

NorthWestern Corp NorthWestern Energy

Business Type(s): >15% Vertically Integrated and remaining

T&D only

State(s) of Operation: Montana, South Dakota & Nebraska

Regulatory Environment: Regulated
Report Date: 5/29/24

NorthWestern Energy - Total Company

		Baseline	Calendar Year					
Ref. No.	Refer to the "Definitions" column for more information on each metric.	2012	2019	2020	2021	2022	2023	Definitions
	Natural Gas Distribution							
	Hatarar Gas Distribution							All methane leak sources per 98.232 (i) (1-6) are included
								for Distribution. Combustion sources are excluded. CO 2 is excluded.
1	METHANE EMISSIONS AND MITIGATION FROM DISTRIBUTION MAINS							
1.1	Number of Gas Distribution Customers	268,622	289,340	293,267	296,731	300,348	303,235	
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)	4,477	4,912	4,995	5,088	5,287	5,380	
1.2.2	Cathodically Protected Steel - Bare & Coated (miles)	2,463	2,390	2,383	2,373	2,367	2,359	
1.2.3	Unprotected Steel - Bare & Coated (miles)	0	0	0	0	0	0	
1.2.4	Cast Iron / Wrought Iron - without upgrades (miles)	0	0	0	0	0	0	
1.3	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 catholdically unprotected steel mains, and cast iron/wrought iron mains, consistent with applicable state utility commission authorizations.
1.3.1	Unprotected Steel (Bare & Coated) (# years to complete)	0	0	0	0	0	0	Optional: # yrs by pipe type.
1.3.2	Cast Iron / Wrought Iron (# years to complete)	0	0	0	0	0	0	Optional: # yrs by pipe type.
2.1	Distribution CO2e Fugitive Emissions CO2e Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	35,114	36,597	36,391	36,735	37,088	37,452	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)(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).
2.1.A	CO2e Fugitive Methane Emissions from Gas Distribution Operations/Customer (metric tons/customers)	0.1307	0.1265	0.1241	0.1238	0.1235	0.1235	
2.1.B	CO2e Fugitive Methane Emissions from Gas Distribution Operations/Line Mile (metric tons/line mile)	5.0593	5.0116	4.9322	4.9235	4.8457	4.8398	
2.2	CH4 Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	1,405	1,464	1,456	1,469	1,482	1,496	
2.2.A	CH4 Fugitive Methane Emissions from Gas Distribution Operations/Customer (metric tons/customers)	0.0052	0.0051	0.0050	0.0050	0.0049	0.0049	
2.2.B	CH4 Fugitive Methane Emissions from Gas Distribution Operations/Line Mile (metric tons/line mile)	0.2024	0.2005	0.1973	0.1969	0.1936	0.1933	INPUT VALUE (total mt CH4) as explained in definition above. Subpart W input is CH4 (mt).
2.2.1	CH4 Fugitive Methane Emissions from Gas Distribution Operations (MMSCF/year)	73.15	76.24	75.81	76.50	77.18	77.92	
2.3	Annual Natural Gas Throughput from Gas Distribution Operations in thousands of standard cubic feet (<i>Mscf/year</i>)	73,633,770	90,923,715	86,058,464	87,798,021	89,300,281	96,690,524	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)	69,952	86,378	81,756	83,408	84,835	91,856	
2.4	Fugitive Methane Emissions Rate (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	0.0032060	0.0026782	0.0028069	0.0028321	0.0029433	0.0025889	Calculated annual metric: (MMSFC methane emissions/MMSCF methane throughput)



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		Baseline	Calendar Year					
Ref. No.	Refer to the "Definitions" column for more information on each metric.	2012	2019	2020	2021	2022	2023	Definitions
	Natural Gas Transmission and Storage							
	, and the second							All methane leak sources per 98.232 (e) (1-8), (f)(1-8), and (m) are included for Transmission and Storage. Combustion sources are excluded. CO 2 and N 2 0 are
								excluded.
0.1	Transmission Line Miles	Not Available	2,221.00	2,144.00	2,140.00	2,203.00	2,203.00	
1	Onshore Natural Gas Transmission Compression Methane Emissions							<u>Fugitive Methane</u> emissions as defined in 40 CFR 98 Sub W Section 232 (e) (1-8), CO2 and N2O emissions are excluded from this section.
1.1.1	Pneumatic Device Venting (metric tons/year)	Not Available	49.10	49.10	49.10	49.07	79.10	Value reported using calculation in 40 CFR 98 Sub W Section 236(b)(4)
1.1.2	Blowdown Vent Stacks (metric tons/year)	Not Available	63.50	29.96	47.80	28.64	29.10	Value reported using calculation in 40 CFR 98 Sub W Section 236(i)(1)(iii)
1.1.3	Transmission Storage Tanks (metric tons/year)	Not Available	47.20	47.20	47.20	47.19	60.50	Value reported using calculation in 40 CFR 98 Sub W Section 236(k)(2)(v)
1.1.4	Flare Stack Emissions (metric tons/year)	Not Available	-	-	-	-	-	Value reported using calculation in 40 CFR 98 Sub W Section 236(n)(11)
1.1.5	Centrifugal Compressor Venting (metric tons/year)	Not Available	13.50	13.50	13.50	13.50	0.49	Value reported using calculation in 40 CFR 98 Sub W Section 236(o)(2)(ii)(D)(2)
1.1.6	Reciprocating Compressor Venting (metric tons/year)	Not Available	30.70	30.70	30.70	30.66	34.60	Value reported using calculation in 40 CFR 98 Sub W Section 236(p)(2)(ii)(D)(2)
1.1.7	Equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters (metric tons/year)	Not Available	14.50	14.50	14.50	14.50	59.60	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
1.1.7.B	Equipment Leaks per Transmission Line Mile (metric tons / transmission line miles)	Not Available	0.01	0.01	0.01	0.01	0.03	
1.1.8	Other Leaks (metric tons/year)		-	-	-	-	-	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
1.1.8.B	Other leaks per Transmission Line Mile (metric tons / transmission line miles)	-	-	-	-	-	-	
1.1.9.B	Total Leaks per Transmission Line Mile (metric tons / transmission line miles)	Not Available	0.01	0.01	0.01	0.01	0.03	
1.2 1.2.B	Total Transmission Compression Methane Emissions (metric tons/year)	Not Available	218.50	184.96	202.80	183.56	263.39	
1.2.D	Total Transmission Compression Methane Emissions per Transmission Line Mile (metric tons / trans. line miles)	Not Available	0.10	0.09	0.09	0.08	0.12	
1.3	Total Transmission Compression Methane Emissions (CO2e/year)	Not Available	5,463	4,624	5,070	4,589	6,585	
1.4	Total Transmission Compression Methane Emissions (MSCF/year)	Not Available	11,380	9,633	10,563	9,560	13,718	Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36
2	Underground Natural Gas Storage Methane Emissions							<u>Fugitive Methane</u> emissions as defined in 40 CFR 98 Sub W Section 232 (f) (1-8), CO2 and N2O emissions are excluded from this section.
2.1.1	Pneumatic Device Venting (metric tons/year)	Not Available	53.50	53.50	53.50	53.51	53.50	Value reported using calculation in 40 CFR 98 Sub W Section 236(b)(4)
2.1.2	Flare Stack Emissions (metric tons/year)	-	-	-	-	-	-	Value reported using calculation in 40 CFR 98 Sub W Section 236(n)(11)
2.1.3	Centrifugal Compressor Venting (metric tons/year)	Not Available	9.10	9.10	9.10	9.14	9.10	Value reported using calculation in 40 CFR 98 Sub W Section 236(o)(2)(ii)(D)(2)
2.1.4	Reciprocating Compressor Venting (metric tons/year)	Not Available	17.30	17.30	17.30	17.30	31.20	Value reported using calculation in 40 CFR 98 Sub W Section 236(p)(2)(ii)(D)(2)
2.1.5	Equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters (metric tons/year)	Not Available	-	-	-	-	12.20	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
2.1.6	Other Equipment Leaks (metric tons/year)	-	-	-	-	-	-	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
2.1.7	Equipment leaks from valves, connectors, open-ended lines, and pressure relief valves associated with storage wellheads (metric tons/year)	Not Available	471.90	471.90	471.90	471.90	459.80	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
2.1.8	Other equipment leaks from components associated with storage wellheads (metric tons/year)	-	-	-	-	-	-	Value reported using calculation in 40 CFR 98 Sub W Section 232(q)(2)(v)
2.2	Total Storage Compression Methane Emissions (metric tons/year)	Not Available	551.80	551.80	551.80	551.85	565.80	
2.3	Total Storage Compression Methane Emissions (CO2e/year)	Not Available	13,795	13,795	13,795	13,796	14,145	Density of Methons - 0.0103 kg/ft3 x 10.050 Cub W.50. W.30
2.4	Total Storage Compression Methane Emissions (MSCF/year)	Not Available	28,740	28,740	28,740	28,742	29,469	Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36



