include, for example, China, India, Korea, the Philippine Islands, and Samoa; (3) Black (except Hispanic). A person having origins in any of the black racial groups of Africa; (4) Hispanic. A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.”	Number of Employees	Annual	U.S. Equal Employment Opportunity Commission, EEO Terminology, www.archives.gov/eoo/terminology.html . EPRI, <i>Metrics to Benchmark Electric Power Company Sustainability Performance</i> , 2018 Technical Report.
7.5	Employee Safety Metrics				
7.5.1	Recordable Incident Rate	Number of injuries or illnesses x 200,000 / Number of employee labor hours worked. Injury or illness is recordable if it results in any of the following: death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness. You must also consider a case to meet the general recording criteria if it involves a significant injury or illness diagnosed by a physician or other licensed health care professional, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness. Record the injuries and illnesses of all employees on your payroll, whether they are labor, executive, hourly, salary, part-time, seasonal, or migrant workers. You also must record the recordable injuries and illnesses that occur to employees who are not on your payroll if you supervise these employees on a day-to-day basis. If your business is organized as a sole proprietorship or partnership, the owner or partners are not considered employees for recordkeeping purposes. For temporary employees, you must record these injuries and illnesses if you supervise these employees on a day-to-day basis. If the contractor’s employee is under the day-to-day supervision of the contractor, the contractor is responsible for recording the injury or illness. If you supervise the contractor employee’s work on a day-to-day basis, you must record the injury or illness.	Percent	Annual	U.S. Department of Labor, Occupational Health and Safety Administration, OSHA Recordable Incidents. EPRI, <i>Metrics to Benchmark Electric Power Company Sustainability Performance</i> , 2018 Technical Report.
7.5.2	Lost-time Case Rate	Calculated as: Number of lost-time cases x 200,000 / Number of employee labor hours worked. Only report for employees of the company as defined for the “recordable incident rate for employees” metric. A lost-time incident is one that resulted in an employee’s inability to work the next full work day.	Percent	Annual	U.S. Department of Labor, Occupational Health and Safety Administration, OSHA Recordable Incidents. EPRI, <i>Metrics to Benchmark Electric Power Company Sustainability Performance</i> , 2018 Technical Report.
7.5.3	Days Away, Restricted, and Transfer (DART) Rate	Calculated as: Total number of DART incidents x 200,000 / Number of employee labor hours worked. A DART incident is one in which there were one or more lost days or one or more restricted days, or one that resulted in an employee transferring to a different job within the company.	Percent	Annual	U.S. Department of Labor, Occupational Health and Safety Administration, OSHA Recordable Incidents. EPRI, <i>Metrics to Benchmark Sustainability Performance for the Electric Power Industry</i> , 2018 Technical Report.
7.5.4	Work-related Fatalities	Total employee fatalities. Record for all employees on your payroll, whether they are labor, executive, hourly, salary, part-time, seasonal, or migrant workers. Include fatalities to those that occur to employees who are not on your payroll if you supervise these employees on a day-to-day basis. For temporary employees, report fatalities if you supervise these employees on a day-to-day basis.	Number of Employees	Annual	U.S. Department of Labor, Occupational Health and Safety Administration, OSHA Recordable Incidents. EPRI, <i>Metrics to Benchmark Electric Power Company Sustainability Performance</i> , 2018 Technical Report.
8 Fresh Water Resources					
8.1	Water Withdrawals - Consumptive (Billions of Liters/Net MWh)	Rate of freshwater consumed for use in thermal generation. “Freshwater” includes water sourced from fresh surface water, groundwater, rain water, and fresh municipal water. Do NOT include recycled, reclaimed, or gray water. Water consumption is defined as water that is not returned to the original water source after being withdrawn, including evaporation to the atmosphere. Divide billions of liters by equity-owned total net generation from all equity-owned net electric generation as reported under Metric 2, Net Generation for the data year (MWh).	Billions of Liters/Net MWh	Annual	Partially sourced from EPRI, <i>Metrics to Benchmark Electric Power Company Sustainability Performance</i> , 2018 Technical Report.
8.2	Water Withdrawals - Non-Consumptive (Billions of Liters/Net MWh)	Rate of fresh water withdrawn, but not consumed, for use in thermal generation. “Freshwater” includes water sourced from fresh surface water, groundwater, rain water, and fresh municipal water. Do NOT include recycled, reclaimed, or gray water. Information on organizational water withdrawal may be drawn from water meters, water bills, calculations derived from other available water data or (if neither water meters nor bills or reference data exist) the organization’s own estimates. Divide billions of liters by equity-owned total net generation from all equity-owned net electric generation as reported under Metric 2, Net Generation for the data year (MWh).	Billions of Liters/Net MWh	Annual	Partially sourced from EPRI, <i>Metrics to Benchmark Electric Power Company Sustainability Performance</i> , 2018 Technical Report.
9 Waste Products					

Definitions for Electric Company ESG/Sustainability Metrics

Ref. No.	Metric Name	Definition	Units Reported in	Time Period (if applicable)	Reference to Source (if applicable)
9.1	Amount of Hazardous Waste Manifested for Disposal	Metric tons of hazardous waste, as defined by the Resource Conservation and Recovery Act (RCRA), manifested for disposal at a Treatment Storage and Disposal (TSD) facility. Methods of disposal include disposing to landfill, surface impoundment, waste pile, and land treatment units. Hazardous wastes include either listed wastes (F, K, P and U lists) or characteristic wastes (wastes which exhibit at least one of the following characteristics - ignitability, corrosivity, reactivity, toxicity). Include hazardous waste from all company operations including generation, transmissions, distribution, and other operations.	Metric Tons	Annual	Partially sourced from EPRI, <i>Metrics to Benchmark Electric Power Company Sustainability Performance, 2018</i> Technical Report.
9.2	Percent of Coal Combustion Products Beneficially Used	Percent of coal combustion products (CCPs) - fly ash, bottom ash, boiler slag, flue gas desulfurization materials, scrubber bi-product - diverted from disposal into beneficial uses, including being sold. Include any CCP that is generated during the data year and stored for beneficial use in a future year. Only include CCP generated at company equity-owned facilities. If no weight data are available, estimate the weight using available information on waste density and volume collected, mass balances, or similar information.	Percent	Annual	Partially sourced from EPRI, <i>Metrics to Benchmark Electric Power Company Sustainability Performance, 2018</i> Technical Report.