

AGA Voluntary Sustainability Metrics: Quantitative Information - DE Gas Utilities

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Parent Company: Dominion Energy Inc
Operating Company(s): DEUWI, DETI, DEOH, DEWV, DECGT, DEQP, DEWexpro
Business Type(s): Vertically integrated
State(s) of Operation: VA, PA, WV, OH, MD, NY, SC, UT, WY, ID, CO
Regulatory Environment: Regulated and Unregulated
Note: Data from operating companies is rolled up to the corporate level.
Report Date: 30-Nov-18

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

1 METHANE EMISSIONS AND MITIGATION FROM DISTRIBUTION MAINS					
1.1	Number of Gas Distribution Customers	2,255,507		For all EPA-reported distribution companies	
1.2	Distribution Mains in Service	40,834	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.	For all EPA-reported distribution companies	
1.2.1	Plastic (miles)	23,088		For all EPA-reported distribution companies	
1.2.2	Cathodically Protected Steel - Bare & Coated (miles)	12,116		For all EPA-reported distribution companies	
1.2.3	Unprotected Steel - Bare & Coated (miles)	5,598		For all EPA-reported distribution companies	
1.2.4	Cast Iron / Wrought Iron - without upgrades (miles)	31		For all EPA-reported distribution companies	
1.3	Plan/Commitment to Replace / Upgrade Remaining Miles of Distribution Mains (# years to complete)	15	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.		
1.3.1	Unprotected Steel (Bare & Coated)	15		This metric should be the longest period of all distribution companies.	DEUT replaced all unprotected steel and cast iron over 10 years ago.
1.3.2	Cast Iron / Wrought Iron	15		This metric should be the longest period of all distribution companies.	DEUT replaced all unprotected steel and cast iron over 10 years ago.
2 Distribution CO2e Fugitive Emissions					
2.1	CO2e Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	800,728	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.	Reports fugitive methane emissions only - Does not include CO2 emissions which are included in the Dominion Energy EEI submission (801,804).	
2.1.a	Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	32,029		Methane emissions from EPA-reported LDCs DEUT, DEWV, and DEOH.	
2.2	Natural Gas Throughput from Gas Distribution Operations in thousands of scf	511,578,083		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	CO2e Fugitive Methane Emissions Rate (metric tons per thousands scf of Throughput)	0.0016			2.1 divided by 2.2
2.3a	Fugitive Methane Emissions Rate (metric tons methane per methane content of the above mscf of Throughput)	0.34%		(Row 2.1a divided by density of CH4)/(Row 2.2 times 0.95 percent CH4 in gas)	

NATURAL GAS TRANSMISSION & STORAGE

1.2 Transmission Pipelines, Blow Down Volumes, and Fugitive Emissions				
1.2.1	Total Miles of Transmission Pipeline Operated by gas utility (miles)	-		No DE utilities report under this segment.
1.2.2	Volume of Transmission Pipeline Blow Down Emissions - outside storage and compression facilities (metric tons of CO2e):		As reported to EPA under 40 CFR 98, Subpart W.	
1.2.2.1	scf of natural gas		Not reported to EPA	
1.2.2.3	metric tons CO2e	-		No DE utilities report under this segment.
1.3 Underground Natural Gas Storage Emissions				
1.3.2	Storage Compressor Station Emissions (metric tons CO2e)	3,917	As reported to EPA under 40 CFR 98, Subpart W.	Total EPA-reported DEOH storage station emission(Chip & Robinson) minus wellhead emissions. Only the DEOH storage facilities are technically within a utility.
1.3.3	Storage Facility Wellhead Component Fugitive Emissions (metric tons of CO2e)	1,764	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.	Total EPA-reported DEOH storage wellhead emissions (Chip & Robinson). Only the DEOH storage facilities are a gas utility.
2 CO2e EMISSIONS FOR TRANSMISSION AND STORAGE COMPRESSION				
2.1	CO2e Emissions for Transmission Pipelines (metric tons)	-	CO2 combustion emissions as reported to EPA under 40 CFR 98, Subpart C and methane emissions stated as CO2e as reported under Subpart W.	DE gas utilities do not report transmission compressor station emissions.
2.2	CO2e Emissions for Storage Facilities (metric tons)	42,007	CO2 combustion emissions as reported to EPA under 40 CFR 98, Subpart C and methane emissions stated	Total EPA-reported DEOH storage station emission including Subpart C.
3 CONVENTIONAL AIR EMISSIONS FROM TRANSMISSION AND STORAGE 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)	206		From DEOH (Chip, Robinson, and Switzerland)
3.1.2	VOC (metric tons per year)	63		From DEOH (Chip, Robinson, and Switzerland)

