



# Gas Company ESG/Sustainability Quantitative Information

**Parent Company:** Puget Energy  
**Operating Company(s):** Puget Sound Energy  
**Business Type(s):** LDC with Storage Operations  
**State(s) of Operation:** Washington State  
**Regulatory Environment:** Regulated  
**Report Date:** January 2020

Ref. No.	Refer to the "Definitions" column for more information on each metric.	2017	2018	Definitions
<b>Natural Gas Distribution</b>				
<b>1</b>	<b>METHANE EMISSIONS AND MITIGATION FROM DISTRIBUTION MAINS</b>			<b><u>All methane leak sources per 98.232 (i) (1-6) are included for Distribution. Combustion sources are excluded. CO<sub>2</sub> is excluded.</u></b>
1.1	Number of Gas Distribution Customers	819336	837112	These metrics should include all local distribution companies (LDCs) held by the Parent Company that are above the LDC Facility reporting threshold for EPA's 40 C.F.R. 98, Subpart W reporting rule.
1.2	Distribution Mains in Service			
1.2.1	Plastic (miles)	8634	837112	These metrics should provide the number of years remaining to take out of service, replace or upgrade cathodically unprotected steel mains, and cast iron/wrought iron mains, consistent with applicable state utility commission authorizations. Optional: # yrs by pipe type.
1.2.2	Cathodically Protected Steel - Bare & Coated (miles)	4083	4078	
1.2.3	Unprotected Steel - Bare & Coated (miles)	0	0	
1.2.4	Cast Iron / Wrought Iron - without upgrades (miles)	0	0	
1.3	Plan/Commitment to Replace / Upgrade Remaining Miles of Distribution Mains (# years to complete)			
1.3.1	Unprotected Steel (Bare & Coated) (# years to complete )	0	0	Optional: # yrs by pipe type.
1.3.2	Cast Iron / Wrought Iron (# years to complete )	0	0	
<b>2</b>	<b>Distribution CO<sub>2</sub>e Fugitive Emissions</b>			<u>Fugitive methane</u> emissions (not CO <sub>2</sub> combustion emissions) stated as CO <sub>2</sub> e, as reported to EPA under 40 CFR 98, Subpart W, sections 98.236(q)(3)(ix)(D), 98.236(r)(1)(v), and 98.236(r)(2)(v)(B) - i.e., this is Subpart W methane emissions as input in row 2.2.1 below and converted to CO <sub>2</sub> e here. This metric should include fugitive methane emissions above the reporting threshold for all natural gas local distribution companies (LDCs) held by the Parent Company that are above the LDC Facility reporting threshold for EPA's 40 C.F.R. 98, Subpart W reporting rule. <u>Calculated value based on mt CH<sub>4</sub> input in the 2.2.1 (below).</u>
2.1	CO <sub>2</sub> e Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	60512.25	60981	
2.2	CH <sub>4</sub> Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	2420.49	2439.24	<u>INPUT VALUE (total mt CH<sub>4</sub>) as explained in definition above. Subpart W input is CH<sub>4</sub> (mt).</u>
2.2.1	CH <sub>4</sub> Fugitive Methane Emissions from Gas Distribution Operations (MMSCF/year)	126.067188	127.04375	
2.3	Annual Natural Gas Throughput from Gas Distribution Operations in thousands of standard cubic feet (Mscf/year )	121184389	115737643	This metric provides gas throughput from distribution (quantity of natural gas delivered to end users) reported under Subpart W, 40 C.F.R. 98.236(aa)(9)(iv), as reported on the Subpart W e-GRRT integrated reporting form in the "Facility Overview" worksheet Excel form, Quantity of natural gas delivered to end users (column 4).
2.3.1	Annual Methane Gas Throughput from Gas Distribution Operations in millions of standard cubic feet (MMscf/year)	115125.17	109950.7609	

2.4	Fugitive Methane Emissions Rate (MMscf of Methane Emissions per MMscf of Methane Throughput)	0.00109504	0.00115546	$\frac{E_C}{TP_C} = \frac{\text{tonnes } CH_4}{MMscf \text{ gas}} \times \frac{10^6 \text{ g } CH_4}{\text{tonne } CH_4} \times \frac{\text{g mole } CH_4}{16 \text{ g } CH_4} \times \frac{\text{gmol Nat.Gas}}{0.95 \text{ gmol } CH_4} \times \frac{\text{scf gas}}{1.198 \text{ gmol gas}} \times \frac{MMscf \text{ gas emissions}}{10^6 \text{ scf gas}} =$ $\frac{MMscf \text{ gas emissions}}{MMscf \text{ gas throughput}} = 0\%$
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