



Lodi Gas Storage, L.L.C.
A Rockpoint Gas Storage Company
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June 14, 2024

Mr. Gary Ermann
Safety Policy Division
California Public Utilities Commission
505 Van Ness Ave.
San Francisco, CA 94102
Gary.Ermann@cpuc.ca.gov

VIA ELECTRONIC MAIL

**RE: Lodi Gas Storage, L.L.C.
R15-01-008 2024 Annual Report**

Dear Mr. Ermann:

Lodi Gas Storage, L.L.C. (LGS) respectfully submits this 2024 Annual Report to the California Public Utilities Commission (CPUC) pursuant to R15-01-008. The attached 2024 Annual Report is comprised of this cover letter and the following documents:

- Supplemental Questionnaire R.15-01-008 2024 Annual Report
- Appendix 1 – Transmission Pipelines
- Appendix 7 – Underground Storage
- Appendix 8 – Summary Tables

If you have any questions, or require more information, please contact me at greg.clark@rockpointgs.com or at (209) 368-9277 x3.

Sincerely,

Gregory N. Clark
Senior Compliance Manager

Enclosures (Supplemental Questionnaire, Appendix 1, Appendix 7, Appendix 8)

cc: File #S3.03
C. Fehrenbacher (Christian.Fehrenbacher@arb.ca.gov)
A. Mrowka (Andrew.Mrowka@arb.ca.gov)
A. Anderson, J. Bartlett, M. Fournier, K. Peterson, G. Salazar (via e-mail)

SUPPLEMENTAL QUESTIONNAIRE

R.15-01-008, 2024 Annual Report

Lodi Gas Storage, L.L.C.

Rulemaking (R.) 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 partial fulfillment of Rulemaking (R.) 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 R15-01-008, 2024 Annual Report

Date: 6/14/24

The following data have been prepared to comply with Senate Bill 1371 (Leno, 2014), Section 2, Article 3, Order Instituting Rulemaking (OIR) 15-01-008, and to provide responses to Data Request R. 15-01-008, 2024 Annual Report.

1. Please provide the following for the period from January 1, 2023 to December 31, 2023:
 - a. Describe any current projects or studies related to SB 1371.
 - b. Describe the activity changes between the previous year's reporting and the current year's reporting that affected the change in the total emissions. For example, changes in maintenance activities may have changed blowdown emissions from previous years and resulted in changes to total emissions.
 - c. Describe advances in abatement efforts, similar to the executive summary in the best practices reporting.
 - d. Describe improvements in reporting that are not discernable by reviewing the reporting data. For example, report the installation of a new data management or leak tracking system.
 - e. For smaller utilities, confirm if there were no leaks in distribution mains and services pipelines.
 - f. Identify any additional tables to be included in the Joint Report. Staff will place these tables in an appendix.
2. Does the utility propose a 2015 baseline adjustment or emission factor change? If so, please describe. Can the utility adhere to the following timeline:
 - a. Solicit Baseline Proposals: February 5 through April 30, 2024.
 - b. Agency Review Meetings: April 30 through July 31, 2024.
 - c. Final Decision by August 31, 2024.

Response:

1. The specific elements of the supplemental questionnaire data request are provided as follows:
 - a. Lodi Gas Storage, L.L.C. (LGS) did not have any projects or studies related to SB 1371 during the 2023 calendar year.
 - b. LGS experienced an increase in compressor runtime hours from 6,320 during the 2022 calendar year to 13,809 during the 2023 calendar year. This resulted in a year over year increase of compressor vented emissions equal to 5,056 MCF.
 - c. LGS has continued implementation of SB 1371 Best Practices during the 2023 calendar year, with the intent of minimizing methane emissions to the environment.
 - d. N/A – LGS did not implement improvements that are not discernable by reviewing the reporting data.

- e. N/A – LGS does not own or operate any distribution pipelines.
 - f. N/A – LGS did not include any additional tables in its R15-01-008 Annual Report. Please note that Appendix 1, Appendix 7, and Appendix 8 have been included as part of the R15-01-008 Annual Report.
2. Lodi Gas Storage, L.L.C. (LGS) proposes that its SB 1371 compressor emissions for the 2015 baseline year be adjusted to 2,383 Mscf.

