

# AGA Voluntary Sustainability Metrics: Quantitative Information - October 2018 Version

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**Parent Company:** Puget Energy  
**Operating Company(s):** Puget Sound Energy  
**Business Type(s):** LDC With Storage Operations  
**State(s) of Operation:** Washington  
**Regulatory Environment:** Regulated  
**Note: Data from from operating companies is:** Puget Sound Energy  
**Report Date:** January 2019

Ref. No.	Year	Definitions	Comments, Additional Information
Refer to the "Definitions" column for more information on each metric.	2017		

## NATURAL GAS DISTRIBUTION

<b>1</b>	<b>METHANE EMISSIONS AND MITIGATION FROM DISTRIBUTION MAINS</b>				
1.1	Number of Gas Distribution Customers	825,599		2017 10-k, total customers served	
1.2	Distribution Mains in Service		<i>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.</i>		
1.2.1	Plastic ( <i>miles</i> )	8,634		2017	
1.2.2	Cathodically Protected Steel - Bare & Coated ( <i>miles</i> )	4,083			
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	<b>Plan/Commitment to Replace / Upgrade Remaining Miles of Distribution Mains (# years to complete)</b>		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.	Use this comment area to briefly note the amount of such pipe already taken out of service, replaced or upgraded previously, if available in publically reported sources. Space is provided in Section 3 of the Qualitative tab for longer explanations about answers to quantitative questions. All have been replaced All have been replaced	
1.3.1	Unprotected Steel (Bare & Coated) (# years to complete)	NA			Optional: # yrs by pipe type.
1.3.2	Cast Iron / Wrought Iron (# years to complete)	NA			Optional: # yrs by pipe type.
<b>2</b>	<b>Distribution CO2e Fugitive Emissions</b>				
2.1	<b>CO2e Fugitive Methane Emissions from Gas Distribution Operations (<i>metric tons</i>)</b>	60,585	<i>Fugitive methane emissions (not CO2 combustion emissions) stated as CO2e, as reported to EPA under 40 CFR 98, Subpart W, sections 98.236(q)(3)(ix)(C) and (D), 98.236(r)(1)(iv) and (v), and 98.236(r)(2)(v)(A) and (B). 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.</i>	Use this space to provide brief explanations or additional information. Some companies with distribution operations in several states may wish to explain if some of their smaller or more rural LDCs are not included because their emissions fall below the Subpart W reporting threshold.	

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**Business Type(s):** LDC With Storage Operations  
**State(s) of Operation:** Washington  
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Ref. No.	Year	Definitions	Comments, Additional Information
Refer to the "Definitions" column for more information on each metric.			
2.2	2017	97,529,155	This metric provides gas distribution throughput reported under Subpart W, 40 C.F.R. 98.236(aa)(9)(i) through (iii), as reported on the Subpart W e-GRRT integrated reporting form in the "Facility Overview" worksheet. Excel form, gas received (column 1) plus the gas withdrawn (column 2) minus the gas injected into storage (column 3). See screenshot of e-GRRT report provided in template instructions.
2.3	0.00062	2.1 divided by 2.2	Some companies may wish to also provide their throughput emissions number as reported to EIA. They could do so in this comment space.

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		2017		

## NATURAL GAS TRANSMISSION & STORAGE

<b>1.2</b>	<b>Transmission Pipelines, Blow Down Volumes, and Fugitive Emissions</b>			
1.2.1	Total Miles of Transmission Pipeline Operated by gas utility ( <i>miles</i> )	27		
1.2.2	Volume of Transmission Pipeline Blow Down Emissions - outside storage and compression facilities:	Not tracked	<i>As reported to EPA under 40 CFR 98, Subpart W.</i>	
1.2.2.1	scf natural gas	Not tracked		
1.2.2.3	metric tons CO <sub>2</sub> e	Not tracked		
<b>1.3</b>	<b>Underground Natural Gas Storage Emissions</b>			
1.3.2	Storage Compressor Station Emissions ( <i>metric tons CO<sub>2</sub>e</i> )	N/A - Under Reporting Threshold	<i>As reported to EPA under 40 CFR 98, Subpart W.</i>	<i>Total station minus wellhead emissions</i>
1.3.3	Storage Facility Wellhead Component Fugitive Emissions ( <i>metric tons of CO<sub>2</sub>e</i> )	N/A - Under Reporting Threshold	<i>Utilizing EPA emissions factors, as reported to EPA under Subpart W, 40 CFR 98.236, on the e-GRRT integrated reporting form, "Equipment Leaks Surveys and Population Counts [98.236 (q, r)]" tab.</i>	