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Ref. No.	Refer to the "Definitions" column for more information on each metric.	2012	2019	2020	2021	2022	2023	Definitions
3 0	Onshore Natural Gas Transmission Pipeline Blowdowns							Blowdown vent stacks for onshore transmission pipeline as defined in 40 CFR 98 Sub W Section 232 (m), CO2 and N2O emissions are excluded from this section.
3.1 Tı	ransmission Pipeline Blowdown Vent Stacks (metric tons/year)	Not Available	193	178	230	27	11	Value reported using calculation in 40 CFR 98 Sub W Section 232(i)(3)(ii)
3.2 Tı	ransmission Pipeline Blowdown Vent Stacks (CO2e/year)	Not Available	4,837	4,462	5,750	687	283	
3.3 Tı	ransmission Pipeline Blowdown Vent Stacks (MSCF/year)	Not Available	10,078	9,296	11,979	1,430	589	
4 0	Other Non-Sub W Emissions Data (OPTIONAL)							(OPTIONAL) If desired, report additional sources required by ONE Future include dehydrator vents, storage station venting transmission pipeline leaks, and storage tank methane.
	otal Methane Emissions from additional sources not recognized by 40 CFR 98 ubpart W (metric tons/year)	-	-	-	-	-	-	
Sı	otal Methane Emissions from additional sources not recognized by 40 CFR 98 ubpart W (CO2e/year)	-	-	-	-	-	-	
	otal Methane Emissions from additional sources not recognized by 40 CFR 98 ubpart W (MSCF/year)	-	-	-	-	-	-	
5 Si	ummary and Metrics							
	otal Transmission and Storage Methane Emissions (MMSCF/year)	Not Available	50	48	51	40	44	
	nnual Natural Gas Throughput from Gas Transmission and Storage Operations MSCF/year)	Not Available	60,156,069	59,059,773	58,072,832	63,513,996	63,151,838	EIA 176 throughput or other reference for other throughput selected
	nnual Methane Gas Throughput from Gas Transmission and Storage Operations MMSCF/year)	Not Available	57,148	56,107	55,169	60,338	59,994	Methane content in natural gas equals 95% based on 40 CFR 98 Sub W 233(u)(2)(vii)
	Nethane Emissions Intensity Metric (Percent MMscf of Methane Emissions per NMscf of Methane Throughput)	Not Available						
N	Natural Gas Gathering and Boosting							
1 N	METHANE EMISSIONS							
1.1 G	Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions	Not Available	-	-	-	-	-	
1.1.1 To	otal Miles of Gathering Pipeline Operated by gas utility (miles)	Not Available	1,222	1,222	1,222	1,222	1,222	
	olume of Gathering Pipeline Blow Down Emissions (scf)	Not Available	1,535,249	660,299	1,365,597	54,000	53,310	This metric is collected to support calculations under EPA 40 CFR 98,
1.1.4 G	Gathering Pipeline Blow-Down Emissions outside storage and compression	Not Available	29.48	12.68	24.80	0.24	0.20	
2 C	CO2e COMBUSTION EMISSIONS FOR GATHERING & BOOSTING COMPRESSION							
2.1 C	CO2e Emissions for Gathering & Boosting Compression Stations (metric tons)	Not Available	7,552	7,569	7,046	6,656	6,963	CO2 combustion emissions as reported to EPA under 40 CFR 98, Subpart C, as directed in Subpart W, 98.232 (k).
	CONVENTIONAL COMBUSTION EMISSIONS FROM GATHERING & BOOSTING							
3.1 E	missions reported for all permitted sources (minor or major)	-	-	-	-	-	-	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.
	NOx (metric tons per year)	Not Available	25.05	25.12	23.35	22.07	22.02	
3.1.2 V	OC (metric tons per year)	Not Available	54.24	54.79	54.82	52.55	55.08	



Parent Company:
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Business Type(s):

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State(s) of Operation: Montana
Regulatory Environment: Regulated
Report Date: 7/28/24