Compressor emissions reported by LGS for the 2015 baseline year were significantly lower than measured emissions from subsequent years. LGS began measuring compressor emissions in 2017 in preparation for the CARB Oil & Gas Rule, which subsequently prescribed annual compressor emissions beginning in 2018. Therefore, the 2015 compressor emissions reported by LGS do not represent a true baseline condition.

LGS proposes applying the most recent measured emission factors from August 2023 to the 2015 data to determine the adjusted baseline values. Measured emissions have varied between 2017 – 2023, but the most recent measurements from August 2023 incorporate lessons learned from prior measurement events (e.g., best place to take the measurement) and should represent a more accurate SB 1371 compressor emissions baseline condition.

LGS has been corresponding with CPUC and CARB regarding this proposed baseline adjustment, and LGS can adhere to the following timeline:

- a. Solicit Baseline Proposals: February 5 through April 30, 2024.
- b. Agency Review Meetings: April 30 through July 31, 2024.
- c. Final Decision by August 31, 2024.

Lodi Gas Storage, L.L.C., June 14, 2024

Rulemaking (R.) 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, R15-01-008 - 2024 June Report
 Appendix 1; Rev. 03/29/2024

Notes:

Emissions included in the Report are based on miles of transmission pipeline. Therefore provide the miles of transmission pipeline in your system here.
 The following data on transmission pipeline leaks is for information purposes and will not be used to report transmission pipeline leak emissions this year.
 Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
 At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

Transmission Pipeline Leaks:

ID	Geographic Location	Pipe Material	Pipe Size (nominal)	Pipe Age (months)	Pressure (psi)	Leak Grade	Above Ground or Below Ground	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Scheduled Repair Date (MM/DD/YY)	Reason for Not Scheduling a Repair	Number of Days Leaking	Emission Factor (Mscf/Day)	Annual Emissions (Mscf)	Explanatory Notes / Comments
No transmission leaks in 2023															
													Sum total	0.00	

Lodi Gas Storage, L.L.C., June 14, 2024

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In Response to Data Request, R15-01-008 - 2024 June Report

Appendix 1; Rev. 03/29/2024

Notes:

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Transmission Pipeline Damage (3rd party dig-ins, natural disasters, etc.):

ID	Geographic Location	Damage Type	Pipe Material	Pipe Size (nominal)	Pipe Age (months)	Pressure (psi)	Leak Grade	Above Ground or Below Ground	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor (Mscf/Day)	Annual Emissions (Mscf)	Explanatory Notes / Comments
No 3rd party damage emissions in 2023														
Sum total												0.00		

Lodi Gas Storage, L.L.C., June 14, 2024

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Consistent with Senate Bill 1371, Leno.**

**In Response to Data Request, R15-01-008 - 2024 June Report
Appendix 1; Rev. 03/29/2024**

Notes:

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At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

The emissions reported under the column Methane Abatement (Mscf) are for information purposes only, and should be separated from the emissions reported under the column for Annual Emissions (Mscf).

Transmission Pipeline Blowdowns:

ID	Geographic Location	Number of Blowdown Events	Reason	Emission Reduction Strategy	Annual Emissions (Mscf)	Explanatory Notes / Comments	Methane Abatement (Mscf)
1	95220	4	M	PB	1.92	Preventive maintenance	0.00
2	94585	16	M	PB	400.07	Preventive maintenance	0.00

Total

401.99

Lodi Gas Storage, L.L.C., June 14, 2024

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Appendix 1; Rev. 03/29/2024**

Notes:
 Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
 At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange
 The emissions captured on this tab represent the emissions associated with the operational design and function of the component. Any intentional release of natural gas for safety or maintenance purposes should be included in the Blowdowns worksheet.

