Company: San Diego Gas & Electric Company (U 902 M)
Proceeding: 2028 General Rate Case
Application: A.26-06-____
Exhibit: SDGE-03

PREPARED DIRECT TESTIMONY OF AMY KITSON

(GAS ENGINEERING & SYSTEM INTEGRITY)

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

June 2026

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SUMMARY

GAS ENGINEERING & SYSTEM INTEGRITY (In 2025 $)			
Categories of Management	**2025 Adjusted-Recorded (000s)**	**TY2028 Estimated (000s)**	**Change (000s)**
Total Non-Shared Services	**1,277**	**2,652**	**1,375**
Total Shared Services (Incurred)	**0**	**0**	**0**
Total O&M	**1,277**	**2,652**	**1,375**

GAS ENGINEERING & SYSTEM INTEGRITY (In 2025 $)							
Categories of Management	**Est. 2025 Adjusted-Recorded (000s)**	**Est. 2026 (000s)**	**Est. 2027 (000s)**	**Est. 2028 (000s)**	**Est. 2029 (000s)**	**Est. 2030 (000s)**	**Est. 2031 (000s)**
Total CAPITAL	**320**	**329**	**329**	**329**	**329**	**329**	**329**

Summary of Requests

- Support engineering, technical standards, and system analysis that enable safe operations.
- Maintain effective damage prevention, and emissions compliance.
- Sustain governance, compliance and risk oversight for transmission and distribution integrity management programs. SDG&E also requests a modification to the regulatory account treatment for the Transmission Integrity Management Program and Gas Safety Enhancement Programs Memorandum Account; and the closure of the regulatory accounts for the Distribution Integrity Management Programs upon review and approval of costs.
- Expand targeted preventive and mitigative activities to address emerging pipeline threats and strengthen system safety according to state and federal mandates.

PREPARED DIRECT TESTIMONY OF AMY KITSON
(GAS ENGINEERING & SYSTEM INTEGRITY)

I. INTRODUCTION

A. Summary of Gas Engineering & System Integrity Costs and Activities

My name is Amy Kitson, Vice President of Gas Engineering and System Integrity (GESI) for SoCalGas supporting San Diego Gas & Electric (SDG&E). In this role, I am responsible for the engineering, integrity management, system planning, and related support functions necessary to operate SDG&E's natural gas transmission and distribution systems in a safe, reliable, and resilient manner, while maintaining affordability for customers.

The purpose of my testimony is to present and support SDG&E's forecasted operations and maintenance (O&M) costs, as well as capital for GESI activities in Test Year (TY) 2028. These activities are essential to:

1. Maintain compliance with state and federal safety and reliability regulations and requirements;
2. Manage system risk through risk-informed and data-driven decision-making;
3. Support operational readiness and emergency response; and
4. Enable efficient planning and long-term system stewardship, consistent with the California Public Utilities Commission (CPUC) direction and customer affordability considerations.

Specifically, this testimony describes:

- Gas Infrastructure Programs and Support, including damage prevention, and emissions compliance;
- Integrity Management Programs for transmission and distribution systems; and
- Gas Engineering functions, including system design, analysis, and technical support.

Collectively, these programs support SDG&E's commitment to safety and reliability, while managing costs in a manner that is affordable for customers. They also reflect compliance with CPUC directives and alignment with California's decarbonization goals. My testimony provides a description of these activities, explains the drivers behind forecasted costs, and demonstrates why these investments are prudent and necessary to serve our customers and communities. Table AK-1 summarizes my sponsored costs.

TABLE AK-1

Test Year 2028 Summary of Total Costs

GAS ENGINEERING & SYSTEM INTEGRITY (In 2025 $)			
Categories of Management	**2025 Adjusted-Recorded (000s)**	**TY2028 Estimated (000s)**	**Change (000s)**
INFRASTRUCTURE SUPPORT PROGRAMS	638	1,305	667
INTEGRITY MANAGEMENT PROGRAMS	639	1,347	708
Total Non-Shared Services	**1,277**	**2,652**	**1,375**

GAS ENGINEERING & SYSTEM INTEGRITY (In 2025 $)							
Categories of Management	**Est. 2025 Adjusted-Recorded (000s)**	**Est. 2026 (000s)**	**Est. 2027 (000s)**	**Est. 2028 (000s)**	**Est. 2029 (000s)**	**Est. 2030 (000s)**	**Est. 2031 (000s)**
GAS TRANSMISSION & ENGINEERING OVERHEAD POOL	320	329	329	329	329	329	329
Total CAPITAL	**320**	**329**	**329**	**329**	**329**	**329**	**329**

Certain forecasted activities and estimated costs were previously presented in SDGE's 2025 RAMP Application (A.) 25-05-010/13 (cons.), filed on May 15, 2025. Those activities and any changes that have occurred since the RAMP filing are detailed in Section V below.

B. Organization of Testimony

My testimony presents a description of activities and support for forecasted O&M and Capital costs in three general categories that address regulatory, safety, and system reliability: (1) Infrastructure Support Programs; (2) Integrity Management Programs; and (3) Gas Engineering. My testimony is further organized as follows:

- **Introduction:** Provides an overview of my role, the purpose of this testimony, and the programs under GESI that support safety, reliability, sustainability, and affordability.
- **Affordability & Efficiency:** Discusses how GESI programs apply risk-based prioritization, planning, and innovation to deliver prudent and effective outcomes consistent with CPUC guidance.
- **O&M Costs:** Details forecasted costs and activities for Infrastructure Support Programs and Integrity Management.
- **Capital:** Outlines capital expenditures by using an established supervision and engineering overhead pool.

- **Risk Assessment Mitigation Phase (RAMP) Integration:** Identifies activities aligned with SDG&E's RAMP filing and explains how risk mitigation strategies are incorporated into this general rate case (GRC) request.
- **Reasonableness Review:** Provides the justification of the requested costs consistent with CPUC directives requiring these costs to be presented for recovery through SDG&E's GRC.

C. Support To and From Other Witnesses

My testimony also refers to the testimony and workpapers of several other witnesses, either in support of their testimony or as support for mine.

- Gas Distribution testimony (Ex. SDGE-04): Activities and associated costs to execute Distribution Integrity Management Program (DIMP) and Projects and Activities to Address Risk (PAARs) are presented in the Gas Distribution testimony. This testimony addresses DIMP program management, system knowledge, data/GIS, and compliance functions.
- Gas Major Projects testimony (Ex. SDGE-06): Activities and associated costs to execute Transmission Integrity Management Program (TIMP) Assessments & Remediation and corrosion related Preventive & Mitigative activities are presented in the Gas Major Projects testimony, which supports execution of these field projects. This testimony addresses TIMP program management, system knowledge, data management and record keeping, and compliance functions.
- Compensation & Benefits testimony (Ex. SCG-16/SDGE-20): Describes the compensation modernization initiative.
- Regulatory Accounts testimony (Ex. SDG&E-26): Proposals related to TIMP balancing account treatment, DIMP account modifications, and the expansion of the Gas Safety Enhancement Program Memorandum Account (GSEPMA) are summarized in the Regulatory Accounts testimony.

II. AFFORDABILITY & EFFICIENCY

Affordability is a critical consideration in how SDG&E plans, prioritizes, and delivers GESI programs. While safety and reliability remain foundational obligations, GESI programs also apply preventative, risk-informed approaches and prudent resource allocation to maintain system performance while managing overall costs in alignment with statewide policy objectives.

A. Risk-Based Prioritization

SDG&E's risk-based decision-making is guided by a commitment to maintaining safe and reliable service for customers. Through defined risk assessment methodologies, SDG&E prioritizes investments that reduce the likelihood and consequences of safety incidents, addresses compliance obligations, and avoids costly emergency repairs or unplanned outages. This approach aligns with the CPUC's Risk-Based Decision-Making framework (RDF) and promotes transparency in prioritizing work. For example, integrity management programs focus on mitigating the highest-risk assets first, thereby reducing the likelihood of incidents, and minimizing potential costly emergency repairs.

Risk-based prioritization is applied through both RAMP-related mitigations and non-RAMP activities, including Pipeline Safety Assurance, inspection and oversight programs, and integrity data and analysis functions. These programs emphasize prevention and early identification of potential integrity issues, which helps minimize reliance on higher corrective measures associated with emergency response, unplanned repairs, and service interruptions.

Collectively, this integrated approach supports affordability and efficiency while maintaining SDG&E's commitment to safety, reliability, and regulatory compliance.

B. Operational Efficiency and Innovation

Through the innovative deployment of technology, process improvements, and data integration, GESI programs improve operational efficiency and help moderate long-term costs. These efforts emphasize deployment based on risk, applicability, and operational need, including where technology can reduce manual effort or enhance the quality and consistency of decision-making.

GESI enhances workforce effectiveness by leveraging centralized expertise, cross functional collaboration, and risk-informed prioritization to align resources, reduce redundancy, and improve execution efficiency while continuing to support overall workforce growth needs to maintain safety, compliance, and operational performance.

Examples include:

- Enhanced risk modeling and analytics, including quantitative and scenario-based tools, to better target inspections, assessments, and preventative activities;
- Adoption of new in-line-inspection technologies to improve detection, identification, and remediation of potential defects;

- Use of new risk-modeling methods to support data driven decision making for Integrity Management Programs, including Quantitative Risk Assessment (QRA) model for medium pressure mains.

Together these efforts reduce lifecycle costs, improve execution efficiency, and support SDG&E's ability to meet safety, reliability, and regulatory obligations while maintaining affordability for customers.

III. NON-SHARED O&M COSTS – GAS ENGINEERING & SYSTEM INTEGRITY

"Non-Shared Services" are activities that are performed by a utility for its own benefit. Corporate Center provides certain services to the utilities and to other subsidiaries. For purposes of this general rate case, SDG&E treats costs for services received from Corporate Center as Non-Shared Services costs. Table AK-1 summarizes the total non-shared O&M forecasts for the listed cost categories.

TABLE AK-2
Non-Shared O&M Summary of Costs

GAS ENGINEERING & SYSTEM INTEGRITY (In 2025$)			
INFRASTRUCTURE SUPPORT PROGRAMS	**2025 Adjusted-Recorded (000s)**	**TY2028 Est. (000s)**	**Change (000s)**
SDG&E PUBLIC AWARENESS	358	1,010	652
PIPELINE SAFETY ASSURANCE	106	112	6
EMISSIONS STRATEGY PROGRAM	174	183	9
TRANSMISSION INTEGRITY MANAGEMENT PROGRAM (TIMP) – PROGRAM MANAGEMENT	214	640	426
DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM (DIMP) – PROGRAM MANAGEMENT	425	707	282
Total	**1,277**	**2,652**	**1,375**

A. SDG&E PUBLIC AWARENESS (1EN000)

TABLE AK-3
Non-Shared O&M Costs – SDG&E Public Awareness

INFRASTRUCTURE SUPPORT PROGRAMS	**2025 Adjusted-Recorded (000s)**	**TY2028 Est. (000s)**	**Change (000s)**
SDG&E PUBLIC AWARENESS	358	1,010	652
Total	**358**	**1,010**	**652**

1. Description of Costs and Activities

The Public Awareness cost supports the federally mandated Public Awareness Program, in accordance with 49 CFR § 192.616. This program, managed by the Public Awareness group, emphasizes regulatory compliance and broad public education through media outreach, social campaigns, and partnerships with organizations dedicated to preventing excavation-related

damage to SDG&E's underground pipelines. The program also supports Underground Service Alert (811, "call-before-you-dig") system awareness by targeting affected audiences, including contractors and the general public, through multiple communication channels. PHMSA has emphasized that "[e]ffective public awareness programs are vital to continued safe pipeline operations" and are essential for communicating with stakeholders, increasing awareness of pipeline safety, and reinforcing stakeholder responsibilities.[1]

Consistent with federal requirements, SDG&E's Public Awareness Program and applicable guidance under API RP 1162 (First Edition) and related regulatory recommendations, educates the public, government agencies, and excavation related personnel regarding: (1) the use of the One Call notification system prior to excavation activities (811/USA ticket); (2) hazards associated with unintentional gas pipeline releases; (3) indications of a potential release; (4) appropriate public safety responses; and (5) event reporting procedures.[2] These communications further emphasize the importance of contacting 811/USA prior to digging or excavation activity to initiation proper marking of underground facilities and reduce the risk of damage.

Excavation damage represents a significant threat to pipeline integrity, with the potential for severe public safety consequences.[3] By implementing targeted risk mitigation strategies, the Public Awareness Program plays a vital role in safeguarding communities and reducing excavation-related incidents. On an annual basis, SDG&E's Public Awareness Program reaches approximately:

- 3.7 million consumers;
- 27,632 excavators and land developers;
- 416 public officials; and
- 33 emergency management officials.

Every two years, the program reaches approximately:

- 123,656 residents and businesses located along pipeline rights of way;

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[1] Public Safety: Pipeline Operator Public Awareness Program, 70 Fed. Reg. 96,28833 (May 19, 2005), *available at:* https://www.govinfo.gov/content/pkg/FR-2005-05-19/pdf/05-9464.pdf.

[2] 49 CFR § 192.616(d).

[3] Excavation Damage is no longer a standalone risk chapter, and has been recategorized as a driver to the High Pressure Gas System and Medium Pressure Gas System risks.

- 502 residents and businesses near storage facilities and compressor stations; and
- 1,347 schools.

Communications are structured by audience category, with tailored messages, delivery methods, and frequencies. SDG&E also undertakes additional efforts to reach non-gas customers residing along pipeline rights of way and to provide outreach materials that remain relevant and effective. These multi-channel communications reinforce "call-before-you-dig" requirements and support compliance with federal standards while advancing damage prevention objectives. Increased public awareness activities are necessary to support SDG&E's damage prevention objectives, as damage prevention data demonstrate that enhanced outreach correlates with fewer excavation damages and increased USA ticket submissions.

a. Description of RAMP Mitigations

Within this cost category there are non-shared O&M costs for risk controls/mitigations that were presented in the 2025 RAMP Report and are listed in the table below. Activities that are compliance or mandated by CPUC or other agencies are listed in bold; and Appendix B attached to this testimony provides the details regarding these mandates for each control.

TABLE AK-4
RAMP and GRC Risk Control/Mitigation Activities - O&M

Excavation Damage Prevention (1EN000)				
ID	**Control/Mitigation Name**	**2025 RAMP 2028 Estimate In 2024 $ (000s)**	**2028 GRC 2028 Forecast In 2025 $ (000s)**	**Change ($000s)**
C003	**Excavation DP Public Awareness**	1,029	1,010	(19)
	Total	**1,029**	**1,010**	**(19)**

b. Description of Selection and Prioritization of RAMP Risk Mitigations

The RAMP risk mitigation efforts are associated with specific actions, such as programs, projects, processes, and utilization of technology and are designed to address a specific safety and/or reliability risk. The Company's selection and prioritization of these RAMP mitigation activities considered many factors when determining if these risk mitigation activities are an effective and worthwhile investment. The Enterprise Risk Management (ERM) process for identifying and assessing system risk is described in the Risk Management Volume testimony (Ex. SCG-02/SDGE-02).

This control supports compliance with applicable California and federal Prevention Program and Public Awareness Program requirements. SDG&E is required to maintain

membership in the Regional Notification Center, Dig Alert, pursuant to California Government Code, Section 4216. This membership includes payment of statutory surcharges that fund the California Underground Facilities Safe Excavation Board, as required under Cal. Gov't Code § 4216.16 and Cal. Code Regs., Title 19, § 4010.

Membership in the Regional Notification Center supports SDG&E's receipt of excavation notifications (811 tickets) in advance of digging activities, enabling the timely identification and marking of gas facilities prior to excavation. Additionally, compliance with the public awareness requirements of 49 CFR § 192.616 increases awareness of safe excavation practices among affected stakeholders, including homeowners, municipalities, landscapers, contractors, and other excavators.

Collectively, these measures reduce the likelihood of excavation-related damage to natural gas facilities, thereby mitigating public safety risk and supporting the safe and reliable operation of SDG&E's system throughout its service territory.

2. Forecast Method

The forecast methodology for Public Awareness is based on a three-year average. This approach is most appropriate as it smooths year-to-year variability and provides a more representative view of expected activity levels for TY2028. The three-year average establishes a stable baseline that reflects sustained operational trends rather than reliance on a single year snapshot.

3. Cost Drivers

The cost drivers supporting this forecast are the labor and non labor resources required to sustain the ongoing PHMSA requirements and established communication activities resulting from Public Awareness audit recommendations made by the CPUC. In addition, as stated in the 2025 RAMP Report, Public Awareness is mandated pursuant to 49 CFR § 192.616.

SDG&E utilizes multiple channels for this communication, including billboards, bill inserts, radio advertisements, bumper stickers, safety outreach events, press releases, social media, advertising campaigns, and sponsorships, to reach a broad audience.

Adjustments to the baseline are included to account for media campaigns required to support expanded outreach efforts and increased damage prevention activities aimed at mitigating excavation-related incidents. In addition, the forecast reflects changes in connection

with the compensation modernization initiative. Please refer to the Compensation & Benefits testimony, Ex. SCG-16/SDGE-20.

B. PIPELINE SAFETY ASSURANCE (1EN005)

TABLE AK-5
Non-Shared O&M Costs – Pipeline Safety Assurance

INFRASTRUCTURE SUPPORT PROGRAMS	2025 Adjusted-Recorded (000s)	TY2028 Est. (000s)	Change (000s)
PIPELINE SAFETY ASSURANCE	106	112	6
Total	**106**	**112**	**6**

1. Description of Costs and Activities

The Pipeline Safety Assurance (PSA) organization functions as the centralized pipeline safety compliance and assurance organization for both SoCalGas and SDG&E, supporting the collection, reporting, trending, assessment, analysis, investigation, communication, and continuous improvement of pipeline safety and regulatory compliance activities. The PSA staffing level, which is comprised of one FTE, reflects the resources needed to support the required regulatory and administrative responsibilities.

PSA coordinates routine and ad hoc audit and inspection activities across operational and program areas, including integrity management, emergency preparedness, public awareness, workforce compliance, and other compliance programs. PSA manages all pre-audit and post-audit data requests and prepares formal responses to audit letters, findings, and closure correspondences. This includes management of a centralized response platform to streamline preparation, review, approval, and submission of audit responses, reinforcing enterprise-wide safety accountability and governance. The group collaborates closely with audited departments to support audit readiness and facilitate efficient, transparent inspections.

PSA also conducts internal assurance activities, including self-assessments and mock inspections of operational areas and specialized programs to proactively identify gaps and strengthen compliance. The organization monitors and coordinates required incident reporting to the Pipeline and Hazardous Materials Safety Administration (PHMSA) and SED in accordance with 49 CFR §§ 191 and 192 and General Order (GO) 112 requirements, including coordination of on-site regulatory inspections when requested. PSA prepares and submits all required follow-up reports, data responses, and corrective action documentation within prescribed regulatory timeframes.

In addition, PSA is responsible for submitting required quarterly and annual reports to PHMSA and SED, as well as mandated notifications and filings related to new construction, rehabilitation and replacement activities, safety-related conditions, Maximum Allowable Operating Pressure (MAOP) exceedances, and other pipeline safety matters. The group supports internal Gas Standard Reviews, coordinates responses to SED customer complaints, and provides regulatory guidance and advisory support to Engineering and Gas Operations on pipeline safety compliance with CPUC and federal regulations.

1. Forecast Method

The forecast method developed for this cost category is base year. This method is most appropriate because 2025 accurately represents this workgroup's continued forecasted resource needs over the 2028 GRC cycle which supports a stable operational cadence.

2. Cost Drivers

PSA activities are driven by the obligation to meet ongoing PHMSA and CPUC regulatory requirements while supporting continuous improvement in pipeline safety performance and regulatory assurance. In addition, the forecast reflects changes in connection with the compensation modernization initiative. Please refer to the Compensation & Benefits testimony, Ex. SCG-16/SDGE-20.

C. EMISSIONS STRATEGY PROGRAM (1EN001)

TABLE AK-6
Non-Shared O&M Costs – Emissions Strategy Program

INFRASTRUCTURE SUPPORT PROGRAMS	2025 Adjusted-Recorded (000s)	TY2028 Est. (000s)	Change (000s)
EMISSIONS STRATEGY PROGRAM	174	183	9
Total	**174**	**183**	**9**

1. Description of Costs and Activities

The Emissions Strategy Program (ESP) supports the ongoing administration, oversight, and regulatory compliance activities required to implement and maintain SDG&E's Natural Gas Leak Abatement Program (NGLAP), as directed by CPUC Decision (D.) 17-06-015 and D.19-08-020. The program primarily consists of labor and related support costs necessary to meet established reporting, planning, and compliance obligations associated with methane emissions reduction requirements.

Key ESP activities include preparation and submission of Annual Emissions Reports and Biennial Compliance Plans, coordination with the CPUC and California Air Resources Board (CARB), and response to regulatory data requests.[4] ESP also administers compliance with the operational requirements of D.17-06-015 and D.19-08-020, including ongoing maintenance and tracking of implemented Best Practices for reducing methane emissions. These activities are ongoing and reflective of a mature, steady-state program. ESP participates in required regulatory workshops convened by the CPUC and CARB to support program transparency, alignment, and compliance. The program includes financial tracking and oversight necessary to support accurate reporting and prudent administration of NGLAP-related activities.

2. Forecast Method

A base year forecasting method was developed for this cost category. This method is utilized because ESP has evolved and stabilized, and the 2025 costs provide a more accurate estimate for maintaining the current program. For example, during the earlier years of the program, SDG&E needed to implement more projects to comply with the mandatory Best Practices. By 2025, many Best Practices conditions were met and SDG&E was able to reduce project activity to only those that require ongoing maintenance and support. The program is expected to remain in this steady-state for upcoming years as outlined in the 2026 Biennial Compliance Plan (*see* Appendix F: NGLAP Compliance Plan). Historical adjustments were made to the base year to only reflect the administrative costs for the test year forecast.

3. Cost Drivers

The cost drivers behind this forecast are the labor and non-labor costs needed to meet the requirements of Senate Bill (SB) 1371[5], D.17-06-015, and D.19-08-020 and to continue sustaining long-term emissions management. The costs associated with the primary responsibilities include:

- Annual emissions reporting
- Biennial Compliance Plans

[4] D.17-06-015 and D.19-08-020.

[5] SB 1371 (Leno, 2014), *available at:* https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB1371.

