

Company: Southern California Gas Company (U 904 G)  
Proceeding: 2024 General Rate Case  
Application: A.22-05-\_\_\_\_  
Exhibit: SCG-05

**PREPARED DIRECT TESTIMONY OF  
WALLACE RAWLS  
(GAS SYSTEM STAFF & TECHNOLOGY)**

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**



**May 2022**

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## SUMMARY

<b>GAS SYSTEM STAFF &amp; TECHNOLOGY (In 2021 \$)</b>			
	<b>2021 Adjusted-Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
Total Non-Shared Services	10,057	13,758	3,701
Total Shared Services (Incurred)	5,600	9,858	4,258
<b>Total O&amp;M</b>	<b>15,657</b>	<b>23,616</b>	<b>7,959</b>

Gas System Staff & Technology is responsible for a collection of key activities and programs that contribute to the ongoing vitality of Southern California Gas Company’s (SoCalGas or the Company) gas operations and help SoCalGas achieve an overarching objective to provide safe, clean, and reliable natural gas service at reasonable rates. More specifically, Gas System Staff & Technology works alongside Gas Transmission, Gas Distribution and Storage operations by creating and issuing policies and standards that establish and validate compliance with applicable laws, regulations, internal policies, and best practices.

My testimony includes both shared and non-shared costs. SoCalGas and San Diego Gas & Electric Company (SDG&E) take a shared-service approach to many natural gas pipeline operator responsibilities, especially in Gas System Staff & Technology. The shared-service approach benefits both utilities and their ratepayers by enabling the utilities to pool their collective knowledge, experience, engineering expertise and intellectual property. The activities discussed in my testimony, either directly or indirectly, address potential safety and security risks while fostering continuous improvement.

In preparing the test year (TY) 2024 General Rate Case (GRC) forecast for this testimony, I reviewed historical spending levels and developed an assessment of future needs. Because of the expected growth of the activities that I am sponsoring, most of my forecasts rely upon a base year (BY) 2021 methodology. Many activities have changed in recent years and the base year is representative of SoCalGas’s expectations for TY 2024. The base year methodology was chosen in most cases because it best represents the future expenses and because it captures the growth that my witness area is expecting. Where appropriate, certain incremental upward or downward adjustments have been identified and made to the forecasts. In total, SoCalGas requests the California Public Utilities Commission (CPUC or Commission) adopt a TY 2024 forecast of \$23,616,000 for Gas System Staff & Technology operations and maintenance (O&M)

expenses, which is composed of \$13,758,000 for non-shared service activities and \$9,858,000 for shared service activities.

### **Summary of Requests**

- Introducing Field Training Instructors will allow SoCalGas to maintain a skilled and qualified workforce, which is critical to maintaining safety at SoCalGas.
- Adding the High Pressure Project Record (HPPR) Closeout program to support the development of process flows, clarify procedures, enhance training modules and job aids, and develop metrics to track and monitor high pressure projects. This will support the Company's goals for employees, public, and pipeline safety. In addition, these costs allow SoCalGas to remain in compliance with 49 CFR Part 192 and Company Gas Standards.
- Developing the newly-created Enterprise Asset Management (EAM) organization which is integrated with SoCalGas's adoption of the International Standards Organization (ISO) 55000 standard as a guide and is a core component of SoCalGas's Safety Management Systems (SMS) program, aligned with the American Petroleum Institute (API) 1173 recommended practice for pipeline safety.
- Expanding the Damage Prevention Program to allow SoCalGas to mature its damage prevention capabilities and work to reduce the potential for excavation damages.

**PREPARED DIRECT TESTIMONY OF  
WALLACE RAWLS  
(GAS SYSTEM STAFF & TECHNOLOGY)**

**I. INTRODUCTION**

**A. Summary of Gas System Staff & Technology Costs and Activities**

My testimony supports TY 2024 forecasts for O&M costs for both non-shared and shared services for the forecast years 2022, 2023, and 2024, associated with the Gas System Staff & Technology area for SoCalGas. Table WR-1 summarizes my sponsored costs.