NATURAL GAS GATHERING & BOOSTING

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)	838		DEOH is the only EPA-reported G&B utility facility.
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.	not reported to EPA
1.1.4	Gathering Pipeline Blow-Down Emissions outside storage and compression facilities (metric tons CO2e)	84		DEOH is the only EPA-reported G&B utility facility.
2 CO2e COMBUSTION EMISSIONS FOR GATHERING & BOOSTING COMPRESSION				

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2.1	CO2e Emissions for Gathering & Boosting Compression Stations (metric tons)	43,108	CO2 combustion emissions as reported to EPA under 40 CFR 98, Subpart C, as directed in Subpart W,	There is no Subpart C for G&B. Combustion emissions are reported under Subpart W. The
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)	0		G&B stations are too small to have air permits.
3.1.2	VOC (metric tons per year)	0		G&B stations are too small to have air permits.

Dominion Energy **Utility and Non-Utility T&S** Voluntary Sustainability Metrics: Quantitative Information

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Parent Company: Dominion Energy Inc (Transmission and Storage)
Operating Company(s): DETI, DECGT, DEQP, DEOH
Business Type(s): Vertically integrated
State(s) of Operation: VA, PA, WV, OH, MD, NY, SC, UT, WY, CO
Regulatory Environment: Unregulated
Note: Data from operating companies is rolled up to the corporate level.
Report Date: 30-Nov-18

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METHANE EMISSIONS FROM NATURAL GAS TRANSMISSION & STORAGE					
1	Transmission Pipelines Blowdowns (between compressor station)				
1.1	Transmission Pipeline Miles Represented in EPA Subpart W Transmission Pipeline Blowdown Reports		3,887	As reported to EPA under 40 CFR 98, Subpart W.	DETI is the only company that triggered the GHGRP, Subpart W, threshold in
1.2	Transmission Pipeline Blowdowns (metric tons CH4)		7,617	As reported to EPA under 40 CFR 98, Subpart W.	DETI only
1.3	Transmission Pipeline Natural Gas Throughput (mscf)		3,592,799,547	As reported to EPA under 40 CFR 98, Subpart W, Quantity of natural gas received at all custody transfer stations in the calendar year (mscf) plus net storage withdrawals.	DETI only
1.4	Methane Intensity of Blowdowns along Transmission Pipelines (between compressor stations)		0.01%	(Row 1.2 divided by density of CH4)/(Row 1.3 times 0.95 percent CH4 in gas)	Matches what is in Methane Management Report updated in May 2018 with 2017 data for intensity calculations.
2	Transmission & Storage Compressor Stations				
2.1	Number of Stations represented in EPA Subpart W T&S Reports		28	As reported to EPA under 40 CFR 98, Subpart W, counting each station separately, even if reporting with another station as a co-located facility.	20 Transmission Stations, 8 Storage, from DETI, DECGT, DEOH, and DEQP
2.2	Transmission & Storage Compressor Station Emissions (metric tons CH4)		3,886	As reported to EPA under 40 CFR 98, Subpart W, CH4 only.	Total EPA-reported DETI, DCGT, DEQP and DEOH T&S station CH4 emissions. The number is equivalent to what is in the Methane Report (page 8). However, please note that units are in metric tons CH4 here; whereas in Methane Report (page 8), emissions have been converted to mscf of CH4 (i.e., metric tons CH4 divided by density).
2.3	Storage Pool Wellhead Component Fugitive Emissions (metric tons CH4)		325	Utilizing EPA emissions factors, as reported to EPA under Subpart W, 40 CFR 98.236, on the e-GRRR integrated reporting form, "Equipment Leaks Surveys and Population Counts [98.236 (g, r)]" tab.	Total EPA-reported DETI and DEQP and DEOH storage station wellhead CH4 emissions.
2.3	Transmission and Storage Station Combined Natural Gas Throughput (mscf)		3,591,972,569	As reported to EPA under 40 CFR 98, Subpart W, Quantity of natural gas received at all custody transfer stations in the calendar year (mscf).	The number is equivalent to what is in the Methane Report (page 8). However, please note that units are in mscf of gas here; whereas in Methane Report (page 8) the throughput was converted to mscf of CH4 (i.e. 95% of gas).
2.4	Methane Intensity from T&S Compressor Stations		0.01%	(Row 2.2 divided by density of CH4)/(Row 2.3 times 0.95 percent CH4 in gas)	Matches what is in Methane Management Report updated in May 2018 with 2017 data for intensity calculations.

