

Portland General Electric

**2019 Edison Electric Institute
(EEI) ESG/Sustainability
Quantitative Information**





2019 Edison Electric Institute (EEI) ESG/Sustainability Quantitative Information

Parent company: Portland General Electric

**Operating
company(s):**

Business type(s): Vertically integrated

**State(s) of
operation:** Oregon

**State(s) with
RPS programs:** Yes

**Regulatory
environment:** Regulated

Report date: 10.30.20

Portfolio

Ref. No.	Metric	2017	2018	2019	Comments, links, additional information and notes
1	Owned Nameplate Generation Capacity at end of year (MW)	3,857	3,856	3,856	Source: SEC Form 10-K
1.1	Coal	814	814	814	
1.2	Natural Gas	1,831	1,830	1,830	
1.3	Nuclear				
1.4	Petroleum				
1.5	Total Renewable Energy Resources				
1.5.1	Biomass/Biogas				
1.5.2	Geothermal				
1.5.3	Hydroelectric	495	495	495	
1.5.4	Solar				
1.5.5	Wind	717	717	717	
1.6	Other				

Portfolio

Ref. No.	Metric	2017	2018	2019	Comments, links, additional information and notes
2	Net Generation for the data year (MWh) ⁽¹⁾	17,524,384	17,559,580	18,131,565	Source: FERC Form 1 and Oregon Department of Environmental Quality Investor Owned Utilities Report This is the sum of Owned Generation and Purchased Generation
2.1	Coal	3,050,929	2,730,445	3,441,514	
2.2	Natural Gas	6,574,592	6,847,962	7,656,846	
2.3	Nuclear	0	631	21	
2.4	Petroleum	7,047	7,253	8,240	
2.5	Total Renewable Energy Resources	6,912,914	5,841,538	4,534,557	
2.5.1	Biomass/Biogas	22,334	51,660	55,964	
2.5.2	Geothermal	0	0	0	
2.5.3	Hydroelectric	5,535,634	4,643,123	3,155,983	
2.5.4	Solar	32,467	38,059	48,903	
2.5.5	Wind	1,322,479	1,108,696	1,273,707	
2.6	Other (includes non-listed fuel types and unknown sources)	978,902	2,131,751	2,490,387	

Portfolio

Ref. No.	Metric	2017	2018	2019	Comments, links, additional information and notes
2.i	Owned Net Generation for the data year (MWh)	11,690,171	11,486,623	12,943,382	Source: FERC Form 1 and Oregon Department of Environmental Quality Investor Owned Utilities Report
2.1.i	Coal	2,842,198	2,458,540	3,302,906	
2.2.i	Natural Gas	5,615,611	6,462,182	7,028,482	
2.3.i	Nuclear	0	0	0	
2.4.i	Petroleum	7,047	7,253	8,240	
2.5.i	Total Renewable Energy Resources	3,225,315	2,558,648	2,603,754	
2.5.1.i	Biomass/Biogas	0	0	0	
2.5.2.i	Geothermal	0	0	0	
2.5.3.i	Hydroelectric	2,131,357	1,673,334	1,581,581	
2.5.4.i	Solar	4	797	2,812	
2.5.5.i	Wind	1,093,954	884,517	1,019,361	
2.6.i	Other (includes non-listed fuel types and unknown sources)	0	0	0	

Portfolio

Ref. No.	Metric	2017	2018	2019	Comments, links, additional information and notes
2.ii	Purchased Net Generation for the data year (MWh)	5,834,213	6,072,957	5,188,183	This is the summed total of purchased power data in 2.1-2.6.
2.1.ii	Coal	208,731	271,905	138,608	
2.2.ii	Natural Gas	958,981	385,780	628,364	
2.3.ii	Nuclear	0	631	21	
2.4.ii	Petroleum	0	0	0	
2.5.ii	Total Renewable Energy Resources	3,687,599	3,282,890	1,930,803	
2.5.1.ii	Biomass/Biogas	22,334	51,660	55,964	
2.5.2.ii	Geothermal	0	0	0	
2.5.3.ii	Hydroelectric	3,404,277	2,969,789	1,574,402	
2.5.4.ii	Solar	32,463	37,262	46,091	
2.5.5.ii	Wind	228,525	224,179	254,346	
2.6.ii	Other (includes non-listed fuel types and unknown sources)	978,902	2,131,751	2,490,387	

