

## **SUPPLEMENTAL QUESTIONNAIRE**

### **R.15-01-008, 2023 Annual Report**

**[Southern California Gas Company]**

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, 2023 Annual Report

Date: [6/15/23]

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, 2023 Annual Report.

**1. Please provide the following for the period from January 1, 2022 to December 31, 2022:**

**a. Describe any current projects or studies related to SB 1371.**

Response:

Listed below are major initiatives and studies from SoCalGas's 2022 Compliance Plan. For additional details on projects and studies related to SB 1371, please refer to SoCalGas's 2022 Compliance Plan ([R. 15-01-008 – Natural Gas Leakage Abatement Rulemaking | SoCalGas](#)).

- Chapter 1 – Leak Inventory Reduction
- Chapter 2 – Increased Leak Survey
- Chapter 3 – Blowdown Reduction Activities
- Chapter 4 – Large Leak Prioritization
- Chapter 5 – Damage Prevention Algorithm and Proactive Intervention
- Chapter 6 – Advanced Meter Analytics Algorithm
- Chapter 7 – Record Keeping IT Project
- Chapter 8 – Geographic Tracking
- Chapter 9 – Competency Based Training Development
- Chapter 10 – Training Facility Enhancements
- Chapter 12 – Stationary Methane Detectors
- Chapter 13 – Electronic Leak Survey
- Chapter 14 – Aerial Monitoring
- Chapter 15 – Damage Prevention Public Awareness
- Chapter 16 – Pipe Fitting Specifications
- Chapter 17 – Repeat Offenders IT Systems
- Chapter 18 – Accelerated Leak Repair – Transmission
- Chapter 19 – Gas Speciation
- Chapter 20 – Public Leak Maps
- Chapter 22 – Vapor Collection Systems
- Chapter 23 – Distribution Above Ground Leak Survey
- Chapter 24 – Storage Above Ground Leak Survey
- Chapter 25 – Distribution Above Ground Leak Repair
- RD&D Summary #16 – Sub-Surface Migration Model and Plastic Piping Slow Crack Leak-Rate Growth
- RD&D Summary #17-1 – Evaluation of New Technologies for Leak Detection, Localization, and Specialization
- RD&D Summary #17-2 – Aerial Leak detection and Quantification Technologies
- RD&D Summary #18 – Evaluation of Stationary Methane Detectors
- RD&D Summary #20a-1 – Develop Company-Specific Emission Factors
- RD&D Summary #20a-2 – Evaluation of New Technologies for Leak Quantification

- RD&D Summary #20a-3 – Quantification of Through-Valve Leakage on Large Compressor Valves
- RD&D Summary #22 – Investigate Designs, Specifications, Tolerances and Sealing Compounds for Threaded Fittings and Joints
- RD&D Summary #23-1 Evaluation of Technologies to Mitigate Gas Blowdowns & Equipment Vented Emissions
- RD&D Summary #23-2 – Evaluate Component Emission Reductions Opportunities

**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.**

Response:

- **Transmission Pipeline Damages:** In 2022, one damage on a Transmission Pipeline released 25,100 Mscf of natural gas. This resulted in a 104,483.3% increase in emissions year-over-year because the previous year’s emissions were only 24 Mscf. The damage was caused by a 3<sup>rd</sup> party and was classified as an Other Outside Force damage. The leak was repaired within 24 hours.
- **Transmission Pipeline Blowdowns:** The volume of Transmission Pipeline blowdowns increased year-over-year by 47.5% or 6,062 Mscf. The increase can be attributed to increased project activity. Project teams continued to mitigate Pipeline blowdown emissions through cross compression, gas capture, project bundling, drafting, and thermal oxidation throughout the year.
- **Transmission M&R Station Leaks and Emissions:** SoCalGas estimates emissions for this category using a population-based emission factor. Emissions increased year-over-year by 4.5% due to an increased facility count. The count of Transmission-maintained Farm Taps increased from 472 to 492, and the count of Pressure Limiting Stations increased from 67 to 70. The count of Farm Taps increased because a district with 13 Taps was transferred from Distribution to Transmission, and an additional 7 taps were confirmed during field verifications. The reasons for the increase in the count of Pressure Limiting Stations are as follows:
  - 2 stations were transferred from Distribution to Transmission;
  - 2 additional stations were confirmed during field verifications; and
  - 1 station was removed from the count because it doesn’t have any pressure limiting equipment.
- **Transmission M&R Station Blowdowns:** The volume of Transmission M&R Station blowdowns increased year-over-year by 1,982 Mscf or 685.8%. The increase in emissions can be attributed to increased project activity at the stations during 2022 relative to 2021.
- **Transmission Compressor Station Compressor Emissions:** Emissions decreased year-over-year by 52.1%. The decrease can be attributed to lower average emission flow rate measurements during 2022 relative to 2021. The two rod