Ref. No.	Refer to the "Definitions" column for more information on each metric.	Baseline 2012	Calendar Year 2019	Calendar Year	Calendar Year 2021	Calendar Year	Calendar Year 2023	Definitions
	Natural Gas Distribution							
								All methane leak sources per 98.232 (i) (1-6) are included for Distribution.
								Combustion sources are excluded. CO 2 is excluded.
1	METHANE EMISSIONS AND MITIGATION FROM DISTRIBUTION MAINS							
1.1	Number of Gas Distribution Customers	182,364	199,663	202,436	205,182	207,834	210,202	These matrice should include all level distribution semanation (LDCs) hold by the Decemb
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)	3,335	3,643	3,695	3,760	3,937	3,999	
1.2.2	Cathodically Protected Steel - Bare & Coated (miles)	1,255	1,191	1,183	1,170	1,162	1,156	
1.2.3	Unprotected Steel - Bare & Coated (miles)	-	-	-	-	-	-	
1.2.4	Cast Iron / Wrought Iron - without upgrades (miles)	-	-	-	-	-	-	
1.3	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 catholdically unprotected steel mains, and cast iron/wrought iron mains, consistent with applicable state utility commission authorizations.
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 CO2e Fugitive Emissions							
2.1	CO2e Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	24,511	25,326	25,179	25,494	26,050	26,288	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)(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).
2.1.A	CO2e Fugitive Methane Emissions from Gas Distribution Operations/Customer (metric tons/customers)	0.1344	0.1268	0.1244	0.1242	0.1253	0.1251	
2.1.B	CO2e Fugitive Methane Emissions from Gas Distribution Operations/Line Mile (metric tons/line mile)	5.3401	5.2391	5.1618	5.1711	5.1088	5.0995	
2.2	CH4 Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	980	1,013	1,007	1,020	1,041	1,050	INPUT VALUE (total mt CH4) as explained in definition above. Subpart W input is CH4
2.2.A	CH4 Fugitive Methane Emissions from Gas Distribution Operations/Customer (metric tons/customers)	0.0054	0.0051	0.0050	0.0050	0.0050	0.0050	(mt).
2.2.B	CH4 Fugitive Methane Emissions from Gas Distribution Operations/Line Mile (metric tons/line mile)	0.2136	0.2096	0.2065	0.2068	0.2041	0.2037	
2.2.1	CH4 Fugitive Methane Emissions from Gas Distribution Operations (MMSCF/year)	51.06	52.76	52.46	53.11	54.21	54.69	
2.3	Annual Natural Gas Throughput from Gas Distribution Operations in thousands of standard cubic feet (<i>Mscf/year</i>)	38,243,784	47,356,572	44,071,326	43,827,067	48,567,828	49,819,553	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)	36,332	44,989	41,868	41,636	46,139	47,329	
2.4	Fugitive Methane Emissions Rate (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	0%	0%	0%	0%	0%	0%	Calculated annual metric: (MMSFC methane emissions/MMSCF methane throughput)



Parent Company:
Operating Company(s):
Business Type(s):

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D (N		Baseline	Calendar Year	D. P. W.				
Ref. No.	Refer to the "Definitions" column for more information on each metric.	2012	2019	2020	2021	2022	2023	Definitions
	Natural Gas Transmission and Storage							
								All methane leak sources per 98.232 (e) (1-8), (f)(1-8), and (m) are
								included for Transmission and Storage. Combustion sources are excluded.
								CO 2 and N 2 O are excluded.
0.1	Transmission Line Miles	-	2,221	2,144	2,140	2,203	2,203	
1	Onshore Natural Gas Transmission Compression Methane Emissions		,	,	,	,	,	Fugitive Methane emissions as defined in 40 CFR 98 Sub W Section 232 (e) (1-8), CO2 and
1.1.1	Pneumatic Device Venting (metric tons/year)	0.0	49.1	49.1	49.1	49.1	79.1	N2O emissions are excluded from this section. Value reported using calculation in 40 CFR 98 Sub W Section 236(b)(4)
1.1.2	Blowdown Vent Stacks (metric tons/year)							Value reported using calculation in 40 CFR 98 Sub W Section 236(i)(1)(iii)
1.1.2	Blowdown vent Stacks (metric tons/year)	0.0	63.5	30.0	47.8	28.6	29.1	value reported using calculation in 40 CFK 96 Sub W Section 250(1)(1)(11)
1.1.3	Transmission Storage Tanks (metric tons/year)	0.0	47.2	47.2	47.2	47.2	60.5	Value reported using calculation in 40 CFR 98 Sub W Section 236(k)(2)(v)
1.1.4	Flare Stack Emissions (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(n)(11)
1.1.5	Centrifugal Compressor Venting (metric tons/year)	0.0	13.5	13.5	13.5	13.5	0.5	Value reported using calculation in 40 CFR 98 Sub W Section 236(o)(2)(ii)(D)(2)
1.1.6	Reciprocating Compressor Venting (metric tons/year)	0.0	30.7	30.7	30.7	30.7	34.6	Value reported using calculation in 40 CFR 98 Sub W Section 236(p)(2)(ii)(D)(2)
1.1.7	Equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters (metric tons/year)	0.0	14.5	14.5	14.5	14.5	59.6	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
1.1.7.B	Equipment Leaks per Transmission Line Mile (metric tons / transmission line miles)	0.0	0.0	0.0	0.0	0.0	0.0	
1.1.8	Other Leaks (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
1.1.8.B	Other leaks per Transmission Line Mile (metric tons / transmission line miles)	0.0	0.0	0.0	0.0	0.0	0.0	
1.1.9.B	Total Leaks per Transmission Line Mile (metric tons / transmission line miles)	0.0	0.0	0.0	0.0	0.0	0.0	
1.2	Total Transmission Compression Methane Emissions (metric tons/year)	0.0	218.5	185.0	202.8	183.6	263.4	
1.2.B	Total Transmission Compression Methane Emissions per Transmission Line Mile (metric tons / trans. line miles)	0.0	0.1	0.1	0.1	0.1	0.1	
1.3	Total Transmission Compression Methane Emissions (CO2e/year)	0.0	5,462.5	4.624.0	5.070.0	4,589.0	6.584.8	
1.4	Total Transmission Compression Methane Emissions (MSCF/year)	0.0	11,380.2	9,633.3	10,562.5	9,560.4	13,718.2	Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36
2	Underground Natural Gas Storage Methane Emissions							Fugitive Methane emissions as defined in 40 CFR 98 Sub W Section 232 (f) (1-8), CO2 and N2O emissions are excluded from this section.
2.1.1	Pneumatic Device Venting (metric tons/year)	0.0	53.5	53.5	53.5	53.5	53.5	Value reported using calculation in 40 CFR 98 Sub W Section 236(b)(4)
2.1.2	Flare Stack Emissions (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(n)(11)
2.1.3	Centrifugal Compressor Venting (metric tons/year)	0.0	9.1	9.1	9.1	9.1	9.1	Value reported using calculation in 40 CFR 98 Sub W Section 236(o)(2)(ii)(D)(2)
2.1.4	Reciprocating Compressor Venting (metric tons/year)	0.0	17.3	17.3	17.3	17.3	31.2	Value reported using calculation in 40 CFR 98 Sub W Section 236(p)(2)(ii)(D)(2)
2.1.5	Equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters (metric tons/year)	0.0	0.0	0.0	0.0	0.0	12.2	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
2.1.6	Other Equipment Leaks (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
2.1.7	Equipment leaks from valves, connectors, open-ended lines, and pressure relief valves associated with storage wellheads (metric tons/year)	0.0	471.9	471.9	471.9	471.9	459.8	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
2.1.8	Other equipment leaks from components associated with storage wellheads (metric	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 232(q)(2)(v)
2.1.8	Total Storage Compression Methane Emissions (metric tons/year)	0.0	551.8	551.8	551.8	551.9	565.8	Talde Tepor ted daming concurrent in the CFN 30 and W Section 232(4)(2)(V)
2.3	Total Storage Compression Methane Emissions (CO2e/year)	0.0	13,795.0	13,795.0	13,795.0	13,796.3	14,145.0	
2.4	Total Storage Compression Methane Emissions (MSCF/year)	0.0	28,740	28,740	28,740	28,742	29,469	Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36
3	Onshore Natural Gas Transmission Pipeline Blowdowns							Blowdown vent stacks for onshore transmission pipeline as defined in 40 CFR 98 Sub W
3.1	Transmission Pipeline Blowdown Vent Stacks (metric tons/year)	0.0	193.5	178.5	230.0	27.5	11.3	Section 232 (m), CO2 and N2O emissions are excluded from this section. Value reported using calculation in 40 CFR 98 Sub W Section 232(i)(3)(ii)
3.2	Transmission Pipeline Blowdown Vent Stacks (Metric tons/year) Transmission Pipeline Blowdown Vent Stacks (CO2e/year)	0.0	4,837	4,462	5,750	687	283	value reported using calculation in 40 crit 50 sub w Section 232(1)(5)(1)
3.3	Transmission Pipeline Blowdown Vent Stacks (COZE/year) Transmission Pipeline Blowdown Vent Stacks (MSCF/year)	0	10.078	9.296	11.979	1.430	589	
3.3	Transmission repelling blowdown vent stacks (wiser/year)	U	10,076	3,230	11,373	1,430	363	



