PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Agenda ID #23585
ENERGY DIVISION **RESOLUTION G-3605**
July 24, 2025

R E S O L U T I O N

Resolution G-3605. Approves and denies in part Southern California Gas Company's 2024 Compliance Plan, Forecasts, and Caps for its Natural Gas Leak Abatement Program.

PROPOSED OUTCOME:

- Approves in part and denies in part ratemaking forecasts and cost caps submitted by the Southern California Gas Company (SoCalGas) for its 2024 Natural Gas Leak Abatement (NGLA) program in Advice Letter 6277-G-B and its 2024 NGLA Compliance Plan.

SAFETY CONSIDERATIONS:

- Repairing or replacing pipes and modifying operations and associated infrastructure to reduce methane emissions also results in modest improvements to natural gas pipeline safety.

ESTIMATED COST:

- The Total Revenue Requirement for SoCalGas' 2025-2026 Natural Gas Leak Abatement Program is $180.8 million, including $102 million for Blowdown Reduction Activities and $ 78.8 million for under-recoveries of previously approved capital forecasts.

By Advice Letter 6277-G filed on March 15, 2024; Advice Letter 6277-G-A, filed October 21, 2024; and Advice Letter 6277-G-B, filed November 5, 2024.

SUMMARY

This Resolution approves in part and denies in part SoCalGas' 2024 Natural Gas Leak Abatement Compliance Plan and the ratemaking forecasts as presented in Advice Letter

(AL) 6277-G-B. The purpose of SoCalGas's 2024 NGLA Compliance Plan (the 2024 Compliance Plan) is to propose how the utility will reduce emissions and implement the 26 Best Practices for natural gas leak abatement adopted in Decision (D.) 17-06-015 and to detail their costs and cost effectiveness. The proposed 2024 Compliance Plan includes 26 chapters, with each chapter describing how a subset of the Best Practices would be addressed.

SoCalGas requested a forecasted Total Revenue Requirement[1] of $483.12 million in Advice Letter 6277-G-B: $385.549 million for Best Practices; $14.526 million for Research, Development, and Demonstration (RD&D) projects; $4.245 million for Program Administration; and $78.8 million for under-recovered ongoing capital revenue requirement. All Best Practices are described in Attachment A, Safety Policy Division's Evaluation of SoCalGas' 2024 NGLA Compliance Plan. This Resolution approves $102 million for one Best Practice, Blowdown Reduction Activities, as it is the sole cost-effective measure in the program. All other costs for Best Practices and RD&D are denied. An additional $4.245 million for SoCalGas' NGLA Program Administration is authorized for recording in the Natural Gas Leak Abatement Program Memorandum Account (NGLAPMA) for potential recovery in a future general rate case or other proceeding, where it will be subject to reasonableness review. We approve $78.8 million for ongoing capital undercollections from previously approved Compliance Plans.

BACKGROUND

On September 21, 2014, Senate Bill (SB) 1371 (Leno) was signed into law.[2] SB 1371 authorized the California Public Utilities Commission to adopt rules and procedures to provide for the "maximum technologically feasible and cost-effective" reduction of methane emissions from CPUC-regulated gas facilities.

[1] The Total Revenue Requirement is the total cost of a program. The Average Annual Revenue Requirement (AARR) is the average yearly cost during the 2025-2026 Compliance Plan Period. The AARR is made up of both capital and operations and maintenance (O&M) costs. Capital costs are collected evenly over the expected length of the life of the asset, and one year of such costs is included in the AARR. For O&M, the AARR includes the total costs during the Compliance Plan Period divided by the number of years of the program, in this case, two years. SoCalGas identifies each of the chapters' capital and O&M costs separately in its Compliance Plan.

[2] SB 1371 is codified in Public Utilities Code section 975-978.

On September 19, 2016, SB 1383 (Lara) was signed into law. SB 1383 requires the California Air Resources Board, in consultation with other state and local agencies, including the CPUC, to approve and begin implementing a comprehensive strategy to reduce methane emissions by 40 percent by 2030 by January 1, 2018.

On June 15, 2017, the CPUC issued D.17-06-015 as part of Rulemaking (R.) 15-01-008, which directed SoCalGas to submit a Tier 3 Advice Letter (AL) to establish 2018 and 2019 revenue requirement forecasts and caps for the Natural Gas Leak Abatement program. The AL was to include the incremental costs for each of 26 Best Practices as well as costs for pilot projects and RD&D broken down by type of expenditure, justifications for pilot and RD&D projects, and the proposed allocation methodology. Ordering Paragraph (OP) 12 of D.17-06-015 states that the ratemaking forecasts and caps that the CPUC approves in response to the Tier 3 ALs shall apply until the NGLA is incorporated into each Utility's next General Rate Case (GRC) or other gas ratemaking proceeding.

Because of the uncertainty and difficulty of forecasting costs for the new program, D.17-06-015 also established two balancing accounts and one memorandum account in which to record expenses for the NGLA program, as follows:[3]

- For the Best Practices/Chapters: a two-way balancing account that is a subaccount of the New Environmental Regulation Balancing Account (NERBA). The subaccount's name is NERBA-Natural Gas Leak Abatement Program (NERBA-NGLAP).
- For the program's RD&D: a one-way balancing account, the Natural Gas Leak Abatement Balancing Account (NGLAPBA);
- For Program Administration: a memo account, the NGLAPMA, to track the incremental expenses related to the program's reporting and administration, to be subject to reasonableness review in a future GRC for recovery.

On October 12, 2018, Resolution G-3538 was adopted, approving with modifications the forecast requests for PG&E, SoCalGas, SDG&E and Southwest Gas Corporations' Compliance Plans through 2020. SoCalGas' forecast of $234 million was approved. Resolution G-3538's Ordering Paragraph (OP) 5 orders the utilities to each:

[3] D.17-06-015 at 132-133.

> Submit a Tier 1 Advice Letter with revised tariff sheets to recover forecasted costs in the Natural Gas Leak Abatement Program Balancing Account for 2018. The balance in the two-way balancing account shall be subject to refund or recovery from customers in the following year through the Annual Gas True-Up advice letter filing.

For 2019, OP 6 adds:

> Each utility will include the authorized cost forecast and cost limit in their gas transportation rates in connection with their consolidated rate update submittal for rates effective January 1, 2019, with balancing account balances subject to true up as in OP 5

For 2020, OP 7 addresses potential funding gaps between the two-year Compliance Plan cycle with SoCalGas and SDG&E's consolidated rate update submittal for rates effective January 1, 2020, stating:

> Each utility may include the authorized cost forecast and cost limit to bridge the funding gap of the two year Leak Abatement Compliance Plan with their consolidated rate update submittal for rates effective January 1, 2020.

OP 7 then repeats the same "subject to refund or recovery" language for balances in the two-way balancing account stated in OP 5 and 6, with balances in the two-way balancing account trued up in the following year through the Annual Gas True-Up advice letter filing. Resolution G-3576 also notes that balances in all accounts authorized for recovery are subject to audit, verification, and adjustment.[4]

On August 15, 2019, the CPUC adopted a Second Phase Decision, D.19-08-020, establishing additional policies, including requiring use of the utility-proposed standard cost effectiveness methodology and two additional cost-benefit analyses, the Cap-and-Trade cost benefit test and the Social Cost of Methane.[5] The Decision also imposed a restriction on rate recovery for Lost and Unaccounted For (LUAF) gas beginning in 2025 for SoCalGas and Pacific Gas & Electric (PG&E) if their methane emission reductions are not 20 percent below the 2015 baseline levels.[6] This

[4] Resolution 3538 at 8.
[5] D.19-08-020, FOF 8,9&10 and OP 2&3.
[6] D.19-08-020, p.2 and OP 5.

performance objective reflects the CPUC's intent that SoCalGas and PG&E be at least halfway to achieving their share of the state's goal of a 40 percent reduction in methane emissions by 2030, consistent with SB 1383, while noting that the 40 percent is a soft target. As stated in D.19-08-020, "We fully expect PG&E and SoCalGas to exceed a 20 percent reduction of methane emissions from their 2015 baseline by 2025, so that they will be on a trajectory to meet the soft target of 40 percent reduction by 2030."[7]

D.19-08-020 also confirmed the CPUC's Safety Enforcement Division's (SED) authority to approve NGLA compliance plans and to disapprove any measures it finds not to be in the ratepayers' interest.[8] The authority was transferred to the Safety Policy Division upon creation of that new division. SPD staff evaluate each biennial compliance plan in consultation with California Air Resources Board and Energy Division staff.

D.19-08-020 further ordered the convening of a workshop by the CPUC's Energy Division and SPD in cooperation with the Technical Working Group[9] established in R.15-01-008 to refine the scope and detail of the compliance plans and Tier 3 Advice Letters pertaining to cost-effectiveness and cost-benefit analysis.[10] It also stated that SPD and ED Staff have the authority to convene the Technical Working Group every two years to consider updates to the NGLA compliance plans.[11]

On October 21, 2019, the public workshop was held. The guidelines[12] developed allow more than one of the 26 Best Practices to be addressed by a combination of actions that may be grouped together in a chapter of the compliance plan. Members of the Technical

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[7] Ibid at 55.
[8] D.19-08-020, p. 19: "SED has authority delegated by the CPUC to approve biennial compliance plans and disapprove any project it determines is not in the ratepayer's interest."
[9] At the time of the initial decision, any party to the proceeding who was interested could join the Technical Working Group. Parties that joined initially included EDF and TURN along with the gas companies and CARB
[10] D.19-08-020, OPs 6 and 7.
[11] D.19-08-020, COL 19.
[12] Email directive from SPD to utilities, "Compliance Plan Guidelines for Natural Gas Leak Abatement Program," November 25, 2019. The NGLA Compliance Plans filed in 2020 reflect those guidelines, primarily the concept that Plan chapters can incorporate more than one best practice. The previous guidelines required a separate chapter for each of the 26 best practices, which was found to be inefficient since SPD had found that a particular measure could address more than one best practice at the same time.

Working Group have since been invited to the annual NGLA workshops held by SPD, CARB, and the utilities.

On January 16, 2020, the CPUC modified the GRC interval periods for each utility, adopting an extension of the GRC cycle for each utility from three years to four years.[13]

On March 12, 2020, SoCalGas submitted AL 5603-G to provide forecasted costs for its 2020 Compliance Plan, including its forecast of costs and emissions reductions for the years 2021 and 2022 and revenue requirements for the life of the capital projects. SoCalGas made various corrections to its initial filing in ALs 5603-G-A, 5603-G-B, and 5603-G-C, which were filed on June 12, 2020; June 29, 2020; and October 2, 2020, respectively.

On March 12, 2020, SoCalGas filed its 2020 Compliance Plan.[14] The Plan was subsequently amended on June 12 and September 4, 2020.[15]

On December 17, 2020, the CPUC issued Resolution G-3576 approving AL 5603-G-C and the SoCalGas 2020 Compliance Plan for a Total Revenue Requirement of $285 million over the life of the capital projects.[16] This resulted in an overall rate increase of 0.4 percent for both 2021 and 2022.[17]

On November 18, 2021, the CPUC's Executive Director granted SoCalGas an extension of time to comply with Ordering Paragraph 12 of D.17-06-015, delaying the incorporation of the leak abatement programs into its GRC for Test Year 2028, which is expected to be filed by May 15, 2026.

On March 15, 2022, SoCalGas submitted its 2022 NGLA Compliance Plan and AL 5950-G, which provided forecasted costs for the Plan. SoCalGas made revisions and corrections in AL 5950-G-A and AL 5950-G-B, which were filed on February 16 and February 21, 2023, respectively. AL 5950-G-B requested a Total Revenue Requirement of $504.5 million, including $485.7 million for Best Practices, $14.4 million for RD&D, and

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[13] D.20-01-002, issued on January 16, 2020.
[14] 2020 Compliance Plan: https://www.socalgas.com/sites/default/files/2020-09/SCG_SB1371_amended_2020_Compliance_Plan_Sept_2020.pdf.
[15] SCG_SB1371_amended_2020_Compliance_Plan_Sept_2020.pdf (socalgas.com)
[16] It has been understood throughout the process of reviewing the NGLA requests for funding that they include the ongoing costs for the life of the capital projects, just as they would in a General Rate Case, and that once they are approved, these are put into the utility's rates for the life of the capital projects and not just the two years of the NGLA Compliance Plan cycle.
[17] Resolution G-3576 p. 3.

$4.4 million in Program Administration Costs. The annual revenue requirement requested for 2023 and 2024 was $98.7 million and $111.5 million respectively, not including Franchise Fees and Uncollectibles.[18] The resulting overall rate increase requested was 0.3 percent for 2023 and 0.6 percent for 2024.

SoCalGas filed an amended 2022 Compliance Plan on August 12, 2022. It did not require an amended AL because there were no changes to the cost forecast as a result of the amendment.

On July 3, 2023, the CPUC issued Resolution G-3595, approving in part and denying in part SoCalGas' 2022 Compliance Plan and AL 5950-G. Resolution G-3595 approved a total forecasted revenue requirement of $429,485,279 over the life of the capital projects,[19] an approximately 15 percent reduction from SoCalGas' request. Funding for several chapters of SoCalGas' 2022 Compliance Plan was not approved due to their very poor cost-effectiveness. Chapter 14 costs were approved at the 2020 level of $22.252 million,[20] in accord with SPD's recommendations.

OP 5 of Resolution G-3595 required the Safety Policy Division and the Energy Division, in consultation with CARB, to convene a meeting of the NGLA's Technical Working Group by September 30, 2023, to receive input and find balance between the dual priorities of the program: maximum methane emissions reductions and cost effectiveness. This meeting was held virtually on September 28, 2023.