**TABLE WR-1  
Test Year 2024 Summary of Total Costs**

<b>GAS SYSTEM STAFF &amp; TECHNOLOGY (In 2021 \$)</b>	<b>2021 Adjusted-Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
Total Non-Shared Services	10,057	13,758	3,701
Total Shared Services (Incurred)	5,600	9,858	4,258
<b>Total O&amp;M</b>	<b>15,657</b>	<b>23,616</b>	<b>7,959</b>

SoCalGas’s philosophy is to provide safe, clean, and reliable delivery of natural gas to customers at reasonable rates. This commitment requires that SoCalGas continue to invest in its employees, pipeline assets, and support services to mitigate risks associated with the safety of the public and employees, as well as to promote system reliability and infrastructure integrity.

Specifically, the activities discussed herein:

- Maintain and enhance safety;
- Reflect local, state, and federal regulatory and legislative requirements;
- Maintain overall system integrity and reliability;
- Respond to customer growth and continuous improvement;
- Comply with franchise obligations; and
- Maintain and strengthen a qualified workforce.

The SoCalGas natural gas system encompasses transmission lines, underground storage fields, compressor stations, and distribution lines. The system is designed to receive natural gas from interstate pipelines and various California production sources from both offshore and onshore. The gas quantity is measured, odorized, analyzed for quality, and then allowed to flow

1 through the pipeline network. This pipeline-quality gas is delivered to the Company's  
2 distribution system, storage fields, and noncore customers. Collectively, these components  
3 enable SoCalGas to safely and reliably deliver natural gas from receipt point to burner tip to over  
4 21.8 million customers in an area of more than 24,000 square miles stretching from Visalia in the  
5 north to the Mexican border in the south, and as far east as the California/Nevada border.<sup>1</sup> To  
6 continue to provide safe, clean, and reliable service, SoCalGas must continue to make prudent  
7 investments in its infrastructure pursuant to applicable regulatory requirements.

8 This testimony discusses non-shared and shared expenses in support of O&M functions  
9 for Gas Operations Training & Development, Enterprise Asset Management, Damage  
10 Prevention, High Pressure Project Record (HPPR) Closeout program, Geographic Information  
11 System (GIS), Data Asset Integrity, Damage Prevention Program Management, Gas Systems  
12 Staff, Operator Qualification, and Pipeline Policy organizations. All costs in this testimony are  
13 shown in 2021 dollars, unless otherwise noted. This testimony also includes a request for  
14 recovery of incurred costs through 2021 in the Natural Gas Leak Abatement Program  
15 Memorandum Account (NGLAPMA). In addition to this testimony, please refer to my  
16 workpapers, Exhibit SCG-05-WP (O&M), for additional information about the activities  
17 described herein.

#### 18 **B. Support To and From Other Witnesses**

19 My testimony also references the testimony and workpapers of several other witnesses,  
20 either in support of their testimony or as referential support for mine.

- 21 • Gas Distribution - Gas System Staff & Technology manages centralized staff  
22 organizations, including Gas Operations Training & Development, Operator  
23 Qualification, Pipeline Policy, Gas Data Governance, and Damage Prevention,  
24 that support Gas Operations personnel. This testimony discusses the creation of  
25 the Gas Data Governance Council to support the goals of Enterprise Asset  
26 Management. The costs associated with the labor for the Gas Data Governance  
27 Council members in Gas Distribution are included in the Gas Distribution  
28 testimony and workpapers of Mr. Mario Aguirre (Ex. SCG-04 and Ex. SCG-04-  
29 WP 2GD009).

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<sup>1</sup> SoCalGas Company Profile, available at <https://www.socalgas.com/about-us/company-profile>.

