

Gas Company ESG/Sustainability Quantitative Information

Parent Company: Berkshire Hathaway Energy Company

Operating Company(s): BHE GT&S, LLC, Northern Natural Gas Company, Kern River Gas Transmission Company, MidAmerican Energy Company and Sierra Pacific Power Company

Report Date: As of and for the year ended December 31, 2023

Disclaimer: Data included herein is based on information available as of April 25, 2024, and is subject to change without notice should new or additional information be obtained.



	Last Year	Current Year		
Refer to the "Definitions" column for more information on each metric.	2022	2023	% Change	Definitions

Natural Gas Distribution

METHANE EMISSIONS AND MITIGATION FROM DISTRIBUTION MAINS				All methane leak sources per 98.232 (i) (1-6) are included for Distribution. Combustion sources are excluded. CO2 is excluded.
Number of Gas Distribution Customers	968,121	978,735	1.1 %	
Distribution Mains in Service	15,385	15,578	1.3 %	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.
Plastic (miles)	9,713	9,895	1.9 %	
Cathodically Protected Steel - Bare & Coated (miles)	5,529	5,542	0.2 %	
Unprotected Steel - Bare & Coated (miles)	143	141	(1.4)%	
Cast Iron / Wrought Iron - without upgrades (miles)	—	—	—	
Plan/Commitment to Replace / Upgrade Remaining Miles of Distribution Mains (# years to complete)				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.
Unprotected Steel (Bare & Coated) (# years to complete) ⁽¹⁾	—	—	—	Optional: # yrs by pipe type.
Cast Iron / Wrought Iron (# years to complete)	—	—	—	Optional: # yrs by pipe type.
Distribution CO2e Fugitive Emissions				
CO2e Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	103,352	103,421	0.1 %	Fugitive methane emissions (not CO2 combustion emissions) stated as CO2e, as reported to EPA under 40 CFR 98, Subpart W, sections 98.236(a)(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 below and converted to CO2e 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 CH4 input in the 2.2 (below).
CH4 Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	4,134	4,137	0.1 %	INPUT VALUE (total mt CH4) as explained in definition above. Subpart W input is CH4 (mt).
CH4 Fugitive Methane Emissions from Gas Distribution Operations (MMSCF/year)	215	215	0.1 %	
Annual Natural Gas Throughput from Gas Distribution Operations in thousands of standard cubic feet (Mscf/year)	202,478,918	196,670,751	(2.9)%	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).
Annual Methane Gas Throughput from Gas Distribution Operations in millions of standard cubic feet (MMscf/year)	192,355	186,837	(2.9)%	
Fugitive Methane Emissions Rate (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	0.1119%	0.1153%	3.0 %	Calculated annual metric: (MMSFC methane emissions/MMSCF methane throughput)

Liquefied Natural Gas Import/Export

LNG Import/Export Methane Emissions				Below current year natural gas LNG Import/Export methane emissions metrics include methane from combustion and have been calculated using GHGRP Part 98 methodologies unless otherwise indicated.
Total LNG Import/Export Methane Emissions (metric tons/year)	186	140	(24.9)%	
Total LNG Import/Export Methane Emissions (CO2e/year)	4,646	3,488	(24.9)%	Global Warming Potential (GWP) = 25 per 40 CFR Table A-1 To Subpart A Of Part 98
Total LNG Import/Export Methane Emissions (MSCF/year)	9,679	7,267	(24.9)%	Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36
Summary and Metics				
Total LNG Import/Export Methane Emissions (MMSCF/year)	10	7	(24.9)%	
Annual Natural Gas Throughput for LNG Import/Export Operations (MSCF/year)	270,326,271	279,304,076	3.3 %	
Annual Methane Throughput for LNG Import/Export Operations (MMSCF/year)	256,810	265,339	3.3 %	
Methane Emissions Intensity Metric (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	0.0038%	0.0027 %	(27.3)%	

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Natural Gas Transmission and Storage

				<u>Below current year natural gas transmission and storage methane emissions metrics include methane from combustion and have been calculated using the Natural Gas Sustainability Initiative (NGSI) Methane Emissions Intensity Protocol v 1.0 unless otherwise indicated.</u>
Onshore Natural Gas Transmission Compression Methane Emissions				
Total Natural Gas Transmission Compression Methane Emissions (metric tons/year)	12,174	10,599	(12.9)%	
Total Natural Gas Transmission Compression Methane Emissions (CO2e/year)	304,349	264,980	(12.9)%	Global Warming Potential (GWP) = 25 per 40 CFR Table A-1 To Subpart A Of Part 98
Total Natural Gas Transmission Compression Methane Emissions (MSCF/year)	634,061	552,042	(12.9)%	Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36
Natural Gas Storage Methane Emissions				
Total Natural Gas Storage Methane Emissions (metric tons/year)	5,439	4,977	(8.5)%	
Total Natural Gas Storage Methane Emissions (CO2e/year)	135,986	124,425	(8.5)%	Global Warming Potential (GWP) = 25 per 40 CFR Table A-1 To Subpart A Of Part 98
Total Natural Gas Storage Methane Emissions (MSCF/year)	283,305	259,219	(8.5)%	Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36
Onshore Natural Gas Transmission Pipeline Methane Emissions				
Total Natural Gas Transmission Pipeline Methane Emissions (metric tons/year)	4,690	3,535	(24.6)%	
Total Natural Gas Transmission Pipeline Methane Emissions (CO2e/year)	117,255	88,379	(24.6)%	Global Warming Potential (GWP) = 25 per 40 CFR Table A-1 To Subpart A Of Part 98
Total Natural Gas Transmission Pipeline Methane Emissions (MSCF/year)	244,281	184,122	(24.6)%	Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36
Summary and Metrics				
Total Transmission and Storage Methane Emissions (MMSCF/year)	1,162	995	(14.3)%	
Annual Natural Gas Throughput from Gas Transmission and Storage Operations (MSCF/year)	4,643,528,661	4,610,786,268	(0.7)%	U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) in Form F 7100.2-1 Part C of the Annual Report for Natural Gas and Other Gas Transmission and Gathering Pipeline Systems
Annual Methane Throughput from Gas Transmission and Storage Operations (MMSCF/year)	4,411,352	4,303,435	(2.4)%	Refer to BHE GT&S, Northern Natural Gas Company and Kern River Gas Company's Gas Company ESG/Sustainability Quantitative Information for the specific CH4 content factor used by each company.
Methane Emissions Intensity Metric (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	0.0263 %	0.0231 %	(12.2)%	