## 2 CO<sub>2</sub>e EMISSIONS FOR TRANSMISSION AND STORAGE COMPRESSION

<b>2.1</b>	<b>CO<sub>2</sub>e Emissions for Transmission Pipelines (<i>metric tons</i>)</b>			
		N/A - Under Reporting Threshold	<i>CO<sub>2</sub> combustion emissions as reported to EPA under 40 CFR 98, Subpart C and methane emissions stated as CO<sub>2</sub>e as reported under Subpart W.</i>	
<b>2.2</b>	<b>CO<sub>2</sub>e Emissions for Storage Facilities (<i>metric tons</i>)</b>			
		N/A - Under Reporting Threshold	<i>CO<sub>2</sub> combustion emissions as reported to EPA under 40 CFR 98, Subpart C and methane emissions stated as CO<sub>2</sub>e as reported under Subpart W.</i>	

## 3 CONVENTIONAL AIR EMISSIONS FROM TRANSMISSION AND STORAGE COMPRESSION

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<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Refer to the "Definitions" column for more information on each metric.</div>	<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">2017</div>		
<b>3.1 Emissions reported for all permitted sources (minor or major)</b>  3.1.1 NOx ( <i>metric tons per year</i> ) 3.1.2 VOC ( <i>metric tons per year</i> )	13.6 1.6	The number of permitted sources for conventional emissions may not be the same number of sources reporting under the EPA GHG reporting rule. Companies may wish to describe which, or how many, sources are included in the conventional pollutants data and whether the CO2e data reported includes all of these sources.	

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### NATURAL GAS GATHERING & BOOSTING

<b>1 METHANE EMISSIONS</b>			
<b>1.1 Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions</b>	N/A		
1.1.1 Total Miles of Gathering Pipeline Operated by gas utility ( <i>miles</i> )	N/A		
1.1.2 Volume of Gathering Pipeline Blow Down Emissions ( <i>scf</i> )	N/A	<i>This metric is collected to support calculations under EPA 40 CFR 98, Subpart W.</i>	
1.1.4 Gathering Pipeline Blow-Down Emissions outside storage and compression facilities ( <i>metric tons CO2e</i> )	N/A		
<b>2 CO2e COMBUSTION EMISSIONS FOR GATHERING &amp; BOOSTING COMPRESSION</b>			
<b>2.1 CO2e Emissions for Gathering &amp; Boosting Compression Stations (<i>metric tons</i>)</b>	N/A	<i>CO2 combustion emissions as reported to EPA under 40 CFR 98, Subpart C, as directed in Subpart W, 98.232(k).</i>	
<b>3 CONVENTIONAL COMBUSTION EMISSIONS FROM GATHERING &amp; BOOSTING COMPRESSION</b>			
<b>3.1 Emissions reported for all permitted sources (minor or major)</b>	N/A	The number of permitted sources for conventional emissions may not be the same number of sources reporting under the EPA GHG reporting rule. Companies may wish to describe which, or how many, sources are included in the conventional pollutants data and whether the CO2e data reported includes all of these sources.	
3.1.1 NOx ( <i>metric tons per year</i> )	N/A		
3.1.2 VOC ( <i>metric tons per year</i> )	N/A		

### Optional Additional Gas Distribution Metrics Nov 2018: Quantitative Information

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The following Nov. 2018 additional metrics may be added below line 2.3 in the AGA ESG Gas Distribution Quantitative Template (Oct. 2018 Version), at the option of the member company.

### NATURAL GAS DISTRIBUTION

2a Distribution Methane Fugitive Emissions - Additional Optional Metrics			
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2.2a	97,529,155	This metric provides gas distribution throughput reported under Subpart W, 40 C.F.R. 98.236(aa)(9)(i) through (iii), as reported on the Subpart W e-GRRT integrated reporting form in the "Facility Overview" worksheet Excel form, gas received (column 1) plus the gas withdrawn (column 2) minus the gas injected into storage (column 3). See screenshot of e-GRRT report provided in template instructions.	Some companies may wish to also provide their throughput emissions number as reported to EIA. They could do so in this comment space.
2.3a	0.034	Row 2.1a divided by 0.0192 kg/scf density of CH4)/(Row 2.2a times 0.95 percent CH4 in natural gas)	