Parent Company: Operating Company(s): Business Type(s): NorthWestern Corp NorthWestern Energy

>15% Vertically Integrated and remaining T&D only

NorthWestern Energy - Montana only

State(s) of Operation: Montana Regulatory Environment: Regulated Report Date: 7/28/24

Ref. No.	Refer to the "Definitions" column for more information on each metric.	Baseline 2012	Calendar Year 2019	Calendar Year	Calendar Year 2021	Calendar Year	Calendar Year 2023	Definitions
4	Other Non-Sub W Emissions Data (OPTIONAL)	2012	2013	2020	2021	2022	2023	(OPTIONAL) If desired, report additional sources required by ONE Future include
•	Other Work-Sub W Emissions Data (OFTIONAL)							dehydrator vents, storage station venting transmission pipeline leaks, and storage tank methane.
4.1	Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	
4.2	Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (CO2e/year)	0.0	0.0	0.0	0.0	0.0	0.0	
4.3	Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (MSCF/year)	0.0	0.0	0.0	0.0	0.0	0.0	
5	Summary and Metrics							
5.1	Total Transmission and Storage Methane Emissions (MMSCF/year)	0.0	50.2	47.7	51.3	39.7	43.8	
5.2	Annual Natural Gas Throughput from Gas Transmission and Storage Operations	0	60,156,069	59,059,773	58,072,832	63,513,996	63,151,838	EIA 176 throughput or other reference for other throughput selected
5.2.1	Annual Methane Gas Throughput from Gas Transmission and Storage Operations (MMSCF/year)	0.0	57,148.3	56,106.8	55,169.2	60,338.3	59,994.2	Methane content in natural gas equals 95% based on 40 CFR 98 Sub W 233(u)(2)(vii)
5.3	Methane Emissions Intensity Metric (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	Missing Data	0%	0%	0%	0%	0%	
	Natural Gas Gathering and Boosting							
1	Natural Gas Gathering and Boosting METHANE EMISSIONS							
1	<u> </u>							
1 1.1 1.1.1	METHANE EMISSIONS		1,222	1,222	1,222	1,222	1,222	
	METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions		1,222 1,535,249	1,222 660,299	1,222 1,365,597	1,222 54,000	1,222 53,310	This metric is collected to support calculations under EPA 40 CFR 98, Subpart W.
1.1.1	METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions Total Miles of Gathering Pipeline Operated by gas utility (miles)		,			,		This metric is collected to support calculations under EPA 40 CFR 98, Subpart W.
1.1.1 1.1.2	METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions Total Miles of Gathering Pipeline Operated by gas utility (miles) Volume of Gathering Pipeline Blow Down Emissions (scf)		1,535,249	660,299	1,365,597	54,000	53,310	This metric is collected to support calculations under EPA 40 CFR 98, Subpart W.
1.1.1 1.1.2 1.1.4	METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions Total Miles of Gathering Pipeline Operated by gas utility (miles) Volume of Gathering Pipeline Blow Down Emissions (scf) Gathering Pipeline Blow-Down Emissions outside storage and compression facilities		1,535,249	660,299	1,365,597	54,000	53,310	This metric is collected to support calculations under EPA 40 CFR 98, Subpart W. CO2 combustion emissionsas reported to EPA under 40 CFR 98, Subpart C, as directed in Subpart W, 98.232(k).
1.1.1 1.1.2 1.1.4	METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions Total Miles of Gathering Pipeline Operated by gas utility (miles) Volume of Gathering Pipeline Blow Down Emissions (scf) Gathering Pipeline Blow-Down Emissions outside storage and compression facilities CO2e COMBUSTION EMISSIONS FOR GATHERING & BOOSTING COMPRESSION		1,535,249 29.5	660,299 12.7	1,365,597 24.8	54,000 0.2	53,310 0.2	CO2 combustion emissionsas reported to EPA under 40 CFR 98, Subpart C, as directed in
1.1.1 1.1.2 1.1.4	METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions Total Miles of Gathering Pipeline Operated by gas utility (miles) Volume of Gathering Pipeline Blow Down Emissions (scf) Gathering Pipeline Blow-Down Emissions outside storage and compression facilities CO2e COMBUSTION EMISSIONS FOR GATHERING & BOOSTING COMPRESSION CO2e Emissions for Gathering & Boosting Compression Stations (metric tons) CONVENTIONAL COMBUSTION EMISSIONS FROM GATHERING & BOOSTING		1,535,249 29.5	660,299 12.7	1,365,597 24.8	54,000 0.2	53,310 0.2	CO2 combustion emissionsas reported to EPA under 40 CFR 98, Subpart C, as directed in Subpart W, 98.232(k). 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
1.1.1 1.1.2 1.1.4 2 2.1	METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions Total Miles of Gathering Pipeline Operated by gas utility (miles) Volume of Gathering Pipeline Blow Down Emissions (scf) Gathering Pipeline Blow-Down Emissions outside storage and compression facilities CO2e COMBUSTION EMISSIONS FOR GATHERING & BOOSTING COMPRESSION CO2e Emissions for Gathering & Boosting Compression Stations (metric tons) CONVENTIONAL COMBUSTION EMISSIONS FROM GATHERING & BOOSTING COMPRESSION		1,535,249 29.5	660,299 12.7	1,365,597 24.8	54,000 0.2	53,310 0.2	CO2 combustion emissions are ported to EPA under 40 CFR 98, Subpart C, as directed in Subpart W, 98.232(k). 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