packing replacements completed as part of the CARB Oil and Gas program during 2021 helped contribute to the lower average emission flow rates during 2022.

- **Transmission Compressor Station Blowdowns:** The volume of Transmission Compressor Station blowdowns decreased year-over-year by 45.1%. The decrease in emissions can be attributed to increased project activity at the stations. Due to the increased project activity, equipment was out of service for extended periods of time, and the number of blowdowns from large equipment was reduced.
- **Transmission Compressor Station Component Fugitive Leaks:** Emissions decreased by 15.9%, and leak counts increased by 49.2%. The increase in leak counts can be attributed to increased project activity leading to the commissioning of new equipment and components, and the decrease in emissions can be attributed to reduced average leak durations during 2022 (56 days) relative to 2021 (69 days).
- **Distribution Main and Service Pipeline Leaks:** Emissions decreased by 17.1% year-over-year due to SoCalGas's continued efforts to reduce its leak inventory. In addition, SoCalGas continued to utilize the Decision Tree (DT) approach throughout 2022, which helped to identify and prioritize the repair of higher-volume leaks. Finally, Aerial Methane Mapping enabled SoCalGas to promptly identify and repair leaks on the distribution system, which helped to decrease leak durations.
- **Distribution Main and Service Pipeline Damages:** Emissions associated with damages vary based on damage severity, damaged asset dimensions, and pipeline pressure. The uptick in emissions from excavation damages can be attributed to increased 3rd party construction activities in SoCalGas territory. Although emissions from damages increased, the number of 811 tickets also increased by more than 60,000 year-over year.
- **Distribution Main and Service Pipeline Blowdowns:** Emissions increased by 89 Mscf or 48.9% during 2022 relative to 2021. The number of blowdown events increased from 23,061 to 23,313. The increase can be attributed to expanded project activity during 2022.
- **Distribution M&R Blowdowns:** Emissions increased by 9.3% during 2022 relative to 2021. Distribution M&R Blowdowns are a function of inspection activity level and can vary year-to-year.
- **Distribution M&R Component Leaks:** Emissions decreased by 7.2%, and leak counts decreased by 13.2% year-over-year. SoCalGas's efforts to reduce emissions through increased greasing and exercising of valves during inspections may be contributing to the lower leak rate.
- **Customer Meter Vented Emissions:** Emissions increased by 57.4% year-over-year. The increase in emissions can be attributed to the projects at industrial customer sites, which contributed 575 Mscf out of 1,420 Mscf.
- **Underground Storage Leaks and Emissions:** Emissions decreased by 63.8% and leak counts decreased by 18.3% year-over-year. The decrease in emissions can be attributed to the continued efforts to detect and repair leaks  $\geq 1,000$  ppm during quarterly CARB Oil and Gas Rule surveys.
- **Underground Storage Compressor Vented Emissions:** Emissions decreased year-over-year by 35.0%. The decrease can be attributed to lower average emission flow rate measurements during 2022 relative to 2021. Although SoCalGas did not complete any rod packing replacements during 2022 to satisfy CARB Oil and Gas flow rate requirements, the CARB Oil and Gas program has helped to identify

packings in need of replacement over the last several years. The rod packing replacements are a contributing factor to the lower overall compressor flow rate emissions.

