

SDG&E, June 15th, 2023
 Rulemaking 03-15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno,
 In Response to Data Request, R13-01-008, 2023 June Report
 Appendix B, Rev. 03/09/2023

Notes:
 Please round all natural gas emissions to nearest Mscf.

Summary Tables:

System Category	Emission Source Category	Fugitive or Vented	For Informational and Reference Purposes Only - Original 2013 Baseline Emissions (Mscf)	Approved 2013 Baseline Emissions (Mscf)	Proposed Adjusted 2013 Baseline Emissions (Mscf)	2021 Total Annual Volume of Leaks & Emissions (Mscf)	2021 Total Annual Count of Leaks & Emission Items	2022 Total Annual Volume of Leaks & Emissions (Mscf)	2022 Total Annual Count of Leaks & Emission Items	Emission Change for Year Over Year Comparison from 2021 to 2022 (Mscf)	Percentage Change for Year Over Year Comparison from 2021 to 2022	Count Change for Year Over Year Comparison from 2021 to 2022	Percentage Change for Year Over Year Comparison from 2021 to 2022	Emission Change for Year Over Year Comparison from 2013 to 2022 (Mscf)	Percentage Change for Year Over Year Comparison from 2013 to 2022	Explanation for Significant Percentage Change for Year Over Year Comparison from 2021 to 2022
Transmission Pipelines	Pipeline Leaks	Fugitive	87	87	82	Leak count: 0 Total System Message: 215	82	Leak count: 0 Total System Message: 215	0	(1)	(1.2%)	(0)	(0.0%)	-6	(6.9%)	
	All Damages	Fugitive	0	0	0	Number of emission items: 0	0	Number of emission items: 0	0	0.0%	0.0%	0	0.0%	0	0.0%	
	Blowdowns	Vented	1,426	1,426	75	Number of blowdown events: 213	181	Number of blowdown events: 239	58	0.0%	0.0%	58	0.0%	58	0.0%	Blowdown emissions are a function of activity level. Blowdown volume varies by activity. Increased project activity during 2022 resulted in an increased number of blowdowns relative to 2021.
	Component Vent Emissions	Vented	0	0	180	Number of devices: 18	180	Number of devices: 28	100	141.3%	571	77	12.2%	3,245	(101.7%)	
	Component Fugitive Leaks	Fugitive	N/A	N/A	0	Number of leaks: 5	0	Number of leaks: 1	0	NA	NA	(1)	(100.0%)	NA	NA	L-2400 was under construction during 2022, which contributed to the reduced number of leaks.
Transmission M&E Stations	Odors	Vented	2	2	88	Number of units: 27	89	Number of units: 27	1	1.1%	0	0.0%	87	4,850.0%		
	Station Leaks & Emissions	Fugitive	22,216	22,216	21,792	Number of facilities: 16	21,792	Number of facilities: 16	-424	(1.9%)	-424	(1.9%)	-424	(1.9%)	The 2021 count was revised to account for 3 test facilities that were inadvertently left out of the count last year. Both were blind flanged for all of 2021 and 2022 Emission Years.	
	Blowdowns	Vented	31	31	2	Number of blowdown events: 130	2	Number of blowdown events: 261	259	1992.3%	259	1992.3%	259	1992.3%	Blowdown volume varies by activity, depending on the type of work performed.	
Transmission Compressor Stations	Compressor Emissions	Vented	1,202	1,202	2,056	Number of compressors: 10	2,074	Number of compressors: 10	872	72.5%	872	72.5%	872	72.5%	Blowdown emissions are a function of activity level. Blowdown volume varies by activity. Increased project activity during 2022 resulted in an increased number of blowdowns relative to 2021.	
	Compressor Leaks	Fugitive	NA	NA	N/A	Number of leaks: 0	NA	Number of leaks: 0	NA	NA	NA	NA	NA	NA	NA	
	Blowdowns	Vented	1,956	1,956	3,201	Number of blowdown events: 284	963	Number of blowdown events: 284	879	44.9%	879	44.9%	879	44.9%	Blowdown volume varies by activity, depending on the type of work performed.	
	Component Vent Emissions	Vented	NA	887	336	Number of devices: 16	336	Number of devices: 16	(2,338)	(100.0%)	35	2.6%	(2,995)	(100.0%)	Observation emission flares depending on the level of odorant in the gas and the volume of gas flow. Please note that it was identified that analyzers were missing from the 2021 count during the 2022 data review. The 2021 count and emissions volume were updated for an accurate year-over-year comparison.	
	Component Fugitive Leaks	Fugitive	1,085	2,913	144	Number of leaks: 20	136	Number of leaks: 17	(1)	(16.8%)	(1)	(15.6%)	(2,788)	(100.0%)	The decrease in emissions and leak counts can be attributed to the continued efforts to detect and repair leaks (L-100) from during quarterly O&M and Leak Risk surveys.	
Distribution Main & Service Pipelines	Storage Tank Leaks & Emissions	Vented	3	3	5	Number of emission items: 34	0	Number of emission items: 5	5	(1)	(10.0%)	(1)	(10.0%)	-3	(100.0%)	Emissions decreased year-over-year because fewer LNG tanks were operated in 2022 relative to 2021. Two tanks were in service during 2021, but only one tank was in service during 2022.