- 1 • GIS Data Asset Integrity - Gas System Staff & Technology sponsors the non-  
2 refundable costs for GIS, which houses and maintains pipeline information on  
3 all distribution pipelines operating at or below 60 pounds per square inch (psi)  
4 and is at the core of all Distribution Integrity Maintenance Program (DIMP)  
5 activities. DIMP is discussed in the Gas Integrity Management Programs  
6 testimony of Ms. Amy Kitson and Mr. Travis Sera (Ex. SCG-09).
- 7 • Integrity Management Technology Systems – Gas System Staff &  
8 Technology sponsors the non-refundable costs for Integrity Management  
9 Technology Systems. The refundable portion of costs are discussed in the  
10 Gas Integrity Management Programs testimony of Ms. Amy Kitson and Mr.  
11 Travis Sera (Ex. SCG-09).
- 12 • Information Technology (IT) Capital Projects – Gas System Staff &  
13 Technology sponsors Gas Operations capital IT projects that include IT  
14 technology solutions to meet business demand and support Enterprise Asset  
15 Management, which are further discussed in the Information Technology  
16 testimony of Mr. William J. Exon (Ex. SCG-21, Chapter 2). These capital  
17 costs are for projects that will modernize and enhance the search ability,  
18 traceability, and digitalization of operational asset records.
- 19 • Gas Transmission Operations and Construction – Gas System Staff &  
20 Technology manages centralized staff organizations, including Gas  
21 Operations Training & Development, Operator Qualification, Pipeline Policy,  
22 Gas Data Governance, and Damage Prevention, that support Gas Operations  
23 personnel. This testimony discusses the creation of the Gas Data Governance  
24 Council to support the goals of Enterprise Asset Management. The costs  
25 associated with the labor in Gas Transmission Operations and Construction  
26 are included in the Gas Transmission Operations and Construction  
27 workpapers of Messrs. Rick Chiapa, Aaron Bell, and Steve Hruby (Ex. SCG-  
28 06-WP 2200-0931).
- 29 • Gas Storage Operations and Construction – Gas System Staff & Technology  
30 manages centralized staff organizations, including Gas Operations Training &  
31 Development, Operator Qualification, Pipeline Policy, Gas Data Governance,

1 and Damage Prevention, that support Gas Operations personnel. This  
2 testimony discusses the creation of the Gas Data Governance Council to  
3 support the goals of Enterprise Asset Management. The costs associated with  
4 the labor in Gas Storage Operations and Construction are included in the Gas  
5 Storage Operations and Construction workpapers of Messrs. Larry Bittleston  
6 and Steve Hruby (Ex. SCG-10-WP 2US001).

7 **C. Organization of Testimony**

8 My testimony is organized as follows:

- 9 • Introduction
- 10 • Risk Assessment Mitigation Phase (RAMP) Integration
- 11 • Sustainability and Safety Culture
- 12 • Non-Shared Costs
  - 13 ○ Gas Operations Training & Development
  - 14 ○ Enterprise Asset Management
  - 15 ○ Damage Prevention
  - 16 ○ High Pressure Project Record Closeout
  - 17 ○ GIS Data Asset Integrity
- 18 • Shared Costs
  - 19 ○ Damage Prevention Program Management
  - 20 ○ Gas Systems Staff
  - 21 ○ Operator Qualification
  - 22 ○ Pipeline Policy
- 23 • Natural Gas Leak Abatement Program Memorandum Account  
24 (NGLAPMA) Recovery
- 25 • Conclusion

26 **II. RISK ASSESSMENT MITIGATION PHASE (RAMP) INTEGRATION**

27 Certain costs supported in my testimony are driven by activities described in SoCalGas's  
28 and SDG&E's May 17, 2021, Risk Assessment Mitigation Phase (RAMP) Report.<sup>2</sup> The 2021

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<sup>2</sup> See Application (A.) 21-05-011/-014 (cons.) (RAMP Proceeding). Please refer to the RAMP to GRC Integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2) for more details regarding the 2021 RAMP Reports.

RAMP Reports presented an assessment of the key safety risks for SoCalGas and SDG&E and proposed plans for mitigating those risks. As discussed in the testimony of the RAMP to GRC Integration witnesses R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2 - RAMP to GRC Integration), the costs of risk mitigation projects and programs were translated from the 2021 RAMP Reports into the individual witness areas.

In the course of preparing the Gas System Staff & Technology GRC forecasts, SoCalGas continued to evaluate the scope, schedule, resource requirements, and synergies of RAMP-related projects and programs. Therefore, the final presentation of RAMP costs may differ from the ranges shown in the 2021 RAMP Reports.