Transmission Pipeline Component Vented Emissions:

Total Number of Devices	Device Type	Bleed Rate	Manufacturer	Emission Factor (Mscf/day)	Annual Emission (Mscf)	Explanatory Notes / Comments
						No component vented emissions in 2023
				Sum total	0	

Lodi Gas Storage, L.L.C., June 14, 2024

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Appendix 1; Rev. 03/29/2024

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At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange

The emissions captured on this tab represent the emissions associated unintentional leaks that if repaired would not leaking. If the component is releasing gas or "bleeding" as a result of its design or function then it is not to be captured in this tab.

Transmission Pipeline Component Fugitive Leaks:

ID	Geographic Location	Device Type	Bleed Rate	Manufacturer	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor (Mscf/day)	Annual Emission (Mscf)	Explanatory Notes / Comments
									Sum total	0

No component leak emissions in 2023

Lodi Gas Storage, L.L.C., June 14, 2024
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At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

Transmission Pipeline Odorizers:

ID	Geographic Location	Number of Units	Emission Factor (Mscf/yr)	Annual Emission (Mscf)	Explanatory Notes / Comments
					No odorizer emissions in 2023
			Sum total	0	

Lodi Gas Storage, L.L.C., June 14, 2024

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In Response to Data Request, R15-01-008 2024 June Report
Appendix 7; Rev. 03/29/2024**

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange

Use the Population based emission factor if facility is not surveyed. Use Leaker based emission factor if facility is surveyed, and report only the found leaking components.

Underground Storage Facility Leaks and Emissions:

ID	Geographic Location	Source	Number of Sources	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor (Mscf/day/dev)	Annual Emissions (Mscf)	Explanatory Notes / Comments
LDAR Q2	95220 W/C		1	6/5/2023	6/5/2023	1	0.0288	0.0288	
LDAR Q2	95220 W/V		1	6/5/2023	6/5/2023	1	0.1080	0.1080	
LDAR Q2	94585 W/V		1	6/6/2023	6/7/2023	2	0.1080	0.2160	
LDAR Q3	94585 W/C		1	8/22/2023	8/22/2023	1	0.0288	0.0288	
LDAR Q4	94585 W/V		2	11/14/2023	11/16/2023	3	0.1080	0.6480	
Sum Total								1	

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Appendix 7; Rev. 03/29/2024

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
 At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.
 The emissions captured on this tab represent the emissions associated with the operational design and function of the compressor. Any intentional release of natural gas for safety or maintenance purposes should be included on the Blowdowns worksheet.

Previous Reporting Changes:

- 1) New Column for Measurement Frequency - See box comments.
- 2) Added new column for Emission Factor Measurement Date - Pressurized Operations.
- 3) Added a fourth compressor operating mode "Offline". In addition, a measurement of emissions (EF) should be taken during Offline mode, to ensure that no emissions are emanating from the system.
- 4) Alternate emissions measurement method, where applicable and measured by the operator.
- 5) Alternate emissions measurement method, where applicable and measured by the operator.
 - Blowdown and Isolation valves
- 6) Measure centrifugal compressor emissions additional column added for these emissions:
 - Dry seals
 - Wet seals
 - Wet seal oil degassing vents in Pressurized Idle mode

CFUC Staff strongly encourage more frequent measurement of the following compressor vented emissions. Compliance minimum is once annually, though Staff suggest the minimum frequency should be quarterly and measured at roughly the same time each quarter (e.g. on or around the component survey given mode of operation). More frequent measurements, e.g. monthly would be better due to the temporal changes in conditions that effect emissions. The more frequent measurements also provide an opportunity to detect worn rod packing or seals, which exacerbate emissions, and with timely awareness of suboptimal operations gas operators have an opportunity for accelerating maintenance to correct worn parts. The following steps for reporting more frequent measurements in 2019 are outlined in the adjacent cell, and should be provided if available.

The Columns P thru Y were added to the template and should be used for the indicated measured compressor emissions, which include Centrifugal compressors in accordance with OGR and your operating practice.