- Participation in workshops with the CPUC and CARB
- Managing ESP program and project finances
- Monitoring and maintaining progress against CPUC emission reduction goals
- Monitoring Best Practice compliance
- Responding to inquiries and data requests from the CPUC and/or CARB
- Collaborating with the CPUC, CARB, and other California utilities to advance emission reduction practices and calculation methodologies within the NGLAP

In addition, the forecast reflects changes in connection with the compensation modernization initiative. Please refer to the Compensation & Benefits testimony (Ex. SCG-16/SDGE-20).

D. TRANSMISSION INTEGRITY MANAGEMENT PROGRAM - TIMP (1EN004)

TABLE AK-7

Non-Shared O&M – TIMP

INTEGRITY MANAGEMENT PROGRAMS	2025 Adjusted-Recorded (000s)	TY2028 Est. (000s)	Change (000s)
TRANSMISSION INTEGRITY MANAGEMENT PROGRAM (TIMP) – PROGRAM MANAGEMENT	214	640	426
Total	**214**	**640**	**426**

1. Description of Costs and Underlying Activities

SDG&E's Transmission Integrity Management Program (TIMP) was established pursuant to 49 Code of Federal Regulations (CFR) § 192, Subpart O, which mandates operators, such as SDG&E, to identify threats to transmission pipelines in High Consequence Areas (HCAs)[6] (including internal and external corrosion, stress corrosion cracking, manufacturing defects, construction and fabrication issues, weather-related and outside forces, incorrect operations, equipment failure, and third-party damages), determine the risk posed by these threats, schedule prescribed assessments to evaluate these threats, collect information about the condition of the pipelines, take actions to minimize applicable threat and integrity concerns to

[6] The introduction of 49 CFR § 192.710 through the Pipeline Safety: Safety of Gas Transmission Pipelines: Maximum Allowable Operating Pressure (MAOP) Reconfirmation, Expansion of Assessment Requirements, and Other Related Amendments final rule (GTSR Part 1, also known as RIN 1) expanded assessment and remediation requirements outside of HCAs.

reduce the risk of a pipeline failure, and report findings to regulators. In recent years, the Pipeline and Hazardous Materials Safety Administration (PHMSA) published several rules and regulatory actions that have enhanced requirements for the TIMP, which are listed in Appendix D: TIMP Supplemental Description.

Identical to the organizational structure of the TIMP at SoCalGas, the activities prescribed by PHMSA[7] for the TIMP are primarily managed by employees in the Integrity Management (IM) department of the GESI organization, which comprises engineers, project managers, technical advisors, project specialists, and other employees with varying degrees of responsibility. SDG&E currently organizes its TIMP activities and costs into four distinct categories: 1) Assessments & Remediation, 2) Preventive & Mitigative (P&M) Measures, 3) Data and GIS, and 4) Program Management Support/Threat & Risk. The forecasted TIMP labor and non-labor costs within this testimony and associated workpapers support the management of three of the four categories: Data and GIS, Program Management Support/Risk & Threat, and P&M Measures categories. Details on each of these three categories can be found in Appendix D of my testimony. The forecasted TIMP labor and non-labor costs necessary for the Assessments & Remediation category and corrosion-related P&M Measures activities the fourth category) are presented in Ex. SDGE-06, Gas Major Projects testimony.

GESI manages the foundational and programmatic TIMP activities to leverage the centralized expertise of its integrity management professionals across its portfolio of Integrity Management Programs: TIMP and DIMP.[8] In response to an order from the CPUC in D.24-12.074, SI Associates performed a comprehensive evaluation of the effectiveness of the SoCalGas TIMP program, for which SoCalGas employees also support SDG&E programmatic TIMP activities as discussed in SoCalGas GESI testimony (Ex. SCG-03). The evaluation

[7] 49 CFR Part 192, Subpart O and 49 CFR § 192.710.

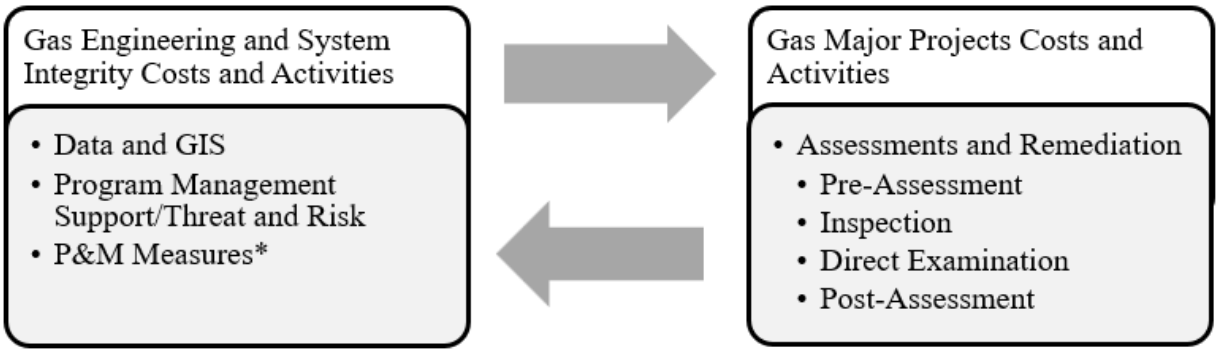
[8] Structural Integrity Associates, Inc. (SI Associates) reviewed the SoCalGas TIMP and DIMP programs and pointed out that the "strong leadership and expertise of the IM teams contribute to execution efficiency by directing the projects towards success using expertise and proven best practices." Rutledge, E., Ostahowski, D. (2026). *Aligning Safety, Compliance, and Cost-Effectiveness: A Comprehensive Review of SoCalGas's TIMP and DIMP Programs*. Report No. 2552533 (p.49).

concluded that the TIMP program meets its core objectives while strategically managing resources to deliver measurable value.[9]

Figure AK-1 below delineates the forecasted costs across each witness area. Details on the four cost categories can be found in Appendix D.

Figure AK-1

Delineation of TIMP Activities



*Corrosion Projects identified within P&M Measures are included in Gas Major Projects testimony

a. Description of RAMP Mitigations

This cost category consists of non-shared O&M costs for the risk control/mitigation that was presented in the 2025 RAMP Report and is listed in the table below. All TIMP activities are risk mitigation measures that address safety risks and were identified in the 2025 RAMP Report for SDGE-Risk 2 High Pressure Gas System.

Appendix B: Controls and Mitigations Compliance Drivers, attached to this testimony, provides the details regarding these mandates for each control.

[9] *See* the SoCalGas GESI testimony, Ex. SCG-03, Appendix F (SI Associates Report: Aligning Safety, Compliance, and Cost-Effectiveness: A Comprehensive Review of SoCalGas's TIMP and DIMP Programs, January 2026).

TABLE AK-8
RAMP and GRC Risk Control/Mitigation Activities - O&M

High Pressure Gas System Integrity Assessments & Remediation (1EN004)				
ID	**Control/Mitigation Name**	**2025 RAMP 2028 Estimate In 2024 $ (000s)**	**2028 GRC 2028 Forecast In 2025 $ (000s)**	**Change ($000s)**
C171	**Integrity Assessments & Remediation**	527([10])	640	113
	Total	**527**	**640**	**113**

b. Description of Selection and Prioritization of RAMP Risk Mitigations

The RAMP risk mitigation efforts are associated with specific actions, such as programs, projects, processes, and utilization of technology and are designed to address a specific safety and/or reliability risk. The Company's selection and prioritization of these RAMP mitigation activities considered many factors when determining if these risk mitigation activities are an effective and worthwhile investment. The Enterprise Risk Management (ERM) process for identifying and assessing system risk is described in the Risk Philosophy testimony (Ex. SCG-02/SDGE-02).

As described above, SDG&E's TIMP is designed to comply with 49 CFR Part 192, Subpart O and 49 CFR § 192.710. Consistent with regulations, SDG&E assesses transmission pipelines[11] for threats, including internal and external corrosion, stress corrosion cracking, manufacturing defects, construction and fabrication issues, weather related and outside force (WROF) events, incorrect operations, equipment failure, and third-party damages. SDG&E evaluates pipeline data, operating conditions, and other necessary data to determine the appropriate actions needed to maintain system integrity and reliability. Factors such as regulatory mandates and guidance (*e.g.*, advisory bulletins), current pipeline data, historical activity levels, and system needs inform the scope of this control.

[10] The total RAMP O&M forecast for C171 is $29 million. The cost shown on the table represents the estimated RAMP O&M forecast allocated to this workpaper, proportional to the GRC O&M forecast, representing 1.8% of the total activity. The other portion of costs for C171 can be found in the Gas Major Projects testimony (Ex. SDGE-06).

[11] HCA, Class 3, Class 4, and piggable MCA pipeline segments as scoped by 49 CFR Part 192 Subpart O and 49 CFR § 192.710, as well as any pipeline segments scoped as a result of 49 CFR § 192.917(e)(5)-(e)(6).

SDG&E is continuing its risk-informed TIMP activities to provide safe and reliable transmission service, support system integrity, and maintain compliance. In the independent study evaluating the efficiency of SoCalGas's TIMP and DIMP,[12] SI Associates observed that efficiency in the TIMP is reflected in structured planning and risk-based prioritization, and that SoCalGas's TIMP, which is managed similarly to SDG&E's TIMP, follows a rigorous project management process to support consistent execution.[13] SI Associates also observed that the number of assessments performed annually, timely repairs following those assessments, and year-over-year increases in pipeline mileage retrofitted to enable ILI demonstrates effective planning, continuous improvement, risk mitigation, and public safety benefits.[14] The GMP testimony (Ex. SDGE-06) also sponsors a portion of C171 costs and activities for the execution of assessment and remediation and select P&M scope for the TIMP, which is separated apart from the program management costs and activities sponsored in this testimony.

2. Forecast Method

The forecast method for TIMP Program Management uses the recorded three-year average. TIMP federal regulations have evolved over the last few years (2019-2024), increasing activity levels and program costs. With GTSR Part 1 taking effect in 2020 and 2021 (but interpretive clarification that impacted SDG&E's TIMP activities by requiring additional assessment work being provided in 2022-2023)[15], as well as GTSR Part 2 taking effect in 2023[16], 2023, 2024, and 2025 best represent the current structure of the organization and the level of activity that must be maintained to comply with newly enhanced federal regulations. The three-year average method reflects sustained conditions and smooths fluctuations in program

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[12] *See* Ex. SCG-03, Appendix F.

[13] As described in the SoCalGas GESI testimony (Ex. SCG-03), SoCalGas employees also provide support to the SDG&E TIMP for program efficiency and consistency.

[14] *See* Ex. SCG-03, Appendix F at Section 1.0 (Executive Summary) and Section 10.0 (Conclusion).

[15] PHMSA, John A. Gale, Director of Office of Standards and Rulemaking at PHMSA Letter to Christine Cowsert VP, Gas Asset Mgmt. & System Operations at PG&E (June 23, 2021), *available at*: https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/standards-rulemaking/pipeline/interpretations/75361/pacific-gas-and-electric-company-pi-21-0004-06-24-2021-part-192939.pdf.

[16] PHMSA, Notice of Limited Enforcement Discretion for Existing Onshore Gas Transmission Pipelines, December 6, 2002, *available at*: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-and-enforcement-division/gsrb/phmsa-onshore-gas-transmission-notice-of-limited-enforcement-discretion.pdf.

management activity, including data integration and ongoing identification and evaluation of threats, that may result from factors such as temporary reallocation of resources or delays[17] while providing a representative baseline of the workload required under the current regulatory framework.

The incremental adjustments to the TY 2028 forecast are driven by Data and GIS and P&M Measures enhancements necessary to comply with expanded requirements from GTSR Part 1 and GTSR Part 2, and include plans to increase P&M and data integration activity to address enhancements to threat identification and other mandated P&M requirements (*See* Appendix D).

3. Cost Drivers

As further described in Appendix D, TIMP costs are primarily driven by the level of activity required to meet programmatic and regulatory compliance obligations, encompassing Prevention & Mitigation (P&M) measures, data and GIS management, and Program Management Support/Threat & Risk. These are performed using a combination of labor and non-labor resources. GESI continues to integrate process improvements and program updates into the TIMP and is actively evaluating recommendations from PHMSA as well as the independent TIMP and DIMP efficiency study[18]; and the costs of these recommendations are uncertain and difficult to forecast. Regulatory actions such as PHMSA advisory bulletins and rulemakings also may alter the scope of TIMP program management activities and cause associated costs to vary from the current forecast.

As federal requirements have evolved, increased emphasis has been placed on data collection and integration, documentation, and expanded re-evaluation of threat conditions across the transmission system. In response to enhanced federal requirements, such as 49 CFR § 192.935(a), and the more frequent occurrence of severe WROF events, GESI is forecasting approximately six annual depth-of-cover (DOC) surveys to assess ground conditions, identify early signs of potential pipeline exposures, and determine where mitigation may be required. As more data becomes available, additional sites may be added for continued monitoring. By

[17] Costs incurred in 2025 were lower due primarily to delays in Data and GIS activities as well as temporary resource reallocation.

[18] *See* Ex. SCG-03, Appendix F at Section 9.0 (Observations for Enhancement of Program Objectives).

linking DOC conditions to the threat categories specified in 49 CFR § 192.917(a), SDG&E strengthens its P&M actions to address risks in line with federal requirements. These conditions inform the need for enhanced P&M measures, such as increased patrols, DOC surveys, mitigations, and marker frequency, to reduce the elevated likelihood of damage from external forces.

Additionally, GESI anticipates the need for expanded pipeline marker coverage in High Consequence Areas (HCAs) where excavation-related threats remain elevated over the forecast period. These areas are identified by the Threat and Risk team using threat information from integrity management risk evaluations, One-Call ticket activity trends, DOC assessments, and field reports. Based on these evaluations, GESI plans to implement prevention measures, including additional pipeline markers, repair or replacement of non-functional markers, and increase cover depth of pipelines in accordance with 49 CFR § 192.935(a)(1)(xiii). These activities are designed to reduce the likelihood of damage from external forces while supporting public and excavator awareness of pipeline locations. While cost estimates for these additional P&M surveys have been incorporated into the TY 2028 GRC forecast, actual costs remain subject to variation based on field conditions, system reliability requirements, and survey findings that could trigger additional capital remediation not currently forecasted.

4. Continuation and Modification of the TIMPBA

The CPUC has long recognized the variability of TIMP activities and the likelihood that regulations will continue to evolve, consistently authorizing a balancing account mechanism that enables cost recovery, beginning with the two-way balancing account in the TY 2012 GRC cycle, which was found to be "appropriate due to […] the costs of complying with Subpart O and possible changes in pipeline inspection requirements in the future." [19] The CPUC stated that the two-way balancing account would "ensure that SDG&E has sufficient funds to carry out all the necessary TIMP-related work to ensure that its gas transmission system remains safe and reliable."[20]

Factors that continue to influence TIMP costs and are expected to drive variability in forecasted TIMP activity levels include, but are not limited to the following:

[19] D.13-05-010 at 387.

[20] *Id*.

- **Regulatory Impacts:** As summarized above, PHMSA has issued a variety of regulatory communications/actions over the last several years that have or are expected to have impact on the TIMP. The rulemaking examples that have been described (GTSR Part 1 and GTSR Part 2) both drove changes in costs associated with Data and GIS activities. Advisory bulletins also introduce changes and uncertainty regarding the scope of TIMP activities. In 2024, for example, PHMSA issued an advisory bulletin titled *Pipeline Safety: Identification and Evaluation of Potential Hard Spots—In-Line Inspection Tools and Analysis* "to notify pipeline owners of the importance of evaluating their pipeline facilities for the existence and potential threat of hard spots" and recommends, amongst other actions, that operators consider expanding their threat evaluation to all pipe manufactured prior to 1970.[21] While the evaluation and integration of the recommendations are in progress, threat expansion has historically increased data gathering and assessment activity scope and costs (*e.g.*, SCC threat activation).[22] Though advisory bulletins are advisory in nature and not intended to be binding, they are often prompted by safety concerns and SDG&E responds with careful consideration.[23] Generally, should new regulatory actions arise, costs associated with the TIMP could increase or decrease which further warrants the continuation of SDG&E's TIMPBA. Also see the Regulatory Accounts testimony (Ex. SDGE-21).
- **Program Enhancements:** As mandated by 49 CFR Part 192, Subpart O, SDG&E is required to evaluate program performance and maintain a quality assurance process in its TIMP. SDG&E regularly identifies and implements program enhancements and process improvements to maintain the program's

[21] Pipeline Safety: Identification and Evaluation of Potential Hard Spots—In- Line Inspection Tools and Analysis, 89 Fed. Reg. 222,90827 (November 18, 2024), *available at:* https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2024-11/2024-26725.pdf.

[22] A.25-04-020, Chapter 1: SoCalGas TIMP Development and Implementation testimony (April 30, 2025), Ex. SCG-01 at 1, 8, *available at:* https://www.socalgas.com/sites/default/files/2025-04/SCG-01_TIMP_Testimony_Implementation_Sera.pdf.

[23] The CPUC, through the Safety Enforcement Division (SED), engages operators on advisory bulletins to determine what processes and actions have been or will be implemented to align with federal guidance.

effectiveness. These program enhancements also introduce uncertainty in cost forecasting as they may increase activity levels or focus resources to certain activity categories (*e.g.*, P&M Measures) depending on need. At the end of 2025, the independent study on the efficiency of SoCalGas's TIMP and DIMP was finalized and SI Associates included additional recommendations that could increase TIMP costs.[24] SDG&E had been in the process of evaluating some of the recommendations prior to the study (*e.g.*, stress corrosion cracking threat evaluation enhancements, composite repairs) and continues to assess these opportunities, including newer recommendations such as applying the robotic ILI validation spools process to conventional ILIs.[25] However, the potential cost impacts are uncertain at this time.

- **P&M Measures:** GESI reviews and determines the measures to be conducted in response to assessment-related conditions, which are subject to change from project to project. The activity level forecasted is based on the best available information at the time of filing and actual timing and costs of each project is subject to variation due to factors such as system reliability requirements, field conditions, and resource availability. SDG&E has estimated costs associated with the additional P&M surveys that will be needed to comply with enhanced regulations. However, depending on survey findings, SDG&E could incur costs associated with capital remediation that is not forecasted for TY 2028 GRC at this time.

In the TY 2024 GRC cycle, the CPUC converted SDG&E's balancing account (TIMPBA) to a one-way balancing account, with excess costs and undercollections recorded in a memorandum account (TIMPMA) subject to reasonableness review in an application, stating that this ensures a reduction in the amounts that may be recovered in rates in balancing accounts through Advice Letters and provides the rate recovery of any above-authorized costs will occur via the more thorough reasonableness review application process that will better protect ratepayers.

[24] Ex. SCG-03, Appendix F at Section 9.0 (Observation for Enhancement of Program Objectives).

[25] *Id*.

For the TY 2028 GRC cycle, SDG&E requests the CPUC revert the TIMPBA to a two-way balancing account but does not request the restoration of the mechanism under which SDG&E was previously authorized to recover undercollections associated with up to 35% of actual expenditures greater than authorized expenditures through a Tier 3 Advice Letter. As described in the Regulatory Accounts testimony of (Ex. SDGE-21), a two-way balancing account with any undercollection subject to a reasonableness review in an application is functionally equivalent to a one-way balancing account and memorandum account but reduces the administrative burden of accounting for TIMP costs in two separate accounts.

SDG&E also requests that the CPUC modify the TIMPBA to include a 50% interim rate recovery mechanism that will allow SDG&E partial recovery of actual TIMP under-collected balances on an annual basis, subject to refund. Since TIMP activities are mandatory and driven by the principles of pipeline and public safety, a 50% interim rate recovery mechanism would enable SDG&E to maintain mandatory safety activities while also reducing the negative effects of large undercollected balances (*e.g.*, accumulation of interest, impacts to a utility's financial health and increased cost of borrowing) as discussed in the Regulatory Accounts testimony (Ex. SDGE-21). In approving interim rate recovery, the CPUC has considered various benefits to ratepayers such as savings on interest rate cost,[26] intergenerational equity,[27] reducing the potential for rate shock,[28] and ensuring rate stability[29] when authorizing interim rate recovery.[30] These factors would similarly weigh in favor of interim rate recovery here. Further, ratepayers are protected in that this interim rate recovery mechanism would not constitute pre-approval of costs and therefore does not reduce SDG&E's accountability as to reasonableness of costs. Any undercollection must still be reviewed by the CPUC through an application and recovery would be subject to refund should the CPUC find any incurred costs unreasonable.

[26] D.26-02-006 at 4, 12.

[27] D.23-06-004 at 10.

[28] D.16-08-003 at 9-10.

[29] D.20-10-026 at 24, 26-27.

[30] D.26-02-006 at 12-13.

E. DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM - DIMP (1EN003)

TABLE AK-10
Non-Shared O&M - DIMP

INTEGRITY MANAGEMENT PROGRAMS	2025 Adjusted-Recorded (000s)	TY2028 Est. (000s)	Change (000s)
DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM (DIMP) – PROGRAM MANAGEMENT	425	707	282
Total	**425**	**707**	**282**

1. Description of Costs and Underlying Activities

SDG&E's Distribution Integrity Management Program (DIMP) was designed to comply with the requirements of 49 CFR Part 192, Subpart P – Gas Distribution Pipeline Integrity Management. The DIMP is a comprehensive, data-driven program that continually integrates system risk evaluation with risk reduction measures. The objective of the DIMP is to mitigate safety-related risks utilizing a forward-looking risk-informed approach. SDG&E's DIMP accomplishes this objective through additional risk informed processes and procedures that identify monitoring activities, assessments, and proactive remediation to enhance the safety activities performed by SDG&E as prescribed by 49 CFR Part 192, Subparts A–N.

The DIMP is sophisticated, comprehensive, data-driven program that continually integrates national and local information in evaluating system risks and risk reduction measures. As an alternative to a wholesale replacement approach, the DIMP's risk assessment methodology is an iterative process that prioritizes risk reduction measures for highest threats, including low probability, high consequence threats, in a manner that supports affordability. To that end, the DIMP is implemented by a highly specialized team of engineers, data scientists, technical advisors, and industry consultants whose experience and expertise ranges across a variety of disciplines including materials and corrosion, operations, and risk analytics. Effective implementation of the program necessitates both analytical capability and applied knowledge gained through operational experience with system design, material behavior, and failure mechanisms is required.