Table WR-2 provides a summary of the RAMP-related costs supported in my testimony:

**TABLE WR-2  
Summary of RAMP O&M Costs (In 2021 \$)\***

<b>GAS SYSTEM STAFF &amp; TECHNOLOGY</b>			
<b>RAMP Risk Chapter</b>	<b>BY2021 Embedded Base Costs (000s)</b>	<b>TY2024 Estimated Total (000s)</b>	<b>TY2024 Estimated Incremental (000s)</b>
SCG-Risk-2 Excavation Damage (Dig-In) on the Gas System	2,317	3,963	1,646
Sub-total	2,317	3,963	1,646
<b>RAMP Cross-Functional Factor (CFF) Chapter</b>			
SCG-CFF-1 Asset and Records Management	421	1,046	625
Sub-total	421	1,046	625
<b>Total RAMP O&amp;M Costs</b>	<b>2,738</b>	<b>5,009</b>	<b>2,271</b>

\*CFF-related information, in accordance with the March 30, 2022, Assigned Commissioner Ruling in A.21-05-011/-014 (cons.), is provided in the RAMP to GRC Integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).



1  
2

**TABLE WR-4  
Summary of RAMP Risk and CFF Activities**

<b>RAMP ID</b>	<b>Title</b>	<b>Description</b>
SCG-Risk-2-C01 SCG-Risk-2-C02	Locate and Mark Training	This training mitigation consists of programs that provide personnel the knowledge to perform activities associated with locating and marking pipelines, such as (1) Locate and Mark training and (2) Locate and Mark Operator Qualification.
SCG-Risk-2-C03 SCG-Risk-2-C04	Locate and Mark Activities	This mitigation comprises three activities that are related to performing or supporting locate and mark: (1) Locate and Mark, (2) Pipeline Observation (stand-by), and (3) Staff Support.
SCG-Risk-2-C03 SCG-Risk-2-C08	Locate and Mark Operator Qualification	Locate and Mark Operator Qualification (OQ) training requires employees to field-demonstrate their knowledge and competency to perform locate and mark tasks.
SCG-Risk-2-C11 SCG-Risk-2-C12	Damage Prevention Analysts	The Damage Prevention Analyst Program works to reduce the number of third-party damages to gas facilities by identifying at-risk excavating contractors and educating them on proper Regional Notification Center notification and safe digging techniques.
SCG-Risk-2-C15-T1 SCG-Risk-2-C16-T1	Public Awareness - Affected Public	SoCalGas continues to promote awareness of the Underground Service Alert (811, “call-before-you-dig”) system to the affected public by reaching out to contractors and the general public so that pipelines are properly marked and located before excavation activities.
SCG-Risk-2-C15-T2 SCG-Risk-2-C16-T2	Public Awareness - Emergency Officials	SoCalGas has the responsibility to train its employees in emergency procedures as well as establishing a liaison with first responders.
SCG-Risk-2-C15-T3 SCG-Risk-2-C16-T3	Public Awareness - Local Public Officials	SoCalGas works directly with city officials involved in construction activities within their jurisdiction to raise public awareness in an effort to prevent unsafe excavation damages that could result in damage to underground facilities.
SCG-Risk-2-C15-T4 SCG-Risk-2-C16-T4	Public Awareness—Excavators	SoCalGas engages in excavator outreach so that contractors and excavators are informed of the potential safety issues that might arise when working around natural gas pipelines.
SCG-Risk-2-C19 SCG-Risk-2-C20	Damage Prevention Policy Activities	Gas System Staff & Technology supports a centralized staff organization, which includes the management of the Damage Prevention and Public Awareness Programs.

<b>RAMP ID</b>	<b>Title</b>	<b>Description</b>
SCG-Risk-2-C22 SCG-Risk-2-C23	Gold Shovel Standard Program	The Gold Shovel Standard is a program designed to strengthen professional contractors' commitment to safe excavation practices through incentives tied to obtaining contracts with the utility.
SCG-Risk-2-M1 SCG-Risk-2-M2	Automate Third Party Excavation Incident Reporting	Automating Third Party Excavation incident reporting into one system will centralize the reporting and data analysis.
SCG-Risk-2-C11 SCG-Risk-2-C12	Outreach for Latent 3rd Party Damages	This mitigation encompasses the efforts to identify and communicate with excavators who may have damaged a SoCalGas underground facility without complying with safe excavation laws and best practices.
SCF-CFF-1-02	Operational Compliance and Oversight	SoCalGas has established an Information Governance (IG) program team to continue executing on the records management element of Enterprise Asset Management (EAM) and to improve records management capabilities and oversight of day-to-day activities.
SCF-CFF-1-07	Establish an Enterprise Asset Management Operating Model	Establish a new EAM Operating Model, as part of continuous improvement.