As a result of the Technical Working Group meeting, SPD issued directions to the utilities to continue to provide values for the three existing cost-effectiveness tests. SPD also allowed the utilities to include additional cost-effectiveness values that include safety benefits, where appropriate. SPD further directed the utilities to update the values for the social cost of methane as presented in D.19-08-020 for inflation by using the California Consumer Price Index. Additionally, SPD instructed utilities that RD&D programs should prioritize improving cost-effectiveness.

On March 15, 2024, SoCalGas submitted its 2024 NGLA Compliance Plan and AL 6277-G, which provides 2025 and 2026 forecasted costs for the Plan's Chapters,

[18] The sum of the 2023 and 2024 annual revenue requirement is less than the Total Revenue Requirement because there are significant capital costs in some of the leak abatement programs, which are recovered over a longer period.
[19] Resolution 3595-G, OP 1 and AL 6277-G-B at 3.
[20] Resolution G-3594, OP 1.

RD&D, and Program Administration. SoCalGas filed an amended 2024 Compliance Plan on April 4, 2024. An amended AL was not required because there were no changes to the cost forecast as a result of the amendment.

On August 30, 2024, staff issued a Data Request for which replies were received on September 13, 2024. The Data Request asked for further details on how various parts of the revenue requirement requested in AL 6277-G were calculated, including the ongoing capital revenue requirements from prior compliance plan periods, and why they are not retroactive ratemaking. SoCalGas' response to the questions on retroactive ratemaking included the admission that it omitted claiming these costs during the previous Compliance Plan periods due to "inadvertent error." SoCalGas argued that collecting them now is not retroactive ratemaking "because these projects and their related Total Revenue Requirements were approved in prior Compliance Plans and Advice Letters."

Staff issued a second Data Request on September 13, 2024, and SoCalGas' response was received September 20, 2024. The request asked SoCalGas to prioritize those NGLA chapters/Best Practices that are necessary to maintain the achievement of a 20 percent reduction in methane emissions by 2025 and a 40 percent reduction by 2030, as compared to the 2015 emissions baseline. It also asked SoCalGas to identify those RD&D projects that are focused solely on improving the cost-effectiveness of the program as ordered in Resolution G-3595.

SoCalGas' September 20, 2024, reply to staff's Data Request highlighted six chapters as necessary to continue the 20 percent emissions reductions and achieve the 40 percent reductions as compared to the 2015 baseline by 2030. In order of SoCalGas' priority, the six chapters were:

1. Leak Inventory Reduction, Chapter 1;
2. Aerial Methane Mapping, Chapter 14;
3. Blowdown Reduction Activities, Chapter 3;
4. Increased Leak Survey, Chapter 2;
5. Leak and Vented Emission Reduction, Chapter 21;
6. Storage Aboveground Leak Survey, Chapter 24.

SoCalGas included only three RD&D projects focused solely on cost-effectiveness.

On December 24, 2024, SPD published its "Approval of Adjusted 2015 Baseline Emissions for Southern California Gas Company,"[21] as was previously sent to SoCalGas on September 20, 2024. SPD adjusted the 2015 baseline in order to align the emission estimation method with improvements in leak measurement, primarily drawing on recent research on customer meter set emissions. These improvements allowed a more accurate measurement of reductions achieved from implementation of Best Practices. This reassessment raised the 2015 baseline from 1,592,022 thousand cubic feet (MCF) to 2,057,487 MCF and allowed demonstration of a significant improvement from the baseline. Importantly, using the new baseline, SoCalGas reports that it had achieved a 36 percent reduction in emissions from its infrastructure as of 2023.[22] Hence, SPD observes that SoCalGas has already achieved its 20 percent by 2025 emissions reduction goal.

On October 21, 2024, SoCalGas filed an amended AL 6277-G-A to correct inadvertent errors with the categorization of costs in Chapter 2—Increased Leak Survey and Chapter 13, Electronic Leak Survey. Also, a typo was found and corrected in Chapter 9 of Table 1.

On November 5, 2024, SoCalGas filed AL 6677-G-B, to correct additional inadvertent omissions and to revise the 2024 NGLAP annual revenue requirements, which are changed from $148.620 million and $122.455 million for 2025 and 2026, respectively, to $155.713 million and $129.559 million for 2025 and 2026, respectively. Its forecast for RD&D and for Program Administration remain the same at $14.526 million and $4.245 million.

NOTICE

Notices of AL 6277-G, AL 6277-G-A, and AL 6277-G-B were made by publication in the CPUC's Daily Calendar. SoCalGas states that copies of the Advice Letters were mailed and distributed in accordance with Section 4 of General Order 96-B.

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[21] See Appendix A of the SPD Approval of Adjusted 2015 Baseline Emissions at: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-policy-division/reports/2024-ngla-joint-report_122424.pdf

[22] Analysis of the Gas Companies' June 14, 2024, Natural Gas Leak and Emission Reports, at 22, Table 5.

PROTESTS

ALs 6277-G, AL 6277-G-A, and 6277-G-B were not protested. Consistent with General Order 96-B, General Rule 7.5.1 the original protest and comment period designated in AL 5950-G was not reopened.

DISCUSSION

The CPUC considered SoCalGas AL 6277-G-B and SPD's Evaluation of SoCalGas' 2024 NGLA Compliance Plan (the "SPD Evaluation Report," attached as Attachment A) in reaching a determination that balances the goals of cost-effectiveness and emissions reductions.

Cost-Effectiveness

The SPD Evaluation Report considers the cost-effectiveness methodologies established in D.19-08-020. Three types of cost-effectiveness methods are to be considered for comparison purposes. These include the standard cost-effective measurement, the avoided Cap-and-Trade cost, and the avoided Social Cost of Methane as comparison measures. D.19-08-020 does not establish a threshold cost-effectiveness value or limit for the NGLA program.

The standard cost-effectiveness measure is based on the Average Annual Revenue Requirement (AARR),[23] from which the cost of the gas saved is deducted, divided by the annual emissions reduction for the program. This standard cost-effectiveness is then expressed in dollars per thousand standard cubic feet of natural gas emissions avoided or $/MCF.[24] Given this method, a lower numerical value denotes a better cost-effectiveness.

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[23] SoCalGas identifies each of the chapters' capital and O&M separately in its Compliance Plan. The AARR and TRR are described in fn 1. As noted above, the AARR is the basis for the standard cost-effectiveness calculations for each measure.

[24] Different units for natural gas are used in different contexts. One MCF is roughly equal to 1.038 million British thermal units (MMBtu), the unit typically used when pricing natural gas, and 10.38 therms, the unit used on customer bills: https://www.eia.gov/tools/faqs/faq.php?id=45&t=8. Natural gas spot prices at the Henry Hub, the pricing point for natural gas prices on the New York Mercantile Exchange averaged $2.29 per MCF and $2.21 per MMBtu in 2024. Source: Spot Henry Hub natural gas prices hit a historic low in 2024 - U.S. Energy Information Administration (EIA).

As required by D.19-08-020, the 2024 Compliance Plan continues the use of the avoided Cap and Trade compliance costs and the avoided Social Cost of Methane. The avoided Cap-and-Trade cost is based on the reduction in gas throughput caused by abating leaks and quantifies the greenhouse gas (GHG) impact by assuming that all gas throughput is combusted to carbon dioxide (CO2) and emitted to the atmosphere.

For SoCalGas, an annual Advice Letter forecasts the rate impact of Cap-and-Trade costs. If approved, these costs are added to rates. To estimate the value of reduced Cap and Trade compliance costs, SoCalGas assumed a December 2025 vintage futures value based on the five-day average of the first trading days of the year, January 2-8, 2024, from the International Exchange: $45.12 per metric ton of CO2 equivalent (MTCO2e). Compliance with the CPUC's instructions produced a Cap-and-Trade benefit value of $2.46/MCF, which was used for the 2024 Compliance Plan.[25]

The benefit of the avoided Social Cost of Methane is the reduction in the future cost to society from the environmental impact of leaked methane that has not been combusted, which has a higher global warming potential in the short term than CO2. D.19-08-020 provides a Table of Estimates for the Social Cost of Methane for use in the utilities' compliance plans. Following the 2023 Technical Working Group meeting, SPD staff provided written guidance to update those values using the California Consumer Price Index (CPI). In the 2024 Compliance Plan, SoCalGas updated the Phase II Decision estimate for 2020 by applying the California CPI, which resulted in a social cost of methane of $24.42/MCF.

These two additional cost-effectiveness tests are to be used for "information and comparison purposes."[26] Including the combined values for the Cap-and-Trade cost benefit and the Social Cost of Methane, a measure is said to achieve a "break-even" net cost-effectiveness of $0/MCF when it has a standard cost-effectiveness of approximately $26.88/MCF.[27] This is $4.88 higher than the breakeven value of $22/MCF in the 2022 Compliance Plan period of 2023-2024.

During the 2023 Technical Working Group, SPD staff suggested the inclusion of an optional cost-benefit test that included the safety cost benefits of an activity, where relevant. In the 2024 Compliance Plan, SoCalGas included a safety cost-benefit test in

[25] SPD Evaluation of SoCalGas Company's 2024 NGLA Compliance Plan, Safety Policy Division, July 26, 2024 (SoCalGas SPD Evaluation Report) at 6.
[26] D.19-08-020, p. 36
[27] SoCalGas SPD Evaluation Report at 5.

three of its Chapters (1, 2, and 14). The test used PHMSA data on the likelihood of a hazardous leak resulting in a serious incident, the value of statistical life as determined in the Risk-Based Decision-Making Framework,[28] publicly available incident data from PHMSA, and the likelihood of a non-hazardous leak becoming a hazardous leak using internal SoCalGas data. In the three chapters where SoCalGas provided safety cost-benefit information, such calculations yielded an estimated value of $1/MCF at most.[29]

In addition to the cost-effectiveness of a measure, SPD considers other factors, as follows:

- Is it required for compliance with the Best Practices specified in D.19-08-020?
- Is it technically feasible?
- Is its cost-effectiveness improving over time?
- What is its contribution to achieving the program's emission reduction goals?
- Is it foundational for the functioning of the program (i.e., training, tracking and performing measurements of emissions)?
- Does it provide the "biggest bang for the buck" (FOF, D.19-08-020)?

As a result of this broader consideration of each measure in the utility's compliance plans, SPD's evaluation may approve measures that are not cost-effective, pursuant to D.19-08-020, which recognized that the cost of "maximum technologically feasible" measures might be expensive: "…we do not adopt a requirement that all measures, or the Compliance Plans in their entirety, must show a positive benefit to cost ratio under either methodology. The CPUC retains full discretion to evaluate measures proposed in the Compliance Plans considering cost-effectiveness along with other qualitative factors and policy goals."[30]

SPD has conducted a new analysis that evaluates the impact of the updated baseline on the amount of emissions reduction needed by 2030 and has identified 10 programs as necessary or foundational to achieve a 40 percent reduction to baseline or required to maintain compliance with D.17-16-015's mandatory Best Practices. As shown and further described in Attachment A, these include the following:

[28] D. 22-12-027 at Page 60.
[29] SPD Evaluation Report at 4.
[30] D.19-08-020 at 27.

1. Chapter 1: Leak Inventory Reduction (at a reduced cost and longer duration between finding and fixing a leak);
2. Chapter 14: Aerial Methane Mapping (Aerial Mapping);
3. Chapter 3: Blowdown Reductions Activities;
4. Chapter 7: Recordkeeping Project;
5. Chapter 8: Geographic Tracking;
6. Chapter 13: Electronic Leak Survey;
7. Chapter 20: Public Leak Maps;
8. Chapter 15: Damage Prevention Public Awareness;
9. Chapter 16: Pipe Fitting Specifications; and
10. Chapter 19: Gas Speciation.

SPD's approval of these chapters in the 2025-2026 SoCalGas Compliance Plan would result in a Total Revenue Requirement of $222.3 million, or a reduction of 42 percent in costs from SoCalGas' request for Best Practices. It would also result in an estimated 39 percent reduction in emissions by 2030, nearly attaining the 2030 emissions reductions goal.

Among the measures SPD recommends for approval is Aerial Methane Mapping. This program is not cost effective under the standard specified in Public Utilities Code section 975,[31] which yields a cost-effectiveness of $61/MCF counting methane leaks abated only on the utility side of the gas system. We acknowledge that the cost effectiveness increases if leaks found on the customer side are counted, as approximately 60 percent of the emissions found through Aerial Methane Mapping are on the customers' side, including in disadvantaged communities. If all emissions were permissibly counted in evaluating cost-effectiveness, Aerial Methane Mapping would achieve a standard cost effectiveness of $24/MCF, beating the "breakeven" point of $26.88/MCF.

Ratepayer Impacts

Analyses show that most of the Best Practices are not cost-effective. SB 1371 states that the Commission should prioritize affordability considerations and instructs the Commission to approve cost-effective emissions reduction measures.[32] As noted in D.19-08-020 and the enabling statute, "Affordability must also be at the forefront and a

[31] Pub. Util. Code section 975(e)(1) provides that the Commission shall " [p]rovide for the maximum technologically feasible and cost-effective avoidance, reduction, and repair of leaks and leaking components *in those commission-regulated gas pipeline facilities that are intrastate transmission and distribution lines* within a reasonable time after discovery. . ." (emphasis added).

[32] See Pub. Util Code sections 975(b), 975(e)(1), and 977(d).

priority as required by SB 1371."[33] Indeed, the Commission must scrutinize every program we authorize for cost-effectiveness.

The SPD Evaluation Report identifies one measure—the Blowdown Reductions Activities set forth in Chapter 3—as meeting or exceeding the standard cost effectiveness benchmark.[34] Therefore, we approve one chapter, Chapter 3, Blowdown Reduction Activities, as it is the only measure that is cost-effective using the three cost-effectiveness methodologies approved in D.19-08-020. The practice is forecasted to achieve a standard cost-effectiveness of $22 and contributes to a 9.1 percent, or 187,581 Mcf, reduction in emissions.