The DIMP framework includes key elements such as system knowledge, threat identification, risk evaluation and prioritization, and the implementation of programs and activities that enhance distribution integrity and safety[31]. SDG&E currently organizes its DIMP

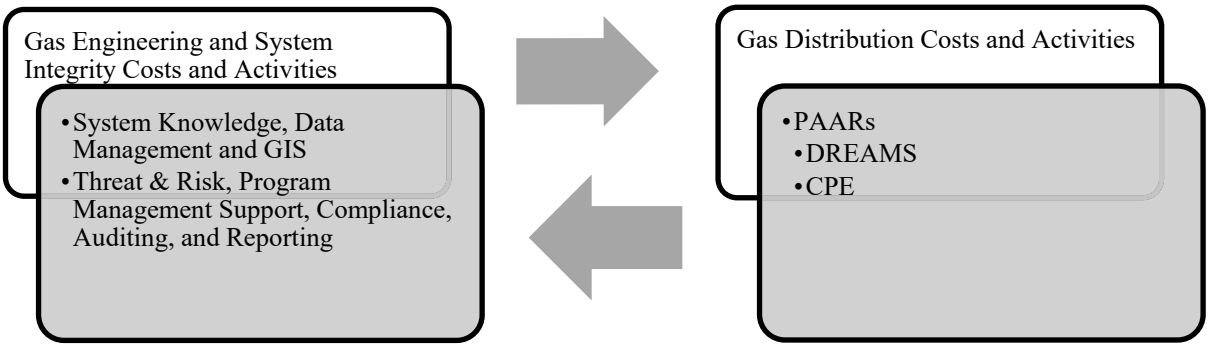
[31] 49 CFR Part 192, Subpart P.

activities and costs into three distinct categories: 1) System Knowledge, Data Management, and GIS, 2) Threat & Risk, Program Management Support, Compliance, Auditing, and Reporting, and 3) Projects and Activities to Address Risk (PAARs). SDG&E's DIMP activities require collaboration between multiple organizations within the company to accomplish the established objectives of the federal regulations.

GESI manages the foundational and programmatic oversight activities (*e.g.*, data gathering, risk evaluation, program evaluation and reporting) of the DIMP primarily through the IM and IM&SP organizations to leverage the centralized expertise of integrity management professionals.[32] The forecasted DIMP labor and non-labor costs for these activities are presented in this testimony and associated workpapers. The operational responsibility for the day-to-day execution of the PAARs resides with dedicated teams embedded within SDG&E's Gas Distribution organization. The forecasted DIMP labor and non-labor costs necessary for the execution of the PAARs are presented in the Gas Distribution testimony (Ex. SDGE-04).

SDG&E's DIMP is structured in alignment with regulatory requirements and incorporates coordinated activities between GESI and Gas Distribution as part of its implementation plan. Figure AK- 2 delineates the forecasted activities between GESI and Gas Distribution.

Figure AK-2: Delineation of DIMP Activities



[32] Ex. SCG-03, Appendix F at Section 6.0 (DIMP – Program Evaluation for Effectiveness, Efficiency and Cost-Effectiveness).

a. System Knowledge, Data Management, and GIS:

DIMP regulation acknowledges that distribution systems and operators vary widely, necessitating a flexible, performance-based framework that enables operators to model their DIMP based on the unique attributes of their systems. 49 CFR § 192.1007(a) intends for operators to develop an understanding of its distribution system ("System Knowledge") through reasonably available information and existing data. Data management and GIS are part of the System Knowledge grouping of activities in Figure AK-2. System knowledge is developed through the collection and analysis of reasonably available information, including but not limited to system design, materials, construction methods, pipeline conditions, past and present operations and maintenance, local environmental factors, and failure data such as leak history. Comprehensive and accurate system knowledge is fundamental to the effective implementation of the DIMP, as it supports threat identification, risk evaluation, and the identification and prioritization of risk-mitigation measures. Data collection for SDG&E's over 15,000 miles of distribution mains and services is an extensive process that is continually being improved upon through targeted research and changes in data capture as needed.

SDG&E's GIS houses and maintains information on all distribution assets and is at the core of all DIMP activities. GESI uses the GIS application to spatially manage, analyze, and visualize distribution assets and associated operational data. The maintenance of these databases, through editing and quality control, must continually reflect changes in the pipeline system based on new construction, replacements, and abandonments for not only DIMP-related projects, but also for all company-wide projects; in order to analyze the entire distribution pipeline system and determine programs and activities needed to address risk. Various tool sets (application) within the database allow for analysis and relative risk evaluation of the distribution system.

Data integrity is imperative to analyze SDG&E's vast distribution pipeline system and to develop projects and activities to address risk. As discussed in the SI Associates' efficiency study, enhancements to data management, including centralized data platforms, integrated data systems, and advanced analytics, further strengthen and enhance program effectiveness. These initiatives are in alignment with the SI Associates' recommendations to enhance the quality and utility of data, with a focused emphasis on improving data integration and analytics

capabilities.[33] Resources supporting the DIMP System Knowledge, Data Management, and GIS activities also support other integrity management programs, such as the TIMP. Costs incurred to manage these programs, including employee labor costs, are allocated to designated program-specific accounts based on scoped activity (*e.g.*, DIMP internal orders).

b. Threat & Risk Program Management Support, Compliance, Auditing, and Reporting:

The IM and IM&SP organizations consist primarily of engineers, project managers, technical advisors, project specialists, and other professionals with varying levels of responsibility. These employees perform functions related to the overall oversight, coordination, and administration of the Company's Integrity Management programs. Personnel typically support multiple integrity-related programs and allocate their time and associated labor costs to designated, program-specific accounts in accordance with established cost-tracking practices.

Employees supporting the DIMP Program Management Support, Threat & Risk, compliance, auditing, and reporting cost category are responsible for managing and implementing activities necessary to comply with 49 CFR Part 192, Subpart P. Key activities include program planning and governance, threat identification and risk assessment, development and maintenance of compliance documentation, internal and external audit support, performance monitoring, and preparation of required regulatory reports. These efforts enable DIMP to be consistently implemented, documented, and continuously improved to meet regulatory requirements and support the safe and reliable operation of the gas distribution system.

Pursuant to the 49 CFR § 192.1007(b), SDG&E has implemented a robust and systematic process for identifying threats to the integrity of its natural gas distribution system ("Threat Identification"). This process is conducted annually and is the basis for DIMP evaluations of new threats or improved methods for addressing existing threats (*e.g.*, corrosion, excavation damage, equipment failure, and incorrect operation). This threat identification process is foundational in developing an understanding of the threats that SDG&E evaluates in the subsequent DIMP processes. Consistent with the requirements of 49 CFR 192.1007(c), the risk evaluation process relies on the results of Threat Identification to determine the relative

[33] *See* Ex. SCG-03, Appendix F at Section 7.0 (Benchmarking – DIMP) and Section 9.0 (Observations and Enhancement of Program Objectives).

significance of each threat and to rank threats accordingly ("Evaluation and Rank Risk"). For each identified threat, historical leak trends are analyzed to assess system performance and to estimate the likelihood of failure. These likelihood assessments are then combined with evaluation of the potential consequences associated with each threat to develop the overall risk results. GESI incorporates regulatory advisories issued by PHMSA when evaluating threats and determining appropriate risk-reduction measures.[34]

DuPont Aldyl-A polyethylene pipe (Aldyl-A) has been identified by SDG&E, the natural gas industry, and both California and federal regulators as a material that is at an increased risk of failure due to its documented susceptibility to slow crack growth, brittle like failure behavior, and environmentally accelerated degradation. Material failures in Aldyl-A can occur abruptly, leading to sudden and unpredictable leakage, which may go undetected between routine leakage survey intervals, thus posing a significant threat to the integrity of natural gas distribution systems.

PHMSA's 2007 advisory bulletin (ADB-07-01) warned that historical standards may have overestimated the long-term strength of plastic pipes manufactured from the 1960s through early 1980s, and emphasized the need for robust leak surveillance, improved data collection, and targeted testing.[35]

The CPUC's 2014 report underscored the importance of replacements rates that meaningfully reduce risks associated with early-vintage Aldyl-A.[36] Further, on January 23, 2026, PHMSA issued an updated advisory (ADB-2026-01) urging operators to consider accelerated material degradation in elevated-temperature environments and to complete inventories of potentially susceptible plastic pipes and components.[37] This advisory responds to NTSB recommendations following the March 2024 West Reading incident (discussed below).

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[34] *See* Appendix E (PHMSA Advisory Bulletins: Aldyl-A Pipelines).

[35] Pipeline Safety: Updated Notification of the Susceptibility to Premature Brittle-Like Cracking of Older Plastic Pipe, 72 Fed. Reg. 172,51301 (September 6, 2007), *available at:* https://www.govinfo.gov/content/pkg/FR-2007-09-06/pdf/07-4309.pdf.

[36] CPUC, *Hazard Analysis and Mitigation Report: Aldyl A Polyethylene Gas Pipelines* (June 11, 2014) at 29, *available at*: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-policy%20division/reports/ra-doc-10-aldyla.pdf.

[37] Pipeline Safety: Distribution Integrity Management Program Considerations for Plastic Piping and Components, 91 Fed. Reg. 15,2995 (January 23, 2026), *available at*: https://www.govinfo.gov/content/pkg/FR-2026-01-23/pdf/2026-01321.pdf.

Numerous incidents nationwide demonstrate the safety risks posed by aging Aldyl-A infrastructure:

- Greater than 15 Aldyl-A failures have occurred in California alone, resulting in 15 ignitions, nine explosions, and six injuries.
- On March 24, 2023, at a chocolate factory in West Reading, Pennsylvania, a leak from a retired Aldyl-A service tee installed in 1982 caused an explosion and fire that resulted in seven deaths and 10 injuries.
- On November 6, 2024 in South Jordan, Utah, am explosion associated with a subsurface gas leak from an Aldyl-A gas main installed in 1976 destroyed a home and resulted in the death of a 15-year-old boy.

These events further highlight the importance of incorporating industry learnings, regulatory advisories, and historical performance data into a quantitative risk assessment (QRA) methodology.

QRA is data-driven method of assigning a numeric value to risks using a model. In simplified form, QRA can be conceived as framework consisting of three main parts: 1) input data, 2) a mathematical model, and 3) a ranked output. Commonly, the ranked output is quantitative and can be compared to an acceptable risk threshold which is used to trigger action when the risk is too high. When taken as a whole, the benefits of a QRA based approach to risk management include improved transparency and consistency - key objectives of SDG&E's continuing drive toward a mature Safety Culture.

As part of SDG&E's ongoing efforts to optimize the effectiveness of the DIMP, QRA prioritizes activities that provide the greatest risk reduction based on life-safety consequences. For example, SDG&E prioritizes replacement early vintage plastic pipe segments through the Distribution Risk Evaluation and Monitoring System (DREAMS), which is informed by QRA results. Segments are prioritized for replacement when the location risk exceeds the established threshold of 6×10^{-6} (6 in 1 million) probability of a serious incident annually. Risk is determined not only at the segment level, but also through location-based aggregation, which incorporates the additional risk of adjacent segments. This approach prioritizes areas where high-risk segments are clustered, reflecting elevated cumulative risk, as the most critical locations for mitigation. These results are used to prioritize targeted asset replacement through

the DREAMS programs, enabling investments to be focused on locations that provide the greatest reduction in safety risk.

The program's objective is to replace the identified pipeline segments prior to the year they exceed this threshold, known as the Year of Exceedance (YoE). As the distribution system continues to age, the number of miles identified for replacement is anticipated to increase. In order to avoid future unsustainable workloads, the replacement rate must keep pace with anticipated population growth. Accordingly, the program also prioritizes replacing identified segments before their projected YoE to maintain system risk levels below the established threshold and support long-term system safety and reliability.

DIMP will continue to evolve and refine its DREAMS safety-based risk analytics, leveraging new information to enhance the prioritization of higher-risk pipeline segments. As these analytics advance, the accuracy of estimating failure into the future is expected to improve[38], leading to better-targeted investments and potential cost efficiencies over time. This strategy supports disciplined capital deployment using both risk driven resource allocation to drive program effectiveness, and continuously improved analytical capabilities to reduce long-term costs.

The effectiveness of the DIMP PAARs is monitored through measures required to be collected in accordance with 49 CFR § 192.1007(e) ("Measure Performance, Monitor Results, and Evaluate Effectiveness"). On an annual basis, integrity data relevant to the overall program measures identified in 49 CFR § 192.1007(e)(i) through (iv) are collected and reported in accordance with 49 CFR § 192.1007(g) using Form PHMSA F 7100.1-1 ("Report Results"). The periodic evaluation of performance metrics provides the opportunity to determine whether actions taken to address threats are effective, or whether different actions are needed. The DIMP threats and risks are evaluated at a frequency not exceeding once every five years in accordance with 49 CFR § 192 Subpart P. This is conducted through threat specific analysis and considers the significance of threat location and other factors ("Periodic Evaluation and Improvement"). Furthermore, as part of its commitment to continuous improvement, SDG&E periodically

[38] PHMSA emphasizes that "upgrades to risk assessment processes using quantitative or probabilistic risk models is a prudent step for operators to take to improve IM programs, allowing better definition of the risks on pipeline systems and better support for risk management practices." PHMSA, *Pipeline Risk Modeling* (February 1, 2020) at 19, *available at*: https://www.ntsb.gov/investigations/AccidentReports/Reports/PIR2601.pdf.

updates the DIMP to incorporate lessons learned from operating and industry experience, insights derived from the distribution integrity management process, and new or enhanced tools and techniques as they become available.

c. PAARs:

GESI designs and administers various projects to address threats on SDG&E's distribution system (collectively referred to as Projects and Activities to Address Risk or PAARs). PAARs are intended to meet the requirements of 49 CFR § 192.1007(d) ("Identify and Implement Measures to Address Risk") by implementing additional or accelerated actions to manage identified system risk, complementing current regulatory operations and maintenance requirements (federal and state). Utilizing system knowledge and the evaluation and ranking of risk, new PAARs may be identified as needed to address emerging risks on the distribution system. In alignment with PHMSA's intent and recognition that a PAAR needs to be operator-specific, GESI develops PAARs that are specific to the SDG&E system.

Since implementing the DIMP, GESI has created several system specific PAARs to identify and reduce pipeline integrity risks for distribution lines in accordance with 49 CFR § 192, Subpart P. These include Distribution Risk Evaluation and Monitoring System (DREAMS) and CP Effectiveness (CPE). The forecasted DIMP labor and non-labor costs necessary for executing PAARs are presented in the Gas Distribution testimony (Ex. SDGE-04).

d. Proposed Closure of the DIMPBA

The 2024 GRC Final Decision established the one-way DIMP balancing account and a memorandum account to recover above-authorized spending when needed. In this GRC, SDG&E requests the closure of the one-way balancing account and will seek closure of the memorandum account once any costs that are in the account have undergone review. Since the adoption of Subpart P requirements, SDG&E has invested several years in the development, refinement, and implementation of its risk models, forecasting tools, and associated governance processes. As a result of program maturity and enhanced analytical capability, SDG&E has a greater level of confidence in its ability to manage DIMP requirements and program management costs within authorized funding levels, absent changes and interpretations that add to the requirement of Subpart P which will be recorded in the Gas Safety Enhancement Programs

Memorandum Account (GSEPMA) as applicable.[39] In light of this experience, and recognizing that Subpart P is performance-based, SDG&E is proposing the closure of the one-way DIMP balancing account in this rate period. SDG&E summarizes its request to discontinue existing cost recovery mechanisms in Regulatory Accounts testimony (Ex. SDGE-21).

e. Description of RAMP Mitigations

Within this cost category there are non-shared O&M costs for risk controls/mitigations that were presented in the 2025 RAMP Report and are listed in the table below. All DIMP activities are risk mitigation measures addressing safety risks identified in the 2025 RAMP Report, Chapter SDG&E-Risk-3, Medium Pressure Gas System, as described in the section above.

Activities that are compliance or mandated by CPUC or other agencies are listed in bold; and Appendix B attached to this testimony provides the details regarding these mandates for each control.

TABLE AK-11
RAMP and GRC Risk Control/Mitigation Activities - O&M

Medium Pressure Gas System Distribution (1EN003)				
ID	**Control/Mitigation Name**	**2025 RAMP 2028 Estimate In 2024 $ (000s)**	**2028 GRC 2028 Forecast In 2025 $ (000s)**	**Change ($000s)**
C182	**Distribution Risk Evaluation & Monitoring System (DREAMS)**	1,034	707	(327)
	Total	**1,034**	**707**	**(327)**

f. Description of Selection and Prioritization of RAMP Risk Mitigations

The RAMP risk mitigation efforts are associated with specific actions, such as programs, projects, processes, and utilization of technology and are designed to address a specific safety and/or reliability risk. The Company's selection and prioritization of these RAMP mitigation activities considered many factors when determining if these risk mitigation activities are an effective and worthwhile investment. The Enterprise Risk Management (ERM) process for identifying and assessing system risk is described in the Risk Management Volume testimony (Ex. SCG-02/SDGE-02).

[39] *See* the Regulatory Accounts testimony (Ex. SDGE-21).

As described above, SDG&E's DIMP is designed to comply with 49 CFR Part 192, Subpart P, which requires operators to understand system conditions, identify and evaluate threats, implement measures to address risk, monitor performance, and periodically evaluate and improve the program. Consistent with regulations, SDG&E evaluates its distribution system for threats including corrosion, natural forces, other outside force damage, pipe, weld, or joint failure, equipment failure, and incorrect operations, and develops and implements PAARs to reduce the likelihood and consequences of failures that could result in leaks, service interruptions, injuries or fatalities, environmental impacts, or property damage.

SDG&E considers system knowledge, performance data, resourcing, and other information such as the results of ongoing risk evaluation and program reviews to determine where continued or additional risk reduction activities are needed under the DIMP. Factors such as regulatory mandates and guidance (*e.g.*, advisory bulletins) and past activity levels also inform the scope of this control. SDG&E plans to request authorization to increase the scope of the DREAMS PAAR to align with updated quantitative risk results and manage system risk at a sustainable pace.

The Gas Distribution testimony (Ex. SDGE-04) also sponsors a portion of C182 costs and activities for the execution of DIMP which is separate and distinct from the program management costs and activities sponsored in this direct testimony.

2. Forecast Method

The forecast method developed for this cost category is base-year with adjustments to account for changes from the base year through forecast years. Because the DIMP is a continuously evolving, risk-driven program, the base year provides the most up-to-date and accurate representation of the effort and resources required going forward. This is due to recent enhancements in the QRA methodology, threat and risk evaluation processes, and supporting systems/tools which have established a more robust and mature programmatic baseline. These improvements are expected to be maintained at a relatively consistent level, with incremental adjustments to support future data-validation efforts, as well as the database maintenance and enhancements necessary for the effective implementation of the DIMP.

3. Cost Drivers

SDG&E's service territory covers approximately 4,100 square miles and 2.4 million service meters within diverse geographical terrain and climate (coastal, mountains, deserts,

agricultural, urban). The size and location of operations have a direct and significant bearing on overall costs to comply with federal DIMP requirements.

The cost drivers behind this forecast include both labor and non-labor components. The cost drivers for labor are primarily attributed to Program Management team activities related to strategic oversight, data analysis, regulatory compliance, and program alignment. These teams support adherence to contractual obligations, mitigate compliance risks, and maintain governance standards. Additionally, non-labor costs are driven by supplemental contracted resources that are engaged to address process optimization, provide specialized guidance, and support during peak operational periods. Cost increases are driven by the need to update and maintain distribution asset information to reflect ongoing projects, evolving regulatory requirements, and enhancements to the DIMP.

F. New Rules and Regulations (Gas Safety Enhancement Programs)

1. Description of Underlying Activities

The regulatory framework governing utility gas systems has evolved substantially in recent years, shaped by lessons learned from pipeline incidents – most notably the 2010 San Bruno explosion and the 2018 Merrimack Valley over-pressurization event – and propelled by Congressional mandates enacted through the Protecting Our Infrastructure of Pipelines and Enhancing Safety (PIPES) Acts of 2020. The Gas Safety Enhancement Programs (GSEP) are safety-driven programs developed and established in response to various safety-related regulations issued by federal and state regulators. As new federal and state safety regulations develop, SDG&E continues to provide regulatory input to assist in effective implementation and desired outcomes that affirm SDG&E's commitment to safety. SDG&E does not forecast GSEP O&M expenses related to monitoring, evaluating, or incorporating new regulatory requirements in this testimony because these functions are performed by a dedicated SoCalGas team. The costs associated with SoCalGas's support of SDG&E for these activities are addressed in the SoCalGas GESI testimony (Ex. SCG-03).

Although pending PHMSA and state regulatory requirements currently under development are not forecasted in this TY 2028 GRC application, forthcoming rules will continue to affect SDG&E's operations. PHMSA rulemakings driven by congressional mandates remain ongoing, and additional regulatory actions are anticipated during this GRC period. As discussed earlier in this section, the PIPES Act of 2020 continues to serve as the primary

statutory driver for PHMSA's pipeline safety, integrity and oversight initiatives. In 2025, Congress advanced legislation to reauthorize the PIPES Act (PIPES Act of 2025), further strengthening PHMSA's mandate to develop new and updated safety regulations across a broad range of pipeline-safety focus areas. This reauthorization directs PHMSA to continue expanding and refining regulatory requirements, including but not limited to:

- Enhancing operators' ability to test and deploy new technologies in real-world operating environments;
- Addressing risks associated with pipelines constructed from composite materials;
- Strengthening state call-before-you-dig programs to reduce excavation-related damage;
- Advancing safety requirements for emerging CO_2 and hydrogen pipeline systems;
- Formalizing cybersecurity requirements to prevent attacks similar to the 2021 Colonial Pipeline incident;
- Mitigating failures associated with aging plastic components and addressing land-movement threats such as landslides and seismic activity;
- Evaluating geological hazards through required assessment reports and potential follow-on regulations;
- Reviewing and issuing recommendations related to Maximum Allowable Operating Pressure (MAOP) reconfirmation records; and
- Updating methodologies for calculating Potential Impact Radius (PIR).