1           These activities are discussed further in the cost sections below, as well as in my  
2 workpapers. For additional information and a roadmap, please refer to Appendix B, which  
3 contains a table identifying by workpaper the TY 2024 forecast dollars associated with activities  
4 in the 2021 RAMP Report that are discussed in this testimony.

5           The RAMP risk mitigation efforts are associated with specific actions, such as programs,  
6 projects, processes, and utilization of technology. For each of these mitigation efforts, an  
7 evaluation was made to determine the portion, if any, that was already performed as part of  
8 historical activities (*i.e.*, embedded base costs) and the portion, if any, that was incremental to  
9 base year activities. Furthermore, for the incremental activities, a review was completed to  
10 determine if any portion of incremental activity was part of the workgroup's base forecast  
11 methodology. The result is what SoCalGas considers to be a true representation of incremental  
12 increases over the base year.

13           My incremental request supports the ongoing management of these risks that could pose  
14 significant safety, reliability, and financial consequences.

1           **C.       Changes from RAMP Report**

2           As discussed in more detail in the RAMP to GRC Integration testimony of Messrs.  
3 Pearson and Flores (Ex. SCG-03/SDG&E-03, Chapter 2), in the RAMP Proceeding, the  
4 Commission’s Safety Policy Division (SPD) and intervenors provided feedback on the  
5 Companies’ 2021 RAMP Reports. Appendix B in Ex. SCG-03/SDG&E-03, Chapter 2 provides  
6 a complete list of the feedback and recommendations received and the Companies’ responses.

7           General changes to risk scores or Risk Spend Efficiency (RSE) values are primarily due  
8 to changes in the Multi-Attribute Value Framework (MAVF) and RSE methodology, as  
9 discussed in the RAMP to GRC Integration testimony. Other than these changes, the RAMP-  
10 related activities described in my GRC testimony are consistent with the activities presented in  
11 the 2021 RAMP Report.

12           **III.     SUSTAINABILITY AND SAFETY CULTURE**

13           Sustainability at SoCalGas focuses on continuous improvement, innovation, and  
14 partnerships to advance California’s climate objectives incorporating holistic and sustainable  
15 business practices and approaches. SoCalGas’s sustainability strategy, ASPIRE 2045, integrates  
16 five key focus areas across the Company’s operations to promote the public interest, and the  
17 wellbeing of utility customers, employees, and other stakeholders. Please refer to the  
18 Sustainability and Climate Change Policy testimony of Michelle Sim and Naim Jonathan Peress  
19 (Exhibit SCG-02) for a more detailed discussion of SoCalGas’s sustainability and climate  
20 policies.

21           Safety is foundational to SoCalGas and SoCalGas’s sustainability strategy. As the  
22 nation’s largest gas distribution utility, the safety of SoCalGas’s customers, employees,  
23 contractors, system, and the communities served has been – and will remain – a fundamental  
24 value for the Company and is interwoven in everything SoCalGas does. This safety-first culture  
25 is embedded in every aspect of SoCalGas’s business. The tradition of providing safe and reliable  
26 service spans 150 years of the Company’s history and is summarized in SoCalGas’s Leadership  
27 Commitment statement, which is endorsed by the entire senior management team:

28                     *SoCalGas leadership is fully committed to safety as a core value.*  
29                     *SoCalGas’s Executive Leadership is responsible for overseeing reported*  
30                     *safety concerns and promoting a strong, positive safety culture and an*  
31                     *environment of trust that includes empowering employees to identify risks*  
32                     *and to “Stop the Job.”*

1 SoCalGas’s approach to safety is one of continuous learning and improvement where all  
2 employees and contractors are encouraged and expected to engage in areas of opportunity for  
3 learning and promote open dialogue where learning can take place. To learn about SoCalGas’s  
4 overall safety approach please see the Safety & Risk Management System testimony of Neena  
5 Master (Exhibit SCG-27).