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State(s) of Operation: South Dakota
Regulatory Environment: Regulated
Report Date: 7/28/24

NorthWestern Energy - South Dakota only

		Baseline	Calendar Year					
Ref. No.	Refer to the "Definitions" column for more information on each metric.	2012	2019	2020	2021	2022	2023	Definitions
	Natural Gas Distribution							
								All methane leak sources per 98.232 (i) (1-6) are included for
								Distribution. Combustion sources are excluded. CO 2 is
								excluded.
1	METHANE EMISSIONS AND MITIGATION FROM DISTRIBUTION MAINS							
1.1	Number of Gas Distribution Customers	44,584	47,010	48,055	48,647	49,401	49,886	These metrics should include all local distribution companies (LDCs) held by
1.2	Distribution Mains in Service							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)	782.70	879.85	900.36	923.40	945.20	969.40	
1.2.2 1.2.3	Cathodically Protected Steel - Bare & Coated (miles)	795.08	791.00	789.78	789.02	788.40	787.90 -	
1.2.3	Unprotected Steel - Bare & Coated (miles) Cast Iron / Wrought Iron - without upgrades (miles)	-	-	-	-	-	-	
1.2.4	cast non / wroaght non without appraises (mines)							These metrics should provide the number of years remaining to take out of
1.3	Plan/Commitment to Replace / Upgrade Remaining Miles of Distribution							service, replace or upgrade catholdically unprotected steel mains, and cast
	Mains (# years to complete)							iron/wrought iron mains, consistent with applicable state utility commission authorizations.
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 CO2e Fugitive Emissions							
2.1	CO2e Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	6,796	7,156	7,146	7,192	7,211	7,329	Fugitive methane emissions (not CO2 combustion emissions) stated as CO2e, as reported to EPA under 40 CFR 98, Subpart W, sections 98.236(η(3)(ix)(D), 98.236(η(3)(1)(v), and 98.236(η(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 7 (helow)
2.1.A	CO2e Fugitive Methane Emissions from Gas Distribution Operations/Customer (metric tons/customers)	0.1524	0.1522	0.1487	0.1478	0.1460	0.1469	
2.1.B	CO2e Fugitive Methane Emissions from Gas Distribution Operations/Line Mile (metric tons/line mile)	4.3075	4.2827	4.2281	4.1996	4.1598	4.1704	
2.2	CH4 Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	271.85	286.23	285.84	287.31	288.11	292.80	
2.2.A	CH4 Fugitive Methane Emissions from Gas Distribution Operations/Customer (metric tons/customers)	0.0061	0.0061	0.0059	0.0059	0.0058	0.0059	INPUT VALUE (total mt CH4) as explained in definition above. Subpart W
2.2.B	CH4 Fugitive Methane Emissions from Gas Distribution Operations/Line Mile (metric tons/line mile)	0.1723	0.1713	0.1691	0.1678	0.1662	0.1666	input is CH4 (mt).
2.2.1	CH4 Fugitive Methane Emissions from Gas Distribution Operations (MMSCF/year)	14.16	14.91	14.89	14.96	15.01	15.25	
2.3	Annual Natural Gas Throughput from Gas Distribution Operations in thousands of standard cubic feet (<i>Mscf/year</i>)	28,891,086	35,032,176	33,811,445	36,046,928	34,325,300	38,618,277	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)	27,447	33,281	32,121	34,245	32,609	36,687	
2.4	Fugitive Methane Emissions Rate (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	0%	0%	0%	0%	0%	0%	Calculated annual metric: (MMSFC methane emissions/MMSCF methane throughput)



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NorthWestern Energy - South Dakota only

State(s) of Operation: Regulatory Environment: Report Date: South Dakota Regulated 7/28/24