Blowdowns are intentional gas releases, usually performed for maintenance purposes. The Best Practice for reducing blowdown emissions involves reducing pressure before the blowdown and/or using portable compressors to contain the emissions. We approve a Total Revenue Requirement of $102 million and an Average Annual Revenue Requirement of $6.1 million for the years 2025 and 2026.[35]

SoCalGas may present proposals for other measures it wishes to continue in its 2026 GRC filing for Test Year 2028.

Review of NGLA RD&D Projects

Due to concerns about impacts on ratepayers and the fact that other gas RD&D programs already exist, we do not approve continuation of the RD&D projects requested in AL 6277-G-B, which are forecasted to cost $14.4 million. SoCalGas may move the leak abatement RD&D projects it wishes to continue into its broader RD&D program pursuant to PUC 740.1, starting with its filing of the Test Year 2028 GRC.

Review of SoCalGas' Program Administration Forecast for 2025-2026

Program Administration costs for the NGLA program include costs for reporting the various emission factors and their updates for each of the Best Practices and RD&D projects. The total Program Administration forecast for the 2024 Compliance Plan is $4.245 million, which is a decrease from that approved in Resolution G-3595.[36] Consistent with D.17-06-015, SoCalGas is authorized to book administrative expenses in

[33] D.19-08-020 at 27.
[34] Safety Policy Division Evaluation of Southern California Gas Company's 2024 NGLA Compliance Plan, May 15, 2025, at Table 1.
[35] SoCalGas Data Request Response dated October 10, 2024.
[36] Resolution G-3595 approved in full SoCalGas' request to recover $4,372,749 in Program Administration costs for the 2022 Compliance Plan period of 2023 and 2024.

a memorandum account to be reviewed in a future General Rate Case or other proceeding. These costs are thus not approved for recovery from ratepayers in this Resolution.

Requested Increase to Capital Revenue Requirement from Prior Compliance Periods

SoCalGas also requests recovery in rates of unrecovered ongoing capital revenue requirement from prior compliance plan periods dating back to its initial advice letter filed in 2017. SoCalGas explains that this lack of recovery is the result of undercollection of and/or shortfalls to continuing capital revenue requirements associated with completed capital projects approved through prior NGLA compliance plans that were not fully accounted for in rates.[37] These costs are in addition to the revenue requirement requested for 2025-2026 in the 2024 Compliance Plan.

SoCalGas states that the previous NGLA advice letters included rate impacts only for the two-year compliance periods of their associated compliance plans, not the ongoing capital requirements associated with previously approved projects. SoCalGas proposes to include a total of $78.766 million for these capital undercollections and shortfalls, including approximately:

- $50.8 million, representing the revenue requirement in 2025 and 2026 from capital expenditures approved as part of the 2017, 2020 and 2022 Compliance Plans;
- $2.7 million for a one-time true-up of the undercollection in the NERBA-NGLAP subaccount as of December 2023, attributable in part to the revenue requirement of capital expenditures approved in the 2017, 2020, and 2022 compliance plans offset by program underspending; and
- $25.2 million for on-going revenue requirement in 2024 related to capital additions approved in prior compliance plans that were not included in any previous NGLA advice letters.[38]

These under-recoveries occurred in part because SoCalGas used its original approved NGLA Advice Letter[39] and its approval in Resolution G-3538 as the model for subsequent Advice Letters, using only the two years included in the forecast of capital

[37] AL 6277-G-B at 6.
[38] SoCalGas email to Renee Guild, January 31, 2025, from Greg Healy, SoCalGas Regulatory Affairs Manager, responding to questions raised during January 28, 2025, phone call with CPUC staff of Energy Division, Legal, and Safety Policy Division and its explanation of Table 6 of AL 6277-G-B.
[39] SoCalGas AL 5211-B, approved by Resolution 3538 (October 12, 2018).

costs for the subsequent Compliance Plan period. That advice letter did not have any previously approved ongoing capital requirements to include, however, since it was the first one to be submitted for approval. Using this initial submittal as a model, the subsequent 2020 and 2022 two-year biennial Compliance Plans repeated this approach.

This "inadvertent" omission[40] was compounded by the lack of clarity in D.17-06-015 and the Preliminary Statement for the NERBA Balancing Account, neither of which specifically detail how the ongoing capital revenue requirement associated with approved capital expenditures in prior Compliance Plans will continue to be incorporated in rates in subsequent years and via which specific rate elements. The current language of the Preliminary Statement for the NERBA Balancing Account reads as follows:

> With respect to the NERBA Balancing Account, pursuant to D.17-06-015, SoCalGas will submit a Tier 3 advice letter to establish the 2018 and 2019 revenue requirement for the NGLAP Subaccount, and proposed allocation methodology, for the implementation of the Best Practices of the Natural Gas Leak Abatement Program. The revenue requirement will be carried forward in subsequent years until addressed in SoCal Gas' next GRC or other applicable proceeding.

In response to an Energy Division's question to SoCalGas regarding how this Preliminary Statement for the NERBA Balancing Account could be improved with a more specific "allocation methodology" for how assets approved in each Compliance Plan should be recovered in rates, SoCalGas proposed that the underlined sentence be added to the following paragraph:

> Pursuant to D.17-06-015, SoCalGas will file a Tier 3 advice letter to request the revenue requirement associated with O&M and capital expenditure forecasts for each two year period for the implementation of the Best Practices of the Natural Gas Leak Abatement Program. <u>Any ongoing capital revenue requirement associated with capital expenditures approved in prior Compliance Plans will continue to be recorded in the NGLAP subaccount in subsequent years and will be included in the proposed revenue requirement for recovery in customer</u>

[40] SoCalGas Data Request Response received September 13, 2025, p. 8: "In previous Advice Letters SoCalGas inadvertently omitted the ongoing capital revenue requirements and only presented the revenue requirements related to the proposed projects for the two year period covered under the corresponding Compliance Plan for inclusion in rates."

> transportation rates through the Tier 3 advice letter submittal until addressed in SoCalGas's next GRC or other applicable proceedings.[41]

We agree that this language would help clarify the intention of D.17-06-015 to include the capital costs for Best Practices that are approved going forward and approve this new language to be incorporated into SoCalGas' Preliminary Statement for the NERBA Balancing Account.

Turning to the issue of SoCalGas' request for recovery of ongoing capital costs from previously approved Compliance Plans, Energy Division confirms that these costs are tied to projects and work that has been previously approved in our prior NGLA resolutions and that their ongoing reflection in rates has not occurred. We treat the capital costs for this program the same as the revenue requirement associated with any other capital assets approved to be put into rates. This program was developed in compliance with SB 1371 and SB 1383 and has been implemented by decisions D.17-06-015 and D.19-08-020. Therefore, we approve SoCalGas' revenue recovery of on-going capital requirements in the amount of $78.766 million, to align with what has been approved and under-recovered in Resolutions G-3538 (October 11, 2018), G-3576, (December 17, 2020), and Resolution G-3595 (July 3, 2023). However, as noted above and in Resolution G-3538, balances in all accounts authorized for recovery are subject to audit verification and adjustment.

Summary of Costs Approved

The following table shows the Total Approved and Average Annual Revenue Requirement for the SoCalGas 2024 Compliance Plan.

[41] SoCalGas email to Renee Guild, January 31, 2025, from Greg Healy, SoCalGas Regulatory Affairs Manager, responding to questions raised during January 28, 2025, phone call with CPUC staff of Energy Division, Legal, and Safety Policy Division.

Approved Cost Recovery

	Total Revenue Requirement Approved (million)	Revenue Requirement for 2025 (million)	Revenue Requirement for 2026 (million)
Best Practices	$102.0	$6.1*	$6.1*
RD&D	$0	$0	$0
Under-recoveries	$78.8	$55.0	$23.8
Total	$180.8	$61.1	$29.9

* For the Best Practices, the Average Annual Revenue Requirement, rather than the exact revenue requirement for each year, is shown.

Future Costs for the NGLA Program

As noted above, the Commission requires funding for the NGLA program to be transitioned into the regular GRC process for each utility participating in the program. D.17-06-015 originally anticipated each utility complying with the NGLA program would incorporate NGLA program expenses in its next general rate case,[42] but the CPUC's Executive Director granted SoCalGas an extension until its GRC Test Year 2028 to incorporate NGLA program expenses, which is expected to be filed by May 15, 2026. SoCalGas acknowledges this in AL 6277-G-B.[43]

SoCalGas is therefore directed to incorporate the NGLA program's costs in its next GRC proceeding and to incorporate NGLA expenses into its GRC applications or other application proceeding going forward. SoCalGas shall submit its approved biennial NGLA compliance plans and SPD's evaluation thereof into the record of any GRC or other application proceeding in which recovery for costs associated with that compliance plan is sought.

For the year 2027, we approve SoCalGas to continue the NGLA Best Practice Chapter 3, Blowdown Reduction Activities approved herein with annual revenue requirement spending capped at the $6.1 million level approved in this resolution.

[42] See D.17-06-015, OP 12.

[43] See AL 6277-G-B at 8 ("As directed in D.17-06-015 and D.19-08-020, and subsequently as granted by the Commission, future costs for the NGLA Program for SoCalGas will ultimately be incorporated into the TY 2028 GRC, anticipated to be filed May 15, 2026.")

COMMENTS

Public Utilities Code section 311(g)(1) provides that this Resolution must be served on all parties and subject to at least 30 days public review. Any comments are due within 20 days of the date of its mailing and publication on the CPUC's website and in accordance with any instructions accompanying the notice. Section 311(g)(2) provides that this 30-day review period and 20-day comment period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day review and 20-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments and will be placed on the CPUC's agenda no earlier than 30 days from today.

FINDINGS AND CONCLUSIONS

1. On September 1, 2014, Senate Bill (SB) 1371 (Leno), codified in Pub. Util Code section 975 et seq, was signed into law, authorizing the California Public Utilities Commission (CPUC) to adopt rules and procedures to reduce emissions of natural gas from CPUC-regulated gas facilities to the maximum extent feasible while giving due consideration to costs.
2. SB 1371 requires that affordability be a priority of the emissions reduction program.
3. Public Utilities Code section 975(e)(1) requires approval of emissions reduction measures that are both cost-effective and technologically feasible.
4. On September 19, 2016, SB 1383 (Lara) was signed into law, requiring the California Air Resources Board, in coordination with other state and local agencies, to approve and begin implementing a comprehensive strategy by January 1, 2018, to reduce methane emissions by 40 percent by 2030.
5. Decisions (D.) 17-06-015 and D.19-08-020 ordered ratemaking forecasts for the Natural Gas Leak Abatement Program (NGLA) to be submitted in Tier 3 Advice Letters, which require approval via CPUC resolutions.
6. D.17-06-015 required SoCalGas to establish a two-way balancing account for incremental NGLA program expenditures related to Best Practices in the form of a subaccount to its New Environmental Regulatory Balancing Account (NERBA), and to create a one-way balancing account for the costs of

the NGLA program's Research, Development and Demonstration (RD&D) activities.

7. D.17-06-015 required SoCalGas to create a Memorandum Account for incremental administrative costs associated with the Natural Gas Leak Abatement Program expenditures.
8. Ordering Paragraph 12 of D.17-06-015 provides that the ratemaking forecasts and caps that the CPUC approves in response to the Tier 3 ALs shall apply until the NGLA is incorporated into each Utility's next General Rate Case or other gas ratemaking proceeding.
9. On November 18, 2021, the CPUC's Executive Director granted SoCalGas an extension of time to comply with OP 12 of D.17-06-015, delaying the incorporation of SoCalGas' leak abatement programs into their GRC until their next General Rate Case, which is expected to be filed by May 15, 2026.
10. D.19-08-020 required the use of a standard cost effectiveness methodology and two additional cost-benefit analyses that calculate the benefit of avoided Cap and Trade compliance costs and the benefit of the avoided Social Cost of Methane.
11. The avoided Cap and Trade costs and the avoided Social Cost of Methane tests are to be used for information and comparison purposes.
12. D.19-08-020 imposed a restriction on rate recovery for Lost and Unaccounted For (LUAF) gas for SoCalGas and Pacific Gas & Electric beginning in 2025 if their methane emissions are greater than 20 percent below the 2015 baseline levels. This performance objective reflects the CPUC's intent that SoCalGas and PG&E be at least halfway to achieving the State's goal of 40 percent reduction in methane emissions by 2025 consistent with the goals of SB 1383.
13. D.07-06-015 and D.19-08-020 authorize SPD to approve biennial compliance plans and disapprove any project it deems not in ratepayers' interest.
14. On October 31, 2017, SoCalGas filed AL 5211-G, which was approved with modifications in Resolution 3538 on October 12, 2018.
15. On December 17, 2020, the CPUC issued Resolution (R.) G-3576 approving AL 5603-G-C and the SoCalGas 2020 Compliance Plan for a Total Revenue Requirement of $285 million over the life of the capital projects. This resulted in an overall rate increase of 0.4 percent for both 2021 and 2022.
16. On July 3, 2023, the CPUC issued Resolution G-3595, partially approving AL 5950-G-B, authorizing funding of $429,485,279, representing a reduction of approximately 15 percent from SoCalGas' funding request.
17. On March 15, 2024, SoCalGas submitted its 2024 NGLA Compliance Plan along with AL 6277-G requesting recovery of its forecasted costs for the Plan. At the request of SPD, SoCalGas amended its 2024 Compliance Plan on

April 4, 2024, to correct various errors in its initial submission. It did not amend AL 6377-G because the changes did not affect the forecasted costs in AL 6377-G.