Portfolio

Ref. No.	Metric	2017	2018	2019	Comments, links, additional information and notes
3	Investing in the Future: Capital Expenditures, Energy Efficiency (EE), and Smart Meters				
3.1	Total Annual Capital Expenditures (nominal dollars)	\$514,000,000	\$595,000,000	\$606,000,000	Source: SEC Form 10-K
3.2	Incremental Annual Electricity Savings from EE Measures (MWh)	301,870	303,797	287,503	Energy Trust of Oregon Annual Report
3.3	Incremental Annual Investment in Electric EE Programs (nominal dollars)		\$65,778,320	\$52,164,521	Energy Trust of Oregon Annual Report
3.4	Percent of Total Electric Customers with Smart Meters (at end of year)	99.9%	99.9%	99.9%	
4	Retail Electric Customer Count (at end of year)				Source: SEC Form 10-K
4.1	Commercial	107,855	109,107	110,084	
4.2	Industrial	267	270	262	
4.3	Residential	762,211	772,389	779,673	

Emissions⁽²⁾

Ref. No.	Metric	2017	2018	2019	Comments, links, additional information and notes
5	GHG Emissions: Carbon Dioxide (CO2) and Carbon Dioxide Equivalent (CO2e)				
5.1	Owned Generation⁽³⁾				
5.1.1	Carbon Dioxide (CO2)				
5.1.1.1	Total Owned Generation CO2 Emissions (MT)				
5.1.1.2	Total Owned Generation CO2 Emissions Intensity (MT/Net MWh)				
5.1.2	Carbon Dioxide Equivalent (CO2e)				
5.1.2.1	Total Owned Generation CO2e Emissions (MT)	5,131,135	5,043,586	5,940,851	
5.1.2.2	Total Owned Generation CO2e Emissions Intensity (MT/Net MWh)	0.44	0.44	0.46	
5.2	Purchased Power⁽⁴⁾				
5.2.1	Carbon Dioxide (CO2)				
5.2.1.1	Total Purchased Generation CO2 Emissions (MT)				
5.2.1.2	Total Purchased Generation CO2 Emissions Intensity (MT/Net MWh)				
5.2.2	Carbon Dioxide Equivalent (CO2e)				
5.2.2.1	Total Purchased Generation CO2e Emissions (MT)	1,085,049	1,446,264	1,508,277	
5.2.2.2	Total Purchased Generation CO2e Emissions Intensity (MT/Net MWh)	0.19	0.24	0.29	

Emissions⁽²⁾

Ref. No.	Metric	2017	2018	2019	Comments, links, additional information and notes
5.3	Owned Generation + Purchased Power				
5.3.1	Carbon Dioxide (CO ₂)				
5.3.1.1	Total Owned + Purchased Generation CO ₂ Emissions (MT)				
5.3.1.2	Total Owned + Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)				
5.3.2	Carbon Dioxide Equivalent (CO ₂ e)				
5.3.2.1	Total Owned + Purchased Generation CO ₂ e Emissions (MT)	6,216,184	6,489,850	7,449,129	
5.3.2.2	Total Owned + Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.35	0.37	0.41	
5.4	Non-Generation CO₂e Emissions				
5.4.1	Fugitive CO ₂ e emissions of sulfur hexafluoride (MT) ⁽⁵⁾		9,890	3,459	
5.4.2	Fugitive CO ₂ e emissions from natural gas distribution (MT)				