Ref. No.	Refer to the "Definitions" column for more information on each metric.	Baseline 2012	Calendar Year 2019	Calendar Year 2020	Calendar Year 2021	Calendar Year 2022	Calendar Year 2023	Definitions
	Natural Gas Transmission and Storage							
								All methane leak sources per 98.232 (e) (1-8), (f)(1-8), and (m) are included for Transmission and Storage. Combustion sources are excluded. CO , and N , O are excluded.
0.1	Transmission Line Miles	0	0	0	0	0	0	
1	Onshore Natural Gas Transmission Compression Methane Emissions	•						<u>Fugitive Methane</u> emissions as defined in 40 CFR 98 Sub W Section 232 (e) (1-8), CO2 and N2O emissions are excluded from this section.
1.1.1	Pneumatic Device Venting (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(b)(4)
1.1.2	Blowdown Vent Stacks (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(i)(1)(iii)
1.1.3	Transmission Storage Tanks (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(k)(2)(v)
1.1.4	Flare Stack Emissions (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(n)(11)
1.1.5	Centrifugal Compressor Venting (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(o)(2)(ii)(D)(2)
1.1.6	Reciprocating Compressor Venting (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(p)(2)(ii)(D)(2)
1.1.7	Equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
1.1.7.B	Equipment Leaks per Transmission Line Mile (metric tons / transmission line miles)	0.0	0.0	0.0	0.0	0.0	0.0	
1.1.8	Other Leaks (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
1.1.8.B	Other leaks per Transmission Line Mile (metric tons / transmission line miles)		0.0	0.0	0.0	0.0	0.0	
1.1.9.B	,		0.0	0.0	0.0	0.0	0.0	
1.2	Total Transmission Compression Methane Emissions (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	
1.2.B	Total Transmission Compression Methane Emissions per Transmission Line Mile (metric tons / trans. line miles)	0.0	0.0	0.0	0.0	0.0	0.0	
1.3	Total Transmission Compression Methane Emissions (CO2e/year)	0.0	0.0	0.0	0.0	0.0	0.0	
1.4	Total Transmission Compression Methane Emissions (MSCF/year)	0.0	0.0	0.0	0.0	0.0	0.0	Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36
2 2.1.1	Underground Natural Gas Storage Methane Emissions Pneumatic Device Venting (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Fugitive Methane emissions as defined in 40 CFR 98 Sub W Section 232 (f) (1-8), CO2 and N2O emissions are excluded from this section. Value reported using calculation in 40 CFR 98 Sub W Section 236(b)(4)
2.1.2	Flare Stack Emissions (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(n)(11)
2.1.3	Centrifugal Compressor Venting (metric tons/year)							Value reported using calculation in 40 CFR 98 Sub W Section
2.1.4	Reciprocating Compressor Venting (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	236(o)(2)(ii)(D)(2) Value reported using calculation in 40 CFR 98 Sub W Section
2.1.5	Equipment leaks from valves, connectors, open ended lines, pressure relief	0.0	0.0	0.0	0.0	0.0	0.0	236(p)(2)(ii)(D)(2) Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
2.1.5	valves, and meters (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	value reported using calculation in 40 CFK 36 300 W Section 230(4)(2)(V)
2.1.6	Other Equipment Leaks (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
2.1.7	Equipment leaks from valves, connectors, open-ended lines, and pressure relief valves associated with storage wellheads (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
2.1.8	Other equipment leaks from components associated with storage wellheads (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 232(q)(2)(v)
2.2	Total Storage Compression Methane Emissions (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	
2.3	Total Storage Compression Methane Emissions (CO2e/year)	0.0	0.0	0.0	0.0	0.0	0.0	
2.4	Total Storage Compression Methane Emissions (MSCF/year)	0.0	0.0	0.0	0.0	0.0	0.0	Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36



Operating Company(s): Business Type(s):

NorthWestern Corp NorthWestern Energy

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NorthWestern Energy - South Dakota only

State(s) of Operation: **Regulatory Environment:** Report Date:

South Dakota Regulated 7/28/24

		Baseline	Calendar Year					
Ref. No		2012	2019	2020	2021	2022	2023	Definitions
3	Onshore Natural Gas Transmission Pipeline Blowdowns							Blowdown vent stacks for onshore transmission pipeline as defined in 40 CFR 98 Sub W Section 232 (m), CO2 and N2O emissions are excluded from this
3.1	Transmission Pipeline Blowdown Vent Stacks (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	section. Value reported using calculation in 40 CFR 98 Sub W Section 232(i)(3)(ii)
3.2	Transmission Pipeline Blowdown Vent Stacks (CO2e/year)	0.0	0.0	0.0	0.0	0.0	0.0	
3.3	Transmission Pipeline Blowdown Vent Stacks (MSCF/year)	0.0	0.0	0.0	0.0	0.0	0.0	
4	Other Non-Sub W Emissions Data (OPTIONAL)							(OPTIONAL) If desired, report additional sources required by ONE Future include dehydrator vents, storage station venting transmission pipeline leaks, and storage tank methane.
4.1	Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	
4.2	Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (CO2e/year)	0.0	0.0	0.0	0.0	0.0	0.0	
4.3	Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (MSCF/year)	0.0	0.0	0.0	0.0	0.0	0.0	
5	Summary and Metrics							
5.1	Total Transmission and Storage Methane Emissions (MMSCF/year)	0.0	0.0	0.0	0.0	0.0	0.0	
5.2	Annual Natural Gas Throughput from Gas Transmission and Storage Operations (MSCF/year)	0.0	0.0	0.0	0.0	0.0	0.0	EIA 176 throughput or other reference for other throughput selected
5.2.1	Annual Methane Gas Throughput from Gas Transmission and Storage Operations (MMSCF/year)	0.0	0.0	0.0	0.0	0.0	0.0	Methane content in natural gas equals 95% based on 40 CFR 98 Sub W 233(u)(2)(vii)
5.3	Methane Emissions Intensity Metric (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	
5.3	• •	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	
1	Emissions per MMscf of Methane Throughput) Natural Gas Gathering and Boosting METHANE EMISSIONS	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	
1	Emissions per MMscf of Methane Throughput) Natural Gas Gathering and Boosting METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	
1 1.1 1.1.1	Emissions per MMscf of Methane Throughput) Natural Gas Gathering and Boosting METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions Total Miles of Gathering Pipeline Operated by gas utility (miles)	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	This makin is collected to support collections under FDA 40 CFD 00 Cubant
1 1.1 1.1.1 1.1.2	Emissions per MMscf of Methane Throughput) Natural Gas Gathering and Boosting METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions Total Miles of Gathering Pipeline Operated by gas utility (miles) Volume of Gathering Pipeline Blow Down Emissions (scf)	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	This metric is collected to support calculations under EPA 40 CFR 98, Subpart
1 1.1 1.1.1	Emissions per MMscf of Methane Throughput) Natural Gas Gathering and Boosting METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions Total Miles of Gathering Pipeline Operated by gas utility (miles)	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	This metric is collected to support calculations under EPA 40 CFR 98, Subpart
1 1.1 1.1.1 1.1.2	Emissions per MMscf of Methane Throughput) Natural Gas Gathering and Boosting METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions Total Miles of Gathering Pipeline Operated by gas utility (miles) Volume of Gathering Pipeline Blow Down Emissions (scf)	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	This metric is collected to support calculations under EPA 40 CFR 98, Subpart
1 1.1 1.1.1 1.1.2 1.1.4	Emissions per MMscf of Methane Throughput) Natural Gas Gathering and Boosting METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions Total Miles of Gathering Pipeline Operated by gas utility (miles) Volume of Gathering Pipeline Blow Down Emissions (scf) Gathering Pipeline Blow-Down Emissions outside storage and compression		Missing Data	This metric is collected to support calculations under EPA 40 CFR 98, Subpart CO2 combustion emissions as reported to EPA under 40 CFR 98, Subpart C, as directed in Subpart W, 98.232(k).				
1 1.1 1.1.1 1.1.2 1.1.4	Emissions per MMscf of Methane Throughput) Natural Gas Gathering and Boosting METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions Total Miles of Gathering Pipeline Operated by gas utility (miles) Volume of Gathering Pipeline Blow Down Emissions (scf) Gathering Pipeline Blow-Down Emissions outside storage and compression CO2e COMBUSTION EMISSIONS FOR GATHERING & BOOSTING COMPRESSIC		Missing Data	CO2 combustion emissions as reported to EPA under 40 CFR 98, Subpart C, as				
1 1.1 1.1.1 1.1.2 1.1.4	Emissions per MMscf of Methane Throughput) Natural Gas Gathering and Boosting METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions Total Miles of Gathering Pipeline Operated by gas utility (miles) Volume of Gathering Pipeline Blow Down Emissions (scf) Gathering Pipeline Blow-Down Emissions outside storage and compression CO2e COMBUSTION EMISSIONS FOR GATHERING & BOOSTING COMPRESSIC CO2e Emissions for Gathering & Boosting Compression Stations (metric tons)		Missing Data	CO2 combustion emissions as reported to EPA under 40 CFR 98, Subpart C, as directed in Subpart W, 98.232(k). 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				
1 1.1 1.1.1 1.1.2 1.1.4 2 2.1	Emissions per MMscf of Methane Throughput) Natural Gas Gathering and Boosting METHANE EMISSIONS Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions Total Miles of Gathering Pipeline Operated by gas utility (miles) Volume of Gathering Pipeline Blow Down Emissions (scf) Gathering Pipeline Blow-Down Emissions outside storage and compression CO2e COMBUSTION EMISSIONS FOR GATHERING & BOOSTING COMPRESSIC CO2e Emissions for Gathering & Boosting Compression Stations (metric tons) CONVENTIONAL COMBUSTION EMISSIONS FROM GATHERING & BOOSTING COMPRESSION		Missing Data	CO2 combustion emissions as reported to EPA under 40 CFR 98, Subpart C, as directed in Subpart W, 98.232(k). 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				