PHMSA has also, through the testimony of Administrator Paul Roberti on March 4th, 2026, reinforced its commitment to publishing a final rule enhancing the safety of gas distribution pipelines.[40] Although not all forthcoming requirements have been fully defined, preliminary *Pipeline Safety: Safety of Gas Distribution Pipelines* rulemaking language indicates

[40] Congress.Gov, *Written Statement of the Honorable Paul Roberti, Administrator Pipeline and Hazardous Materials Safety Administration, Before the U.S. House of Representatives Committee on Energy and Commerce Subcommittee on Energy Hearing on Pipeline Safety Reauthorization* (March 4, 2026) at 3, *available at*: https://www.congress.gov/119/meeting/house/119016/witnesses/HHRG-119-IF03-Wstate-RobertiP-20260304.pdf.

that SDG&E will be required to implement additional safety measures, revise operational practices, and update internal procedures as these rules are finalized.[41]

2. Continuation and Proposed Modification of GSEPMA

To address these uncertainties and enable appropriate cost tracking, in SDG&E's TY2024 GRC, the CPUC approved the Gas Safety Enhancement Programs Memorandum Account (GSEPMA)[42] to record incremental, substantial, and non-speculative costs resulting from PHMSA amendments to federal regulations. For the TY2028 GRC, SDG&E proposes to retain the GSEPMA and modify the account to allow for the creation of new subaccounts specific to new or amended state and local regulatory requirements. Expanding the scope of the GSEPMA will provide a more comprehensive mechanism to track and record incremental costs to comply with federal, state and local regulatory changes that are issued between rate case funding cycles for which SDG&E has not been able to incorporate a forecast of costs.

To achieve timely and effective compliance with these evolving federal, state, and local mandates, GESI must continually monitor, review, and analyze new and proposed regulations from all applicable agencies. This ongoing process includes evaluating the implications of new rules, assessing their impacts on existing policies, procedures, and field operations, and determining system, training, and process modifications necessary for integration. Through this proactive regulatory oversight, GESI supports operational readiness, maintains compliance, and facilitates the efficient and consistent incorporation of new requirements across the organization. However, due to the uncertainty regarding the timing, scope, and specific requirements of forthcoming rulemakings, associated activities and costs cannot be reasonably forecasted for the TY2028 GRC. SDG&E requests that it retain and modify its existing cost recovery mechanism, described in more detail in the Regulatory Accounts testimony (Ex. SDGE-21).

IV. CAPITAL

This section of the testimony addresses the capital expenditures projected for SDG&E's Gas Engineering. The guiding principle behind SDG&E's capital investment strategy is to support a safe, resilient, and reliable delivery of natural gas, while maintaining affordability for

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[41] Pipeline Safety: Safety of Gas Distribution Pipelines and Other Pipeline Safety Initiatives, 88 Fed. Reg. 172,61746 (September 7, 2023), *available at:* https://www.govinfo.gov/content/pkg/FR-2023-09-07/pdf/2023-18585.pdf.

[42] D.24-12-074 at 1090 (Ordering Paragraph (OP) 10(e)).

customers. These investments also aim to improve operational efficiency, enhance responsiveness, and maintain compliance with all applicable regulatory and environmental requirements.

Table AK-12 summarizes the total capital forecasts for 2026, 2027, and 2028.

A. LOCAL ENGINEERING POOL – GT POOL (EN9030)

TABLE AK-12

Capital Expenditures Summary of Costs

GAS ENGINEERING & SYSTEM INTEGRITY (In 2025 $)							
Gas Transmission and Engineering Overhead Pool	**Est. 2025 Adjusted-Recorded (000s)**	**Est. 2026 (000s)**	**Est. 2027 (000s)**	**Est. 2028 (000s)**	**Est. 2029 (000s)**	**Est. 2030 (000s)**	**Est. 2031 (000s)**
Local Engineering Pool – GT Pool	320	329	329	329	329	329	329
Total CAPITAL	**320**	**329**	**329**	**329**	**329**	**329**	**329**

1. Description

Supervision and Engineering charges are initially recorded directly in this category and then reassigned to capital projects. This budget code maintains an established accounting procedure for charging. The capital expenditures support projects focused on safety, compliance, reliability, and affordability. Additional details regarding the Supervision and Engineering overhead pool can be found in the GESI capital workpapers (Ex. SDGE-03-CWP).

2. Forecast Method

The forecast method developed for this cost category is the base year of recorded costs in this budget code. This method is most appropriate because it best reflects future operational needs and resource requirements. SDG&E anticipates that Capital expenditures in TY2028 will be consistent with 2025.

3. Cost Drivers

The underlying cost driver(s) for this capital project relate to the cost of labor assigned to planning and engineering capital projects, as well as the increasing complexity of these projects. The costs are associated with the continual day-to-day activity of maintenance and construction.

V. RISK ASSESSMENT MITIGATION PHASE (RAMP) INTEGRATION

A. GRC Risk Controls/Mitigations and Benefit Cost Ratios

As previously discussed, certain costs supported in this testimony are for Control/Mitigation activities described in SDG&E's 2025 RAMP Report[2] for activities designed to reduce risk. Specifically, the controls and mitigations in this testimony were included in: Chapter SDGE-Risk-1 Excavation Damage, Chapter SDGE-Risk-2 High Pressure Gas System, and Chapter SDGE-Risk-03 Medium Pressure Gas System. As further reference, a roadmap matching controls and mitigations to both the 2025 RAMP and the TY 2028 GRC testimony is appended to the RDF Integration testimony, Ex. SCG-02B/SDGE-02B. Table AK-13 below summarizes the Control/Mitigation BCRs based on the costs forecasted[3] in this testimony and estimated in the 2025 RAMP with the associated BCRs. Controls/Mitigations that are mandated by CPUC or other agencies are listed in bold in the table below and are listed in Appendix B, attached to this testimony, providing the details regarding the respective mandates for each Control/Mitigation.

TABLE AK-13
Comparison of RAMP and GRC Risk Control/Mitigation Benefit Cost Ratios

SDG&E Gas Engineering & System Integrity (GESI)							
ID	**Control/ Mitigation Name**	**2025 RAMP Direct, in 2024$ (000s) 2028-2031**			**2028 GRC Direct, in 2025 $ (000s) 2028-2031**		
		BCR Societal	**BCR Hybrid**	**BCR WACC**	**BCR Societal**	**BCR Hybrid**	**BCR WACC**
C003	**Damage Prevention - Public Awareness (HP)**	0.28	0.30	0.28	5.41	5.69	5.41
C003	**Damage Prevention - Public Awareness (MP)**	0.28	0.28	0.28	0.16	0.16	0.16
C171	**Integrity Assessments & Remediation**	1.33	1.25	1.12	0.42	0.39	0.36
C182	**Distribution Risk Evaluation & Monitoring System (DREAMS)**	0.19	0.03	0.03	0.29	0.04	0.04

B. Justification For Proposed Mitigations With BCRs <1

The RDF prescribes a methodology for calculation of Benefit Cost Ratios under three discount rates as detailed in the table above. Certain of these calculations result in a BCR that is less than one. SoCalGas/SDG&E justifies the selection of these mitigations based on a thorough

analysis of operational considerations. Details regarding the justification for each mitigation are provided in the table below and are compiled with all mitigations in the RDF Integration testimony Ex. SCG-02B/SDGE-02B. A list of compliance drivers are attached to this testimony in Appendix B: Controls and Mitigations Compliance Drivers.

Table AK-14
Control/Mitigation Justification

ID	Control/Mitigation Name	Justification
C003	**Damage Prevention - Public Awareness (MP)**	The Public Awareness program is a comprehensive initiative designed to educate the public and stakeholders on safe excavation practices and the importance of using 811 services to reduce risks to subsurface facilities. In adherence to Code of Federal Regulations 192.616 the program monitors compliance with industry guidelines and legal requirements through regular audits and reviews, while delivering ongoing, multi-channel public education campaigns supported by accessible materials such as brochures, flyers, and instructional videos. It emphasizes collaboration with local governments, industry associations, and other stakeholders to maintain consistent, coordinated messaging, and actively engages communities through workshops, seminars, and informational sessions that provide practical damage-prevention guidance. Continuous feedback from surveys and focus groups is used to refine strategies and improve effectiveness, ultimately fostering a culture of safety, increasing public understanding of excavation best practices, and reducing the likelihood of damage to underground infrastructure.
C171	**Integrity Assessments & Remediation**	SDG&E continues to implement the TIMP as mandated by 49 C.F.R. § Part 192, Subpart O and 49 C.F.R. § 192.710. TIMP addresses transmission pipeline failure risks through activities such as threat identification, assessment, remediation, and preventive and mitigative measures. Activities executed under the TIMP are necessary to maintain a compliant, safe, and reliable transmission pipeline system.

ID	Control/Mitigation Name	Justification
C182	**Distribution Risk Evaluation & Monitoring System (DREAMS)**	This DIMP control mitigates safety risk associated with Aldyl-A plastic pipe. Aldyl-A has shown a propensity for failure due to low resistance to brittle-like cracking. There have been more than 15 Aldyl-A failures in California alone, resulting in multiple explosions and injuries. More recently, an incident in South Jordan, UT resulted in a fatality.[43] The CPUC's 2014 Hazard Analysis and Mitigation Report on Aldyl-A underscored the importance of replacements rates that meaningfully reduce risks associated with Aldyl-A. [44] SDG&E employs quantitative risk analysis (QRA) to prioritize and target replacements and continues to enhance its data and tools. Replacement of pipe segments prior to exceeding the risk threshold supports both safety and cost efficiency.

C. Changes From 2025 RAMP Report

Since the timing of the filing of the 2025 RAMP Report in May 2025 some circumstances may have changed that impact the control/mitigation scope – including units, costs, and other factors that influence the forecast. In addition, updates may have occurred affecting the underlying assumptions used to calculate the BCRs and are described in the RDF Integration testimony (Ex. SCG02B/SDGE-02B). Key changes impacting the forecasts include:

- **C003 Damage Prevention - Public Awareness:** Compared with the 2025 RAMP filing, the units of measure for both medium- and high-pressure public awareness programs in the TY2028 GRC forecast were revised from the number of customers reached to the number of USA tickets generated. This revision resulted in corresponding changes to the mitigation unit counts; however, overall costs remain largely unchanged.
- **C171 Integrity Assessments & Remediation:** TIMP forecast updates are informed by the latest assessment plan information, evolving compliance

[43] National Transportation Safety Board (NTSB), Pipeline Investigation Report PIR-26-02, Enbridge Inc. Natural Gas–Fueled Home Explosion and Fatality, South Jordan, Utah, November 6, 2024 (Mar. 31, 2026) at 1, 4-5, *available at:* https://www.ntsb.gov/investigations/AccidentReports/Reports/PIR2602.pdf.

[44] CPUC, *Hazard Analysis and Mitigation Report: Aldyl A Polyethylene Gas Pipelines* (June 11, 2014) at 29, *available at*: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-policy%20division/reports/ra-doc-10-aldyla.pdf.

requirements, and updated assumptions regarding planned integrity assessment and remediation activity. The number of forecasted projects and associated costs has been updated to reflect the latest projections and as three-year historical average method as described above.

- **C182: Distribution Risk Evaluation & Monitoring System (DREAMS):** Compared to the 2025 RAMP report, the TY 2028 GRC forecast for C182 reflects lower units and lower costs. The decrease in units reflects updated planning for DREAMS replacement activity based on current risk assessment information and prioritization of higher risk pipeline segments. The decrease in costs reflects the updated scope.

D. Feedback from Safety Policy Division and parties

The Commission's Safety Policy Division (SPD) issued their assessment report on October 10, 2025[45] regarding the Companies' 2025 RAMP Reports. Parties subsequently served opening and reply comments on November 17, 2025 and December 1, 2025 respectively. Appendix C in the RDF Integration testimony (Ex. SCG-02B/SDG&E-02B), appends a summary of the feedback and recommendations received and the Companies' responses.

E. CAVA Integration

Pursuant to Commission decisions in the Climate Adaptation Order Instituting Rulemaking (OIR) (R.18-04-019),[46] SDG&E performed a Climate Adaptation Vulnerability Assessment (CAVA) focused on years 2030, 2050, and 2070, with the aim of identifying asset and operational vulnerabilities to climate hazards across the SDG&E system. Some of the climate hazards that will have short- and long-term ramifications in the Southern California region include extreme temperatures, wildfire, inland flooding, coastal flooding and erosion, and landslides. Climate change is recognized as a factor that can drive, trigger, or exacerbate multiple RAMP risks. Implementing climate change adaptation measures and integrating climate vulnerability considerations into RAMP controls and mitigations can enhance system infrastructure longevity and reduce the severity of long-term negative climate impacts. The

[45] Informal comments were received from Mussey Grade Road Alliance (MGRA) on August 22, 2025, from Cal Advocates on September 4, 2025, from The Utility Reform Network (TURN) on September 12, 2025, and from Indicated Shippers (IS) on September 30, 2025.

[46] D.19-10-054; D.20-08-046.

controls and mitigations described in further detail in this chapter, as shown below, align with the goal of increasing SDG&E's physical and operational resilience to the increasing frequency and intensity of climate hazards.

TABLE AK-15
Controls and Mitigations that Align with Increasing Resilience to Climate Hazards

Potential Climate Hazard(s)	Relevant ID	Relevant Control / Mitigation	Risk Chapter
Inland Flooding; Landslides	C171	Integrity Assessments & Remediation	High Pressure Gas System

VI. REASONABLENESS REVIEW

A. NGLAPMA - NATURAL GAS LEAK ABATEMENT

Emissions Strategy Program Unrecovered Memo Account Funding

On January 22, 2015, the CPUC issued Rulemaking (R.) 15-01-008 to implement provisions of Senate Bill (SB) 1371, which set forth requirements for natural gas leak abatement. On June 15, 2017, the CPUC issued D.17-06-015 outlining the NGLAP for the Utilities, pursuant to Public Utilities Code § 975, 977, and 978. D.17-06-015 ordered SDG&E to submit a Tier 1 Advice Letter to create a Memorandum Account for incremental administrative costs associated with NGLAP expenditures[47], and D.17-06-015 ordered SDG&E to submit Tier 3 Advice Letters to establish 2018 and 2019 revenue requirement forecasts and caps for the NGLAP.[48] On July 17, 2017, SDG&E submitted the requisite Tier 1 Advice Letter (AL 2593-G) to establish the Natural Gas Leak Abatement Memorandum Account (NGLAMA), establish the Natural Gas Leak Abatement Balancing Account (NGLABA), and revise the New Environmental Regulatory Balancing Account (NERBA) Preliminary Statement to include the Natural Gas Leak Abatement Program Subaccount. The CPUC approved this Advice Letter on September 6, 2017, with an effective date of July 17, 2017.

Following the approval of AL 2593-G, SDG&E submitted Tier 3 AL 2621-G on October 31, 2017, to provide ratemaking forecasts for 2018 and 2019. On July 17, 2018, Energy Division instructed PG&E, SoCalGas, SDG&E, and Southwest Gas to submit a supplemental

[47] D.17-06-015 at 161 (Ordering Paragraph (OP) 8).

[48] *Id.* at 161-162 (OP 10).

Tier 3 AL by July 31, 2018, to address a possible funding gap for 2020. SDG&E submitted supplemental AL 2621-G-B on July 31, 2018 containing ratemaking forecasts for NGLAPMA, NGLAPBA, and NGLAP in the NERBA for 2018, 2019, and 2020. In loaded dollars, the forecasted maximum spend for NGLAPMA for 2018, 2019, and 2020 was $0.517 million. On October 11, 2018, the CPUC approved SDG&E's AL and Compliance Plan through Resolution G-3538. SDG&E spent within the established NGLAPMA cap and booked $0.513 million to the NGLAPMA for 2018, 2019, and 2020, respectively.

On March 12, 2020, SDG&E submitted AL 2852-G to provide forecasted costs for its 2020 Compliance Plan, which included costs and emissions reductions for years 2021 and 2022. Pursuant to Energy Division's April 16, 2020 request, on June 12, 2020, SDG&E submitted AL 2852-G-A which replaced AL 2852-G in its entirety and provided updated cost forecasts and a discussion about the emission reduction forecast. On June 25, 2020, Energy Division directed SDG&E to supplement AL 2852-G-A. SDG&E submitted AL 2852-G-B on June 29, 2020, to replace AL 2852-G-A in its entirety. On October 2, 2020, SDG&E submitted AL 2852-G-C to replace AL 2852-G-B in its entirety and correct rate impact figures. In loaded dollars, the forecasted maximum spend for the NGLAPMA for 2021 and 2022 was $0.453 million. On December 17, 2020, the CPUC approved SDG&E's AL 2852-G-C and 2020 Compliance Plan through Resolution G-3577. SDG&E spent within the established cap for NGLAPMA and booked $0.445 million to the NGLAPMA during 2021 and 2022.

On March 15, 2022, SDG&E submitted AL 3071-G to provide forecasted costs for its 2022 Compliance Plan, and on February 21, 2023, and April 11, 2023, SDG&E submitted revisions in AL 3071-G-A and in AL 3071-G-B, respectively. In loaded dollars, the forecasted maximum spend for the NGLAPMA for 2023 and 2024 was $0.414 million. On June 29, 2023, the CPUC approved SDG&E's AL 3071-G-B and 2022 Compliance Plan through Resolution G-3599. SDG&E spent within the established cap for the NGLAPMA and booked $0.373 million to the NGLAPMA during 2023 and 2024.

On March 15, 2024, SDG&E submitted its 2024 Compliance Plan and AL 3285-G to provide forecasted costs for 2025 and 2026, and on November 5, 2024, SDG&E submitted revisions in AL 3285-G-A. In loaded dollars, the forecasted maximum spend for the NGLAPMA for 2025 and 2026 was $0.414 million. On October 30, 2025, the CPUC approved

SDG&E's AL 3285-G-A and 2024 Compliance Plan through Resolution G-3606. SDG&E has spent within the established cap and booked $0.111 million in the NGLAPMA during 2025.

As directed by D.17-06-015, SDG&E has been tracking NGLAP administrative costs in the NGLAPMA since 2017. During each Compliance Plan cycle, SDG&E has requested authorization for NGLAPMA costs and provided a spending cap in its Advice Letters. The CPUC authorized the spending during each Compliance Plan cycle, and SDG&E has kept expenditures within the authorized caps. SDG&E requested to recover NGLAPMA costs recorded from July 17, 2017, through December 31, 2021, in the test year (TY) 2024 GRC, and this request was denied without prejudice. The CPUC denied the request because it felt there was insufficient proof that these costs were not included in other administrative costs.[49] The CPUC instructed SDG&E to continue to record costs in the NGLAPMA until they can be included in the next GRC. Therefore, SDG&E is requesting recovery for these costs in the TY 2028 GRC application.

NGLAPMA Administrative Costs

The administrative costs recorded in the NGLAPMA are for activities mandated by D.17-06-015 and D.19-08-020. These activities include regulatory and reporting requirements, coordination and collaboration with the CPUC during program implementation, program-level financial management, program-level tracking and planning, ESP employee training and development, and office supplies.

The regulatory and reporting requirements include developing the Annual Emissions Reports, creating Biennial Compliance Plans, preparing Advice Letters, and responding to any data requests associated with these submittals. ESP staff are responsible for these recurring tasks, and the associated costs are recorded in the NGLAPMA.

The costs associated with coordination and collaboration with the CPUC are also recorded in the NGLAPMA. These costs include participation in workshops hosted by the CPUC and CARB, including the annual Winter Workshop hosted near the start of each year. The costs include time spent developing and submitting proposals to improve emission calculation methodologies or revising baseline emissions to be more accurate, and the costs include time spent helping to review and provide comments on the CPUC and CARB Annual

[49] D.24-12-074.

Joint Report. Following workshops, proposal presentations, or comment submittals, the CPUC and CARB have often requested additional meetings and/or provided data requests. The costs recorded in the NGLAPMA also include time spent participating in these additional meetings and responding to associated data requests.

Costs associated with program-level financial management and program-level tracking and planning are recorded in the NGLAPMA. Managing program finance requires detailed and continuous oversight, and program-level tracking and planning involves collaborating with RD&D to identify emission reduction opportunities, forecasting the emission impact of current and proposed projects, and confirming the program's ability to meet the emission reduction targets and maintain compliance with D.17-06-015 and D.19-08-020.

Finally, costs associated with training and employee development are recorded in the NGLAPMA. These costs include time spent by the ESP team to complete required training, time spent by ESP developing, reviewing, and updating job-specific training documents, and time spent by ESP members at industry conferences and workshops. Costs incurred for these activities, including both labor and non-labor, are allocated and tracked through a designated program-specific NGLAPMA internal order, which provides a clear well-documented and traceable mechanism for cost attribution. This internal order structure supports accurate cost capture and segregation from other Company activities.

The costs recorded in the NGLAPMA are not incurred or recorded in other departments or administrative accounts, as there are no other programs within SDG&E that perform NGLAP program administrative specific activities and there are not any other administrative accounts for SDG&E's NGLAP work. As a result, the NGLAPMA serves as the sole and centralized mechanism for tracking all administrative costs associated with NGLAP activities, supporting transparency, preventing duplication, and consistent cost reporting in accordance with CPUC requirements.

SDG&E requests to recover the NGLAP administration costs recorded in the NGLAPMA between 2017 and 2025. The costs are included in Table AK-16.

TABLE AK-16

Emissions Strategy Program

Unrecovered Memo Account Funding	
Year	**Amount**
2018	$696
2019	$2,249
2020	$510,409
2021	$184,343
2022	$260,821
2023	$274,420
2024	$98,785
2025	$110,574

VII. CONCLUSION

The GESI programs sponsored in this testimony are essential to maintaining the safety, reliability, and resilience of SDG&E's natural gas system, while maintaining affordability for customers. These activities are also essential to maintain compliance with state and federal safety and reliability requirements, manage system risk through risk-informed and data-driven decision-making, support operational readiness, and enable efficient planning and long-term system stewardship, consistent with the CPUC's direction and customer affordability considerations.

The forecasts presented for TY 2028 reflect prudent planning and alignment with state and federal regulations, including the CPUC's Risk-Based Decision-Making framework. These requests incorporate incremental activities identified in SDG&E's 2025 Risk Assessment Mitigation Phase (RAMP) filing, enabling alignment between risk mitigation strategies and resource allocation.

Through risk-based prioritization, integrated planning, and workforce development, SDG&E strives to deliver safe and reliable service in the most effective manner possible while managing affordability for customers. The capital investments and O&M activities outlined in

this testimony are necessary to address evolving regulatory requirements, mitigate system risks, and maintain operational readiness in a changing environment.