	Pipeline Leaks	Fugitive	33,730	8,668	11,110	Number of known leaks: 614 Estimated number of unknown leaks: 91 Total number of leaks: 705	12,020	Number of known leaks: 708 Estimated number of unknown leaks: 154 Total number of leaks: 822	910	8.2%	117	16.6%	3,352	38.7%	Emissions from known leaks were approximately equal year-over-year. However, because more leaks were found during 2022 surveys, then 2021 surveys, the estimated volume of emissions from unknown leaks during 2022 is higher than 2021. The increase in the number of leaks found during survey can be attributed to covering more mileage during 2022 than 2021. Approximately 400 additional miles were surveyed in 2022.	
	All Damages	Fugitive	8,894	8,894	8,827	Number of damages: 385	9,169	Number of damages: 347	(388)	(4.4%)	(388)	(4.4%)	(388)	(4.4%)	Emissions increased by 3.5% year-over-year. However, the number of damage events decreased by 9.9% from 385 to 347, and the number of 813 Bikes increased by more than 25,000. The increase in emissions can be attributed to one survey line damage that released 1,332 Mscf. The leak was classified as an expansion damage and was repaired within one day.	
	Blowdowns	Vented	45	45	26	Number of blowdown events: 290	41	Number of blowdown events: 296	250	612.0%	250	612.0%	250	612.0%	Blowdown counts and emissions are a function of activity level. Blowdown volume varies by activity. Increased project activity during 2022 resulted in an increased number of blowdowns relative to 2021.	
	Component Vent Emissions	Vented	0	0	0	Number of devices: 0	0	Number of devices: 0	0	0.0%	0	0.0%	0	0.0%		
Distribution M&E Stations	Component Fugitive Leaks	Fugitive	0	0	0	Number of leaks: 0	0	Number of leaks: 0	0	0.0%	0	0.0%	0	0.0%		
	Station Leaks & Emissions	Fugitive	80,978	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	All Damages	Fugitive	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Blowdowns	Vented	16	16	16	Number of blowdown events: 2,660	17	Number of blowdown events: 2,779	119	4.5%	119	4.5%	119	4.5%	Distribution M&E blowdowns are a function of inspection activity level and can vary year-over-year. There were more inspections and more blowdown events in 2022 relative to 2021.	
	Component Emissions	Vented	NA	0	0	Number of emission items: 0	0	Number of emission items: 0	0	0.0%	0	0.0%	0	0.0%	SDG&E's efforts to reduce emissions through increased greening and awareness of safety during inspections may be contributing to the lower leak rate.	
Customer Meters	Component Leaks	Fugitive	NA	269	219	Number of leaks: 35	172	Number of leaks: 28	(77)	(21.3%)	(77)	(20.0%)	(77)	(100.0%)	The increase in emissions is due to the increasing number of meters in the system and the population-based emission estimation methodology.	
	Meter Leaks	Fugitive	126,261	126,261	131,936	Number of meters: 906,136	131,592	Number of meters: 1,184 Number of meters: 909,507	558	0.4%	3,773	0.4%	5,333	4.2%	Emissions associated with damages vary based on damage severity, damaged asset dimensions, and pressure. Between 2021 and 2022, the number of damage events increased from 145 to 154 annually, 15% of the 154 damages in 2022 were repaired within one day, and the remaining three damages were repaired within two days.	
	All Damages	Fugitive	NA	NA	395	Number of damages: 145	1,661	Number of damages: 154	96	108.9%	96	33.8%	96	33.8%	Customer Meter blowdowns are a function of activity level and can vary year to year. More O&M activities resulting in blowdowns took place in 2022 than 2021.	
Underground Storage	Vented Emissions	Vented	54	54	45	Number of blowdown events: 14,410	63	Number of blowdown events: 60,163	11	40.0%	6,753	12.6%	0	16.7%		
	Storage Leaks & Emissions	Fugitive	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Compressor Vent Emissions	Vented	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Component Vent Emissions	Vented	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Compressor and Component Fugitive Leaks	Fugitive	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Unusual Large Leaks	Component Vent Emissions	Vented	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Component Fugitive Leaks	Fugitive	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Total			282,046	178,996	160,551	NA	180,978	NA	NA	NA	0%	NA	NA	1,099	1.1%	