- **Underground Storage Component Vented Emissions:** Emissions decreased by 4.0% as four devices were removed or converted to instrument air by the end of 2022. Please note that the 2021 count was corrected from 116 to 117, as one device was inadvertently left out of the 2021 count.
  - **Underground Storage Compressor and Component Fugitive Leaks:** Emissions decreased by 39.0%, and the number of leaks  $\geq 10,000$  ppm decreased by 44.4% year-over-year. The decrease in emissions can be attributed to the continued efforts to detect and repair leaks  $\geq 1,000$  ppm during CARB Oil and Gas Rule quarterly surveys.
- c. Describe advances in abatement efforts, similar to the executive summary in the best practices reporting.

Response:

Title	Emission Source	Mandatory Best Practice(s)	Advances in Abatement Efforts During Emission Year 2022
Blowdown Reduction Activities	Transmission Pipeline	23, 3-7	<ul style="list-style-type: none"> <li>• The Digital Blowdown Planning and Reporting Tool for Transmission Pipeline was launched in 2022 and is expected to increase reporting accuracy as well as allow for better tracking and emission forecasting.</li> </ul>
Aerial Monitoring /Aerial Methane Mapping (AMM)	Distribution Mains and Services; Customer Meter Set Assemblies (MSAs); Compressor Stations	16, 17, 20a	<ul style="list-style-type: none"> <li>• Expanded Aerial Methane Mapping program by approximately five-fold by covering approximately 2,500 square miles in 2022 versus 500 square miles in 2021.</li> <li>• Tested, evaluated, and approved the use of 2<sup>nd</sup>-generation Gas Mapping LiDAR technology to enhance detection sensitivity in distribution environment.</li> <li>• Reduced average AMM flight time per square mile by 9%.</li> <li>• Expanded use of UAVs to assist with leak survey in difficult to access locations, such as Bridge and Span locations and remote pipeline segments.</li> </ul>
Repeat Offenders IT Systems	Distribution Mains and Services	26	<ul style="list-style-type: none"> <li>• Converted the legacy paper form known as the Company Property Damage Report to electronic form (eCPDR).</li> <li>• The eCPDR data was integrated with other SoCalGas systems for incident tracking, claims, and regulatory reporting.</li> </ul>

Large Leak Prioritization	Distribution Mains and Services	15, 16, 20a, 21	<ul style="list-style-type: none"> <li>Increased percentage of Non-Hazardous, higher-flow leak category repairs from 4% to 11%.</li> </ul>
Leak Inventory Reduction/ Leak Repair	Distribution Mains and Services	21	<ul style="list-style-type: none"> <li>Continued to reduce the leak inventory during 2022 by accelerating leak repair beyond 2021 levels.</li> </ul>
Electronic Leak Survey	Distribution Mains and Services	20b	<ul style="list-style-type: none"> <li>Physical maps of Distribution routine leak surveys were digitized and made available on tablets to streamline the leak notification process and accelerate leak mitigation.</li> <li>Data such as leak survey status, various field conditions, and breadcrumbs along surveyed routes are available in near real time at various levels (i.e., Regions, Area, and District).</li> </ul>
Damage Prevention Public Awareness	Distribution Mains and Services	24, 25, 26	<ul style="list-style-type: none"> <li>Geofencing efforts were implemented by leveraging location-based and behavioral data which target relevant users in real time.</li> <li>In certain hardware and/or excavation and demolition businesses, shoppers indicating interest in excavation and/or demolition activities receive push notification on their mobile devices, and they are directed to the SoCalGas “Call 811 Before You Dig” website for more information.</li> </ul>

**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.**

Response:

The Digital Blowdown Planning and Reporting Tool for Transmission Pipeline was launched in 2022 and is expected to increase reporting accuracy as well as allow for better tracking and emission forecasting.

**e. For smaller utilities, confirm if there were no leaks in distribution mains and services pipelines.**

Response:

Not applicable.

**f. Identify any additional tables to be included in the Joint Report. Staff will place these tables in an appendix.**

Response:

SoCalGas appreciates the opportunity to suggest new tables for the Joint Report but is not recommending the addition of any tables at this time.