18. On September 20, 2024, Safety Policy Division issued a letter to SoCalGas: "Approval of Adjusted 2015 Baseline Emissions for Southern California Gas Company," which adjusted the 2015 emissions baseline from 1,600,000 thousand cubic feet (MCF) to 2,057,487 MCF.
19. With the adoption of the adjusted baseline, SPD observes that SoCalGas has reported a 36 percent reduction in emissions by the end of 2023, exceeding its 20 percent by 2025 goal required in D.19-08-02.
20. On October 21, 2024, SoCalGas submitted AL 6277-G-A to correct inadvertent errors and a typo, and on November 5, 2024, submitted AL 6277-G-B to correct inadvertent errors and the Total Revenue Requirement.
21. In accordance with D.19-08-020, SPD approval of Compliance Plan proposals is based on consideration of mandatory Best Practices, forecasted emission reductions, and cost-effectiveness. D.19-08-020 does not establish cost-effectiveness as the sole consideration, nor does it establish a cost-effectiveness threshold.
22. Safety Policy Division issued an evaluation report partially approving Chapter 1 and fully approving Chapters 3, 7, 8, 13, 14, 15, 16, 19 and 20 of SoCalGas's 2024 Compliance Plan, while not approving Chapters 2, 9, 10, 21, and 24. The combined total of chapters approved in the Safety Policy Division report result in a total revenue requirement of approximately $222.3 million, and an Average Annual Revenue Requirement of $46.4 million for Best Practices.
23. This Resolution approves only the Blowdown Reduction Activities set forth in Chapter 3 of SoCalGas's 2024 Compliance Plan, as it is the only chapter which the SPD Evaluation Report finds to be cost-effective. All other measures are disapproved.
24. The Total Revenue Requirement for Blowdown Reduction Activities is $102 million, and the Average Annual Revenue Requirement is $6.1 million.
25. This Resolution does not approve funding for NGLA Research, Development, and Demonstration projects described in SoCalGas' 2024 Compliance Plan.
26. SoCalGas is required to incorporate the NGLA into its GRC for Test Year 2028 by Ordering Paragraph 12 of D.17-06-015, and the letter from the CPUC's executive director dated November 18, 2021.
27. SoCalGas may move its NGLA Research, Demonstration & Development projects as appropriate to its broader Research and Development program in

its next GRC pursuant to Public Utilities Section 740.1, or other process as may be specified by the Commission.

28. In accordance with D.17-06-015, the program administration costs recorded in the Natural Gas Leak Abatement Program Memo Account are subject to reasonableness review in SoCalGas' next GRC or other application. They are thus not approved for recovery in this Resolution.
29. SoCalGas requests modifications to on-going capital revenue requirements for years 2025 and 2026 that are in addition to its requested recovery for its 2024 Compliance Plan. These include (1) $27.039 million in 2025 and $23.765 million for 2026 for on-going capital revenue requirements for the 2017, 2020, and 2022 Compliance Plans; (2) an undercollection of $2.717 million in 2025 in the New Environmental Regulation Balancing Account (NERBA-NGLAP) subaccount as of December 2023; and (3) a shortfall in the 2024 Natural Gas Leak Abatement Program (NGLAP) revenue requirement of $25.245 million. Together these total $55 million in 2025 and $23.765 in 2026.
30. It is reasonable for SoCalGas to recover the ongoing capital costs associated with measures approved in prior compliance plans.
31. It is reasonable for SoCalGas to modify its rates to collect the revenue requirement approved in this resolution.

THEREFORE IT IS ORDERED THAT:

1. The Southern California Gas Company's (SoCalGas) 2024 Natural Gas Leak Abatement Program (NGLA) Compliance Plan and forecast as filed in Advice Letter 6277-G-B is partially approved with a forecast Total Revenue Requirement of $180.8 million for:

    A) Chapter 3: Blowdown Reduction Activities at the level of $102 million; and

    B) Recovery of on-going capital requirements from previously approved Advice Letters at the level of $78.8 million.

    All other costs for Best Practices and Research Development & Demonstration are denied.

2. The $4.245 million that SoCalGas requested for its NGLA Program Administration is authorized to be recorded in the Natural Gas Leak Abatement Program Memorandum Account (NGLAPMA) for potential recovery in a future general rate case or other proceeding, where it will be subject to reasonableness review.

3. SoCalGas shall modify the Preliminary Statement for the Natural Gas Leak Abatement Program Subaccount in the New Environmental Balancing Account (NERBA-NGLAP) to facilitate recovery of ongoing capital costs associated with the NGLA program by adding the following text: "Any ongoing capital revenue requirement associated with capital expenditures approved in prior Compliance Plans will continue to be recorded in the NGLAP subaccount in subsequent years and will be included in the proposed revenue requirement for recovery in customer transportation rates through the Tier 3 advice letter submittal until addressed in SoCalGas's next GRC or other applicable proceedings."
4. Going forward, SoCalGas shall incorporate its NGLA program expenses and biennial NGLA compliance plans into the record of any GRC or other application proceeding in which recovery for costs associated with that compliance plan is sought.
5. In 2027, SoCalGas shall record the costs for the NGLA chapter identified above in its NERBA-NGLAP Subaccount to be subject to refund or recovery from customers in the following year through the Annual Gas True up advice letter filing, at the same level approved herein for 2026: $6.1 million in annual revenue requirement.
6. SoCalGas shall update its rates for the approved revenue requirement in Resolution G-3605 within 30 days upon issuance of this resolution via a Tier 1 Advice Letter.

This Resolution is effective today.

Commissioner Signature blocks to be added upon adoption of the resolution

The foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on [DATE]; the following Commissioners voting favorably thereon:

Dated _____, at <Voting meeting location>, California

ATTACHMENT A

SPD EVALUATION OF SOUTHERN CALIFORNIA GAS COMPANY'S 2024 NGLA COMPLIANCE PLAN

SOCALGAS' NATURAL GAS LEAK ABATEMENT COMPLIANCE PLAN REVIEW BY SAFETY POLICY DIVISION

May 15, 2025

SPD review of emission reduction measures proposed by the Southern California Gas Company

California Public Utilities Commission

Review of the SoCalGas 2024 NGLA Compliance Plan by the Safety Policy Division

Contents

EXECUTIVE SUMMARY

The California Public Utilities Commission's (CPUC's or Commission's) Safety Policy Division (SPD) approves,[1] with some exceptions, the emissions reduction measures proposed in the Southern California Gas Company (SoCalGas) Amended 2024 Natural Gas Leak Abatement (NGLA) Compliance Plan ("2024 Plan"), filed on April 4, 2024. The Plan was filed in accordance with the NGLA program requirements established in Decision (D.)17-16-015 and expanded in D.19-08-020.

The 2024 Plan forecasts an annual emission reduction of over 800,000 thousand standard cubic feet (MCF) of natural gas by 2025, a 42 percent reduction from the approved 2015 Baseline.[2] This forecast exceeds both the Commission's target of 20 percent by 2025[3] and the statewide greenhouse gas reduction goal of 40 percent by 2030.[4] While the decisions establishing the NGLA program require the Compliance Plans to indicate how the company expects to achieve the statewide goal, it does not offer guidance on proposals exceeding that goal.

Considering that the Commission's 20 percent reduction target was achieved in 2023,[5] the emphasis on emission reduction activity should be on the more cost-effective measures while maintaining compliance with the mandatory Best Practices of D.17-16-015. Accordingly, SPD has approved or partially approved the proposed SoCalGas Compliance Plan chapters that meet those criteria. An evaluation of each of those chapters follows.

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[1] Approval authority delegated to SED now SPD, in D.19-08-020 at 19.

[2] In its initial Compliance Plan submission on March 15, 2024, SoCalGas used a baseline which was still pending approval from SPD. SoCalGas corrected this to the approved baseline in its April 4, 2024 Amendment.

[3] D.19-08-020, Ordering Paragraph 5.

[4] D.17-06-015, Ordering Paragraph 6(c).

[5] Analysis of the Gas Companies' June 14, 2024, Natural Gas Leak and Emission Reports. CPUC-CARB Joint Report.

CHAPTERS APPROVED

SPD fully or partially approves the following chapters:

Partial Approval

Chapter 1, Leak Inventory Reduction. Approval limited to maintain a three-year leak duration maximum.

Full Approval

- Chapter 3, Blowdown Reduction Activities
- Chapter 7, Record Keeping IT Project
- Chapter 8, Geographic Tracking
- Chapter 13, Electronic Leak Survey
- Chapter 14, Aerial Monitoring
- Chapter 15, Damage Prevention Public Awareness
- Chapter 16, Pipe Fitting Specifications
- Chapter 19, Gas Speciation
- Chapter 20, Public Leak Maps

CHAPTERS NOT APPROVED

SPD does not approve the following chapters:

- Chapter 2, Increased Leak Survey
- Chapter 9, Competency Based Training Development
- Chapter 10, Training Facility Enhancements
- Chapter 21, Leak and Vented Emission Reduction – Transmission Compressor Facilities
- Chapter 24, Storage Above Ground Leak Survey

BACKGROUND

In accordance with D.19-08-020, SoCalGas filed a 2024 Compliance Plan on March 15, 2024, as required. Concurrently, SoCalGas submitted the associated Advice Letter (AL) 6277-G. After initial feedback from SPD Staff, SoCalGas submitted an amended Compliance Plan on April 4, 2024 (2024 Plan). The purpose of an NGLA Compliance Plan is to propose how the utility will achieve emissions reductions, primarily through the implementation of the 26 Best Practices[6] for leak abatement adopted by the Commission in D.17-06-015[7] (hereafter the "Best Practices"). The 2024 Plan covers activities proposed for the 2025-2026 cycle.

D.19-08-020 added requirements for the Compliance Plans, including specifications for determining the cost-effectiveness of each proposed compliance measure when emissions reduction can be attributed to the measure. D.19-08-020 requires the use of a specified cost-effectiveness methodology and two cost-benefit tests to provide information when evaluating proposed methane reduction measures and for evaluating the Biennial Methane Leaks Compliance Plans (Compliance Plans) while maintaining full discretion for the Commission also to consider qualitative factors and policy goals. The two cost-benefit tests are: Cap-and-Trade savings and avoided Social Cost of Methane (SCM). D.19-08-020 did not specify a cost-effectiveness threshold but required the proposals to be evaluated on qualitative and quantitative bases.[8] Resolution G-3595 directed SPD and Energy Division Staff, in consultation with California Air Resources Board (CARB) Staff, to convene a Technical Working Group (TWG) in 2023 to discuss cost considerations. As a result of the TWG, SPD provided guidance on updating cost savings estimates using current dollars.

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[6] See Appendix B for the list of Best Practices.

[7] D.17-06-015 Ordering Paragraph 4 and Appendix B.

[8] D.19-08-020, at p. 36.

Some of the Best Practices, such as record-keeping or training, do not have directly associated emissions reductions; rather, these practices serve as foundational support for the overall goal. D.19-08-020 also provides for grouping multiple Best Practices into integrated measures, with each measure described in its own chapter.

APPROVAL AUTHORITY

D.19-08-020 authorizes the CPUC's Safety Enforcement Division (SED) to approve or reject NGLA Compliance Plans.[9] Since that decision, the Safety Policy Division (SPD) was established and responsibility for the NGLA program was passed to SPD. When funding for emissions reduction measures described in the Compliance Plan is requested outside of a General Rate Case (GRC), the utility will file a Tier 3 Advice Letter with the Energy Division. Pursuant to CPUC General Order 96-B, a Tier 3 Advice Letter is subject to disposition by Resolution, which requires a Commission vote.

COMPLIANCE PLAN SUMMARY

The 2024 Plan presents a total of 26 chapters detailing measures that address the 26 Best Practices to begin or continue in 2025-2026. Nine of the chapters provide an emissions reduction estimate, with six also providing corresponding cost-effectiveness estimates. Following the 26 chapters, the 2024 Plan also includes an attachment detailing six Research and Development (R&D) programs proposed for 2025-2026.

Overall, the 2024 Plan forecasts an emissions reduction of 42 percent by 2025 and 43 percent by 2030 relative to the 2015 baseline. This forecast somewhat exceeds the statewide greenhouse gas (GHG) reduction goal of 40 percent by 2030 and the CPUC-mandated reduction target of 20 percent by 2025 established in D.19-08-020.

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[9] D.19-08-020, at p. 19.

A summary table of the chapters that provide emission reductions forecasts and cost-effectiveness values is provided in Appendix A.

COST-EFFECTIVENESS DEFINITION AND USE

D.19-08-020 defines a cost-effectiveness calculation method and requires presenting the SCM and Cap-and-Trade cost-benefit tests. The Decision does not establish a threshold cost-effectiveness value or limit. However, given the Cap-and-Trade cost-benefit of $2.46/MCF and SCM benefit of $24.42/MCF, a measure is considered to achieve a "breakeven" net cost-effectiveness of $0/MCF when it has a standard cost-effectiveness of $26.88/MCF (i.e., $2.46 + $24.42).

STANDARD COST-EFFECTIVENESS

According to the Decision, SoCalGas calculates standard cost-effectiveness value as the ratio of the measure's average annual revenue requirement (AARR), less associated cost-benefits,[10] divided by the total emissions reduction (in MCF) for the same period.[11] For the 2024 Plan, SoCalGas used the forecasted average annual Weighted Average Cost of Gas (WACOG) published in the 2018 California Gas Report,[12] resulting in a cost-benefit of $2.42/MCF, for calculating standard cost-effectiveness. Program costs are defined as the average annual revenue requirement (AARR) times the number of years of the benefit period. Cost-effectiveness is expressed in dollars per MCF of natural gas emissions ($/MCF).