For these reasons, SDG&E respectfully requests that the California Public Utilities Commission approve the Test Year 2028 forecasts and associated activities described in this testimony as reasonable and necessary to fulfill SDG&E's obligations to customers and the communities it serves.

This concludes my prepared direct testimony.

VIII. WITNESS QUALIFICATIONS

My name is Amy Kitson. I am employed by SoCalGas as the Vice President of Gas Engineering & System Integrity with responsibility for Gas Engineering & System Integrity for both SoCalGas and SDG&E. My business address is 555 West Fifth Street, Los Angeles, California 90013-1011. I graduated from Michigan State University in 2003 with a Bachelor of Science degree in Mechanical Engineering and California State University Northridge in 2009 with a Master of Science degree in Engineering Management. I joined SoCalGas in 2005 as an engineer in the Gas Operations organization supporting the Transmission Integrity Management Program. Since that time, I have held numerous positions with increasing levels of responsibility including Project Manager, Technical Services Manager, Storage Engineering Manager, Risk Assessment & Controls Manager, Director of Storage Risk Management, Director of Integrity Management and Strategic Planning and Director of Angeles Link Engineering and Technology. In my current position, my responsibilities include overseeing the Gas Engineering, Integrity Management, and Infrastructure Support Program activities for both SDG&E and SoCalGas. Prior to joining SoCalGas, I worked at Consumers Energy in Michigan. I have previously testified before the Commission.

APPENDIX A
GLOSSARY OF TERMS

APPENDIX A

Glossary of Terms

ACRONYM	DEFINITION
3D	Three-Dimensional
AB	Assembly Bill
AI	Artificial Intelligence
AIP	Asset Investment Planning
AMP	Asset Management Program
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
ASV	Automatic Shutoff Valve
BIA	Bureau of Indian Affairs
BTU	British Thermal Unit
BY	Base Year
CA	Compliance Assurance
CalGEM	California Geologic Energy Management
CARB	California Air Resources Board
CAGMP	Climate Adaptation and Geohazards Management Program
CAVA	Climate Adaptation Vulnerability Assessment
CBO	Community Based Organization
CDFA	California Department of Food and Agriculture
CEC	California Energy Commission
CEP	Community Engagement Plan
CFR	Code of Federal Regulations
Chem/Envtl	Chemical/Environmental
CNG	Compressed Natural Gas
COC	Certificate of Conformity
CPUC	California Public Utilities Commission
CSF	Customer Service Field
CSUMB	California State University Monterey Bay
DACAG	Disadvantaged Communities Advisory Group
DIMP	Distribution Integrity Management Program
DOI	Department of Interior
DOT	Department of Transportation
DVC	Disadvantaged Vulnerable Communities
EAC	Engineering Analysis Center
EAM	Enterprise Asset Management
EIT	Engineering Information Technology
EM	Emergency Management
EPM	Electronic Pressure Monitors
ESJ	Environmental and Social Justice
ESP	Emission Strategy Program

FTE	Full-Time Equivalent
GA&S	Geographic Analysis & Survey
GenAI	Generative AI
GESI	Gas Engineering and System Integrity
GHG	Greenhouse Gas
GIS	Geographic Information Systems
GMP	Geohazard Management Program
GO	General Order
GRC	General Rate Case
GTSR	Gas Transmission Safety Rule
HCAs	High Consequence Areas
I&C	Instrumentation & Control
IIP	Integrated Infrastructure Planning
ILI	Inline Inspection
IPD	Infrastructure Project Delivery
ISO	International Standards Organization or International Organization for Standardization
KPIs	Key Performance Indicators
KRIs	Key Risk Indicators
LCFS	Low Carbon Fuels Standard
LEV	Low Emission Vehicle
LRoW	Land & Right of Way
LUAF	Lost and Unaccounted For (Gas)
MCAs	Moderate Consequence Areas
ML	Machine Learning
MMT	million metric tons
MRC	Measurement, Regulation and Control
MROWMA	Morongo Rights of Way Memorandum Account
NACE	National Association of Corrosion Engineers
NGV	Natural Gas Vehicle
Nox	Nitrogen Oxide
NSR	New Source Review
NTSB	National Transportation Safety Board
O&M	Operations and Maintenance
OIR	Order Instituting Rulemaking
OEM	Original Equipment Manufacturer
OP	Operator Qualification
OPM	Optical Pipeline Monitoring
PDCA	Plan, Do, Check, Act
PHMSA	Pipeline and Hazardous Materials Safety Administration
PI	Pipeline Integrity
PID	Piping & Instrumentation Diagram
PLC	Programmable Logic Controller

PSMS	Pipeline Safety Management Systems
QA/QC	Quality Assurance/Quality Control
RAMP	Risk Assessment and Mitigation Phase
RCPPP	Reliable and Clean Power Procurement Program
RNG	Renewable Natural Gas
ROW	Right of Way
RSAR	Risk Spending Accountability Reports
RTU	Remote Terminal Unit
SAP HANA	SAP's High-performance Analytic Appliance
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
SCG	SoCalGas
SDG&E	San Diego Gas & Electric
SIMP	Storage Integrity Management Program
SLCP	Short-Lived Climate Pollutant
SME	Subject Matter Expert
SMS	Safety Management System
SOx	Sulfur Oxide
TVC	Traceable, Verifiable, and Complete
TY	Test Year
WMFT	Work Management and Field Technology

APPENDIX B
CONTROLS AND MITIGATIONS COMPLIANCE DRIVERS

APPENDIX B

CONTROLS AND MITIGATIONS COMPLIANCE DRIVER ROADMAP

The table below identifies the compliance drivers that support the Risk Controls/ Mitigations identified in testimony. This appendix is intended to demonstrate traceability between proposed controls/mitigations and applicable regulatory requirements.

Control/Mitigation ID	Control/Mitigation Name	Compliance Driver
C003	Damage Prevention Public Awareness MP & HP	49 CFR § 192.614 & 192.616
C013	Gas Transmission Safety Rule – MAOP Reconfirmation	49 CFR § 192.624
C171	Integrity Assessments & Remediation: Transmission Integrity Management Program (TIMP)	49 CFR § 192, Subpart O 49 CFR § 192.710
C182	Distribution Risk Evaluation & Monitoring System (DREAMS)	49 CFR § 192, Subpart P

APPENDIX C
GESI CAPITAL EXPENDITURES

San Diego Gas Electric Company
Capital Expenditures
(In Thousands of 2025 $)

Gas Engineering & System Integrity	2026	2027	2028	2029	2030	2031
Total Capital	**329**	**329**	**329**	**329**	**329**	**329**
2026 - 2028 Capital Request	329	329	329	-	-	-
Post-Test Year Capital Forecast	-	-	-	329	329	329

San Diego Gas Electric Company
Capital Expenditures
(In Thousands of 2025 $)

Gas Engineering & System Integrity
2026 - 2028 Capital Request

Category	Workpaper Sub	Workpaper Description	In-Service Date	2026	2027	2028
Gas Transmission Supervision and Engineering Overhead Pool	**EN9030.001**	EN9030 - Local Engineering Pool - GT Pool	Routine	329	329	329
Grand Total				**329**	**329**	**329**

San Diego Gas Electric Company
Capital Expenditures
(In Thousands of 2025 $)

Gas Engineering & System Integrity
Post-Test Year Capital Forecast

Category	Workpaper Sub	Workpaper Description	In-Service Date	2026	2027	2028	2029	2030	2031
Gas Transmission Supervision and Engineering Overhead Pool	**EN9030.001**	EN9030 - Local Engineering Pool - GT Pool	Routine	-	-	-	329	329	329
Grand Total				**-**	**-**	**-**	**329**	**329**	**329**

APPENDIX D
GESI SUPPLEMENTAL TIMP DESCRIPTION

APPENDIX D

Transmission Integrity Management Program (TIMP)
Supplemental Description

This appendix provides a supplemental description of SDG&E's TIMP, including the regulatory background under which the program operates, the structure and key components of the program and the primary activities associated with implementation.

Specifically, this appendix is intended to:

- Describe the regulatory requirements (49 CFR Part 192, Subpart O and related rulemakings) that govern the TIMP,
- Summarize the program framework and cyclical processes used to identify threats, assess risk, and plan integrity activities,
- Explain the key functional components of the program, including Data & GIS, Threat & Risk, Preventive & Mitigative (P&M) Measures, and Program Management Support, and
- Provide context regarding the drivers of TIMP-related activities and costs, including regulatory changes, program enhancements, and evolving risk considerations.

This appendix is intended to complement the testimony by providing additional detail on the design, operation, and regulatory basis of the TIMP, and to support understanding of how program activities align with applicable compliance requirements and ongoing integrity management objectives.

I. Regulatory Background

SDG&E's Transmission Integrity Management Program (TIMP) was established pursuant to 49 Code of Federal Regulations (CFR) § 192, Subpart O, which mandates operators, such as SDG&E, to identify threats to transmission pipelines in High Consequence Areas (HCAs)[1], determine the risk posed by these threats, schedule prescribed assessments to evaluate these threats, collect information about the condition of the pipelines, take actions to minimize

[1] The introduction of 49 CFR § 192.710 through the *Pipeline Safety: Safety of Gas Transmission Pipelines: Maximum Allowable Operating Pressure (MAOP) Reconfirmation, Expansion of Assessment Requirements, and Other Related Amendments* final rule (GTSR Part 1, also known as RIN 1) expanded assessment and remediation requirements outside of HCAs.

applicable threat and integrity concerns to reduce the risk of a pipeline failure, and report findings to regulators.

The TIMP federal pipeline regulations were first adopted effective February 14, 2004, following the passage of the Pipeline Safety Improvement Act of 2002, to promote the continued safe and reliable operation of the country's natural gas infrastructure. In recent years, the Pipeline and Hazardous Materials Safety Administration (PHMSA) published the following rules that have enhanced requirements for the TIMP, including the expansion of assessment and remediation activities to areas outside of HCAs[2]:

- October 2019: *Pipeline Safety: Safety of Gas Transmission Pipelines: Maximum Allowable Operating Pressure (MAOP) Reconfirmation, Expansion of Assessment Requirements, and Other Related Amendment* final rule (GTSR Part 1, also known as RIN 1).
- August 2022: *Pipeline Safety: Safety of Gas Transmission Pipelines: Repair Criteria, Integrity Management Improvements, Cathodic Protection, Management of Change, and Other Related Amendments* final rule (GTSR Part 2, also known as RIN 2).
- April 2024: *Pipeline Safety: Periodic Updates of Regulatory References to Technical Standards and Miscellaneous Amendments* final rule (Technical Standards Update I).
- July 2025: *Pipeline Safety: Periodic Updates of Regulatory References to Technical Standards and Miscellaneous Amendments; Additional Technical Amendments; Response to Petition for Reconsideration* final rule (Technical Standards Update II).

Other regulatory actions that have impacted or are currently expected to impact the TIMP include, but are not limited to:

[2] 49 CFR § 192.710.

- PHMSA Advisory Bulletin on Pipeline Safety: Deactivation of Threats – Requires operators to consider stress corrosion cracking threat as 'active' on all covered segments.[3]
- PHMSA Advisory Bulletin on Pipeline Safety: Identification and Evaluation of Potential Hard Spots-In-Line Inspection Tools and Analysis – Requires operators to evaluate their pipeline facilities for the existence and potential threat of hard spots on the pipeline body.[4]
- PHMSA Advisory Bulletin on Pipeline Safety: Advisory Bulletin on Protecting Pipeline Integrity During Extreme Winter Weather, Rapid Thaw, and Geohazard Events – Requires operators to highlight safety risks associated with extreme winter weather.[5]

Background Summary

SDG&E's TIMP framework is structured in alignment with the requirements of 49 CFR § 192.911 and follows a cyclical set of processes as visualized in the Figure AK-1 below.

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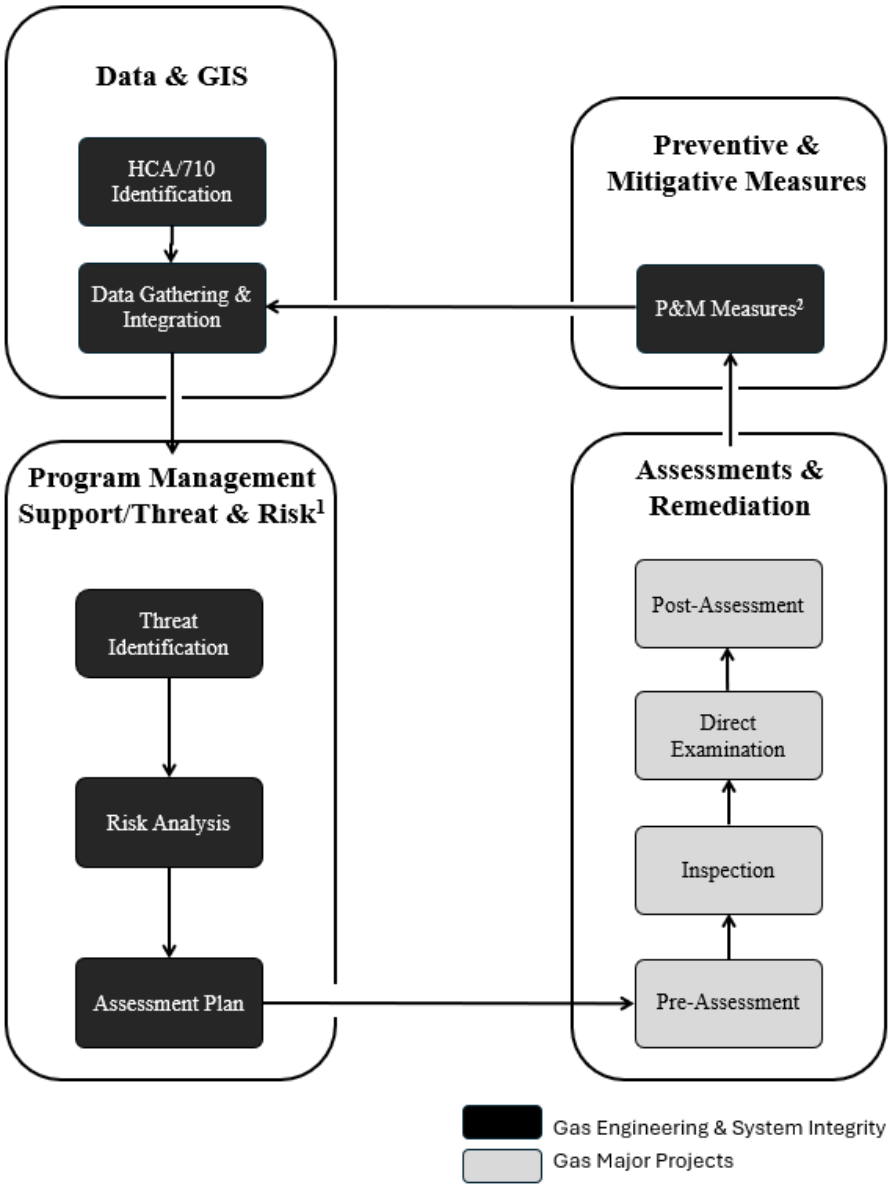
[3] 82 Fed. Reg. No. 50,14106 (March 16, 2017), *available at*: https://www.govinfo.gov/content/pkg/FR-2017-03-16/pdf/2017-05262.pdf.

[4] 89 Fed. Reg. No. 222,90827 (November 18, 2024), *available at*: https://www.govinfo.gov/content/pkg/FR-2024-11-18/pdf/2024-26725.pdf.

[5] 91 Fed. Reg. No. 28,6287 (February 11, 2026), *available at*: https://www.govinfo.gov/content/pkg/FR-2026-02-11/pdf/2026-02666.pdf.

Figure AK-1

SDG&E TIMP Cycle



[1] Includes continual evaluation & assessment, MOC, QA, record keeping activities
[2] Corrosion projects included in Ex. SDGE-06 (Gas Major Projects testimony)

Cost Categories

The activities prescribed by PHMSA for the TIMP are primarily managed by employees in the Integrity Management (IM) department of the GESI organization, which comprises engineers, project managers, technical advisors, project specialists, and other employees with varying degrees of responsibility. SDG&E currently organizes its TIMP activities and costs into four distinct categories: 1) Assessments & Remediation; 2) Preventive & Mitigative (P&M) Measures; 3) Data and GIS; and 4) Program Management Support/Threat & Risk. As described in Ex. SDGE-06, Gas Major Projects testimony, SDG&E executes its TIMP assessment and remediation projects and corrosion-related P&M Measures activities (a subset of the P&M Measures category) primarily through the Gas Major Projects organization to leverage its centralized expertise and portfolio. Similarly, SDG&E manages the foundational and programmatic TIMP activities primarily through the GESI organization to leverage the centralized expertise of its integrity management professionals across its portfolio of Integrity Management Programs: TIMP and DIMP.

Data & GIS

The Data & GIS category encompasses the first two steps of the TIMP in Figure AK-1, above. GESI uses the Geographic Information System (GIS) platform to spatially manage, analyze, and visualize transmission assets and associated operational data. The system and its function are critical for meeting regulatory compliance requirements as it informs the foundational activity of identifying pipeline segments that must be included in the TIMP (e.g., HCAs, moderate consequence areas (MCAs)). GIS offers system-wide visibility with geographic context, enabling a better understanding of where risks are located and how assets interact with their surrounding environment. It also facilitates the integration and Quality Assurance/Quality Control (QA/QC) of diverse data elements to support threat identification and risk assessment, assessment planning, and the linking of assets to traceable, verifiable, and complete (TVC) records.

SDG&E's GIS database serves as the Company's centralized spatial reference system, maintaining a common pipeline stationing framework that is fundamental for locating transmission assets and their attributes. It also houses the data collected during TIMP assessment and remediation processes. The database enables data integration across operational and

integrity management activities. GESI continuously updates the database to reflect changes in the pipeline system based on new construction, replacements, abandonments, or reconditioning of pipelines on the transmission pipeline system. Various tool sets (applications) within the database allow for the analysis and identification of HCAs, risk evaluation of the transmission system, and the creation of Assessment Plans. As data gathering and integration needs evolve in response to changing regulations, GESI maintains and enhances the database and its related systems and databases accordingly. Costs incurred to manage these programs, including employee labor costs, are allocated to designated program-specific accounts based on scoped activity (e.g., TIMP Balancing Account (TIMPBA) internal orders).

Program Management Support/Threat & Risk

The majority of the GESI IM department perform functions related to the general oversight and management of the Integrity Management programs, with employees dividing their time between programs and tracking their hours and costs to designated program-specific accounts as needed (e.g., TIMPBA internal orders).[6] Employees supporting the TIMP Program Management Support/Threat & Risk activities and cost category manage activities that include records management and validation, data management and integration, financial reconciliation, threat identification and risk assessment, regulatory reporting, integrity engineering analysis, auditing, quality assurance, Management of Change (MOC), compliance reporting and continual program evaluation and enhancements. These program management activities are critical to support overall compliance with federal requirements.[7]

Following the data & GIS group of activities in Figure AK-1, the Threat & Risk team under GESI identifies threats, assesses risk, and establishes the TIMP Assessment Plan, which informs the Assessment & Remediation activities that are discussed in detail in the Ex. SDGE-06, Gas Major Projects testimony.

Under TIMP regulations, operators are required to perform threat identification and risk assessment of transmission pipelines. SDG&E follows a prescriptive approach for threat identification, which includes the nine categories of threats described in American Society of

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6 As described in the SoCalGas GESI testimony (Ex. SCG-03), SoCalGas employees also provide support to the SDG&E TIMP for program efficiency and consistency.

7 49 CFR § 192.911.

Mechanical Engineers (ASME) Standard B31.8S: External Corrosion; Internal Corrosion; Stress Corrosion Cracking; Manufacturing; Construction; Equipment; Third Party; Incorrect Operations; and Weather Related and Outside Force (WROF).[8] On an annual basis, all pipelines operated in HCAs and in-scope non-HCAs[9] are evaluated for each of the nine threat categories to identify threats. A relative risk assessment of the HCA and non-HCA pipeline segments is performed, and results inform the development of an Assessment Plan for both baseline assessments and continual reassessments. The Assessment Plan is then provided to the teams that perform project execution to inform future TIMP assessment projects; these activities and costs are discussed in Ex. SDGE-06, Gas Major Projects testimony.

The forecasted Threat & Risk activities include projects initiated to meet new requirements that were introduced to the TIMP in Parts 1 and 2 of the GTSR, enacted in 2019 and 2022, respectively. Threat & Risk projects related to geohazard, cracking, and cyclic fatigue threats are direct responses to these enhanced requirements to the TIMP program. In addition to these new requirements, PHMSA Advisory Bulletin *PHMSA-2024-0176* notifies pipeline operators "of the importance of evaluating their pipeline facilities for the existence and potential threat of hard spots in the pipe body."[10] The Threat & Risk team is developing an approach to evaluate the potential threat of hard spots in the system, but GESI has not forecasted the impact on projects and efforts that would be required to respond to the issues identified in the Advisory Bulletin during the TY 2028 GRC cycle at this early stage in the process.

Preventive & Mitigative (P&M) Measures

In accordance with 49 CFR § 192.935(a)(1), SDG&E identifies and performs P&M measures "to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a high consequence area."[11] After an assessment has been completed by Gas Major Projects, GESI

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8 Weather Related and Outside Force threat identification and risk assessment under SDG&E's TIMP includes geohazards.

9 As defined in 49 CFR §192.710(a).

10 Pipeline Safety: Identification and Evaluation of Potential Hard Spots—In- Line Inspection Tools and Analysis, 89 Fed. Reg. No. 222,90827 (November 18, 2024), *available at*: https://www.govinfo.gov/content/pkg/FR-2024-11-18/pdf/2024-26725.pdf

11 49 CFR § 192.935(a)(1) requires operators to implement P&M measures beyond what is required in 49 CFR Part 192.

analyzes assessment data to establish the reassessment interval for a pipeline and determine the need for P&M measures, if any. When appropriate, the consideration of additional measures (i.e., P&M measures) for pipeline segments with similar operating conditions is undertaken for both HCA and non-HCA pipelines. Currently, SDG&E takes measures to enhance cathodic protection of pipelines beyond established requirements based on assessment findings, and these activities are described in Ex. SDGE-06, Gas Major Projects testimony.