For the 2022 data reporting of compressor vented emissions:
 Where more than one measurement was taken during the year (e.g. after a maintenance cycle* monthly, or quarterly), use the measured EF multiplied by the activity hours that occurred during the corresponding period. For example, if the compressor measurement was taken quarterly, then the measured EF should be multiplied by the activity hours that occurred in the respective quarter, and the same for more frequent measurements (e.g. monthly, weekly etc.). For each compressor devote one row per measurement period (see example provided). In the case of a single annual measurement (EF), then that EF would apply to the activity hours for each respective mode for the entire year (which is consistent with prior year reporting practice).

* If a measurement is taken after a maintenance cycle and no other measurements were taken during the remainder of the year, then use this measured EF for the activity hours occurring after the measurement date thru 12/31/xx. The activity hours prior to the maintenance of the compressor from the beginning of the year should use the previously measured EF, even if the EF was measured in the prior year.

Use these EF columns as well as the columns for the Compressor Measurements noted in Columns Q thru T when they are applicable, the data is not captured by the operator, then add a note explaining why the applicable measurement data was not recorded or available in the Explanatory Notes / Comments column.

Transmission Compressor Vented Emissions:

ID	Geographic Location	Compressor Type	Prime Mover	Number of Cylinders	Number of Seals	Seal Type	Measurement Frequency	Emission Factor - Measurement Date - Pressurized Operations	Operating Mode: Pressurized Operating (hours)	Operating Mode: Pressurized Idle (hours)	Operating Mode: Depressurized Idle (hours)	Operating Mode: Offline (hours)	Emission Factor - Pressurized Operating (lb/d/yr)	Emission Factor - Pressurized Idle (lb/d/yr)	Emission Factor - Depressurized Idle (lb/d/yr)	Emission Factor - Rod Packing (lb/d/yr)		Emission Factor - Blowdown (Value lb/d/yr)		Annual Emissions (Metric)	Explanatory Notes / Comments	
																Pressurized Operating - Rod Packing (lb/d/yr)	Pressurized Idle - Rod Packing (lb/d/yr)	Pressurized Operating - Blowdown (Value lb/d/yr)	Pressurized Idle - Blowdown (Value lb/d/yr)			
1000	94585	R	C	4	4	W	A	8/21/2023	2870	5858	54	N/A	378	0	124	378	0	N/A	0	0	1,092	
2000	94585	R	C	4	4	W	A	8/21/2023	4082	4676	0	N/A	378	0	0	378	0	N/A	0	0	1,543	
3000	94585	R	C	4	4	W	A	8/21/2023	3423	5337	0	N/A	418	0	0	418	0	N/A	0	0	1,439	
4000	94585	R	C	6	6	W	A	8/21/2023	3434	5325	0	N/A	626	0	0	626	0	N/A	0	0	2,151	
Sum Total																				6,215		

Lodi Gas Storage, L.L.C., June 14, 2024

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Consistent with Senate Bill 1371, Leno.**

In Response to Data Request, R15-01-008, 2024 June Report

Appendix 7; Rev. 03/29/2024

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange

Underground Storage Blowdowns:

ID	Geographic Location	Source	Compressor Type	Number of Blowdown Events	Annual Emissions (Mscf)	Explanatory Notes / Comments
1000	94585 C		R	7	51.35	Preventive maintenance, Blowdown to fix LDAR leaks
2000	94585 C		R	2	11.45	Preventive maintenance, Blowdown to fix LDAR leaks
3000	94585 C		R	13	179.32	Preventive maintenance, Blowdown to fix LDAR leaks
4000	94585 C		R	7	80.67	Preventive maintenance, Blowdown to fix LDAR leaks

Sum Total **323**

Lodi Gas Storage, L.L.C., June 14, 2024

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In Response to Data Request, R15-01-008 2024 June Report

Appendix 7; Rev. 03/29/2024

Notes:

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At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange

The emissions captured on this tab represent the emissions associated with the operational design and function of the component. Any intentional release of natural gas for safety or maintenance purposes should be included on the Blowdowns worksheet.