Parent Company: Operating Company(s): Business Type(s): NorthWestern Corp NorthWestern Energy

>15% Vertically Integrated and

remaining T&D only

State(s) of Operation: Nebraska
Regulatory Environment: Regulated
Report Date: 7/28/24

NorthWestern Energy - Nebraska only

		Baseline	Calendar Year					
Ref. No.	Refer to the "Definitions" column for more information on each metric.	2012	2019	2020	2021	2022	2023	Definitions
	Natural Gas Distribution				<u> </u>			
								All methane leak sources per 98.232 (i) (1-6) are included for Distribution. Combustion sources are excluded. CO 2 is excluded.
1	METHANE EMISSIONS AND MITIGATION FROM DISTRIBUTION MAINS							
1.1	Number of Gas Distribution Customers	41,674	42,667	42,776	42,902	43,113	43,147	
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)	359.70	389.34	399.84	404.42	405.20	411.10	
1.2.2	Cathodically Protected Steel - Bare & Coated (miles)	413.10	408.28	410.23	414.33	416.10	414.90	
1.2.3	Unprotected Steel - Bare & Coated (miles)	-	-	-	-	-	-	
1.2.4	Cast Iron / Wrought Iron - without upgrades (miles)	-	-	-	-	-	-	
1.3	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 catholdically unprotected steel mains, and cast iron/wrought iron mains, consistent with applicable state utility commission authorizations.
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.
2.1	CO2e Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	3,807	4,116	4,066	4,050	3,827	3,835	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)(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).
2.1.A	CO2e Fugitive Methane Emissions from Gas Distribution Operations/Customer (metric tons/customers)	0.0914	0.0965	0.0950	0.0944	0.0888	0.0889	
2.1.B	CO2e Fugitive Methane Emissions from Gas Distribution Operations/Line Mile (metric tons/line mile)	4.93	5.16	5.02	4.95	4.66	4.64	
2.2	CH4 Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	152.28	164.62	162.62	161.81	152.89	153.20	
2.2.A	CH4 Fugitive Methane Emissions from Gas Distribution Operations/Customer (metric tons/customers)	0.0037	0.0039	0.0038	0.0038	0.0035	0.0036	INPUT VALUE (total mt CH4) as explained in definition above. Subpart W input is
2.2.B	CH4 Fugitive Methane Emissions from Gas Distribution Operations/Line Mile (metric tons/line mile)	0.1970	0.2064	0.2007	0.1976	0.1862	0.1855	CH4 (mt).
2.2.1	CH4 Fugitive Methane Emissions from Gas Distribution Operations (MMSCF/year)	7.93	8.57	8.47	8.43	7.96	7.98	
2.3	Annual Natural Gas Throughput from Gas Distribution Operations in thousands of standard cubic feet (<i>Mscf/year</i>)	6,498,900	8,534,967	8,175,693	7,924,026	6,407,153	8,252,694	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)	6,174	8,108	7,767	7,528	6,087	7,840	
2.4	Fugitive Methane Emissions Rate (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	0%	0%	0%	0%	0%	0%	Calculated annual metric: (MMSFC methane emissions/MMSCF methane throughput)



Parent Company: NorthWestern Corp
Operating Company(s): NorthWestern Energy
Business Type(s): >15% Vertically Integra

>15% Vertically Integrated and remaining T&D only

NorthWestern Energy - Nebraska only

State(s) of Operation: Nebraska
Regulatory Environment: Regulated
Report Date: 7/28/24