6 The activities described below and, in this testimony, advance the state’s climate goals  
7 and align with SoCalGas’s sustainability priorities. In addition, they support SoCalGas’s safety  
8 culture goals.

9 Damage Prevention: SoCalGas continues to conduct damage prevention programs that  
10 address the nine damage prevention elements found within the PIPES Act, Title 49 U.S.C.  
11 (United States Code) §60134(b). Reduction of damages to SoCalGas’s infrastructure supports  
12 public safety, system integrity, and emission reductions. Damages resulting from excavation  
13 activity are a great threat to SoCalGas’s pipeline infrastructure, with potential for catastrophic  
14 consequences to public safety. Safety is the first priority of the Damage Prevention Programs.  
15 The reduction of gas infrastructure damages has a secondary sustainability benefit of reducing  
16 emissions released into the atmosphere. This activity thus protects the climate, improves air  
17 quality in communities, and promotes world-class safety.

18 Training: Training programs have historically focused primarily on the U.S. Department  
19 of Transportation Pipeline and Hazardous Materials Safety Administration’s (PHMSA) safety  
20 regulations. Safety is a core value at SoCalGas and is embedded in its operations – from  
21 uniquely curated training programs to the maintenance of policies and procedures, and to  
22 providing safe and reliable service to SoCalGas’s customers. Per SoCalGas’s Safety  
23 Management System (SMS), “competence, awareness and training” are part of the Company’s  
24 seven core Safety Values and this activity promotes world-class safety.

25 Operator Qualification: Safety is fundamental to employee training and qualification.  
26 Maintaining a skilled, qualified, and dedicated workforce is critical to SoCalGas’s safety  
27 success. It is through the efforts of the Operator Qualification department that SoCalGas can  
28 continue to deliver safe, clean, and reliable service to its customers, maintaining the integrity of  
29 its pipeline infrastructure and achieving world-class safety.

30 Pipeline Policy: The Pipeline Policy department develops and maintains policies required  
31 for gas operations, maintenance, and emergency response related to leakage detection,

1 identification, mitigation, and pipeline patrol, including Gas Standards affecting field operations  
 2 in the areas of leakage clerical, pipeline patrol, leak detection, leak identification and coding,  
 3 leakage mitigation, and leakage policy. These standards and policies inform field personnel how  
 4 to operate and respond to emergencies safely, a key component of SoCalGas’s and SDG&E’s  
 5 safety culture. This activity protects the climate and promotes world-class safety.

6 Enterprise Asset Management (EAM): EAM supports safety by generating foundational  
 7 data used for risk analytics to support risk-based decision making, as well accurate operational  
 8 information to support field personnel. This foundational data can also be leveraged to support  
 9 environmental stewardship by using predictive analytics to identify methane emitting leaks  
 10 before they happen, and to quantify the environmental risks associated with certain assets. This  
 11 activity protects the climate, improves air quality in communities, and promotes world-class  
 12 safety.

13 **IV. NON-SHARED COSTS**

14 “Non-shared services” are activities that are performed by a utility solely for its own  
 15 benefit. Corporate Center provides certain services to the utilities and to other subsidiaries. For  
 16 purposes of this GRC, SoCalGas treats costs for services received from Corporate Center as non-  
 17 shared services costs, consistent with any other outside vendor costs incurred by the utility.

18 Table WR-5 summarizes the total non-shared O&M forecasts for the listed cost categories.

19 **TABLE WR-5**  
 20 **Non-Shared O&M Summary of Costs**

<b>GAS SYSTEM STAFF &amp; TECHNOLOGY (In 2021 \$)</b>			
<b>Categories of Management</b>	<b>2021 Adjusted-Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
A. Gas Operations Training & Development	5,509	6,479	970
B. Enterprise Asset Management	1,777	4,909	3,132
C. Damage Prevention	1,612	675	-937
D. High Pressure Project Record Closeout	669	1,088	419
E. GIS Data Asset Integrity	490	607	117
<b>Total Non-Shared Services</b>	<b>10,057</b>	<b>13,758</b>	<b>3,701</b>

**A. Gas Operations Training & Development**

Included in this section of the testimony are activities and associated O&M expenses to address the core Gas Operations Training and Development duties in the Operations Training and Development, Transmission & Storage Training, Training Design and Support, and Welding Training departments that are non-shared. These activities and expenses are summarized in Table WR-6 below.