Underground Storage Component Vented Emissions (See note above):

ID	Geographic Location	Device Type	Bleed Rate	Manufacturer	Pressure (psi)	Survey Date (MM/DD/YY)	Number of Days Emitting	Emission Factor, Engineering or Manufacturer's based Estimate of Emissions (Mscf/day)	Annual Emissions (Mscf)	Explanatory Notes / Comments
N/A										Quarterly LDAR conducted in 2023. Component leak emissions captured on Compressor & Component Leaks worksheet.
Sum Total									0	

Lodi Gas Storage, L.L.C., June 14, 2024

Rulemaking (R.) 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, R15-01-008 2024 June Report

Appendix 7; Rev. 03/29/2024

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange

The emissions captured on this tab represent the emissions associated unintentional leaks that if repaired would not leaking. If the component is releasing gas or "bleeding" as a result of its design or function then it is not to be captured in this tab.

Please include emissions from leaks found with concentrations below 10,000ppm, and include in the total emissions column. Please use the associated emission factors provided in Appendix 9, Emission Factors.

Underground Storage: Compressor and Component Fugitive Leaks (see note above):

12/31/2023 1/1/2023

ID	Geographic Location	Device Type	Bleed Rate	Manufacturer	Pressure (psi)	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Prior Survey Date (MM/DD/YY)	Number of Days Leaking	Emission Factor or Engineering Estimate (Mscf/day)	Emissions (Mscf)	Explanatory Notes / Comments
LDAR 2022	95220 V	NA	varies		1354	01/01/23	02/28/23	11/07/22	87	0.3562	30.81	Carryover leak from 2022. CARB Oil & Carryover leak from 2022. CARB Oil & Gas Rule Delay of Repair, leak not repaired by year end 2022. Includes 1 component.
LDAR 2022	95220 C	NA	varies		1354	01/01/23	05/10/23	11/07/22	158	0.1342	21.14	Carryover leak from 2022. CARB Oil & Gas Rule Delay of Repair, leak not repaired by year end 2022. Includes 1 component.
LDAR 2022	95220 V	NA	varies		1354	01/01/23	05/10/23	11/07/22	158	0.3562	56.10	component.
LDAR Q1	95220 V	NA	varies		1354	03/24/23	03/27/23	11/07/22	73	0.3562	51.65	Includes 2 components
LDAR Q1	95220 C	NA	varies		1354	03/24/23	03/27/23	11/07/22	73	0.1342	19.46	Includes 2 components
LDAR Q1	94585 V	NA	varies		1349	03/23/23	03/23/23	11/07/22	69	0.3562	98.31	Includes 4 components
LDAR Q1	94585 V	NA	varies		1349	03/23/23	08/30/23	11/07/22	229	0.3562	81.57	CARB Oil & Gas Rule Delay of Repair, includes 1 component.
LDAR Q1	94585 V	NA	varies		1349	03/23/23	12/31/23	11/07/22	352	0.3562	125.38	CARB Oil & Gas Rule Delay of Repair, leak not repaired by year end 2023. Includes 1 component.
LDAR Q1	94585 C	NA	varies		1349	03/23/23	04/06/23	11/07/22	83	0.1342	66.83	Includes 6 components
LDAR Q2	95220 V	NA	varies		1354	06/05/23	06/09/23	03/23/23	42	0.3562	29.92	Includes 2 components
LDAR Q2	94585 V	NA	varies		1349	06/06/23	06/07/23	03/23/23	40	0.3562	98.49	Includes 7 components
LDAR Q2	94585 V	NA	varies		1349	06/06/23	12/31/23	03/23/23	247	0.3562	87.80	CARB Oil & Gas Rule Delay of Repair, leak not repaired by year end 2023. Includes 1 component.
LDAR Q2	94585 C	NA	varies		1349	06/06/23	06/07/23	03/23/23	40	0.1342	15.90	Includes 3 components
LDAR Q3	95220 V	NA	varies		1354	08/18/23	08/21/23	06/05/23	41	0.3562	14.60	Includes 1 component
LDAR Q3	95220 C	NA	varies		1354	08/18/23	08/21/23	06/05/23	41	0.1342	22.01	Includes 4 components
LDAR Q3	94585 V	NA	varies		1349	08/22/23	08/30/23	06/05/23	48	0.3562	17.10	CARB Oil & Gas Rule Delay of Repair, includes 1 component.
LDAR Q3	94585 V	NA	varies		1349	08/22/23	08/24/23	06/05/23	42	0.3562	74.80	Includes 5 components
LDAR Q3	94585 C	NA	varies		1349	08/22/23	08/24/23	06/05/23	42	0.1342	50.73	Includes 9 components
LDAR Q4	95220 V	NA	varies		1354	11/13/23	12/31/23	08/18/23	93	0.3562	32.95	CARB Oil & Gas Rule Delay of Repair, leak not repaired by year end 2023. Includes 3 components.
LDAR Q4	95220 C	NA	varies		1354	11/13/23	11/15/23	08/18/23	47	0.1342	18.72	Includes 3 components
LDAR Q4	94585 V	NA	varies		1349	11/14/23	11/16/23	08/18/23	47	0.3562	133.93	Includes 8 components
LDAR Q4	94585 C	NA	varies		1349	11/14/23	11/16/23	08/18/23	47	0.1342	25.23	Includes 4 components