Natural Gas Processing

				<u>Below current year natural gas processing methane emissions metrics include methane from combustion and have been calculated using the Natural Gas Sustainability Initiative (NGSI) Methane Emissions Intensity Protocol v 1.0 unless otherwise indicated.</u>
Processing Methane Emissions				
Total Natural Gas Processing Methane Emissions (metric tons/year)	118	119	0.8 %	
Total Natural Gas Processing Methane Emissions (CO2e/year)	2,943	2,966	0.8 %	Global Warming Potential (GWP) = 25 per 40 CFR Table A-1 To Subpart A Of Part 98
Total Natural Gas Processing Methane Emissions (MSCF/year)	6,131	6,178	0.8 %	Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36
Summary and Metrics				
Total Gas Processing Methane Emissions (MMSCF/year)	6	6	0.8 %	
Annual Natural Gas Throughput from Gas Processing Operations (MSCF/year)	48,025,487	57,057,017	18.8 %	
Annual Methane Throughput from Gas Processing Operations (MMSCF/year)	39,381	48,556	23.3 %	
Annual Natural Gas Liquids Processed from Natural Gas Processing Operations (bbl)	2,166,489	1,999,574	(7.7)%	
Methane Emissions Intensity Metric (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	0.0146%	0.0121%	(17.2)%	

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Natural Gas Gathering and Boosting

				<u>Below current year natural gas gathering and boosting methane emissions metrics include methane from combustion and have been calculated using the Natural Gas Sustainability Initiative (NGSI) Methane Emissions Intensity Protocol v 1.0 unless otherwise indicated.</u>
Gathering and Boosting Methane Emissions				
Total Natural Gas Gathering and Boosting Methane Emissions (metric tons/year)	356	376	5.8 %	Global Warming Potential (GWP) = 25 per 40 CFR Table A-1 To Subpart A Of Part 98 Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36
Total Natural Gas Gathering and Boosting Methane Emissions (CO2e/year)	8,893	9,408	5.8 %	
Total Natural Gas Gathering and Boosting Methane Emissions (MSCF/year)	18,526	19,599	5.8 %	
Summary and Metrics				
Total Natural Gas Gathering and Boosting Methane Emissions (MMSCF/year)	19	20	5.8 %	
Annual Natural Gas Transported by Natural Gas Gathering and Boosting Operations (MSCF/year)	10,771,548	9,519,501	(11.6)%	
Annual Methane Throughput from Natural Gas Gathering and Boosting Operations (MMSCF/year)	8,800	7,825	(11.1)%	
Annual Hydrocarbon Liquids Transported by Natural Gas Gathering and Boosting Operations (bbl)	2,143,661	1,864,892	(13.0)%	
Methane Emissions Intensity Metric (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	0.1091%	0.1305%	19.5 %	

Natural Gas Production

<u>and have been calculated using the Natural Gas Sustainability Initiative (NGSI) Methane Emissions Intensity Protocol v 1.0 unless otherwise indicated.</u>				
Production Methane Emissions				
Total Natural Gas Production Methane Emissions (metric tons/year)	524	537	2.5 %	Global Warming Potential (GWP) = 25 per 40 CFR Table A-1 To Subpart A Of Part 98 Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36
Total Natural Gas Production Methane Emissions (CO2e/year)	13,094	13,423	2.5 %	
Total Natural Gas Production Methane Emissions (MSCF/year)	27,278	27,965	2.5 %	
Summary and Metrics				
Total Natural Gas Production Methane Emissions (MMSCF/year)	27	28	2.5 %	
Annual Natural Gas Throughput from Gas Production Operations (MSCF/year)	887,764	2,240,294	152.4 %	
Annual Methane Throughput from Gas Production Operations (MMSCF/year)	729	1,839	152.4 %	
Annual Produced Oil and Condensate Throughput from Natural Gas Production Operations (bbl)	9,598	9,807	2.2 %	
Methane Emissions Intensity Metric (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	3.6691%	1.4898%	(59.4)%	

Comments

(1) Replacement is targeted under the MidAmerican Energy Company distribution integrity management plan which is a priority-based program focusing on relative risk

(2) 2021 natural gas distribution emissions do not include the Sierra Pacific Power Company distribution system