GESI also collects and analyzes additional pipeline data through surveys when needed to support and inform the threat identification and risk assessment processes, which drive assessment and remediation activities, as well as additional P&M activities. This enables SDG&E to blend elements of 49 CFR § 192.935 and § 192.917 into a comprehensive and cyclical set of activities within the overall TIMP framework (visualized by Figure AK-1) and efficiently respond to enhancements in federal regulations. Through the publication of GTSR Part 2, PHMSA has explicitly prescribed dozens of data points in 49 CFR § 192.917(b) that operators must gather and integrate, including depth-of-cover (DOC), crossings, soil, backfill, coating type, and coating condition. GTSR Part 2 similarly enhanced the requirements of 49 CFR § 192.935(a), which newly prescribes activities that operators "should consider to prevent or mitigate the consequences of a pipeline failure." Two of these options an operator must consider include performing additional DOC surveys at roads, streams, and rivers, and remediating inadequate depth-of-cover.

As part of continuous improvement, SDG&E continues to enhance its threat identification capabilities, where practicable. Specifically, for the TIMP, GESI will conduct DOC data collection surveys in HCA sites that are impacted by the WROF threat. This will support both the ongoing improvements in data gathering and enable enhanced threat identification and risk assessment for future remediation activities.

APPENDIX E
PHMSA ADVISORY BULLETINS: ALDYL-A PIPELINES

Appendix E

PHMSA Advisory Bulletins: Aldyl-A Pipelines

The table below identifies the PHMSA Advisory Bulletins referenced throughout this testimony that are relevant to SDG&E's Distribution Integrity Management Program (DIMP) and Aldyl-A polyethylene pipe (Aldyl-A). PHMSA Advisory Bulletins provide important safety guidance and highlight emerging risks, material performance considerations, and operational expectations that inform SDG&E's threat identification, risk evaluation, and mitigation activities. These Aldyl-A related bulletins are an example of evolving regulatory expectations and are considered when assessing operator performance and program effectiveness. This appendix provides a consolidated reference to support traceability between federal guidance and the DIMP activities described in this testimony.

PHMSA ADVISORY BULLETINS

Bulletin	Date	Description
ADB-99-01[1]	March 11, 1999	Potential Failure Due to Brittle-Like Cracking Certain Polyethylene Plastic Pipe Manufactured by Century Utility Products Inc
ADB-99-02[2]	March 11, 1999	Potential Failures Due to Brittle-Like Cracking of Older Plastic Pipe in Natural Gas Distribution Systems
ADB-02-07[3]	November 26, 2002	Notification of the Susceptibility to Premature Brittle-Like Cracking of Older Plastic Pipe
ADB-07-01[4]	September 6, 2007	Updated Notification of the Susceptibility of Older Plastic Pipes to Premature Brittle-Like Cracking
ADB-26-01[5]	January 23, 2026	Distribution Integrity Management Program Considerations for Plastic Piping and Components

[1] 64 Fed. Reg. 47,12211 (Mar. 11, 1999), *available at:* https://www.govinfo.gov/content/pkg/FR-1999-03-11/pdf/99-6013.pdf.

[2] 64 Fed. Reg. 47,12212 (Mar. 11, 1999), *available at:* https://www.govinfo.gov/content/pkg/FR-1999-03-11/pdf/99-6051.pdf.

[3] 67 Fed. Reg. 228,70806 (Nov. 26, 2002), *available at:* https://www.govinfo.gov/content/pkg/FR-2002-11-26/pdf/02-30055.pdf.

[4] 72 Fed. Reg. 172,51302 (Sept. 6, 2007), *available at:* https://www.govinfo.gov/content/pkg/FR-2007-09-06/pdf/07-4309.pdf.

[5] 91 Fed. Reg. 15,2995 (Jan. 23, 2026), *available at:* https://www.govinfo.gov/content/pkg/FR-2026-01-23/pdf/2026-01321.pdf.

APPENDIX F
NGLAP COMPLIANCE PLAN

2026 SB 1371

COMPLIANCE PLAN

SDGE™

Introduction

San Diego Gas & Electric Company (SDG&E or Company) submits this Biennial Compliance Plan on March 13, 2026 (Compliance Plan) as part of the Natural Gas Leak Abatement Program (NGLAP or Program). Implementation of the measures described in this Compliance Plan is planned during years 2027 and 2028 (2026 Compliance Period). For work planned in 2027, SDG&E plans to begin implementation during January 2027 because funding for such period was authorized in Resolution G-3606. For work planned in 2028, SDG&E plans to begin implementation in 2028 following the approval of SDG&E's TY 2028 GRC Application.

Measures proposed in this Compliance Plan are for activities that are incremental to safety and specific to the emission reduction goals of Decision (D.) 19-08-020. SDG&E currently has policies and procedures in place to meet environmental and safety regulations implemented by various state and federal agencies, including, but not limited to, the U.S. EPA, PHMSA, OSHA, CARB, and local air pollution control districts. Some of these policies and procedures overlap with those supporting SB 1371 requirements that are addressed in the relevant chapters herein.

Emission Reductions from 2015 Baseline

The current 2015 emissions inventory baseline for SDG&E's system is 204,878 MCF. Estimated emission reductions resulting from major activities proposed in this Compliance Plan during 2027 and 2028 are currently 6,912 MCF and 46,048 MCF, respectively. Assuming that SDG&E will be authorized to continue the activities proposed in this Compliance Plan through 2030, SDG&E estimates that it will achieve a 1% reduction from baseline in 2030. Notably, baseline emissions are periodically updated as new methodologies are identified and approved. As such, the estimated percentage reductions and emission levels presented in this Compliance Plan may differ from the results observed in future years.

Table 1 below, Major Efforts to Reduce Emissions, summarizes SDG&E's proposed major activities and estimated emission reductions proposed in the 2026 Compliance Plan based on the approved 2015 baseline.

Table 1: Major Efforts to Reduce Emissions – SDG&E

Chapter	2027 Emission Reduction, MCF	2030 Emission Reduction, MCF	Standard Cost Effectiveness ($/MCF), (2027-2028)	Net Cost Effectiveness** ($/MCF), (2027-2028)
Chapter 1 – Increased Leak Survey*	6,084	6,084	NA	NA
Chapter 2 – Blowdown Reduction Activities	0	7,214	56	28
Chapter 7 – Damage Prevention Public Awareness	828	2,251	375	348
Chapter 14 – Aerial Monitoring (System Only)	0	30,499	31	3
Program Totals	**6,912**	**46,048**	**46**	**18**
Percentage Reduction from Official 2015 Baseline	**1%**	**1%**		

*Cost effectiveness for Chapter 1 cannot be calculated because SDG&E is not requesting funding for this Chapter (See Chapter 1 for details)

** Net Cost Effectiveness reflects the Standard Cost Effectiveness with Avoided Cap & Invest and Social Cost of Methane Cost Benefits.

Emission Reduction Estimation Assumptions

- SDG&E is using leaker-based emission factors to estimate 2027, 2028, and 2030 Distribution Main & Service Pipeline Leak emissions. SDG&E is utilizing the same emission factors that were submitted in the 2025 Annual Emissions Report to estimate emissions for Chapters 1 and 7. SDG&E is using the emission factors that were submitted in the "SoCalGas and SDG&E 2022 Aerial Methane Mapping Research & Cost Effectiveness Summary Report" from February 2023 to estimate emissions for Chapter 14.
- To estimate overall reductions relative to baseline, SDG&E estimated the impact of the proposed activities on annual emissions during 2027 and 2030, and these volumes were assessed relative to the 2015 baseline volume.

Emission models used to forecast reductions will have some degree of variation and the final observed reduction may be higher or lower. Based on information and technologies currently available, SDG&E is proposing to implement measures that maximize cost-effective emission reductions as reasonably as possible and then maintain the reduced emission levels through 2030

and beyond. As research projects and pilots are completed, more accurate modeling may become available. Furthermore, new technologies may become commercially available to further reduce emissions beyond what is currently forecasted. Notably, in order to sustain emission reductions through 2030, programs will need continued funding for Operations & Maintenance.

In addition to the emissions forecasted to be reduced from SDG&E's system, SDG&E is proposing to use emerging technologies to reduce post-meter (customer) emissions, further discussed in Chapter 14 (Aerial Monitoring). Although these reductions are not currently reflected in SDG&E's Annual Emissions Report, these activities support the state's climate goals and the spirit of Senate Bill 1371.

Calculating Cost Effectiveness

SDG&E calculates the cost effectiveness of its projects with avoided Cap & Invest (formerly Cap & Trade) costs, and social cost of methane as follows:

Historical Standard Cost Effectiveness:

$$\frac{(RRR - Cost\ Benefits)_{2018\text{-}2024}}{Emissions\ Reductions_{2018\text{-}2024}}$$

Pursuant to D.19-08-020, SDG&E also calculates cost effectiveness with avoided Cap & Invest costs, and social cost of methane as follows:

Historical Cost Effectiveness with avoided Cap & Invest Costs:

$$\frac{(RRR - Cost\ Benefits - Avoided\ Cap\ \&\ Invest\ Costs)_{2018\text{-}2024}}{Emissions\ Reductions_{2018\text{-}2024}}$$

Historical Cost Effectiveness with avoided Social Cost of Methane and Cap & Invest Costs:

$$\frac{(RRR - Cost\ Benefits - Avoided\ Cap\ \&\ Invest\ Costs - Social\ Cost\ of\ Methane)_{2018\text{-}2024}}{Emissions\ Reductions_{2018\text{-}2024}}$$

Future Standard Cost Effectiveness:

$$\frac{(AARR - Cost\ Benefits)_{2027\text{-}2028}}{Emissions\ Reductions_{2027\text{-}2028}}$$

Pursuant to D.19-08-020, SDG&E also calculates cost effectiveness with avoided Cap & Invest costs, and social cost of methane as follows:

Future Cost Effectiveness with avoided Cap & Invest Costs:

$$\frac{(AARR - Cost\ Benefits - Avoided\ Cap\ \&\ Invest\ Costs)_{2027\text{-}2028}}{Emissions\ Reductions_{2027\text{-}2028}}$$

Future Cost Effectiveness with avoided Social Cost of Methane and Cap & Invest Costs:

$$\frac{(AARR - Cost\ Benefits - Avoided\ Cap\ \&\ Invest\ Costs - Social\ Cost\ of\ Methane)_{2027\text{-}2028}}{Emissions\ Reductions_{2027\text{-}2028}}$$

Cost Effectiveness Assumptions and Supporting Details

- AARR = Average annual revenue requirement, calculated by dividing the cumulative revenue requirement for each measure by the useful life of the measure or asset.
- RRR = Realized revenue requirement. It should be noted that AARR and RRR will not match up by definition. Using an "average" does not account for the "realized" due to actual timing of when costs hit and the magnitude and mix of O&M and capital spending. As such, the corresponding AARR and RRR will result in variances.
- The cost benefit values utilized in the 2026 Compliance Plan are as follows:
    - The social cost of methane is $25.92/MCF. The social cost of methane from the 2024 Compliance Plan was adjusted for inflation using the California Consumer Price Index to arrive at the updated value.
      The cost benefit of the reduced cost of gas was evaluated at the forecasted average annual Weighted Average Cost of Gas (WACOG) published in the 2024 California Gas Report, converted to cost per MCF using a BTU conversion factor of 1.0317 MCF/MMBtu, resulting in a cost benefit of $5.46/MCF.
    - Cap & Invest costs are $32.83/$MTCO_2e$, assuming December 2027 vintage prices, based on a 5-day average of trading days January 21 – 26, 2026. This futures data was acquired from the International Exchange. Converting from $MTCO_2e$ to MCF results in a cost benefit of $1.79/MCF.

SDG&E Table of Concordance

Chapter	Best Practices Addressed	Subject	Page Number
1	15, 16	Increased Leak Survey	8
2	23, 3-7	Blowdown Reduction Activities	11
3	24, 25	Damage Prevention Algorithm & Proactive Intervention	16
4	9, 20b	Recordkeeping IT Project	18
5	20b	Geographic Tracking	23
6	20b	Electronic Leak Survey	25
7	24, 25, 26	Damage Prevention Public Awareness	27
8	22	Pipe Fitting Specifications	31
9	26	Repeat Offenders IT Systems	34
10	17	Gas Speciation	36
11	20b	Public Leak Maps	38
12	21	Accelerated Leak Repair - Transmission	40
13	19	Distribution Above Ground Leak Surveys	42
14	16, 17, 20a	Aerial Monitoring	44

SDG&E Acronym Library

Acronym	Definition
49 CFR 192	PHMSA Regulation - Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards
811	National call-before-you-dig phone number
AARR	Average annual revenue requirement
AG	Above Ground
AMM	Aerial Methane Mapping/ Aerial Monitoring
AOC	Abnormal Operating Conditions
API	American Petroleum Institute
BP	Best Practice
BTU	British thermal unit
CARB	California Air Resources Board
CCSLB	California Contractor State License Board
CFR	Code of Federal Regulations
CPDR	Company Property Damage Report
CPUC	California Public Utilities Commission
DIMP	Distribution Integrity Management Program
EAL	Environmental Analysis Laboratory
EDAPO	Engineering Data Analytics and Performance Optimization
ELS	Electronic Leak Survey
EPA	Environmental Protection Agency
G.O. 112F	State General Order Governing Design, Construction, Testing, Operation, and Maintenance of Gas Gathering, Transmission, and Distribution Piping Systems
GIS	Geographic Information System
GRC	General Rate Case
GS	Gas Standard
IT	Information Technology
LiDAR	Light Detection and Ranging
M&R	Measurement and Regulation
MCF	Thousand cubic feet
MMBtu	Million British thermal units
MSP	Material Specification Properties
MTCO2e	Metric tons of Carbon Dioxide equivalent
NPT	National Pipe Thread
NGLAP	Natural Gas Leak Abatement Program
NSOTA	Non-State-of-the-Art
O&M	Operations & Maintenance
P&ID	Piping and Instrumentation Diagram

Acronym	Definition
PHMSA	Pipeline and Hazardous Materials Safety Administration
PE	Polyethylene
psig	Pounds per square inch gauge
QC	Quality Control
RD&D	Research, Development, & Demonstration
RP	Recommended Practice
RRR	Realized Revenue Requirement
TIMP	Transmission Integrity Management Program
TY	Test Year
WACOG	Weighted Average Cost of Gas

2026 SB 1371 Compliance Plan
Chapter 1: Increased Leak Survey

Part 1. Evaluate the Current Practice Addressed in this Chapter

This Chapter addresses the following Best Practices:

Best Practice 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 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.
Best Practice 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 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.

Historic Project Achievements:

Leak surveys on distribution lines have historically been performed according to the requirements in 49 CFR § 192.723. SDG&E pipelines are typically leak surveyed at intervals of 1-, 3-, or 5-years. The frequency of this survey is determined by the pipe material involved, i.e., plastic or steel, the operating pressure, whether the pipe is under cathodic protection, and the proximity of the pipe to various population densities. In 2018, SDG&E increased the survey frequency for all Vintage Plastic (Aldyl-A (PE) pipe installed before 1986) from 5-year to annual. This activity was funded by DIMP.

In the 2018 Compliance Plan, SDG&E was approved to move Vintage Steel pipe (Steel pipe installed before 1950) from 5-year to annual leak survey cycles, Plastic pipe (Yellow or Orange TR418 resin, and 1986 and later Aldyl-A pipe) was moved from 5-year to 3-year survey cycles, and protected steel (Post-1950) pipe from 5-year to 3-year leak survey cycles. All survey cycles were accelerated by early 2020. The Increased Leak Survey project was initially designed to accelerate survey cycles in alignment with proactive methane mitigation goals. However, in accordance with the direction from the CPUC in Resolution G-3606, all previously accelerated leak survey cycles were decelerated during 2025 except for Vintage Plastic which remains on a 1-year cycle.

Emission Reductions Achieved:

Historical Emission Reductions (MCF)

2018	2019	2020	2021	2022	2023	2024
9,468	10,724	10,627	22,319	21,977	16,339	23,782

Emission reductions from mains and services are calculated by estimating how much earlier leaks were identified by the accelerated surveys relative to the prior cycles and then multiplying the durations by the leaks' emission factors.

Cost Effectiveness Evaluation of Historic Work:

Historical Standard Cost Effectiveness ($/MCF)

Projected in 2024 Compliance Plan	Actual Cost Effectiveness (2018-2024)
$479	$80

Part 2. Proposed New or Continuing Measure

Resolution G-3606 approved partial funding for 2025 and disallowed funding for 2026 for this Chapter. As a result, SDG&E returned its survey schedule to the 5-year cycles required by law, except for Vintage Plastic which remains on a 1-year cycle.

Part 3. Abatement Estimates

Forecast of Emission Reductions (MCF)*

2027	2028
6,084	6,084

*Note: Forecasted reductions are only for accelerated surveys on Vintage Plastic because SDG&E's proposal to continue additional accelerated surveys was denied in Resolution G-3606.

Forecasted emission reductions are calculated by averaging the emission reductions achieved through accelerated surveys on Vintage Plastic during 2023 and 2024.

Part 4. Cost Estimates

SDG&E discontinued this program following Resolution G-3606. No funding is requested.

Part 5. Cost Effectiveness/Benefits

Cost effectiveness cannot be calculated because SDG&E does not request funding for this Chapter during this Compliance Period.

Part 6. Supplemental Information/Documentation

Not applicable.

Part 1. Evaluate the Current Practice Addressed in this Chapter

This Chapter addresses the following Best Practice(s):

Best Practice 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.
Best Practice 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.
Best Practice 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 storage infrastructure work, requiring methane evacuation, shall also be submitted to facilitate audits, with line venting schedule updates.
Best Practice 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.
Best Practice 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 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.
Best Practice 7: Bundling Work Policy
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.

Historic Project Achievements:

SDG&E has documented use of cost-effective methods to reduce vented emissions during high-pressure construction projects, including performing pressure reduction using mobile compressors, transferring gas to lower pressure systems, and isolating smaller sections of pipe using gas capture tank trailers.

Operators of natural gas pipeline systems routinely reduce line pressure and discharge gas from pipeline sections to provide safe working conditions during maintenance and repair activities. In the 2022 Compliance Plan, SDG&E was approved to continue blowdown reduction efforts on high-pressure pipelines; however, it was not approved beyond the levels of the 2020 Compliance Plan. This included purchasing compressors and cross-compression equipment to reduce blowdown emissions, field operations staff to support blowdowns, and creating a recordkeeping and compliance process to document that the requirements of the Best Practices are being met.

Two (2) Gas Standards were identified to be updated to require blowdown reduction efforts as outlined in Best Practices 3 through 7. SDG&E's Gas Standard G7909, *Purging Pipelines and Components* has been updated and SDG&E's Gas Standard G8148, *Gas Loss Estimation – Pipeline* was updated in 2020.

Emission Reductions Achieved:

The 2015 baseline for blowdown emissions reported for Transmission Pipelines, Transmission M&R Stations, Distribution Mains & Services, and Distribution M&R Stations totaled 3,518 MCF. Emissions from these categories in calendar years 2018 through 2022, totaled 557 MCF, 1,588 MCF, 574 MCF, 119 MCF, and 241 MCF, respectively. This equates to an estimated reduction of 2,961 MCF for 2018, 1,930 MCF for 2019, 2,944 MCF for 2020, 3,399 MCF for 2021, and 3,277 MCF for 2022.

Beginning in 2023, SDG&E was required to report the volumes of mitigated Transmission Pipeline blowdowns on the Annual Emissions Report, which are now being leveraged to estimate emission reductions for 2023 and 2024. The annual mitigated blowdown emissions reported in this Compliance Plan are from the following categories: Blowdowns in Transmission Pipelines and Distribution Mains & Services. Emissions mitigated from these two (2) categories over calendar years 2023 and 2024 totaled 11,387 MCF and 3,041 MCF respectively. This equates to an estimated reduction of 6,968 MCF for 2023 and 7,460 MCF for 2024.

Historical Emission Reductions (MCF)

2018	2019	2020	2021	2022	2023	2024
2,961	1,930	2,944	3,399	3,277	6,968	7,460

Cost Effectiveness Evaluation of Historic Work:

Historical Standard Cost Effectiveness ($/MCF)

Projected in 2024 Compliance Plan	Actual Cost Effectiveness (2018-2024)
$116	$58

Part 2. Proposed New or Continuing Measure

SDG&E does not propose to continue high-pressure pipeline blowdown reduction efforts in 2027. In 2028, SDG&E plans to continue its high-pressure blowdown reduction efforts and is requesting funding in the TY 2028 GRC Application to replace aging medium gas capture tank trailers. This equipment is reaching end of life, and replacing it is necessary to maintain the reliability and effectiveness of blowdown mitigation operations.

Part 3. Abatement Estimates

SDG&E estimates the following blowdown emission reductions within the Transmission Pipeline, Transmission M&R Stations, Distribution Mains & Services, and Distribution M&R Station Categories.

Forecast of Emission Reductions (MCF)

2027	2028
0	7,214

SDG&E does not forecast emission reductions in 2027 because funding is not available. Blowdown emissions are a function of activity level. The 2028 estimate assumes the activity level remains constant and there are no unforeseen emergency blowdowns. In 2028, the forecasted emission reductions were derived from the average historical emission reductions from 2023 and 2024. SDG&E will continue evaluating opportunities to expand blowdown reduction capabilities, and emerging technologies may allow for further reductions in future Compliance Periods.

Part 4. Cost Estimates

This measure has been incorporated into SDG&E's routine Operations & Maintenance (O&M) activities and will be included in SDG&E's TY 2028 GRC Application.

Total Revenue Requirement over Expected Life of Investment
$0.8 million
Average Annual Revenue Requirement
$0.2 million

Part 5. Cost Effectiveness/Benefits

The blowdown reduction program is an investment that minimizes methane emissions, contributing to California's climate goals and reducing environmental impact in the communities SDG&E serves. In addition, the program directly supports system safety and affordability.

From a safety perspective, the use of cross-compression and gas capture equipment allows SDG&E to safely reduce pipeline pressure, which reduces the risk of uncontrolled releases and enhances worker and public safety. These practices are aligned with SDG&E Gas Standard, G7366, *Planning Pipeline Blowdowns and Reporting,* which promotes consistent application of mitigation procedures across all high-pressure operations.