CAP-AND-TRADE BENEFITS

An avoided Cap-and-Trade cost-benefit test is required by D.19-08-020 to be used for information and comparison purposes.[13] For SoCalGas, an annual Advice Letter

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[10] The cost-benefits used in the basic standard cost-effectiveness calculation omits the SCM, avoided Cap-and-Trade and estimated safety benefits.

[11] Pg. 8 – SoCalGas 2024 Plan

[12] https://www.socalgas.com/regulatory/documents/cgr/2018_California_Gas_Report.pdf

[13] D.19-08-020, at p. 36

(AL) forecasts the rate impact of the Cap-and-Trade expense. This expense is added to rates through CPUC approval in the AL resolution process. Emissions reductions are accounted for in this Advice Letter as part of the total gas throughput. In the Compliance Plan, the utility must show the value of the avoided Cap-and-Trade cost as a benefit in $/MCF. D.19-08-020 specifies that the Cap-and-Trade cost-benefit test shall use the same Emission Conversion Factor and Proxy Greenhouse Gas Allowance Price as is used for the gas utilities' forecast revenue requirements pursuant to D.15-10-032.[14] That decision values Cap-and-Trade costs by assuming that all gas throughput is combusted and emitted to the atmosphere as CO2.

The Proxy Greenhouse Gas Allowance Price is variable based on market valuation. To determine the Cap-and-Trade benefit for the Compliance Plan, SoCalGas used a December 2025 futures value based on the five-day average of trading days January 2-8, 2024, from the International Exchange: $45.12 per metric ton CO2 equivalent (MT CO2(e)). Compliance with the Commission instructions produces a Cap-and-Trade benefit value of $2.46/MCF.

SOCIAL COST OF METHANE BENEFITS

The second cost-benefit test required by D.19-08-020 is the value for avoided SCM. While not immediately tangible savings to the ratepayer, the future cost to society from the environmental impact of GHGs is an important component of any GHG program. D.19-08-020 provides a table of estimates (in 2007 dollars) of the SCM, forecasted every five years, to be used in Compliance Plans.[15] Following the 2023 Technical Working Group meeting, CPUC Staff provided written guidance to update those values using the California Consumer Price Index. In the 2024 Plan, SoCalGas

[14] D.15-01-008, Ordering Paragraph 3, p. 82.

[15] D.19-08-020, at Page 16.

calculated an SCM of $24.42/MCF by using the D.19-08-020 estimate for 2020 of $21/MCF and applying the California Consumer Price Index.

SAFETY COST BENEFITS

During the 2023 Technical Working Group, CPUC Staff suggested including an optional cost-benefit test that included the safety cost benefits of an activity, where relevant. In the 2024 Plan, SoCalGas included a safety cost-benefit test in three Chapters (1, 2, and 14). The test utilized Pipeline Hazardous Materials Safety Administration (PHMSA) data on likelihood of a hazardous leak resulting in a serious incident, the value of statistical life as determined in the Commission's Risk-Based Decision-Making Framework proceeding[16] and publicly available incident data from PHMSA, and the likelihood of a non-hazardous leak becoming a hazardous leak using internal SoCalGas data. In the three chapters where SoCalGas provided safety cost-benefit information, such calculations yielded an estimated value of $1/MCF at most.

REVIEW OF PLAN CHAPTERS

Of the 26 chapters presented, SoCalGas proposed funding for 15 chapters, while no additional funding was requested for the remaining 11 chapters. SPD Staff reviewed all 26 chapters presented by SoCalGas in its 2024 Plan and evaluated each of the 15 chapters for which funding is proposed. A list of all chapters with their Average Annual Revenue Requirement, Standard Cost-effectiveness, and Best Practices addressed, is provided in Table 1.

REVIEW OF RESEARCH AND DEVELOPMENT PROPOSALS

SoCalGas proposes six R&D projects in the 2024 Plan. These efforts are continuations or extensions of previously approved projects at a similar cost. Based on CPUC guidance, the goal of the research proposed in this Compliance Plan is to

[16] D. 22-12-027, at Page 60.

improve system emissions estimates and strategically reduce emissions while considering operational efficiency and cost-effectiveness. SPD finds that the proposed projects are reasonable and approve of their implementation. The research project topics and costs are provided in Table 2.

TABLE 1. COMPLIANCE PLAN SUMMARY

CH.	DESCRIPTION	Avg. Ann. Revenue Reqt., Millions	Forecasted 2030 Annual Emissions Red., MCF	Std. Cost Effect., $/MCF[17]	Best Practices Addressed
1	Leak Inventory Reduction	$52.3	266,921	190	15, 16, 20a, 21
2	Increased Leak Survey[18]	$11.0	149,460	71	15, 16
3	Blowdown Reduction Activities	$6.1	187,581	22	23, 3-7
4	Large Leak Prioritization	None	Ch. 1[19]	NA	15, 16, 20a, 21
5	Damage Prevention Algorithm and Proactive Intervention	None	NA	NA	24, 25, 26
6	Advanced Meter Analytics Algorithm	None	NA	NA	17
7	Recordkeeping IT Project	$2.0	NA	NA	9
8	Geographic Tracking	$0.9	NA	NA	9, 20b
9	Competency-Based Training Development	$0.9	NA	NA	13
10	Training Facility Enhancements	$0.04	NA	NA	13
11	Blowdown Reduction Projects at Storage Facilities	None	NA	NA	23
12	Stationary Methane Detectors	None	NA	NA	18
13	Electronic Leak Survey	$0.1	NA	NA	20b

[17] Standard Cost-effectiveness is the average annual revenue requirement less direct savings divided by the annual emission reduction. Additional benefits are accounted for in the Net Cost Effectiveness which includes Cap-and-Trade, and Social Cost benefit tests, see Table 3 in Appendix A.

[18] Projected annual emissions reduction and cost effectiveness includes estimates for proposed MSA Pilot Program provided in SoCalGas' response to a Data Request

[19] The projected annual emissions reduction for Chapter 4 "Large Leak Prioritization" (33,659 MCF) is included in the annual emissions reduction estimate for Chapter 1 "Leak Inventory Reduction"

CH.	DESCRIPTION	Avg. Ann. Revenue Reqt., Millions	Forecasted 2030 Annual Emissions Red., MCF	Std. Cost Effect., $/MCF[17]	Best Practices Addressed
14	Aerial Monitoring[20]	$13.2	206,596/ 507,469	61/24	16, 17, 20a
15	Damage Prevention Public Awareness	$1.7	NA	NA	24, 25, 26
16	Pipe Fitting Specifications	$1.5	NA	NA	22
17	Repeat Offenders IT Systems	None	2,345	NA	26
18	Accelerated Leak Repair - Transmission	None	NA	NA	21
19	Gas Speciation	$0.8	NA	NA	17
20	Public Leak Maps	$0.01	NA	NA	20b
21	Leak and Vented Emission Reduction – Transmission Compressor Facilities	$0.2	6,821	35	19, 21, 23
22	Vapor Collection Systems	None	NA	NA	23
23	Distribution Above Ground Leak Survey	None	1,166	NA	19
24	Storage Above Ground Leak Survey	$1.3	1,416	921	19, 21
25	Distribution Above Ground Leak Repair	None	NA	NA	19, 21
26	High Bleed Device Replacement	None	NA	NA	23

[20] Emissions reductions and cost-effectiveness for Aerial Monitoring are with systems emissions only and system and confirmed non-system emissions, respectively.

CH.	DESCRIPTION	Avg. Ann. Revenue Reqt., Millions	Forecasted 2030 Annual Emissions Red., MCF	Std. Cost Effect., $/MCF[17]	Best Practices Addressed
	TOTAL	**$92.2**	**822,306/ 1,123,179** [21]	110/ 80	

NA = **Emission reduction**/Cost-effectiveness not applicable or could not be estimated

TABLE 2. RESEARCH AND DEVELOPMENT SUMMARY

Project Number	Project Topic	Best Practice Addressed	Advice Letter Loaded Cost ($)
16	Leak Detection and Prevention Algorithm	16	1,169,472
17	Eval. Of Instruments and Methods for Leak Detection, Quantification, Localization, and Speciation	17, 20a	4,091,724
18	Eval. Of Stationary Methane Detectors	18	238,651
20a	Develop and Maintain Company Specific Emission Factors	20a, 20b	3,131,121
22	Leak Prev. for Threaded Connections	22	1,516,494
23	Eval of Tech. to Mitigate Blowdown and Vented Emissions	23	1,324,934

[21] Total Forecasted Annual Emissions Reductions are with systems emissions only and system + non-system emissions, respectively.

EVALUATION OF CHAPTERS

APPROVAL CRITERION

To determine approval of proposed emission reduction chapters, SPD considers the following:

- Is it required for compliance with D.17-06-015-mandated Best Practices?
- Is it technically feasible?
- Is it cost effective?
- Does it contribute substantially to meeting reduction goals?
- Is it foundational to the NGLA Program?
- Is it essential for continuance of reductions achieved?

CHAPTER 1. LEAK INVENTORY REDUCTION

This chapter addresses the identification and repair of natural gas pipeline leaks, which was one of the motivating concerns behind the adoption of SB 1371;[22] some gas leaks had been allowed to remain open indefinitely under then-current regulations. Prior to the NGLA program, leaks that were not classified as hazardous did not have to be repaired promptly; these leaks (typically referred to as Grade 3) were too low in gas concentration to support ignition. Now, under the NGLA program, Best Practice 21 ("Find it, Fix it") requires all leaks to be repaired as soon as possible but no more than three years after discovery, with some exceptions for unusually high-cost repairs. SoCalGas achieved this three-year standard as of June 2020 and has since continued to improve its open leak time, achieving an average repair time for non-hazardous leaks of eight months in 2023.

[22] SB 1371 section 1(i) ("Providing just and reasonable rate revenues for gas corporations to find, categorize, and repair leaks promptly when discovered, including employing an adequate workforce, is in the public interest, and promotes the interests of customers and the public.").

In the 2024 Plan, SoCalGas proposes expanding the program from the average annual revenue requirement of $36.7 million previously approved in the 2022 Plan to an average annual revenue requirement of $52.3 million, a 42.5 percent increase. In the plan, SoCalGas attributes the growth of these costs to two main factors. Firstly, SoCalGas proposes to target an average repair time of seven months in 2025 and six months by the end of 2026. Secondly, SoCalGas anticipates upward cost pressures due to proposed regulation from the PHMSA mandating accelerated leak repair schedules.

The standard cost-effectiveness is presented as $190/MCF, based on an AARR of $52.3 million. The net cost-effectiveness is $162/MCF.

Given this chapter's relatively high forecasted standard cost-effectiveness of $190/MCF, SPD is concerned with the high cost of continuing to reduce repair times below the Best Practice requirement. SoCalGas's average repair time of eight months for non-hazardous leaks, and proposal to further decrease the time to six months, goes well beyond the three-year limit established in the NGLA Best Practices. Additionally, SoCalGas's forecasted emissions reduction of 42% by 2025 surpasses the 20% reduction target for that year and the 40% reduction required by 2030. To address cost concerns and maintain compliance with the three-year best practice requirement, SPD approves a reduced activity level for this chapter. Although SoCalGas anticipates greater funding needs due to expected PHMSA regulatory changes, federal regulations above and beyond the D.17-06-015 Best Practice requirements fall outside of the scope of the NGLA program Compliance Plan and are most appropriately addressed in a General Rate Case.

SPD approves Chapter 1 leak repair activity sufficient to ensure the three-year leak duration of Best Practice 21. SPD estimates that duration can be achieved at the level of activity proposed in the 2018 Compliance Plan, which had an AARR of $17.7

million. The 2018 Compliance Plan achieved a three-year leak duration by 2020. When adjusted for inflation by 3 percent a year, the present funding value would be a $20 million AARR.

CHAPTER 2. INCREASED LEAK SURVEY

This chapter addresses Best Practice 16 (Special Leak Surveys), which requires survey intervals that are possibly more frequent than required by BP 15, based on the utility's identification of special pipeline situations that are more likely to produce leaks. SoCalGas determined that unprotected steel pipelines are more leak prone and will benefit from a leak survey interval of one year rather than the 3-year standard required by BP 15. SoCalGas also applies a one-year survey frequency to Non-State-Of-The-Art (NSOTA) plastic pipe (primarily Aldyl A) but those costs are covered by their GRC-funded DIMP program. "Unprotected Steel" are steel pipelines that do not have cathodic protection systems acting to control corrosion.

SoCalGas proposes to continue a one-year survey cycle for unprotected steel distribution pipe in the Compliance Plan and also proposes a pilot program to randomly survey Meter Set Assemblies (MSAs) during surveys of other equipment to determine the benefits of increased surveying for MSA leaks. This pilot program accounts for most of the growth in the costs of Chapter 2 from $8.1 million AARR approved in the 2022 Plan to $11.0 million AARR in the 2024 Plan.

In the 2024 Plan, the standard cost-effectiveness is forecasted as $71/MCF based on an AARR of $11.0 million and a forecasted annual emissions reduction of 149,460 MCF. These forecasted reductions do not include potential reductions from the proposed pilot program, as SoCalGas considered that to be too speculative to include in the chapter's final total. However, SPD notes that the 149,460 MCF emissions reduction number includes reductions from the annual surveys of NSOTA

pipeline[23]. While SPD acknowledges that such reductions are valid when considering the utility's total efforts to reduce emissions, funding for NSOTA surveys is determined in the General Rate Case. The inclusion of emissions reductions for activities that do not have their costs accounted for in this chapter results in a more favorable cost-effectiveness than would otherwise be calculated.