		Baseline	Calendar Year					
Ref. No.	Refer to the "Definitions" column for more information on each metric.	2012	2019	2020	2021	2022	2023	Definitions
	Natural Gas Transmission and Storage							
	· · · · · · · · · · · · · · · · · · ·							All methane leak sources per 98.232 (e) (1-8), (f)(1-8), and (m) are
								included for Transmission and Storage. Combustion sources are
								excluded. CO 2 and N 2 O are excluded.
0.1	Transmission Line Miles	0	0	0	0	0	0	
1	Onshore Natural Gas Transmission Compression Methane Emissions							Fugitive Methane emissions as defined in 40 CFR 98 Sub W Section 232 (e) (1-8),
1.1.1	Pneumatic Device Venting (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	CO2 and N2O emissions are excluded from this section. Value reported using calculation in 40 CFR 98 Sub W Section 236(b)(4)
1.1.2	Blowdown Vent Stacks (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(i)(1)(iii)
1.1.3	Transmission Storage Tanks (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(k)(2)(v)
1.1.4	Flare Stack Emissions (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(n)(11)
1.1.5	Centrifugal Compressor Venting (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(o)(2)(ii)(D)(2)
1.1.6	Reciprocating Compressor Venting (metric tons/year)							Value reported using calculation in 40 CFR 98 Sub W Section 236(p)(2)(ii)(D)(2)
1.1.0	Reciprocating Compressor Venting (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	value reported using calculation in 40 Cr N 30 Sub W Section 250(p)(2)(ii)(0)(2)
1.1.7	Equipment leaks from valves, connectors, open ended lines, pressure relief	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
	valves, and meters (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	
1.1.7.B	Equipment Leaks per Transmission Line Mile (metric tons / transmission	0.0	0.0	0.0	0.0	0.0	0.0	
1.1.8	line miles) Other Leaks (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
1.1.8.B	Other leaks per Transmission Line Mile (metric tons / transmission line							·
	miles)	0.0	0.0	0.0	0.0	0.0	0.0	
1.1.9.B	Total Leaks per Transmission Line Mile (metric tons / transmission line		0.0	0.0	0.0		2.2	
	miles)	0.0	0.0	0.0	0.0	0.0	0.0	
1.2	Total Transmission Compression Methane Emissions (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	
1.2.B	Total Transmission Compression Methane Emissions per Transmission Line	0.0	0.0	0.0	0.0	0.0	0.0	
4.0	Mile (metric tons / trans. line miles)							
1.3 1.4	Total Transmission Compression Methane Emissions (CO2e/year) Total Transmission Compression Methane Emissions (MSCF/year)	0.0	0.0	0.0	0.0	0.0	0.0	Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36
	· · · · · · · · · · · · · · · · · · ·	0.0	0.0	0.0	0.0	0.0	0.0	
2	Underground Natural Gas Storage Methane Emissions							<u>Fugitive Methane</u> emissions as defined in 40 CFR 98 Sub W Section 232 (f) (1-8), CO2 and N2O emissions are excluded from this section.
2.1.1	Pneumatic Device Venting (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(b)(4)
2.1.2	Flare Stack Emissions (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(n)(11)
2.1.3	Centrifugal Compressor Venting (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(o)(2)(ii)(D)(2)
2.1.4	Reciprocating Compressor Venting (metric tons/year)							Value reported using calculation in 40 CFR 98 Sub W Section 236(p)(2)(ii)(D)(2)
2.1.4	reciprocating compressor venting (metric tons) year)	0.0	0.0	0.0	0.0	0.0	0.0	Tallac reported asing calculation in 10 cm 30 sab to section 250(p)(2)(ii)(0)(2)
2.1.5	Equipment leaks from valves, connectors, open ended lines, pressure relief			0.0	0.0		2.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
	valves, and meters (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	
2.1.6	Other Equipment Leaks (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
2.1.7	Equipment leaks from valves, connectors, open-ended lines, and pressure			0.0			2.2	Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v)
	relief valves associated with storage wellheads (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	
2.1.8	Other equipment leaks from components associated with storage	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 232(q)(2)(v)
2.2	Total Storage Compression Methane Emissions (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	
2.3	Total Storage Compression Methane Emissions (CO2e/year)	0.0	0.0	0.0	0.0	0.0	0.0	
2.4	Total Storage Compression Methane Emissions (MSCF/year)	0.0	0.0	0.0	0.0	0.0	0.0	Density of Methane = 0.0192 kg/ft3 per 40 CFR Sub W EQ. W-36
3	Onshore Natural Gas Transmission Pipeline Blowdowns							Blowdown vent stacks for onshore transmission pipeline as defined in 40 CFR 98 Sub
								W Section 232 (m), CO2 and N2O emissions are excluded from this section.
3.1	Transmission Pipeline Blowdown Vent Stacks (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	Value reported using calculation in 40 CFR 98 Sub W Section 232(i)(3)(ii)
3.2	Transmission Pipeline Blowdown Vent Stacks (CO2e/year)	0.0	0.0	0.0	0.0	0.0	0.0	
3.3	Transmission Pipeline Blowdown Vent Stacks (MSCF/year)	0.0	0.0	0.0	0.0	0.0	0.0	
				I			I	



Parent Company:
Operating Company(s):

NorthWestern Corp NorthWestern Energy

Business Type(s): >15% Vertically Integrated and

remaining T&D only

State(s) of Operation: Nebraska
Regulatory Environment: Regulated
Report Date: 7/28/24

NorthWestern Energy - Nebraska only

		Baseline	Calendar Year					
Ref. No.	Refer to the "Definitions" column for more information on each metric.	2012	2019	2020	2021	2022	2023	Definitions
4	Other Non-Sub W Emissions Data (OPTIONAL)							(OPTIONAL) If desired, report additional sources required by ONE Future include dehydrator vents, storage station venting transmission pipeline leaks, and storage tank methane.
4.1	Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (metric tons/year)	0.0	0.0	0.0	0.0	0.0	0.0	
4.2	Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (CO2e/year)	0.0	0.0	0.0	0.0	0.0	0.0	
4.3	Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (MSCF/year)	0.0	0.0	0.0	0.0	0.0	0.0	
5	Summary and Metrics							
5.1	Total Transmission and Storage Methane Emissions (MMSCF/year)	0.0	0.0	0.0	0.0	0.0	0.0	
5.2	Annual Natural Gas Throughput from Gas Transmission and Storage	0.0	0.0	0.0	0.0	0.0	0.0	EIA 176 throughput or other reference for other throughput selected
5.2.1	Annual Methane Gas Throughput from Gas Transmission and Storage Operations (MMSCF/year)	0.0	0.0	0.0	0.0	0.0	0.0	Methane content in natural gas equals 95% based on 40 CFR 98 Sub W 233(u)(2)(vii)
5.3	Methane Emissions Intensity Metric (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	Missing Data	
	Natural Gas Gathering and Boosting		L					
1	METHANE EMISSIONS							
1.1	Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions							
1.1.1	Total Miles of Gathering Pipeline Operated by gas utility (miles)							
1.1.2	Volume of Gathering Pipeline Blow Down Emissions (scf)							This metric is collected to support calculations under EPA 40 CFR 98, Subpart W.
1.1.4	Gathering Pipeline Blow-Down Emissions outside storage and compression							
2	CO2e COMBUSTION EMISSIONS FOR GATHERING & BOOSTING COMPRESSION							
2.1	CO2e Emissions for Gathering & Boosting Compression Stations (metric tons)							CO2 combustion emissionsas reported to EPA under 40 CFR 98, Subpart C, as directed in Subpart W, 98.232(k).
3	CONVENTIONAL COMBUSTION EMISSIONS FROM GATHERING & BOOSTING COMPRESSION							
3.1	Emissions reported for all permitted sources (minor or major)							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 (metric tons per year)							
3.1.2	VOC (metric tons per year)							
		l .	1	I	l .			