



# Gas Company ESG/Sustainability Quantitative Information

Parent Company:  
Operating Company(s):  
Business Type(s):  
State(s) of Operation:  
Regulatory Environment:  
Current Reporting Year

Essential Utilities  
Section A includes data for Peoples Natural Gas Company and Peoples Gas Company, Essential's two distribution companies that report under EPA Subpart W. Section B includes data for all distribution companies.  
Distribution  
Pennsylvania, West Virginia, and Kentucky  
Regulated  
1/1/2023 to 12/31/2023

Ref. No.	Refer to the "Definitions" column for more information on each metric.	Baseline 2019	Last Year 2022	Current Year 2023	Definitions
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## Section A Natural Gas Distribution

1	<b>METHANE EMISSIONS AND MITIGATION FROM DISTRIBUTION MAINS</b>				<i>All methane leak sources per 98.232 (i) (1-6) are included for Distribution. Combustion sources are excluded. CO<sub>2</sub> is excluded.</i>
1.1	Number of Gas Distribution Customers	692,920	699,173	700,032	
1.2	Distribution Mains in Service				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.
1.2.1	Plastic (miles)	7,779	8,089	8,438	
1.2.2	Cathodically Protected Steel - Bare & Coated (miles)	4,219	4,413	4,527	
1.2.3	Unprotected Steel - Bare & Coated (miles)	3,323	2,420	2,490	
1.2.4	Cast Iron / Wrought Iron - without upgrades (miles)	80	25	24	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.
1.3	Plan/Commitment to Replace / Upgrade Remaining Miles of Distribution Mains (# years to complete)	Please see the Gas Infrastructure and Resiliency section of our ESG Report for information on our Long-Term Infrastructure Replacement Program: <a href="https://esg.essential.co/environment#gas-infrastructure-and-resiliency">https://esg.essential.co/environment#gas-infrastructure-and-resiliency</a>			
1.3.1	Unprotected Steel (Bare & Coated) (# years to complete)				Optional: # yrs by pipe type.
1.3.2	Cast Iron / Wrought Iron (# years to complete)				Optional: # yrs by pipe type.
2	Distribution CO <sub>2</sub> e Fugitive Emissions				Fugitive methane 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(e)(3)(iv)(D), 98.236(f)(1)(v), and 98.236(r)(2)(v)(B) - i.e. this is Subpart W methane emissions as input in row 2.2 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. Calculated value based on mt CH <sub>4</sub> input in the 2.2 (below).
2.1	CO <sub>2</sub> e Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	274,718	246,113	240,860	
2.2	CH <sub>4</sub> Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	10,989	9,845	9,634	INPUT VALUE (total mt CH <sub>4</sub> ) as explained in definition above. Subpart W input is CH <sub>4</sub> (mt).
2.2.1	CH <sub>4</sub> Fugitive Methane Emissions from Gas Distribution Operations (MMSCF/year)	572	513	502	
2.3	Annual Natural Gas Throughput from Gas Distribution Operations in thousands of standard cubic feet (Mscf/year)	141,279,035	133,576,214	122,490,228	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)	134,215	126,897	116,366	
2.4	Fugitive Methane Emissions Rate (Percent MMScf of Methane Emissions per MMScf of Methane Throughput)	0.43%	0.40%	0.43%	Calculated annual metric: (MMSFC methane emissions/MMSCF methane throughput)
Natural Gas Transmission and Storage (Not Applicable)					
Natural Gas Gathering and Boosting (Not Applicable)					
Human Resources (Please see Essential's ESG microsite at <a href="https://esg.essential.co">ESG.Essential.co</a> for detailed information regarding employee metrics and related narratives)					

## Section B Natural Gas Sustainability Initiative (NGSI) Metrics

Total Methane Emissions, GHGRP emission factors for mains and services (MT)		10,997	10,823	Total distribution segment methane emissions from GHGRP and non GHGRP facilities, calculated using GHGRP emission factors for mains and services
Total Methane Emissions, GHG Inventory emission factors for mains and services (MT)		5,116	4,954	Total distribution segment methane emissions from GHGRP and non GHGRP facilities, calculated using GHG Inventory emission factors for mains and services
Natural Gas Delivered to End Users, As Reported (Mscf)		145,578,343	132,776,281	Total volume of natural gas delivered to end users from GHGRP facilities and non GHGRP facilities, as reported
Natural Gas Delivered to End Users, Normalized (Mscf)		122,692,708	115,478,332	Total volume of natural gas delivered to end users from GHGRP facilities and non GHGRP facilities, normalized
Methane Content of Delivered Natural Gas, Reported (%)	2020 was the first year for which Essential calculated and reported NGSI metrics	95.0%	95.0%	Methane content of delivered natural gas, as reported (weighted average methane content of all throughput).
Methane Content of Delivered Natural Gas, Normalized (%)		95.0%	95.0%	Methane content of delivered natural gas, normalized (weighted average methane content of all throughput)
NGSI Methane Emissions Intensity, GHGRP emission factors for mains and services (%)		0.4141%	0.4469%	Methane emissions intensity associated with natural gas distribution using reported throughput and GHGRP emission factors for mains and services (methane emissions associated with natural gas distribution divided by total methane throughput)
Normalized NGSI Methane Emissions Intensity, GHGRP emission factors for mains and services (%)		0.4914%	0.5138%	Methane emissions intensity associated with natural gas distribution using normalized throughput and GHGRP emission factors for mains and services (methane emissions associated with natural gas distribution divided by total methane throughput)
NGSI Methane Emissions Intensity, GHG Inventory emission factors for mains and services (%)		0.1927%	0.2046%	Methane emissions intensity associated with natural gas distribution using reported throughput and GHG Inventory emission factors for mains and services (methane emissions associated with natural gas distribution divided by total methane throughput)
Normalized NGSI Methane Emissions Intensity, GHG Inventory emission factors for mains and services (%)		0.2286%	0.2352%	Methane emissions intensity associated with natural gas distribution using normalized throughput and GHG Inventory emission factors for mains and services (methane emissions associated with natural gas distribution divided by total methane throughput)