Given the relatively poor standard cost-effectiveness of $71/MCF (even with inclusion of emission reductions from a DIMP-funded activity) and considering that the Aerial Methane Monitoring program is expected to provide annual coverage of the NSOTA pipelines, SPD does not find a compelling justification for continued funding of the measures in this chapter.

SPD does not approve adoption of Chapter 2.

CHAPTER 3. BLOWDOWN REDUCTION ACTIVITIES

Another set of Best Practices involves the reduction of intentional gas releases, usually for maintenance purposes, known as blowdowns. This chapter implements Best Practices 3, 4, 5, 6, 7, and 23. These practices include activities such as bundling of several projects, reducing pressure before the blowdown, and containing the emissions with portable compressors.

SoCalGas proposes continuing its high-pressure pipeline blowdown reduction efforts and installing infrastructure to support drawdown and cross-compression activities. In the 2024 Plan, SoCalGas proposes an AARR of $6.1 million[24] for these activities, a decrease from the 2022 Plan request of $8.1 million AARR.

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[23] SoCalGas 2024 Amended Compliance Plan, April 4, 2024, p 26.

[24] The AARR was corrected to $6.109 million from $6.2 million in an October 10, 2024 Data Request response.

The estimated emissions reduction by 2025 is 187,581 MCF, over 20 percent of the total forecasted reductions. It should be noted that the number of blowdowns can vary from year to year as required maintenance activities may differ.

Standard cost-effectiveness for this chapter is forecasted at $22/MCF. The cost-effectiveness for this Chapter is exceptionally favorable and is supported by a historically achieved standard cost-effectiveness of $33/MCF for the 2018-2022 period.

SPD approves adoption of the Chapter 3 measures.

CHAPTER 7. RECORD KEEPING IT PROJECT

Best Practice 9 requires that utilities maintain thorough records of all methane emissions and leaks, as well as the calculations, data, and assumptions used to determine the volume released.

SoCalGas proposes to continue funding to maintain the existing “Data Lake”, which allows utility staff to collate relevant data of varying formats from various sources in the utility into a single integrated location. SoCalGas also proposes additional activities aimed at leveraging this Data Lake to improve the efficiency of operational practices, as well as data accuracy and reliability. In the 2024 Plan, SoCalGas proposes an AARR of $2.0 million for these activities, a decrease from the AARR of $3.7 million in the 2022 Plan.

Due to the nature of the work described, no direct emissions reductions, or cost effectiveness can be attributed to the activities in Chapter 7. SPD views activities related to the maintenance and assessment of emissions data as foundational to the operation and oversight of the NGLA program.

SPD approves adoption of the Chapter 7 measures.

CHAPTER 8. GEOGRAPHIC TRACKING

SoCalGas identifies the activities in this chapter as applying to Best Practices 9 and 20b. Best Practice 9 requires that utilities maintain thorough records of all methane emissions and leaks, while Best Practice 20b requires that utilities develop methodologies to improve geographic tracking of leaks, as well as maintain geographic leak maps available to the public.

SoCalGas proposes finalizing the QA/QC of a digital modeling project begun in previous Compliance Plan cycles of several high-pressure facilities. Additionally, SoCalGas proposes further digitization of pipeline easements, as well as maintenance of existing data of historic right-of-way agreements. In the 2024 Plan, SoCalGas proposes an AARR of $0.9 million, significantly lower than the $10.4 million in the 2022 Plan.

Due to the nature of the work described, no direct emissions reductions or cost effectiveness can be attributed to the activities in Chapter 8. SPD views activities related to the maintenance and assessment of emissions, facility, and equipment data as foundational to the operation and oversight of the NGLA program.

SPD approves adoption of the Chapter 8 measures.

CHAPTER 9. COMPETENCY BASED TRAINING DEVELOPMENT

Best Practice 13 directs utilities to implement training programs to instruct workers and contractors on how to carry out the Best Practices of the NGLA program. In its 2024 Compliance Plan, SoCalGas includes two chapters in response to this Best Practice (Chapter 9 and Chapter 10).

In Chapter 9, SoCalGas proposes to continue transitioning from traditional in-person classroom-based training to a web-based system. SoCalGas claims that such a transition will allow for a more individualized learning process and facilitate the incorporation of new policies. Chapter 9 proposes an AARR of $0.9 million and a Total Revenue Requirement of $1.7 million.

Due to the nature of the work described, no direct emissions reductions or cost effectiveness can be attributed to the activities in Chapter 9. While SPD views activities in other such chapters to be foundational, SPD does not find those described in Chapter 9 to be necessary for the NGLA program, as this chapter primarily aims to replace or enhance already existing compliant training programs. As such, SPD recommends that a proposal to fund the replacement of existing classroom-based training with a web-based system should be requested in a General Rate Case.

SPD does not approve the adoption of the Chapter 9 measures.

CHAPTER 10. TRAINING FACILITY ENHANCEMENTS

Best Practice 13 directs utilities to implement training programs to instruct workers and contractors on how to carry out the Best Practices of the NGLA program. In its 2024 Compliance Plan, SoCalGas includes two chapters in response to this Best Practice (Chapter 9 and Chapter 10).

In Chapter 10, SoCalGas proposes to add additional hands-on training assemblies to their already existing training facility dubbed “Situation City”. SoCalGas argues that such assemblies give employees vital practical experience, which can improve infield safety and efficiency. The utility proposes an AARR of $0.04 million and a Total Revenue Requirement of $2.8 million.

Due to the nature of the work described, no direct emissions reductions or cost effectiveness can be attributed to the activities in Chapter 10. SPD does not find the measures described in Chapter 10 to be necessary for the NGLA program, as this chapter aims to supplement already existing compliant training facilities. SPD recommends that a proposal to fund additional training measures be requested in a General Rate Case.

SPD does not approve adoption of the Chapter 10 measures.

CHAPTER 13. ELECTRONIC LEAK SURVEY

Best Practice 20b requires utilities to improve geographic tracking and evaluation methodologies, as well as develop leak detection procedures capable of transferring data to a central database.

In Chapter 13, SoCalGas describes the ongoing Electronic Leak Survey (ELS) project, which seeks to replace the existing leak survey process based on paper maps with a GIS web-based application. SoCalGas lists many benefits to completing implementation of this project, including cost-savings associated with paper-based maps and procedures, reduced waiting times for data entry during time-sensitive events (such as system overpressure, fire, flooding, etc.), and the ability to leverage electronic data to perform analytics to improve procedural efficiency.

In the 2024 Plan, SoCalGas propose an AARR of $0.1 million and a Total Revenue Requirement of $7.7 million[25], a significant reduction from the previous $1.9 million and $28.9 million presented in the 2022 Plan, respectively.

[25] The 2024 Plan mistakenly gives a Total Revenue Requirement of $8.7 million for Chapter 13. SoCalGas has confirmed that the Chapter 13 Total Revenue Requirement of $7.7 million in AL 6277-G is correct.

No direct emission reduction can be assigned to this chapter. SPD views activities related to the collection and recording of emissions data as foundational to the operation and oversight of the NGLA program, as well as necessary for compliance with Best Practice 20b.

SPD approves adoption of Chapter 13.

CHAPTER 14. AERIAL MONITORING

Aerial Monitoring, or Aerial Methane Mapping (AMM) addresses Best Practices 16, 17, and 20a. AMM uses laser-based LIDAR scanning technology mounted in a helicopter. The AMM surveys supplement traditional ground-based foot surveys by providing more frequent coverage and tend to detect the largest "super-emitter" leaks which can most benefit from prompt detection and repair. Another advantage of Aerial Monitoring (AMM) over traditional ground-based measurement is that since natural gas leaks upwards, it is not always visible from the ground, especially when the wind is blowing away from the surveyor or when a structure stands between the leak and the measurement device.

SoCalGas states that AMM was successfully demonstrated in pilot programs in 2019 and 2020. In the 2021-2022 Compliance Period, SoCalGas began broader implementation of the program and, by May 2022, was performing a total of six flights weekly with two helicopters. SoCalGas currently scans approximately 80% of all Non-State-Of-The-Art (NSOTA) pipelines.[26]

In the 2024 Plan, SoCalGas proposes to expand the program to cover 100% of its NSOTA lines annually while slightly reducing the cost. The 2022 AARR funding was approved at $13.72 million, the 2024 request is for $13.2 million.

[26] NSOTA pipelines are pipelines made of vintage plastic material that are no longer installed for gas service due to being more prone to leaking, such as Aldyl-A.

Because AMM finds gas leaks from any source, the measure offers the opportunity to identify and repair leaks on both the utility (system) and customer (non-system) side of natural gas pipelines. SoCalGas has presented two sets of emissions reduction estimates: one for SoCalGas assets and one for customer leaks. Additionally, SoCalGas also presents two sets of cost-effectiveness calculations: one that accounts for all costs but only accounts for abatement on SoCalGas assets (system), and one that accounts for all costs and abatements on both SoCalGas and customer assets (system and non-system).

In the 2024 Plan, SoCalGas reports a historical standard cost-effectiveness in 2023 of $73/MCF on the system alone and $29/MCF when combining system and non-systems emissions. Starting in 2025, SoCalGas forecasts an increased annual emissions reduction of 206,596 MCF on system assets and 300,873 MCF on non-system assets. That estimate results in a reduced forecasted standard cost-effectiveness of $61/MCF when only accounting for system leak abatement, and $24/MCF when accounting for both system and non-system leak abatement. When the benefits of Cap-and Trade and Social Cost of Methane savings are included, the net cost effectiveness drops below zero for the combined system and non-system emission reductions.

While the NGLA Program does not account for emission reductions achieved outside of the utility's system, SPD recognizes that the greenhouse gas reduction benefits that Aerial Monitoring provides are just the same as reductions achieved for the utility system. Furthermore, detection of leaks on customer facilities offers safety and cost saving advantages for customers.

As mentioned in the review of Chapter 2, the AMM program is more cost-effective at providing annual survey frequency for NSOTA plastic pipelines than the increased survey measure of Chapter 2.

SPD approves the Aerial Monitoring program as proposed in SoCalGas's 2024 Plan.

CHAPTER 15. DAMAGE PREVENTION PUBLIC AWARENESS

SoCalGas identifies activities within this chapter falling under Best Practices 24, 25, and 26. These three Best Practices all center around avoiding excavation damage to pipelines from the public or third-party contractors. Of particular note is Best Practice 24, which requires utilities to expand public education programs regarding the "Call Before You Dig – 811 Program".

In Chapter 15, SoCalGas proposes to continue conducting various incremental activities, beyond those funded in GRCs, associated with supporting dig-in prevention public outreach and education campaigns. Such activities include distribution of pamphlets and various other promotional materials to bring awareness to dig-in prevention resources (such as 811) and requirements, as well as partnerships and sponsorships for public outreach to various communities within the service territory.

In the 2024 Compliance Plan, SoCalGas proposes an AARR of $1.7 million and a Total Revenue Requirement of $3.4 million for Chapter 15 activities.

No direct emissions reductions can be attributed to the activities in Chapter 15. SPD views activities associated with Chapter 15 to be necessary to achieve compliance with the Best Practices established by D.17-06-015, specifically Best Practice 24. SPD also notes the benefit of dig-in prevention activities in reducing safety risks, in addition to methane emissions.

SPD approves adoption of Chapter 15.

CHAPTER 16. PIPE FITTING SPECIFICATIONS

Best Practice 22 requires review of pipe fitting specification data, and then proposal of a program to replace low quality fittings. SoCalGas is implementing this practice by inspecting newly received components so that only fittings that meet specifications are used in the field. SPD finds this chapter is necessary to comply with Best Practice 22.

SoCalGas has not been able to attribute emission reductions directly to this practice, but low-quality threaded components have historically been identified as a common source of leaks in gas infrastructure, and improvements in the quality of the components will contribute to reducing emissions. This chapter proposes an AARR of $1.5 million and a Total Revenue Requirement of $2.9 million.

SPD approves adoption of Chapter 16.

CHAPTER 19. GAS SPECIATION

Best Practice 17 requires utilities to use enhanced methane detection practices, including gas speciation as one of those practices. Natural gas can have different 'species' depending on the source: utility pipeline gas has a different chemical composition than other sources of methane. SoCalGas has established use of a mobile gas speciation van which the utility dispatches to methane detections where the leak source is in question. In Chapter 19, SoCalGas proposes to continue operation of the mobile gas speciation van, as well as employ an additional technician to handle increased demand generated by increased leak survey schedule proposed in other chapters.

In the 2024 Compliance Plan, SoCalGas proposes an AARR of $0.8 million and a Total Revenue Requirement of $1.5 million.

Due to the nature of the work described, no direct emissions reductions or cost effectiveness can be attributed to the activities in Chapter 19. SPD notes that gas speciation is required for compliance with Best Practice 17. Identification of gas leak sources saves the cost of repairing leaks that aren't due to utility pipeline leaks.

SPD approves adoption of Chapter 19.

CHAPTER 20. PUBLIC LEAK MAPS

Best Practice 20b requires utilities to maintain publicly available geographic leak maps with leaks displayed by ZIP code or census tract. SoCalGas proposes to continue maintaining their public leak maps, which are available through SoCalGas's website.[27] In the 2024 Compliance Plan, SoCalGas proposes an AARR of $0.01 million and a Total Revenue Requirement of $0.02 million for the two-year compliance plan period.

No direct emissions reductions or cost effectiveness can be attributed to the activities in Chapter 20. SPD notes that the activity is necessary for compliance with Best Practices and enhances public accessibility to the NGLA program. Furthermore, the costs associated with the program are low.

SPD approves adoption of Chapter 20.