Emissions⁽²⁾

Ref. No.	Metric	2017	2018	2019	Comments, links, additional information and notes
6	Nitrogen Oxide (NOx), Sulfur Dioxide (SO2), Mercury (Hg)				
6.1	Generation basis for calculation ⁽⁶⁾	Other			
6.2	Nitrogen Oxide (NOx)				
6.2.1	Total NOx Emissions (MT)	2,812	2,537	2,966	
6.2.2	Total NOx Emissions Intensity (MT/Net MWh)	0.000241	0.000221	0.000229	
6.3	Sulfur Dioxide (SO2)				
6.3.1	Total SO2 Emissions (MT)	3,065	2,153	3,232	
6.3.2	Total SO2 Emissions Intensity (MT/Net MWh)	0.000262	0.000187	0.000250	
6.4	Mercury (Hg)				
6.4.1	Total Hg Emissions (kg)	8.5	7.7	9.3	
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	0.000001	0.00000067	0.00000072	

Resources

Ref. No.	Metric	2017	2018	2019	Comments, links, additional information and notes
7	Human Resources				
7.1	Total Number of Employees		2,966	2,956	
7.2	Total Number on Board of Directors/Trustees	11	12	12	
7.3	Total Women on Board of Directors/Trustees	1	4	4	
7.4	Total Minorities on Board of Directors/Trustees	2	3	3	
7.5	Employee Safety Metrics				
7.5.1	Recordable Incident Rate	3.44	2.77	2.16	
7.5.2	Lost-time Case Rate	1.21	0.95	0.77	
7.5.3	Days Away, Restricted, and Transfer (DART) Rate	2.01	1.63	1.23	
7.5.4	Work-related Fatalities	0	0	0	
8	Fresh Water Resources (cooling water; does not include nominal water use (e.g., drinking water) for which data were not readily available)				
8.1	Water Withdrawals - Consumptive (Billions of Liters/Net MWh)	N/A for 2017	0.00001501	0.00001499	
8.2	Water Withdrawals - Non-Consumptive (Billions of Liters/Net MWh)	N/A for 2017	0.00000015	0.000000040	
9	Waste Products				
9.1	Amount of Hazardous Waste Manifested for Disposal (MT)	N/A for 2017	19.3	3.7	
9.2	Percent of Coal Combustion Products Beneficially Used	N/A for 2017	4.7%	9.3%	

Key

MT = metric tons

1 lb. = 453.59 grams

1 metric ton = 1.1023 short tons

Notes

- (1) Generation and greenhouse gas emissions data are reported based on the Oregon Department of Environmental Quality (ODEQ) Investor Owned Utility GHG report (oregon.gov/deq/FilterDocs/IOUProtocols.pdf). This report shows greenhouse gas emissions and generation in terms of power provided to PGE customers; it does not account for generation or emissions associated with power delivered outside of PGE service territory.
- (2) Greenhouse gas emissions are reported in terms of CO₂e only and are based on the ODEQ Investor Owned Utility GHG report. The ODEQ report shows greenhouse gas emissions associated with power provided to PGE customers and does not account for emissions associated with power delivered outside of PGE service territory.
- (3) As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subparts C and D) and adjusted per ODEQ IOU Reporting Protocols.
- (4) Per the ODEQ IOU Report, greenhouse gas emissions associated with purchased power are based on fuel specific emission factors. Emissions from purchases of undetermined origin are calculated based on the Northwest Power Pool (NWPP) emission factor; emissions from Bonneville Power Administration (BPA) purchases are calculated using a BPA specific EF provided by ODEQ.
- (5) As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subpart DD). PGE's 2017 report included corrections for previously excluded assets, the resulting data is not representative of actual operations and has been excluded from this report.
- (6) To keep reporting consistent, total plant (non-greenhouse gas) emissions were adjusted based on power delivered to customers. DEQ IOU Report adjusted generation was used to calculate the intensities.

Blank cells indicate that the Company has not measured, is unable to track, or has not provided this data point. Cell values of zero indicate that the company has measured the requested metric and has resulted in a measurement of zero.

Total CO₂e is calculated using the following global warming potentials from the IPCC Fourth Assessment Report:

CO₂ = 1

CH₄ = 25

N₂O = 298

SF₆ = 22,800