Sum Total **1,173**

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**In Response to Data Request, R15-01-008 2024 June Report
Appendix 7; Rev. 03/29/2024**

Pursuant to SB 1371, Leno - Natural gas: leakage abatement, the California Public Utilities Commission (CPUC) requests that the following information be transmitted to the CPUC and the California Air Resources Board (CARB):
Note - Definitions in Data Request, R15-01-008 2022 June Report

The following question in the above mentioned data request is answered using the spreadsheets in this Appendix (#7):
(6) Calculable or estimated emissions and non-graded gas leaks, as defined in Data Request R15-01-008 2022 June Report.

Notes:
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Underground Storage Dehydrator Vented Emissions:

ID	Geographic Location	Type of Dehydrator (Glycol or Desiccant)	Vapor Recovery Unit or Thermal Oxidizer (Y/N)	Annual Volume of Gas Withdrawn (Mscf)	Emission Factor (Y/N)	Engineering Estimate (Y/N)	Annual Emissions (Mscf)	Explanatory Notes / Comments
ZZZ-3300	95220	Glycol	Y	5,024,492.50	0	N	0	Petrex dehydrator with electric driven glycol circulation pumps
ZZZ-4300	95220	Glycol	Y	5,024,492.50	0	N	0	Petrex dehydrator with electric driven glycol circulation pumps
PHASE 1	94585	Glycol	Y	2,919,829.00	0	N	0	QB Johnson dehydrator with electric driven glycol circulation pumps
BBC-5150	94585	Glycol	Y	6,887,274.00	0	N	0	QB Johnson dehydrator with electric driven glycol circulation pumps
Sum Total							0	

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Notes:
 Please round all natural gas emissions to nearest Mscf.
 As a reminder, please use the latest version of each of the worksheets.

Summary Tables:

System Categories	Emission Source Categories	Fugitive or Vented	For Informational and Reference Purposes Only: Original 2015 Baseline Emissions (Mscf)	Approved 2015 Baseline Emissions (Mscf)	Proposed Adjusted 2015 Baseline Emissions (Mscf)	2022 Total Annual Volume of Leaks & Emissions (Mscf)	2022 Total Annual Count of Leak & Emission Items	2023 Total Annual Volume of Leaks & Emissions (Mscf)	2023 Total Annual Count of Leak & Emission Items	Emission Change for Year Over Year Comparison from 2022 to 2023 (Mscf)	Percentage Change for Year Over Year Comparison from 2022 to 2023	Count Change for Year Over Year Comparison from 2022 to 2023	Percentage Change for Year Over Year Comparison from 2022 to 2023	Emission Change for Year Over Year Comparison from 2015 to 2023 (Mscf)	Percentage Change for Year Over Year Comparison from 2015 to 2023	Explanation for Significant Percentage Change for Year Over Year Comparison from 2022 to 2023
Transmission Pipelines	Pipeline Leaks	Fugitive	126	126		0		0		-	#DIV/0!	-	#DIV/0!	-126	(100.0%)	
	All Damages	Fugitive								-	#DIV/0!	-	#DIV/0!	0	#DIV/0!	
	Blowdowns	Vented	87	87		9		402		393	4,366.7%	-	#DIV/0!	315	362.1%	Preventive maintenance, Pipeline inline inspections
	Component Vented Emissions	Vented								-	#DIV/0!	-	#DIV/0!	0	#DIV/0!	
	Component Fugitive Leaks	Fugitive								-	#DIV/0!	-	#DIV/0!	0	#DIV/0!	
Transmission M&R Stations	Odorizers	Vented								-	#DIV/0!	-	#DIV/0!	0	#DIV/0!	
	Station Leaks & Emissions	Fugitive								-	#DIV/0!	-	#DIV/0!	0	#DIV/0!	
	Blowdowns	Vented								-	#DIV/0!	-	#DIV/0!	0	#DIV/0!	
Transmission Compressor Stations	Compressor Emissions	Vented								-	#DIV/0!	-	#DIV/0!	0	#DIV/0!	
	Compressor Leaks	Fugitive								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
	Blowdowns	Vented								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
	Component Vented Emissions	Vented								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
	Component Fugitive Leaks	Fugitive								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
Distribution Main & Service Pipelines	Storage Tank Leaks & Emissions	Vented								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
	Pipeline Leaks	Fugitive								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
	All Damages	Fugitive								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
	Blowdowns	Vented								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
	Component Vented Emissions	Vented								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
Distribution M&R Stations	Component Fugitive Leaks	Fugitive								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
	Station Leaks & Emissions	Fugitive								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
	All Damages	Fugitive								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
Customer Meters	Blowdowns	Vented								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
	Meter Leaks	Fugitive								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
	All Damages	Fugitive								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
Underground Storage	Vented Emissions	Vented								-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
	Storage Leaks & Emissions	Fugitive	0	0		448		1		(447)	(99.8%)	-	#DIV/0!	1.00	#DIV/0!	
	Compressor Vented Emissions	Vented	99	99	2383	1159		6215		5,056	436.2%	-	#DIV/0!	6,116.00	6,177.8%	Proposed baseline adjustment. Increased compressor runtime.
	Blowdowns	Vented	182	182		109		323		214	196.3%	-	#DIV/0!	141.00	77.5%	Preventive maintenance
	Component Vented Emissions	Vented	1144	1144	0	0		0		-	#DIV/0!	-	#DIV/0!	(1,144.00)	(100.0%)	The category "Component Leaks & Emissions" from baseline year was split. LGS does not capture emissions in this row.
Unusual Large Leaks	Compressor and Component Fugitive Leaks	Fugitive	0	0	1144	769		1173		404	52.5%	-	#DIV/0!	1,173.00	#DIV/0!	The category "Component Leaks & Emissions" from baseline year was split. LGS captures emissions in this row.
	Dehydrator Vent Emissions	Fugitive	0	0		0		0		-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
	(Description)									-	#DIV/0!	-	#DIV/0!	-	#DIV/0!	
	Total		1638			2494	NA	8114	NA	5,620	225%	NA	NA	6,476.00	395.4%	

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System Wide Leak Rate Data

1/1/2023 - 12/31/2023

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
11,770,000	19,552,408	25,952,432	427,801	19,856,088	

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
	19,856,088		25,952,432	Gas flow in transmission pipeline is bi-directional

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

*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		Natural gas meets PG&E specifications
Carbon Dioxide		Natural gas meets PG&E specifications
Ethane		Natural gas meets PG&E specifications
C3+		Natural gas meets PG&E specifications
C6+		Natural gas meets PG&E specifications
Oxygen		Natural gas meets PG&E specifications
Hydrogen		Natural gas meets PG&E specifications
Sulfur		Natural gas meets PG&E specifications
Water		Natural gas meets PG&E specifications
Carbon Monoxide		Natural gas meets PG&E specifications
Particulate Matter		Natural gas meets PG&E specifications
Inert Gas		Natural gas meets PG&E specifications
Odorant		Natural gas meets PG&E specifications