Dominion Energy **Utility and Non-Utility Gathering** Voluntary Sustainability Metrics: Quantitative Information

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Parent Company: Dominion Energy Inc (Gathering & Boosting)
Operating Company(s): DETI, DEOH, DEWexpro
Business Type(s): Vertically integrated
State(s) of Operation: PA, WV, UT, WY, CO
Regulatory Environment: Unregulated
Note: Data from operating companies is rolled up to the corporate level.
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Ref. No.	Refer to the "Definitions" column for more information on each metric.	2017	Definitions	Comments, Additional Information
METHANE EMISSIONS FROM NATURAL GAS GATHERING & BOOSTING				
1	Gathering and Boosting Basin Emissions			
1.1	Gathering Pipeline Miles represented in EPA Subpart W G&B Reports	4067	<i>As reported to EPA under 40 CFR 98, Subpart W.</i>	<i>For EPA-reported G&B basins reported under DETI, DEOH, and DEWexpro</i>
1.2	Number of geologic basin represented in EPA Subpart W G&B Reports	3	<i>As reported to EPA under 40 CFR 98, Subpart W.</i>	<i>Green River Basin (535), Appalachian Basin (160), and Appalachian Basin (Eastern Overthrust) (160A)</i>
1.3	Gathering and Boosting Emissions (metric tons CH4)	2,768	<i>As reported to EPA under 40 CFR 98, Subpart W, CH4 only.</i>	<i>For EPA-reported G&B basins reported under DETI, DEOH, and DEWexpro. The number is equivalent to what is in the Methane Report (page 8). However, please note that units are in metric tons CH4 here; whereas in Methane Report (page 8), emissions have been converted to mscf of CH4 (i.e., metric tons CH4 divided by density).</i>
1.4	Throughput of Natural Gas through Gathering & Boosting	362,442,426	<i>Gas received by G&B facilities, as reported to EPA under 40 CFR 98, Subpart W.</i>	<i>For EPA-reported G&B basins reported under DETI, DEOH, and DEWexpro. The number is equivalent to what is in the Methane Report (page 8). However, please note that units are in mscf of gas here; whereas in Methane Report (page 8) the throughput was converted to mscf of CH4 (i.e. 95% of gas).</i>
1.5	Methane Intensity of Gathering & Boosting	0.04%	<i>(Row 2.2 divided by density of CH4)/(Row 2.3 times 0.95 percent CH4 in gas)</i>	<i>Matches what is in Methane Management Report updated in May 2018 with 2017 data for intensity calculations.</i>