Blowdown reduction activities saved an average annual volume of 7,214 MCF during 2023 and 2024. By using the U.S. EPA greenhouse gas equivalencies calculator,[1] the annual savings are equivalent to greenhouse gas emissions from 92 gasoline-powered passenger vehicles driven for one (1) year or CO_2 emissions from 44,496 gallons of gasoline consumed. These improvements stem from advanced gas capture and recompression techniques that align with CPUC directives and internal Company standards and procedures. In the past, it was a standard industry procedure to vent the entire volume of gas into the atmosphere, whereas now SDG&E is mitigating these vented emissions to reduce environmental impact.

The program supports affordability by injecting gas back into SDG&E's pipeline infrastructure that would otherwise have been vented to the atmosphere. The annual cost savings of this program are expected to result in a cost benefit of $39,312 based on the WACOG of $5.46/MCF and estimated annual emission reductions of over 7,200 MCF in 2028. These reductions are achievable through operational enhancements that support sustained abatement across both Transmission and Distribution systems. These efficiencies minimize cost for customers while reliably mitigating blowdown emissions.

The requested funding in the TY 2028 GRC is necessary to continue providing these benefits to customers and continue SDG&E's internal capabilities. Investing in SDG&E-owned equipment will support long-term cost control, promote compliance with SB 1371 Best Practices, and enable sustained emission reductions. This program is essential to meeting regulatory expectations and providing safe and affordable service for SDG&E gas customers. Reducing methane emissions improves regional air quality, and accelerates progress toward the state's 2030 climate commitment and 2045 carbon neutrality goal.

Historical Achieved-Cost Effectiveness Calculations (2018-2024) ($/MCF)

Standard Cost Effectiveness	With Cap and Invest Cost Benefits	With Cap and Invest, and Social Cost of Methane Cost Benefits
$58	$56	$30

[1] Greenhouse Gas Equivalencies Calculator | US EPA

Forecast of Cost Effectiveness Calculations (2027-2028) ($/MCF)

Standard Cost Effectiveness	With Cap and Invest Cost Benefits	With Cap and Invest, and Social Cost of Methane Cost Benefits
$56	$54	$28

Part 6. Supplemental Information/Documentation

Not applicable.

Part 1. Evaluate the Current Practice Addressed in this Chapter

This Chapter addresses the following Best Practice(s):

Best Practice 24: Dig-Ins and Public Education Program
Expand existing public education program to alert the public and third-party excavation contractors to the Call Before You Dig – 811program. In addition, utilities must provide procedures for excavation contractors to follow when excavating to prevent damaging or rupturing a gas line.
Best Practice 25: Dig-Ins and Company Standby Monitors
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.
Best Practice 26: Dig-Ins and 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-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.

Historic Project Achievements:

The State of California mandates a pre-construction meeting with excavators requesting Locate and Mark support and requires continuous monitoring of excavations within ten feet of high-pressure pipelines pursuant to Cal. Gov. Code § 4216.2. Therefore, the requirements of Best Practice 25 are already met. SDG&E's Public Awareness Program is driven by the requirements of 49 CFR § 192.616, Public Awareness Programs for Pipeline Operators, API RP 1162, and program expansion recommendations by regulators. SDG&E was approved to begin expanding the standby program to other areas where there could be challenges to controlling a damage, as proposed in the 2018 Compliance Plan. This implementation was pending the completion of a risk algorithm analyzing the location of 811 tickets and prioritizing them to trigger expanded standby. In 2019, this algorithm was completed and piloted. SDG&E has determined through the algorithm development that, rather than expanding standby, it would be more efficient to perform more field interventions for these higher-risk excavations. Rather than having an employee stand by and observe an excavation, which can often take multiple days, it would be more efficient to have that employee visit multiple excavators within the same timeframe to discuss damage prevention at their excavation sites.

Since implementation, using the prioritized results from the risk analysis algorithm, Company personnel can initiate communication with excavators to discuss the project and remind them of the importance of locating and protecting the natural gas pipe within their project's delineated area. The form of communication can be a phone call, text message, email, or job site visit, prior to the date of excavation. These proactive interventions were implemented in the field, and the Company

personnel were able to effectively address a larger number of excavation projects than just performing standby.

In 2023, the Damage Prevention Algorithm & Proactive Intervention project for the 2022 Compliance Plan period was not approved because of its high standard cost effectiveness. Because this project is deemed a crucial component in emissions prevention, it was incorporated into SDG&E's routine Operations & Maintenance activities.

Emission Reductions Achieved:

No updates to the achieved emission reductions were made for this Compliance Period.

Cost Effectiveness Evaluation of Historic Work:

No updates on the cost effectiveness of historic work were made for this Compliance Period.

Part 2. Proposed New or Continuing Measure

SDG&E does not propose new or continuing measures for this Chapter.

Part 3. Abatement Estimates

SDG&E is not proposing new or continuing measures, and therefore, abatement estimates are not available.

Part 4. Cost Estimates

SDG&E does not request funds for this Chapter in this Compliance Period.

Part 5. Cost Effectiveness/Benefits

Cost effectiveness cannot be calculated because SDG&E does not request funding for this Chapter during this Compliance Period.

Part 6. Supplemental Information/Documentation

Not applicable.

2026 SB 1371 Compliance Plan
Chapter 4: Recordkeeping IT Project

Part 1. Evaluate the Current Practice Addressed in this Chapter

This Chapter addresses the following Best Practice(s):

Best Practice 9: Recordkeeping
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.

Historic Project Achievements:

Measure 1: Data Lake

In the past, developing the Annual Emissions Report required by the NGLAP involved querying various records, which were stored in varying formats, locations, databases, and with various record owners. This made report generation a time-consuming manual process. Additional challenges arose because the electronic systems were not designed for generating reports for emissions, but rather for billing, maintenance, or operational recordkeeping. To help improve efficiency, between 2020 and 2024, SDG&E developed a Data Lake with automated interfaces from various source systems to help capture data elements required for emissions reporting. In addition, the Data Lake is designed to enable seamless modification of the emissions reporting templates as they evolve annually. The scope of the Data Lake expanded to capture the dynamic improvement of the Company's technical system upgrades and incorporate new emissions estimation methodologies and reporting requirements. The automated capture of source system data has reduced the effort needed by the critical experienced staff and made the data capture and reporting process more accurate and reliable.

Milestones Completed:

- Developed the Data Lake with automated interfaces from source systems.
- Modified the automated interfaces when source system technical upgrades occurred.
- Enhanced the automated interfaces when new data elements became available.
- Modified and enhanced the automated reports to align with updated emissions estimation methodologies and reporting requirements.

Measure 2: Engineering Data Analytics and Performance Optimization (EDAPO)

The EDAPO project was described in the 2022 Compliance Plan for SDG&E. However, this project was only initiated for SoCalGas and was inadvertently included in the SDG&E Compliance Plan. SDG&E did not spend nor request any funding for this project. As such, there are no updates or further details to provide in the SDG&E 2026 Compliance Plan for this project.

Measure 3: Asset Field Verification

Prior to the 2018 Compliance Plan, SDG&E maintenance and inspection work management systems were designed for billing, maintenance, or operational recordkeeping purposes only. Moreover, because consistent naming conventions were not in place, records used varying types of nomenclature relevant to specific departments. Querying records from numerous departments in the Company and combining them to generate a single report was challenging and not readily available.

To improve asset data in the Company's source systems, SDG&E performed Asset Verification projects at its Transmission facilities. The Asset Verification projects enhanced existing systems to include additional data elements required for the methane emission calculations, which enabled field personnel to record required information into systems that were previously incapable of recording certain component data (e.g., manufacturer, date of installation, and photos). Having such data readily available enhanced the emission estimations for the mandated Annual Emissions Reports associated with these assets, and it has also allowed departments to refer to assets by a unified naming method and improve data governance.

Milestones Completed:

- Field verification of Transmission assets completed Q2 of 2022.

Measure 4: Real-time Data Management for Methane Abatement/Monitoring Support for Other Gas Operational Units

Real-time data management and monitoring is an essential tool to analyze methane emissions and implement efforts to reduce methane emissions effectively across all operational areas. SDG&E purchased a software license to modernize real-time data management to improve existing and new methane emission reduction projects. This tool's Operational & Maintenance cost was distributed to the end of 2025 to comply with regulatory accounting requirements. The tool enabled SDG&E to improve maintenance/performance practices of its assets in Transmission and Distribution facilities. Moreover, the collected data is used to develop analytical capabilities to provide the ability to integrate with enterprise initiatives across the Company.

Milestones Completed:

- Obtained Enterprise license.
- Enabled additional analytics capabilities and gained the ability to integrate with other enterprise initiatives.
- Integrated existing infrastructure into the NGLAP solutions to enhance the Company's compliance with methane emission requirements.

Measure 5: Develop Mobile Field Forms

Prior to the 2022 Compliance Plan, the work management system used by Transmission did not include digitized forms or mobile capabilities. Enhancement efforts to address these deficiencies commenced in 2021 with software module updates to the work management system. The second

part of the enhancement was to digitize forms and add mobile and spatial capabilities. Such improvements facilitated data recovery for maintaining assets, improved safety, and eliminated inconsistencies that the paper form may have caused. The project is anticipated to be completed in Q2 of 2026.

Milestones Completed:

- Modernized and enhanced mobile solutions to have offline capabilities by Q2 of 2022.
- Enabled spatial capabilities to the mobile solution by Q2 of 2022.

Measure 6: Historizing Emission Sensor Data (HESD)

The RD&D Pilot – Evaluation of Stationary Methane Detectors – did not identify current monitors that could be deployed to cost-effectively scan for emissions. Therefore, the sensor data intended to be historized by the HESD project does not exist at this time. However, the Emission Reduction Analytical Tools (ERAT) project showed promise for identifying new areas to target for emission reductions. As such, HESD funding from the 2022 Compliance Plan was reallocated to ERAT initiatives.

Measure 7: Emission Reduction Analytical Tools (ERAT)

During 2024, a tool for forecasting annual emissions from Distribution Main & Service leaks was completed within the ERAT portfolio. The tool allows the user to forecast emissions based on targeted repair durations and projected leak counts.

Milestones Completed:

- Produced a tool for forecasting emissions from Distribution Main & Service leaks.
- Initiated development of several tools for identifying areas to focus emission reduction efforts before the project was paused to support affordability.

Measure 8: Program Process Improvement

The NGLAP is focused on the technology, data, and Best Practices that guide SDG&E in reducing emissions. The NGLAP is structured to support the elements of satisfying regulatory requirements, tracking financials and compliance requirements, responding to data requests, establishing dashboard(s) with metrics/project controls, and implementing the projects as outlined in the SB 1371 Compliance Plan for emission reductions.

The NGLAP developed and integrated tools to support these efforts that help enhance consistency and accuracy across the Program. This allowed for improved tracking of key performance indicators and decision-making. This process improvement utilized tools and methodologies to effectively manage the program's workflow, including the below workstreams:

- Finance & Regulatory.
- Project Execution.
- Research & Development.
- Policy & Communication.

Milestones Completed:

- Created metrics dashboard in support of analytics for decision making and resource planning.

Emission Reductions Achieved:

The measures in Chapter 4 were designed to comply with mandatory Best Practice 9 established by D.17-06-015. Due to the nature of Best Practice 9, emission reductions cannot be quantified.

Cost Effectiveness Evaluation of Historic Work:

Due to the nature of this work, emission reductions and cost effectiveness cannot be quantified.

Part 2. Proposed New or Continuing Measure

Measure 1: Data Lake

SDG&E plans to maintain the previously approved project and does not propose any new measures. For 2027, SDG&E will utilize the authorized funds from Resolution G-3606, and the 2028 funding will be requested in SDG&E's TY 2028 GRC Application.

Part 3. Abatement Estimates

The measures in Chapter 4 were designed to comply with mandatory Best Practice 9 established by D.17-06-015. Due to the nature of Best Practice 9, emission reductions cannot be quantified.

Part 4. Cost Estimates

The 2027 costs are authorized by Resolution G-3606. The 2028 funding will be requested in SDG&E's TY 2028 GRC Application.

Part 5. Cost Effectiveness/Benefits

The measures in this Chapter were developed to comply with mandatory Best Practice 9 from D.17-06-015. Best Practice 9 requires SDG&E to maintain records, data, calculations, and

assumptions associated with emissions reporting, and D.17-06-015 states that accurate reporting, including estimation methodologies and assumptions, is critical for regulatory audits to promote compliance. SDG&E maintains compliance with these requirements by developing tools to gather, track, and improve program data.

In addition, these tools enhance affordability by reducing the amount of time that staff need to spend gathering data for annual reporting and general program management, and the tools bolster the resilience and reliability of SDG&E's reporting and project management processes by automating part of the processes. The automation helps to confirm that data are prepared in a consistent and accurate manner.

Due to the nature of this work, emission reductions and cost effectiveness cannot be quantified.

Part 6. Supplemental Information/Documentation

Not applicable.

Part 1. Evaluate the Current Practice Addressed in this Chapter

This Chapter addresses the following Best Practice(s):

Best Practice 9: Recordkeeping
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, in consultation with CARB, as part of the Compliance Plan filing.
Best Practice 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 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.

Historic Project Achievements:

To improve capabilities of leak surveys performed at complex high-pressure facilities, SDG&E modeled and created the digital twin for the existing facility to enable a quick query of its facility. The intelligence found in the 3D model and the P&IDs will enable engineering and operations to identify and track the digital asset records. It will enable future reporting from these databases that can include mileage of pipeline/service, the type of equipment and location, and the capability to connect the 3D model database systems to other SDG&E database systems.

In the 2020 Compliance Period,[2] SDG&E completed the digitizing and mechanical walkdown of 15 P&IDs and one (1) 3D modeling for its facilities. These intelligent P&IDs allowed engineering to locate tags for equipment or instrumentation that is currently found in these facilities. SDG&E is able to query data based on a tag, type of equipment, service, location, etc. The tags in the 3D model link to the P&IDs, enabling proper engineering information to be provided. The 3D model provided material information to help identify connection points and support queries for potential leak points in the existing facilities.

[2] 2020 Compliance Plan described scope and work conducted for SoCalGas instead of SDG&E. This scope has been corrected for SDG&E in this statement for the time frame 2020-2022.

Emission Reductions Achieved:

The measures in Chapter 5 were designed to comply with mandatory Best Practices 9 and 20b established by D.17-06-015. Due to the nature of Best Practices 9 and 20b, emission reductions cannot be quantified.

Cost Effectiveness Evaluation of Historic Work:

Due to the nature of this work, emission reductions and cost effectiveness cannot be quantified.

Part 2. Proposed New or Continuing Measure

SDG&E does not propose new or continuing measures for this Chapter.

Part 3. Abatement Estimates

The measures in Chapter 5 were designed to comply with mandatory Best Practices 9 and 20b established by D.17-06-015. Due to the nature of Best Practices 9 and 20b, emission reductions cannot be quantified.

Part 4. Cost Estimates

SDG&E does not request funds for this Chapter in this Compliance Period.

Part 5. Cost Effectiveness/Benefits

Due to the nature of this work, emission reductions and cost effectiveness cannot be quantified.

Part 6. Supplemental Information/Documentation

Not applicable.

2026 SB 1371 Compliance Plan
Chapter 6: Electronic Leak Survey

Part 1. Evaluate the Current Practice Addressed in this Chapter

This Chapter addresses the following Best Practice(s):

Best Practice 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 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.

Historic Project Achievements:

SDG&E implemented a mobile application for the ELS process. This implementation allows leak surveyors to use tablets equipped with a mobile application that provides GIS-generated leak survey routes instead of paper maps. Leak survey instrumentation and equipment are used to identify leaks and collect leak data electronically which is uploaded into GIS. Breadcrumb (GIS Location) data are collected for the survey path walked. The requirements gathering and vendor selection for mobile applications were completed in 2018. The system design activities were completed in 2019. Due to reduced funding and delays, development of mobile and supporting portal applications were completed in 2024. Required hardware (tablets, accessories, storage) and support software were acquired to conduct system integration testing to validate integration paths and end-to-end functionality. Application rollout and deployment activities for all distribution districts were initiated in 2024. A change management team engaged stakeholders to provide information on the mobile application through Digi Boards at district locations, intranet articles, and district visits, supporting the transition.

Emission Reductions Achieved:

The measures in Chapter 6 were designed to comply with mandatory Best Practice 20b established by D.17-06-015. Due to the nature of Best Practice 20b, emission reductions cannot be quantified.

Cost Effectiveness Evaluation of Historic Work:

Due to the nature of this work, emission reductions and cost effectiveness cannot be quantified.

Part 2. Proposed New or Continuing Measure

SDG&E plans to maintain the existing ELS software and does not propose new measures for this Chapter.

Part 3. Abatement Estimates

The measures in Chapter 6 were designed to comply with mandatory Best Practice 20b established by D.17-06-015. Due to the nature of Best Practice 20b, emission reductions cannot be quantified.

Part 4. Cost Estimates

This measure has been incorporated into SDG&E's routine Operations & Maintenance activities and will be included in SDG&E's TY 2028 GRC Application.

Part 5. Cost Effectiveness/Benefits

The implementation of the ELS project delivers significant operational and compliance benefits aligned with organizational goals for emission reductions, safety, reliability, and affordability.

By eliminating reliance on paper-based leak survey maps, including plotting, printing, reviewing, and mailing maps, the initiative strengthens operational controls by reducing cost exposure, decreasing resource consumption, and lowering associated environmental impacts. This transition to digital workflows also mitigates risks related to document loss and process inefficiencies.

Integration with Company software improves geographic accuracy and tracking of leaks and other AOCs, supporting timely follow-up and reducing the risk of human error through auto-populated GIS coordinates.

By automating the leak survey work assignment process within Distribution, the system enhances efficiency and flexibility in cross-district assignments and routing, improving workforce utilization and reducing dependency on manual processes. Automation enhances safety and reliability by providing near real-time access to leak survey data, enabling rapid response during critical events such as system overpressure, seismic activity, fires, and floods.

Additionally, Construction Supervisors and Gas Operations Compliance Coordinators receive near real-time updates via the portal app, strengthening oversight and decision-making, which was previously inaccessible on-the-go.

The project also provides valuable data inputs for advanced analytics, supporting future initiatives aimed at cost reduction, enhanced safety, and improved operational efficiency in alignment with regulatory and environmental standards.

Due to the nature of this work, emission reductions and cost effectiveness cannot be quantified.

Part 6. Supplemental Information/Documentation

Not applicable.

Part 1. Evaluate the Current Practice Addressed in this Chapter

This Chapter addresses the following Best Practice(s):

Best Practice 24: Dig-Ins and Public Education Program
Expand existing public education program to alert the public and third-party excavation contractors to the Call Before You Dig – 811program. In addition, utilities must provide procedures for excavation contractors to follow when excavating to prevent damaging or rupturing a gas line.
Best Practice 25: Dig-Ins and Company Standby Monitors
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.
Best Practice 26: Dig-Ins and 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-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.

Historic Project Achievements:

SDG&E implements a federally mandated Public Awareness program, as prescribed in 49 CFR § 192.616, which contributes to enhanced public safety. In addition, the State of California mandates a preconstruction meeting with excavators requesting Locate and Mark support and requires continuous monitoring of all excavations within ten feet of high-pressure pipelines pursuant to Cal. Gov't Code § 4216.2. The Public Awareness program is also driven by the requirements of 49 CFR. § 192.616, the technical document, Public Awareness Programs for Pipeline Operators, API RP 1162, and program expansion recommendations by regulators.

SDG&E conducted the following activities:

- Contractor and Excavator Outreach
    - Paradigm Excavator Outreach Meetings – Additional safety outreach across the service territory.
    - Contractor Damage Prevention Awareness Meetings – Quarterly virtual meetings with DigAlert.
    - Damage Prevention Analyst Engagements
        - On-site education including:
            - 2,501 proactive engagements in 2024.
            - 278 dig-in investigations in 2024.
            - 78 Outreach engagements in 2024.
            - 182 "Stop the Job" interventions in 2024.

  - Plumber/Sewer Contractor Outreach – Development of stand-alone pipeline safety mailers.
- Community and Nonprofit Partnerships
  - Community Relations Pilot Partnership – Outreach through major nonprofit organizations.
  - Public Affairs Pilot Partnership – Collaborations with cities, municipalities, and nonprofits.
  - Community Outreach Team Engagement – Participation in monthly local events with damage prevention brochures.
- Media and Marketing Campaigns
  - 811 Media Campaign – Digital content and social media ads during 811 Day.
  - Social Media Boosts – Targeted outreach across service territory.
  - General Safety Marketing Campaign – Multilingual, multimedia outreach including radio, digital display, online video, print, and out-of-home advertising with over 30 million impressions across platforms.
- Sports Partnerships
  - MLB San Diego Padres Outreach – Damage prevention messaging included: 811-branded outfield wall signage, homeplate pad exposure, fan giveaway of 40,000 branded beanies, and streaming spots on PadresTV.
  - Common Ground Alliance Collaborations – 811 Day events with other operators.
- Innovative Programs
  - Enertech Geofencing Program – Targeted messaging using keyword search and location data: 1 million impressions, 1,371 ad clicks, 0.14% clickthrough rate.
  - Good Neighbor Program – 811 postcards sent to neighbors of USA ticket submitters based on risk scoring.
  - Doorhanger Distribution Program – Doorhangers left at homes after ground marking to promote 811 awareness.

Emission Reductions Achieved:

Historical Emission Reductions (MCF)

2018	2019	2020	2021	2022	2023	2024
N/A	377	0	339	1,184	1,775	2,726

Emission reductions were estimated by taking the difference between Appendices 1 and 4 excavation damage emissions from emission year 2018 and the Appendices 1 and 4 excavation damage emissions for each respective year. Emission year 2018 was used as the baseline because implementation for this program began during 2019. Annual reductions from Chapter 9 (Repeat Offenders) were subtracted from the totals because Chapter 9 contributes emission reductions to the same area.

Cost Effectiveness Evaluation of Historic Work:

Historical Standard Cost Effectiveness ($/MCF)

Projected in 2024 Compliance Plan	Actual Cost Effectiveness (2018-2024)
N/A	$379

Part 2. Proposed New or Continuing Measure

SDG&E plans to maintain the previously approved project and does not propose any new measures. For 2027, SDG&E will utilize the authorized funds from Resolution G-3606, and the 2028 funding will be requested in SDG&E's TY 2028 GRC Application.

Part 3. Abatement Estimates

Forecast of Emission Reductions (MCF)

2027	2028
828	2,251

The 2028 emission reductions were estimated as the average of the 2023 and 2024 reductions. The 2027 reductions were adjusted downward to account for the reduction in program funding.