[27] SoCalGas's Public Leak Map can be found through the following link: https://www.socalgas.com/safety/distribution-pipelines-emissions-map

CHAPTER 21. LEAK AND VENTED EMISSION REDUCTION – TRANSMISSION COMPRESSOR FACILITIES

SoCalGas identifies activities within this chapter falling under Best Practices 21 and 23. Best Practice 21 requires that utilities repair leaks within 3 years of discovery (with an exception for excessive cost), while Best Practice 23 requires that utilities minimize emissions from operations, maintenance, and other activities in the distribution and transmission systems, as well as storage facilities.

In Chapter 21, SoCalGas proposes two programs for transmission compressor facilities. The first program will investigate and develop a quality and maintenance plan for compressor rod packing. That program is forecasted to reduce 2,981 MCF of emissions each year. The second program will install 4 downstream emission capture systems which are each estimated to reduce 960 MCF (for a total 3,840 MCF) of fugitive emissions annually.

In the 2024 Compliance Plan, SoCalGas proposes an AARR of $0.2 million and Total Revenue Requirement (TRR) of $15.5 million. While the AARR is small, the large TRR Requirement is driven by the capital cost of the downstream capture systems program. SoCalGas estimates a total annual emissions reduction of 4,901 MCF in 2025, which will increase to 6,821 MCF for the following years as the projects are completed.

Standard cost-effectiveness of this chapter is forecasted to be $35/MCF due to the low cost of amortizing $15 million over many years. While generally favorable compared to other chapters, the standard cost-effectiveness of the chapter does not achieve the breakeven point of $26.88/MCF. Furthermore, the TRR of Chapter 21 is significantly high compared to the low forecasted emission reductions. Also, other SoCalGas measures address the Best Practices cited in this chapter.

SPD does not approve the adoption of Chapter 21.

CHAPTER 24. STORAGE ABOVE GROUND LEAK SURVEY

SoCalGas identifies activities within Chapter 24 as related to Best Practices 19 and 21. Best Practice 19 requires utilities to conduct aboveground leak surveys and data collection at high-pressure Compressor Stations, Gas Storage Facilities, City Gates, and Metering & Regulating (M&R) Stations at least once a year. Best Practice 21 requires that utilities repair leaks within 3 years of discovery (with some exceptions).

SoCalGas proposes accelerated instrumented leak surveys and leak repairs at gas storage facilities. This proposal involves repairing leaks in time frames shorter than those required by California Geologic Energy Management Division (CalGEM), CARB, and the NGLA Best Practices. Additionally, SoCalGas proposes utilizing Forward Looking InfraRed (FLIR) Technology to conduct daily inspections on storage facilities, arguing that it will assist with quickly identifying leaks and accelerating leak repairs.

In the 2024 Plan, SoCalGas proposes an AARR of $1.3 million and a Total Revenue Requirement of $2.6 million for Chapter 24. The majority of these costs are attributable to accelerated leak repair. SoCalGas estimates an annual emissions reduction of 1,416 MCF. Standard cost-effectiveness of Chapter 24 is forecasted to be $921/MCF.

This chapter is much less cost-effective than any other chapter in the Compliance Plan. The chapter proposes leak surveys and repair frequency in excess of the best practice requirements.

SPD does not approve the adoption of Chapter 24.

CONCLUSION

SPD has reviewed all the chapters of the 2024 Plan for consistency with the 26 Best Practices, cost-effectiveness, and qualitative safety benefits. SPD approves a limited adoption of SoCalGas's 2024 Compliance Plan, as listed below:

CHAPTERS APPROVED

Partial Approval

Chapter 1, Leak Inventory Reduction. Approval limited to maintain a three-year leak duration maximum.

Full Approval

- Chapter 3, Blowdown Reduction Activities
- Chapter 7, Record Keeping IT Project
- Chapter 8, Geographic Tracking
- Chapter 13, Electronic Leak Survey
- Chapter 14, Aerial Monitoring
- Chapter 15, Damage Prevention Public Awareness
- Chapter 16, Pipe Fitting Specifications
- Chapter 19, Gas Speciation
- Chapter 20, Public Leak Maps

CHAPTERS NOT APPROVED

SPD does not approve the following measures:

- Chapter 2, Increased Leak Survey
- Chapter 9, Competency Based Training Development
- Chapter 10, Training Facility Enhancements
- Chapter 21, Leak and Vented Emission Reduction – Transmission Compressor Facilities

- Chapter 24, Storage Above Ground Leak Survey

APPENDIX A: FORECASTED EMISSIONS REDUCTIONS

Proposed Major Efforts Requiring Costs to Reduce Emissions - SoCalGas

Chapter	2025 Emission Reduction, MCF	2030 Emission Reduction, MCF	AARR, $Million	Standard Cost-effectiveness $/MCF	Net Cost-effectiveness $/MCF
Chapter 1 – Leak Inventory Reduction[28] Combined with Chapter 4 - Large Leak Prioritization	257,399	266,961	$52.3	190	163
Chapter 2 - Increased Leak Survey[29]	149,460	149,460	$11.0	71	44
Chapter 3 - Blowdown Reduction Activities	187,581	187,581	$6.1	22	-5
Chapter 14 - Aerial Monitoring (System Only)	206,596	206,596	$13.2	61	34
Chapter 14 – Aerial Monitoring (all reductions)[30]	507,469	507,469	$13.2	24	-3
Chapter 21 – Transmission Leaks and Vented Emissions	4,901	6,821	$0.2	35	8

[28] Due to overlapping activities, Chapter 1 – Leak Inventory Reduction and Chapter 4 – Large Leak Prioritization share both expenditure and emission reduction estimates

[29] Additional reductions were estimated for the MSA survey pilot but had low confidence so not included.

[30] Emissions reductions for this row include both system and non-system reductions but are not included in table totals.

Chapter 24 – Storage Aboveground Leak Survey	1,416	1,416	$1.3	921	894
Summary (System Only)	**807,353**	**818,835**			
Percentage Reduction from Baseline[31]	**42%**	**43%**			

[31] Percent Reduction based on the approved 2015 baseline of 2,057,483 MCF.

APPENDIX B: BEST PRACTICES FOR THE NATURAL GAS LEAK ABATEMENT PROGRAM

No.	Best Practices	Rationale
	Policies and Procedures (P&P)	
BP 1	Compliance Plan Written Compliance Plan identifying the policies, programs, procedures, instructions, documents, etc. used to comply with the Final Decision in this Proceeding (R.15-01-008). Exact wording TBD by the company and approved by the CPUC, in consultation with CARB. Compliance Plans shall be signed by company officers certifying their company's compliance. Compliance Plans shall include copies of all policies and procedures related to their Compliance Plans. Compliance Plans shall be filed biennially (i.e. every other year) to evaluate best practices based on progress and effectiveness of Companies' natural gas leakage abatement and minimization of methane emissions.	Each company is of a different size and has a different business model. Compliance Plans will require Companies to include those Best Practices (BPs) mandated by the Commission, noting applicable exemptions and alternatives, and any additional measures proposed by each Company to abate natural gas leakage and minimize methane emissions. However, companies must submit a Compliance Plan for approval by the CPUC, in consultation with CARB, to ensure that they are complying with the decisions of this proceeding and SB 1371. The Compliance Plan filing also incorporates many requirements for other BPs including policies and procedures, recordkeeping, training, experienced/trained personnel. In addition, other specific requirements in many leak detection, leak repair and leak

No.	Best Practices	Rationale
		prevention BPs are incorporated into the Compliance Plan filing.
BP 2	Methane GHG Policy Written company policy stating that methane is a potent Green House Gas (GHG) whose emissions to the atmosphere must be minimized. Include reference to SB 1371 and SB 1383. Exact wording TBD by the company and approved by the CPUC, in consultation with CARB, as part of Compliance Plan filing.	Written company policies, referencing both SB 1371 (2014, Leno) and SB 1383 (2016, Lara), are needed to guide company activities and ensure effective implementation to abate natural gas leakage and minimize methane emissions.

No.	Best Practices	Rationale
BP 3	Pressure Reduction Policy Written company policy stating that pressure reduction to the lowest operationally feasible level in order to minimize methane emissions is required before non-emergency venting of high-pressure distribution (above 60 psig), transmission and underground storage infrastructure consistent with safe operations and considering alternative potential sources of supply to reliably serve customers. Exact wording TBD by the company and approved by the CPUC, in consultation with CARB, as part of Compliance Plan filing.	Written company policies are needed to require minimization of methane emissions from company activities (e.g. blowdowns, other operational emissions, etc.), and ensure effective implementation consistent with Operations & Maintenance (O&M) safety, system integrity and reliability requirements.
BP 4	Project Scheduling Policy Written company policy stating that any high pressure distribution (above 60 psig), transmission or underground storage infrastructure project that requires evacuating methane will build time into the project schedule to minimize methane emissions to the atmosphere consistent with safe operations and considering alternative potential sources of supply to reliably serve customers. Projected schedules of high-pressure distribution (above 60 psig), transmission or underground	Written company policies to schedule projects for high pressure distribution, transmission or underground storage infrastructure projects to minimize methane emissions are needed to guide company activities and ensure effective implementation consistent with O&M safety, system integrity and reliability requirements. This scheduling projects BP applies to non-emergency venting of high pressure distribution (above 60 psig), transmission or underground

No.	Best Practices	Rationale
	storage infrastructure work, requiring methane evacuation, shall also be submitted to facilitate audits, with line venting schedule updates TBD. Exact wording TBD by the company and approved by the CPUC, in consultation with CARB, as part of the Compliance Plan filing.	storage infrastructure requiring methane evacuation.
BP 5	Methane Evacuation Procedures Written company procedures implementing the BPs approved for use to evacuate methane for non-emergency venting of high pressure distribution (above 60 psig), transmission or underground storage infrastructure and how to use them consistent with safe operations and considering alternative potential sources of supply to reliably serve customers. Exact wording TBD by the company and approved by the CPUC, in consultation with CARB, as part of the Compliance Plan filing.	Written company procedures are needed to guide company activities for methane evacuation implementation and ensure effective implementation consistent with O&M safety, system integrity and reliability requirements. This methane evacuation implementation BP applies to non-emergency venting of high-pressure distribution (above 60 psig), transmission or underground storage infrastructure requiring methane evacuation.
BP 6	Methane Evacuation Work Orders Policy Written company policy that requires that for any high pressure distribution (above 60 psig), transmission or underground storage infrastructure projects requiring evacuating	Written company policies are needed for methane evacuation work orders to guide company activities and ensure effective implementation consistent with O&M safety, system integrity and reliability requirements. This

No.	Best Practices	Rationale
	methane, Work Planners shall clearly delineate, in procedural documents, such as work orders used in the field, the steps required to safely and efficiently reduce the pressure in the lines, prior to lines being vented, considering alternative potential sources of supply to reliably serve customers. Exact wording TBD by the company and approved by the CPUC, in consultation with CARB, as part of the Compliance Plan filing.	methane evacuation work orders BP applies to non-emergency venting of high pressure distribution (above 60 psig), transmission or underground storage infrastructure requiring methane evacuation.
BP 7	<u>Bundling Work Policy</u> Written company policy requiring bundling of work, whenever practicable, to prevent multiple venting of the same piping consistent with safe operations and considering alternative potential sources of supply to reliably serve customers. Company policy shall define situations where work bundling is not practicable. Exact wording TBD by the company and approved by the CPUC, in consultation with CARB, as part of the Compliance Plan filing.	Written company policy is needed for bundling work to guide company construction and O&M activities for coordination of multiple venting of lines to minimize excess methane emissions consistent with O&M safety, system integrity and reliability requirements. This bundling work BP requires companies to define situations where work bundling is not practicable.
BP 8	<u>Company Emergency Procedures</u> Written company emergency procedures which describe the actions company staff will take to prevent,	Most natural gas companies have gas systems containing large volumes of methane. An uncontrolled release can negate the

No.	Best Practices	Rationale
	minimize and/or stop the uncontrolled release of methane from the gas system or storage facility consistent with safe operations and considering alternative potential sources of supply to reliably serve customers. Exact wording TBD by the company and approved by the CPUC, in consultation with CARB, as part of the Compliance Plan filing.	methane reductions of other utilities and increase GHG emissions. Written emergency company procedures are needed to guide company staff to prevent, minimize, and/or stop the uncontrolled release of methane and ensure effective implementation consistent with O&M safety, system integrity and reliability requirements.
	Recordkeeping	
BP 9	<u>Recordkeeping</u> Written Company Policy directing the gas business unit to maintain records of all SB 1371 Annual Emissions Inventory Report methane emissions and leaks, including the calculations, data and assumptions used to derive the volume of methane released. Records are to be maintained in accordance with G.O. 112 F and succeeding revisions, and 49 CFR 192. Currently, the record retention time in G.O. 112 F is at least 75 years for the transmission system. 49 CFR 192.1011 requires a record retention time of at least 10 years for the distribution system. Exact wording TBD by the company and approved by the CPUC,	Accurate reporting of methane emissions and leaks, including estimation methodologies and assumptions, is critical for regulatory audits to ensure compliance. Written company policy is needed to ensure these records are maintained for all SB 1371 relevant actual measured emissions and leaks and estimated emissions and leaks including calculations, data and assumptions to derive the volume of methane released.