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Appendix 8; Rev. 03/30/2023

System Wide Leak Rate Data

1/1/2022 - 12/31/2022

The highlighted cells show the volumes that are summed together as the throughput for calculating the system wide leak rate.

Gas Storage Facilities:

Average Close of the Month Cushion Gas Storage Inventory (Mscf)	Average Close of the Month Working Gas Storage Inventory (Mscf)	Total Annual Volume of Injections into Storage (Mscf)	Total Annual Volume of Gas Used by the Gas Department (Mscf)	Total Annual Volume of Withdrawals from Storage (Mscf)	Explanatory Notes / Comments

Transmission System:

Total Annual Volume of Gas Used by the Gas Department (Mscf)	Total Annual Volume of Gas Transported to or for Customers* in State (Mscf)	Total Annual Volume of Gas Transported to or for Customers* out of State (Mscf)	Total Annual Volume of Gas Transported to utility-owned or third-party storage fields for injection into storage (Mscf)	Explanatory Notes / Comments
309,974	102,195,275			

Distribution System:

Total Annual Volume of Gas Used by the Gas Department (Mscf)	Total Annual Volume of Gas Transported to or for Customers* in State (Mscf)	Total Annual Volume of Gas Transported to or for Customers* out of State (Mscf)	Explanatory Notes / Comments
102,365	98,974,469		

*The term customers includes anyone that the utility is transporting gas for, including customers who purchase gas from the utility.

Customers can be anyone including residential, businesses, other utilities, gas transportation companies, etc.

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Summary Tables:

Natural Gas Properties	Average Mole Percent	Explanatory Notes / Comments
Methane	94.41	Rainbow
Carbon Dioxide	0.69	Rainbow
Ethane	3.71	Rainbow
C3+	0.17	Rainbow
C6+	0.003	Rainbow
Oxygen	0.2	Estimated up to limit, Not Tested
Hydrogen		Not Tested
Sulfur	0.00017	Rainbow
Water	0.0147	Estimated to limit
Carbon Monoxide		Not Tested
Particulate Matter		Not Tested
Inert Gas	1.7	Rainbow
Odorant	0.000107	Estimated guideline rate