Part 4. Cost Estimates

The 2027 costs are authorized by Resolution G-3606. The 2028 funding will be requested in SDG&E's TY 2028 GRC Application. Revenue requirement for the work planned during 2027 and 2028 is included in the table below.

Total Revenue Requirement over Expected Life of Investment
$1.2 million
Average Annual Revenue Requirement
$0.6 million

Part 5. Cost Effectiveness/Benefits

In addition to reducing emissions, the Damage Prevention Public Awareness project enhances public safety by educating stakeholders of the risks of damaging pipelines during excavations. Through a wide range of outreach efforts, including contractor meetings, targeted mailers, and proactive field engagements, the project helps to prevent dig-ins that could lead to gas leaks.

These efforts advance affordability objectives by reducing costly emergency repairs. The project increases SDG&E system reliability by equipping contractors and communities with the awareness to avoid damaging infrastructure. This is achieved by deploying innovative tools like geofencing and mobile outreach, and through real-time interventions that protect pipeline integrity. With

expanded partnerships, multimedia campaigns, and community engagement, the project demonstrates a comprehensive and evolving approach to public awareness and damage prevention.

Historical Achieved Cost Effectiveness Calculations (2018-2024) ($/MCF)

Standard Cost Effectiveness	With Cap and Invest Cost Benefits	With Cap and Invest, and Social Cost of Methane Cost Benefits
$379	$377	$351

Forecast of Cost Effectiveness Calculations (2027-2028) ($/MCF)

Standard Cost Effectiveness	With Cap and Invest Cost Benefits	With Cap and Invest, and Social Cost of Methane Cost Benefits
$375	$374	$348

Part 6. Supplemental Information/Documentation

Not applicable.

Part 1. Evaluate the Current Practice Addressed in this Chapter

This Chapter addresses the following Best Practice(s):

Best Practice 22: Pipe Fitting Specifications
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 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.

Historic Project Achievements:

SDG&E has a Supply Management department that works with vendors in purchasing materials that meet SDG&E MSP requirements for all components. When materials are received, samples are inspected at a warehouse facility to verify requirements are met. Pipe fittings are components used to join pipe sections together with other fluid control products like valves and pumps to create pipelines. If there are any concerns regarding the quality of materials, including the threaded components and fittings, the Supply Management department is engaged to correct the issue and either engage the current vendor to increase quality assurance standards or begin contract negotiations with alternative vendors to confirm all concerns are addressed.

In 2019, SDG&E hired a third-party consultant to review its QC process and MSP standards to identify consistent requirements across component categories, which resulted in enhancements to the following processes:

- Manufacturing and QC.
- Shipping, Handling, and Storage.
- Construction and Installation.
- Operations & Maintenance.

The purpose of these improvements is to reduce emissions from threaded pipe fittings by improving manufacturers' tolerances and thread quality. In 2021, SDG&E hired a Project Manager to create a project plan necessary to drive the project to completion. Within the project plan, the scope was separated into two (2) phases. Phase 1 of the project focused on updating all the material specifications and QC inspection instruction standards. A third-party consultant was hired to assist with updating all standards. Phase 2 focused on implementing the updated standards during the inspection process, shipping and handling, and construction and installation. A training program was completed during Phase 2 to introduce Company stakeholders to recommended best practice improvements. SDG&E's Gas Standard G8304, *Threaded Connections* was updated with quality improvements for threaded connections. A pilot program was conducted with a QC inspection team at a central location to evaluate process controls during inspection of select threaded components while using a temporary outdoor covered storage area. The pilot program was successful as components were protected with a storage solution that also fit QC and Logistics

team needs. Visual quality inspections were conducted, and SDG&E was better able to anticipate future storage and staffing needs. The study also highlighted improvements needed in manufacturing quality.

Additional accomplishments include:

- Required manufacturers' thread fabrication process and product conform to the NPT tolerances.
- Mandated that manufacturers apply plastic protectors to preserve thread quality during shipping and logistics.
- Developed and implemented a training program for QC inspection team focusing on updated material standards.
- Required indoor storage of all threaded components at QC inspection location.
- Conducted quarterly inventory studies and established metrics to monitor thread quality and NPT thread tolerance from manufacturers.
- Required manufacturers to demonstrate higher level of thread quality.
- Confirmed manufacturer conformance to updated material standards from QC programs.
- Provided leak survey fitting repair and replacement reports to all internal stakeholders of the process, including QC and MSP engineer, for further evaluation.
- Developed recommendations for fitting replacement program.

Emission Reductions Achieved:

The measures in Chapter 8 were designed to comply with mandatory Best Practice 22 established by D.17-06-015. Due to the nature of Best Practice 22, emission reductions cannot be quantified.

Cost Effectiveness Evaluation of Historic Work:

Due to the nature of this work, emission reductions and cost effectiveness cannot be quantified.

Part 2. Proposed New or Continuing Measure

SDG&E plans to maintain the previously approved project and does not propose new measures in 2027. The 2028 funding will be requested in SDG&E's TY 2028 GRC Application.

Part 3. Abatement Estimates

The measures in Chapter 8 were designed to comply with mandatory Best Practice 22 established by D.17-06-015. Due to the nature of Best Practice 22, emission reductions cannot be quantified.

Part 4. Cost Estimates

This measure has been incorporated into SDG&E's routine Operations & Maintenance activities and will be included in SDG&E's TY 2028 GRC Application.

Part 5. Cost Effectiveness/Benefits

The Pipe Fitting Specifications project supports multiple strategic goals by improving the quality and consistency of threaded pipe fittings used across the system. By imposing stricter manufacturing tolerances on thread geometry, the project directly contributes to emission reductions, as tighter seals minimize leaks. The project also promotes affordability by reducing the frequency of leak-related repairs and emergency maintenance, streamlining procurement through standardized materials, and improving vendor quality assurance.

In addition, this project increases system resiliency through standardized installation procedures that provide consistent performance under varying conditions. The project contributes to reliability improvements by addressing fitting-related issues, which can help maintain system performance and consistent gas delivery. Each of these enhancements also provide the co-benefit of improved safety for customers. The project's training programs and updates to SDG&E's Gas Standards further reinforce these benefits by embedding best practices into field operations. Overall, the project demonstrates a comprehensive approach to infrastructure improvement that delivers value across environmental, operational, and customer-focused dimensions.

Due to the nature of this work, emission reductions and cost effectiveness cannot be quantified.

Part 6. Supplemental Information/Documentation

Not applicable.

2026 SB 1371 Compliance Plan
Chapter 9: Repeat Offenders IT Systems

Part 1. Evaluate the Current Practice Addressed in this Chapter

This Chapter addresses the following Best Practice(s):

Best Practice 26: Dig-Ins and 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-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.

Historic Project Achievements:

Best Practice 26 required a solution for capturing and reporting all dig-in incidents. Incidents caused by contractors are identified using contractor identification data from the CCSLB, and this data enabled accurate identification and reporting of repeat offenders. Incident information was captured on a paper form called the CPDR. The Repeat Offenders IT System project converted the paper form to an electronic form called the eCPDR and made it available on mobile devices. The eCPDR shared the form data across the systems used by the Customer Service, Distribution, and Claims departments. The data continues to be shared with the Data Lake (discussed in Chapter 4), which enables emissions reporting. In addition to identifying repeat offenders, the Repeat Offenders IT System eliminated manual effort and potential for data errors in managing paper damage forms, as well as improved the timeliness of reporting through automated data sharing and claim creation. The implementation of the Repeat Offenders IT System commenced in Q4 of 2020.

Emission Reductions Achieved:

Historical Emission Reductions (MCF)

2018	2019	2020	2021	2022	2023	2024
N/A	N/A	N/A	N/A	0	22	0

Emission reductions were estimated by determining the difference in repeat offender incidents that occurred during 2021 relative to each respective year following. The reduction in incidents was multiplied by the average excavation damage volume from Appendices 1 and 4 for each respective year to estimate the volume of emission reductions.

Cost Effectiveness Evaluation of Historic Work:

Historical cost effectiveness was not evaluated because implementation of the system commenced in Q4 of 2020.

Part 2. Proposed New or Continuing Measure

The Repeat Offenders IT System data will continue to be used to prevent damages and reduce emissions.

Part 3. Abatement Estimates:

Forecast of Emission Reductions (MCF)

2027	2028
11	11

The forecast for 2027 and 2028 assumes that the average level of reductions from 2023 and 2024 will be maintained.

Part 4. Cost Estimates

SDG&E does not request funds for this Chapter in this Compliance Period.

Part 5. Cost Effectiveness/Benefits

The Repeat Offenders IT Systems project was designed to comply with the requirements of Best Practice 26. The implementation of this work has reduced emissions, enhanced safety, and bolstered reliability.

Cost effectiveness cannot be calculated because SDG&E does not request funding for this Chapter during this Compliance Period.

Part 6. Supplemental Information/Documentation

Not applicable.

2026 SB 1371 Compliance Plan
Chapter 10: Gas Speciation

Part 1. Evaluate the Current Practice Addressed in this Chapter

This Chapter addresses the following Best Practice(s):

Best Practice 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.

Historic Project Achievements:

SDG&E has a robust laboratory known as the EAL. When a methane source is in question, the EAL dispatches a mobile gas speciation van to identify the chemical content of the gas and identify its source.

SDG&E expanded the capacity of the EAL by increasing staff and equipment to respond to requests from Operations for leak speciation where a methane source is in question. These resources were also required to address lower detection limits of new advanced leak detection instrumentation and the increased level of leak survey activities being driven by the program.

Emission Reductions Achieved:

The measures in Chapter 10 were designed to comply with mandatory Best Practice 17 established by D.17-06-015. Due to the nature of Best Practice 17, emission reductions cannot be quantified.

Cost Effectiveness Evaluation of Historic Work:

Due to the nature of this work, emission reductions and cost effectiveness cannot be quantified.

Part 2. Proposed New or Continuing Measure

SDG&E plans to maintain the previously approved project and does not propose new measures in 2027. The 2028 funding will be requested in SDG&E's TY 2028 GRC Application.

Part 3. Abatement Estimates

The measures in Chapter 10 were designed to comply with mandatory Best Practice 17 established by D.17-06-015. Due to the nature of Best Practice 17, emission reductions cannot be quantified.

Part 4. Cost Estimates

This measure has been incorporated into SDG&E's routine Operations & Maintenance activities and will be included in SDG&E's TY 2028 GRC Application.

Part 5. Cost Effectiveness/Benefits

The Gas Speciation project plays a vital role in reducing emissions, enhancing safety, and supporting operational efficiency. Through the expansion of SDG&E's EAL and the deployment of the mobile gas speciation van staffed with additional qualified technicians, the Company has significantly enhanced its ability to conduct gas speciation analyses. This increased capacity enables more rapid and accurate identification of the chemical composition and source of methane leaks, thereby supporting timely and effective leak mitigation efforts. This capability enables SDG&E to quickly differentiate leaks near other combustible gas sources such as gas seepage from natural occurring sources, sewer lines, or third-party oil & gas pipelines, and initiate repair efforts once the Gas Speciation team confirms that the leak originates from SDG&E's system. As a result, the project directly supports emission reductions by enabling faster verification and repair of leaks—minimizing the duration that methane is released into the atmosphere and reducing health and safety risk to the general public. Ultimately, the Gas Speciation project delivers significant benefits by enhancing safety, reducing environmental impact, and promoting timely and effective leak response.

Due to the nature of this work, emission reductions and cost effectiveness cannot be quantified.

Part 6. Supplemental Information/Documentation

Not applicable.

2026 SB 1371 Compliance Plan
Chapter 11: Public Leak Maps

Part 1. Evaluate the Current Practice Addressed in this Chapter

This Chapter addresses the following Best Practice(s):

Best Practice 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 an agreement on a similar methodology to improve geographic evaluation and tracking of leaks to assist in demonstrations of actual emissions reductions. Leak detection technology 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.

Historic Project Achievements:

Each year since 2020, SDG&E has developed and published publicly available geographic maps of Distribution Main & Service leak information (e.g., ZIP codes & volume of emissions). The list of the Distribution Main & Service leaks is also available to the public under Appendix 4 of the Annual Emissions Reports. SDG&E plans to update the leak information in its public leak maps in Q3 each year because the submission date of the Annual Emissions Report is usually June 15th of each year. The maps allow customers to navigate the service territory via ZIP codes and view the current and historic volume of emissions associated with each ZIP code. The website address for the maps is as follows: https://www.sdge.com/sdge-distribution-mains-services-methane-emissions-map

Emission Reductions Achieved:

The measures in Chapter 11 were designed to comply with mandatory Best Practice 20b established by D.17-06-015. Due to the nature of Best Practice 20b, emission reductions cannot be quantified.

Cost Effectiveness Evaluation of Historic Work:

Due to the nature of this work, emission reductions and cost effectiveness cannot be quantified.

Part 2. Proposed New or Continuing Measure

SDG&E proposes to maintain and annually update, in Q3, the publicly available geographic maps of Distribution Main & Service leak information with the latest data from the Annual Emissions Report.

Part 3. Abatement Estimates

The measures in Chapter 11 were designed to comply with mandatory Best Practice 20b established by D.17-06-015. Due to the nature of Best Practice 20b, emission reductions cannot be quantified.

Part 4. Cost Estimates

The 2027 costs are authorized by Resolution G-3606. The 2028 funding will be requested in SDG&E's TY 2028 GRC Application.

Part 5. Cost Effectiveness/Benefits

The activities of Chapter 11 are completed to comply with mandatory Best Practice 20b from D.17-06-015. Best Practice 20b requires utilities to create publicly available geographic leak maps, which enhances public accessibility to the NGLAP data.

Due to the nature of this work, emission reductions and cost effectiveness cannot be quantified.

Part 6. Supplemental Information/Documentation

Not applicable.

2026 SB 1371 Compliance Plan
Chapter 12: Accelerated Leak Repair - Transmission

Part 1. Evaluate the Current Practice Addressed in this Chapter

This Chapter addresses the following Best Practice(s):

Best Practice 21: Find It, Fix It
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.

SDG&E has historically repaired transmission leaks to meet requirements of 49 CFR Part 192 and CPUC's G.O. 112-F based on safety risk, and has coded leaks as grades 1, 2, or 3 based on proximity to buildings, population density, and concentration of the leak. In the past, leak repair prioritization was solely based on safety and was not correlated to emission volumes.

From 2018 to 2024, SDG&E did not have the opportunity to accelerate any leak repairs on Transmission assets.

Emission Reductions Achieved:

The emission reductions for this program were not evaluated because funding was not authorized for this program.

Cost Effectiveness Evaluation of Historic Work:

Historical cost effectiveness was not evaluated because there was no authorized funding for the 2022 Compliance Period.

Part 2. Proposed New or Continuing Measure

SDG&E does not propose new or continued measures for this Chapter.

Part 3. Abatement Estimates

SDG&E is not proposing new or continuing measures, and therefore, abatement estimates are not available.

Part 4. Cost Estimates

SDG&E does not request funds for this initiative in this Compliance Period.

Part 5. Cost Effectiveness/Benefits

Cost effectiveness cannot be calculated because SDG&E does not request funding for this Chapter during this Compliance Period.

Part 6. Supplemental Information/Documentation

Not applicable.

2026 SB 1371 Compliance Plan
Chapter 13: Distribution Above Ground Leak Surveys

Part 1. Evaluate the Current Practices Addressed in this Chapter

This Chapter addresses the following Best Practice:

Best Practice 19: Aboveground 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.

Historic Project Achievements:

In the 2018 Compliance Plan, SDG&E requested and was approved funding to provide M&R Technicians with instrumentation to begin performing and recording instrumented leak surveys. SDG&E purchased the required instruments to perform instrumented survey.

No incremental staffing was required to implement this measure. Training of existing M&R Technicians on the new instruments was completed at the end of 2020 along with using the purchased equipment to measure and document emissions found at regulator stations.

2022 was the first full year that the instrumented survey on M&R stations was implemented.

Emission Reductions and Cost Effectiveness

Historical Emission Reductions (MCF)

2018	2019	2020	2021	2022	2023	2024
N/A	N/A	57	139	215	0	0

Historical emission reductions were updated using the latest approved emission factors for Appendix 5 leaks.

Historical cost effectiveness was not evaluated because there was no authorized funding for the 2022 Compliance Period.

Part 2. Proposed New or Continuing Measure

SDG&E will continue performing instrumented above ground leak surveys.

Part 3. Abatement Estimates

Forecast of Emission Reductions (MCF)

2027	2028
82	82

The forecasted emission reductions during 2027 and 2028 represent the average achieved reductions between 2020 and 2024. The average from 2020 through 2024 was utilized because the emission reductions were highly variable between 2020 and 2024.

Part 4. Cost Estimates

SDG&E does not request funds for this Chapter in this Compliance Period.

Part 5. Cost Effectiveness/Benefits

Cost effectiveness cannot be calculated because SDG&E does not request funding for this Chapter during this Compliance Period.

Part 6. Supplemental Information/Documentation

Not applicable.

2026 SB 1371 Compliance Plan
Chapter 14: Aerial Monitoring

Part 1. Evaluate the Current Practice Addressed in this Chapter

This Chapter addresses the following Best Practice(s):

Best Practice 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 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.
Best Practice 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.
Best Practice 20a: Quantification
Utilities shall develop methodologies for improved quantification and geographic evaluation and tracking of leaks from the gas systems. Utilities 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 in the demonstration of actual emissions reductions.

Historic Project Achievements:

RD&D tests completed in 2024 in targeted areas of SDG&E territory indicated an aerial LiDAR gas detection program can successfully detect fugitive gas emissions from SDG&E's system and non-system (customer side). As required in Best Practice 16, the pilot program targeted the pipeline systems with known risks for leakage, specifically Vintage Plastic (Aldyl-A (PE) pipe installed before 1986) and Vintage Steel (Steel pipe installed before 1950). The limited pilot test run also indicated that the program economics is potentially cost-effective. SDG&E anticipates that as the program matures, costs will be lower and the cost-effectiveness will improve.

Part 2. Proposed New or Continuing Measure

SDG&E is proposing to move the project into implementation phase during 2028.

Derisking Vintage Aldyl-A pipe:

SDG&E currently operates Vintage Aldyl-A Plastic pipes. In a June 11, 2014 report titled Hazard Analysis and Mitigation Report,[3] the CPUC's staff outlined the risks associated with Vintage Aldyl-A pipes. The report states that "Vintage Aldyl-A pipes were identified as a major potential hazard affecting gas pipeline safety." The Aerial Monitoring program specifically targets the Vintage Aldyl-A pipes and Vintage Steel pipes in SDG&E's distribution pipelines. Therefore, the Aerial Monitoring program helps mitigate a hazard which the CPUC staff report classified as a "major potential hazard." As demonstrated, the Aerial Monitoring program provides benefits beyond methane reduction and customer safety—it also offers significant safety enhancements for SDG&E's distribution assets.

Part 3. Abatement Estimates

Distribution Mains & Services

Forecast of Emission Reductions (MCF)

Source of Emissions	2027*	2028
System Leaks	0	30,499
Non-System Leaks Abated	0	50,222

*Aerial Monitoring not funded in 2027

Emission reductions associated with this project may increase over time as advancements in LiDAR technology enhance detection capabilities. Additionally, future consideration of post-meter incomplete combustion could further contribute to these reductions.

As the program is implemented and more data is collected, these emission numbers and assumptions may be updated. These elements will be revised and updated in the next Compliance Plan to reflect actual implementation results.

Post-Meter Emissions

Drawing from SoCalGas' AMM implementation, SDG&E anticipates identifying approximately 263 post-meter leaks on customer facilities annually.

SDG&E also expects to detect around 126 emission sources each year resulting from incomplete combustion in customer equipment. The reduction of these emissions was not included in the customer emission reductions because it is too early to estimate the actual reductions from incomplete combustion detection.

[3] California Public Utilities Commission, *Hazard Analysis and Mitigation Report on Aldyl-A Polyethylene Gas Pipelines in California*, prepared by Steven Haine, P.E., with technical assistance from Gene Palermo, Palo Alto Plastics Pipe Consulting, June 11, 2014, at 29 (identifying Vintage Aldyl-A pipes as a "major potential hazard affecting gas pipeline safety").

Given the advancements of aerial technology – such as the introduction of Beyond Visual Line of Sight Drone – and the advancement of LiDAR, SDG&E expects the cost effectiveness to improve over time.

Part 4. Cost Estimates

This measure will be incorporated into SDG&E's routine Operations & Maintenance activities and will be included in SDG&E's TY 2028 GRC Application.

Total Revenue Requirement over Expected Life of Investment
$1.1 million
Average Annual Revenue Requirement
$0.6 million

Part 5. Cost Effectiveness/Benefits

The program offers significant environmental, affordability, and safety benefits. From an environmental perspective, it enables SDG&E to detect leaks more quickly, which helps reduce emissions from its gas distribution system. In terms of safety, some leaks are categorized as Code 1, indicating a higher risk. By identifying and repairing these leaks sooner, the program improves the overall safety of the system. It also detects and resolves leaks on the customer side, further enhancing safety for end users. Regarding affordability, when customer-related emissions are included, the total value of gas abated—both from the system and customer sources—combined with the avoided Cap & Invest and social costs, exceeds the overall cost of the program. In other words, the financial benefits of the program outweigh its costs, delivering affordability advantages for customers.

System emissions only calculation:

Forecast of Cost Effectiveness Calculations (2027-2028) ($/MCF)

Standard Cost Effectiveness	With Cap and Invest Cost Benefits	With Cap and Invest, and Social Cost of Methane Cost Benefits
$31	$29	$3

System + Confirmed Non-system emissions calculation:

Forecast of Cost Effectiveness Calculations (2027-2028) ($/MCF)

Standard Cost Effectiveness	With Cap and Invest Cost Benefits	With Cap and Invest, and Social Cost of Methane Cost Benefits
$8	$7	-$19

Part 6. Supplemental Information/Documentation

Not applicable.

Resolution G-3606 did not authorize funding for SDG&E's NGLAP research program during 2025-2027 and advised that SDG&E could move its NGLAP RD&D projects into its broader RD&D portfolio within the TY 2028 GRC. However, as SDG&E explained in its comments to the CPUC, this is not possible because a broader gas RD&D program does not exist at SDG&E. As a result of Resolution G-3606, the NGLAP RD&D program at SDG&E is currently discontinued.