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	in consultation with CARB, as part of the Compliance Plan filing.	
	Training	
BP 10	Minimize Uncontrolled Natural Gas Emissions Training Training to ensure that personnel know how to use company emergency procedures which describe the actions staff shall take to prevent, minimize and/or stop the uncontrolled release of natural gas from the gas system or storage facility. Training programs to be designed by the Company and approved by the CPUC, in consultation with CARB, as part of the Compliance Plan filing. If integration of training and program development is required with the company's General Rate Case (GRC) and/or Collective Bargaining Unit (CBC) processes, then the company shall file a draft training program and plan with a process to update the program once finalized into its Compliance Plan.	Most natural gas companies have gas systems containing large volumes of methane. An uncontrolled release can negate the methane reductions of other utilities and increase GHG emissions. This training BP is needed to ensure personnel know how to use emergency procedures to prevent, minimize and/or stop the uncontrolled releases of methane. This training BP allows for companies to submit draft training programs along with a process to update the program once finalized to allow companies opportunities to integrate changes to their existing training and program development through their existing GRC and/or CBC processes.
BP 11	Methane Emissions Minimization Policies Training Ensure that training programs educate workers as to why it is necessary to	Training programs are necessary to help employees understand why it is important to abate natural gas leaks and minimize methane emissions. If

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	minimize methane emissions and abate natural gas leaks. Training programs to be designed by the Company and approved by the CPUC, in consultation with CARB, as part of the Compliance Plan filing. If integration of training and program development is required with the company's GRC and/or CBC processes, then the company shall file a draft training program and plan with a process to update the program once finalized into its Compliance Plan.	they understand the reasoning behind the goals, they are more likely to comply with the company's policies and procedures. This training BP is needed to ensure workers knows methane emissions reductions policies. This training BP allows for companies to submit draft training programs along with a process to update the program once finalized.
BP 12	<u>Knowledge Continuity Training Programs</u> Knowledge Continuity (Transfer) Training Programs to ensure knowledge continuity for new methane emissions reductions best practices as workers, including contractors, leave and new workers are hired. Knowledge continuity training programs to be designed by the Company and approved by the CPUC, in consultation with CARB, as part of the Compliance Plan filing. If integration of training and program development is required with the company's GRC and/or CBC processes, then the company shall file	New workers need to be trained in how to abate natural gas leakages and minimize methane emissions. Knowledge continuity (transfer) training programs are also needed to alleviate knowledge gaps and improve safety for new methane emissions minimization best practices. This training BP allows for companies to submit draft training programs along with a process to update the program once finalized to allow companies opportunities to integrate changes to their existing training and program development through their existing GRC and/or CBC processes.

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	a draft training program and plan with a process to update the program once finalized into its Compliance Plan.	
BP 13	Performance Focused Training Programs Create and implement training programs to instruct workers, including contractors, on how to perform the BPs chosen, efficiently and safely. Training programs to be designed by the Company and approved by the CPUC, in consultation with CARB, as part of the Compliance Plan filing. If integration of training and program development is required with the company's GRC and/or CBC processes, then the company shall file a draft training program and plan with a process to update the program once finalized into its Compliance Plan.	Training programs are necessary to instruct workers, including contractors, on how to perform BPs, efficiently and safely. This training BP is needed to ensure companies instructs workers, including contractors, on how to perform BPs, efficiently and safely. This training BP allows for companies to submit draft training programs along with a process to update the program once finalized to allow companies opportunities to integrate changes to their existing training and program development through their existing GRC and/or CBC processes.
	Experienced, Trained Personnel	

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BP 14	Formal Job Classifications Create new formal job classifications for apprentices, journeyman, specialists, etc., where needed to address new methane emissions minimization and leak abatement best practices, and filed as part of the Compliance Plan filing, to be approved by the CPUC, in consultation with CARB.	According to the Unions, there is a significant need for experienced, qualified people working in the field, and also for participation in the evaluation of existing practices and development of better (best) practices. Experienced gas system workers have first-hand knowledge of how system equipment operates, what the O&M problems are and how to fix them resulting in less methane leaks. If this is accurate, then methane leaks and emissions are not entirely infrastructure issues. Experienced workers are critical to help train, improve procedures, maintain and operate equipment and to address new methane emissions reduction and leak abatement best practices.
	Leak Detection	
BP 15	Gas Distribution Leak Surveys Utilities should conduct leak surveys of the gas distribution system every 3 years, not to exceed 39 months, in areas where G.O. 112-F, or its successors, requires surveying every 5 years. In lieu of a system-wide three-year leak survey cycle, utilities may	This leak detection BP recommends leak survey intervals of 3 years for all distribution pipelines formerly under the five-year leak survey requirement, unless the utility proposes and gets approved more effective leak survey cycles at a less frequent interval using a risk

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	propose and justify in their Compliance Plan filings, subject to Commission approval, a risk-assessment based, more cost-effective methodology for conducting gas distribution pipeline leak surveys at a less frequent interval. However, utilities shall always meet the minimum requirements of G.O. 112-F, and its successors.	assessment approach. Different leak survey cycles may be appropriate for various districts or areas of a utilities' distribution system based on risk considerations of leak history, pipe material and age, soil conditions, etc.
BP 16	Special Leak Surveys Utilities shall conduct special leak surveys, possibly at a more frequent interval than required by G.O. 112-F (or its successors) or BP 15, for specific areas of their transmission and distribution pipeline systems with known risks for natural gas leakage. Special leak surveys may focus on specific pipeline materials known to be susceptible to leaks or other known pipeline integrity risks, such as geological conditions. Special leak surveys shall be coordinated with transmission and distribution integrity management programs (TIMP/DIMP) and other utility safety programs. Utilities shall file in their Compliance Plan proposed special leak surveys for	This leak detection BP requires utilities to conduct special leak surveys, possibly more frequently than G.O. 112-F or BP # 15, in coordination with their integrity management and other utility safety programs. Also, this BP states that the use of special leak surveys (for the purpose of SB 1371 compliance) shall be predicated on risk assessments, including predictive and historical trends analysis, if possible. This BP also allows for predictive analysis to be defined differently for differing companies based on company size and trends.

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	known risks and proposed methodologies for identifying additional special leak surveys based on risk assessments (including predictive and/or historical trends analysis). As surveys are conducted over time, utilities shall report as part of their Compliance Plans, details about leakage trends. Predictive analysis may be defined differently for differing companies based on company size and trends.	
BP 17	Enhanced Methane Detection Utilities shall utilize enhanced methane detection practices (e.g. mobile methane detection and/or aerial leak detection) including gas speciation technologies.	This leak detection BP requires utilities to use enhanced methane detection practices including enhanced gas speciation technologies. This BP allows utilities to propose specific technologies that are most suitable for their gas systems and geographical areas.
BP 18	Stationary Methane Detectors Utilities shall utilize Stationary Methane Detectors for early detection of leaks. Locations include: Compressor Stations, Terminals, Gas Storage Facilities, City Gates, and Metering & Regulating (M&R) Stations (M&R above ground and pressures above 300 psig only). Methane	This leak detection BP requires utilities to utilize Stationary Methane Detectors for early detection of leaks. This BP applies to locations including compressor stations, terminals, gas storage facilities, City Gates and Metering & Regulating (M&R) Stations (M&R above ground and pressures above

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	detector technology should be capable of transferring leak data to a central database, if appropriate for location.	300 psig only). This BP recommends that methane detector technology is capable of transferring leak data to a central database, if appropriate for location.
BP 19	Above Ground Leak Surveys Utilities shall conduct frequent leak surveys and data collection at above ground transmission and high pressure distribution (above 60 psig) facilities including Compressor Stations, Gas Storage Facilities, City Gates, and Metering & Regulating (M&R) Stations (M&R above ground and pressures above 300 psig only). At a minimum, above ground leak surveys and data collection must be conducted on an annual basis for compressor stations and gas storage facilities.	This leak detection BP requires utilities to conduct frequent leak surveys and data collection at above ground transmission and high pressure distribution (above 60 psig) facilities including Compressor Stations, Gas Storage Facilities, City Gates, and Metering & Regulating (M&R) Stations (M&R above ground and pressures above 300 psig only). This BP also requires a minimum of annual surveys to be conducted for compressor stations and gas storage facilities.
BP 20a	Quantification & Geographic Tracking Utilities shall develop methodologies for improved quantification and geographic evaluation and tracking of leaks from the gas systems. Utilities	This leak detection BP requires utilities to develop methodologies for improved quantification of leaks. This BP also requires utilities to work together, with CPUC and ARB

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	shall file in their Compliance Plan how they propose to address quantification. Utilities shall work together, with CPUC and ARB staff, to come to agreement on a similar methodology to improve emissions quantification of leaks to assist demonstration of actual emissions reductions.	staff, to come to agreement on a similar methodology to improve emissions quantification of leaks to assist demonstration of actual emissions reductions. Improved quantification technologies are very much needed in the industry. Quantifying the amount of natural gas emitted from a leak is dependent on equipment sensitivities and the ability to utilize equipment successfully to measure leakage. Therefore, it is critical to improve accurate emissions inventory data as lessons learned from reviewing Annual Emissions Inventory Report data is that much of the inventory is based on estimations.
BP 20b	Geographic Tracking Utilities shall develop methodologies for improved geographic tracking and evaluation of leaks from the gas systems. Utilities shall work together, with CPUC and ARB staff, to come to agreement on a similar methodology to improve geographic evaluation and tracking of leaks to assist demonstrations of actual emissions reductions. Leak detection technology	This BP also requires utilities to work together, with CPUC and ARB staff, to come to agreement on a similar methodology to improve geographic tracking and evaluation of leaks to assist demonstrations of actual emissions reductions. This BP also recommends that leak detector technologies are capable of transferring leak data to a central

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	should be capable of transferring leak data to a central database in order to provide data for leak maps. Geographic leak maps shall be publicly available with leaks displayed by zip code or census tract.	database in order to provide data for leak maps.
	Leak Repairs	
BP 21	<u>"Find It/Fix It"</u> Utilities shall repair leaks as soon as reasonably possible after discovery, but in no event, more than three (3) years after discovery. Utilities may make reasonable exceptions for leaks that are costly to repair relative to the estimated size of the leak.	As the only leak repair BP, this "find-it/fix-it" BP applies to all leaks. This BP requires utilities to repair all leaks within a maximum of three years of discovery, allowing for reasonable exceptions. In the short-term, utilities are also required separately to eliminate their backlog of leaks unless leak repairs are cost prohibitive.
	Leak Prevention	
BP 22	<u>Pipe Fitting Specifications</u> Companies shall review and revise pipe fitting specifications, as necessary, to ensure tighter tolerance/better quality pipe threads. Utilities are required to review any available data on its threaded fittings, and if necessary, propose a fitting replacement program for threaded connections with significant leaks or comprehensive procedures for leak repairs and meter set assembly	This leak prevention BP addresses the very large number of threaded fittings and their known propensity to develop leaks. This BP requires companies to review and revise pipe fitting specifications and any available data on utilities' threaded fittings, as necessary. This BP requires utilities to review their own pipe fittings specifications along with available data and if necessary, propose a fitting replacement

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	installations and repairs as part of their Compliance Plans. A fitting replacement program should consider components such as pressure control fittings, service tees, and valves metrics, among other things.	program as part of their Compliance Plan. For example, Aeronautical National Pipe Taper (ANPT) threads (ANSI SAE AS71051) may be less leak-prone than National Pipe Taper (NPT) pipe threads (ANSI/ASME B1.20.1) since the former has 2 threads and the latter has 3 threads. However, other types of threads or connections may prove better.
BP 23	Minimize Emissions from Operations, Maintenance and Other Activities Utilities shall minimize emissions from operations, maintenance and other activities, such as new construction or replacement, in the gas distribution and transmission systems and storage facilities. Utilities shall replace high-bleed pneumatic devices with technology that does not vent gas (i.e. no-bleed) or vents significantly less natural gas (i.e. low-bleed) devices. Utilities shall also reduce emissions from blowdowns, as much as operationally feasible.	Most natural gas companies have gas systems containing large volumes of methane. Large amounts of fugitive and vented emissions from operations, maintenance and other activities, along with unforeseen catastrophic releases, can negate the methane reductions by other measures and significantly increase GHG emissions. This leak prevention BP focuses on minimizing fugitive and vented methane emissions including those from catastrophic releases, high-bleed pneumatics and blowdowns. This BP requires replacement of high-bleed pneumatic devices and also requires reduction of blowdown emissions, as much as operationally feasible.

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BP 24	Dig-Ins / Public Education Program Dig-Ins – Expand existing public education program to alert the public and third-party excavation contractors to the Call Before You Dig – 811 program. In addition, utilities must provide procedures for excavation contractors to follow when excavating to prevent damaging or rupturing a gas line.	Dig-Ins are a major cause of gas line ruptures. The utilities are already required to implement Dig-In public awareness programs. This leak prevention BP requires utilities to expand their existing public education programs and to provide procedures for excavation contractors to follow when excavating.
BP 25	Dig-Ins / Company Standby Monitors Dig-Ins – Utilities must provide company monitors to witness all excavations near gas transmission lines to ensure that contractors are following utility procedures to properly excavate and backfill around transmission lines.	Dig-Ins are a major cause of gas line ruptures. This leak prevention BP is necessary to ensure contractors follow utility excavation and backfill procedures around transmission lines in order to try to prevent damage to a transmission line. (It is possible to nick or damage a transmission line which can be a root cause for a rupture years later.)
BP 26	Dig-Ins / Repeat Offenders Utilities shall document procedures to address Repeat Offenders such as providing post-damage safe excavation training and on-site spot visits. Utilities shall keep track and report multiple incidents, within a 5-	This leak prevention BP requires utilities to document procedures to address Repeat Offenders and to track and report multiple incidents in their Annual Emissions Inventory Reports. This BP recommends utilities report egregious offenders

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	year period, of dig-ins from the same party in their Annual Emissions Inventory Reports. These incidents and leaks shall be recorded as required in the recordkeeping best practice. In addition, the utility should report egregious offenders to appropriate enforcement agencies including the California Contractor's State License Board. The Board has the authority to investigate and punish dishonest or negligent contractors. Punishment can include suspension of their contractor's license.	to appropriate enforcement agencies. This BP requires these incidents and leaks to be recorded under the Recordkeeping BP.

(End of Appendix B)