**TABLE WR-6  
Gas Operations Training & Development**

<b>A. Gas Operations Training &amp; Development</b>	<b>2021 Adjusted-Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
1. Gas Operations Training & Development	1,669	2,593	924
2. Training - Transmission/Storage/HP/M&R	1,251	1,356	105
3. Training - Office	690	690	0
4. Training - Welding	1,899	1,840	-59
<b>Total</b>	<b>5,509</b>	<b>6,479</b>	<b>970</b>

**1. Description of Costs and Activities**

The activities completed within this workgroup are categorized as Gas Operations Training and Development. Gas Operations Training and Development create highly qualified employees through the delivery of effective/high-quality learning experiences to operations employees throughout SoCalGas. The continued safe construction, maintenance, integrity management, replacements, and expansion of SoCalGas’s pipeline system must be executed by approximately 3,000 Gas Transmission, Gas Distribution, and Storage employees located throughout SoCalGas’s large and diverse service territory. Gas Operations Training and Development communicates and reinforces SoCalGas’s safety culture and strives to instill a passion for success through interactions, such as regular dialogue, periodic dialogue sessions with frontline supervisors and employees, participation in employee seminars, ongoing refresher training, and one-on-one employee meetings. This request advances SoCalGas’s ability to train and maintain a qualified, and competent workforce, while also contributing to proposed

1 mitigations in RAMP chapters SCG-Risk-2 Excavation Damage (Dig-In) on the Gas System and  
2 SCG-CFF-1 Asset and Records Management.<sup>4</sup>

3 Gas Operations Training and Development also consists of Field Technical Skills  
4 Training. The Operations Field Technical Skills Training team provides Gas Transmission, Gas  
5 Distribution, and Storage with the training and services described below. These trainings and  
6 services are necessary for the Company to follow applicable laws, regulations, and standards, as  
7 well as to help maintain the safety of the workforce and the public.

- 8 • Centralized and /or decentralized technical skills training is provided to  
9 employees who are new to their jobs, require refresher training, have been  
10 promoted to positions requiring additional technical skills, receive new  
11 equipment or technology, or are being introduced to changes in regulations.
- 12 • Compliance-driven qualifications and certifications are conducted for  
13 employees who perform such activities as operating cranes, welding on steel  
14 pipes, or conducting plastic fusion joints.
- 15 • Instructional design services include updating existing training modules and  
16 developing new modules, as needed, in response to changes in Company gas  
17 standards, regulations, technology, or equipment. The Field Technical Skills  
18 Training team also explores new innovations for training, such as online  
19 training and multi-media training aids.
- 20 • Field Training Instructors conduct on-the-job training as an integral part of an  
21 employee's training experience.

22 These costs support the Company's goals of safety and reliability of SoCalGas's system  
23 by providing the proper level of operations leadership, operations support, and field technical  
24 skills training.

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<sup>4</sup> RAMP SCG-CFF-1, Asset and Records Management (May 17, 2021), *available at*  
[https://www.socalgas.com/sites/default/files/SCG-CFF-1\\_RAMP-Cross-Functional-Factor-Asset\\_Management\\_64.pdf](https://www.socalgas.com/sites/default/files/SCG-CFF-1_RAMP-Cross-Functional-Factor-Asset_Management_64.pdf).

**a. RAMP Activities**

RAMP-related costs for Gas Operations Training and Development include the costs for the following activities: (1) Locate and Mark Training and (2) Company Excavator Training. As described in Table WR-4 above, Locate and Mark Training consists of programs that provide personnel the knowledge to perform activities associated with locating and marking pipelines, such as (1) Locate and Mark training and (2) Locate and Mark Operator Qualification. Properly training and qualifying personnel to perform their job gives them the ability to follow applicable policies and procedures in a safe manner, which helps protect employees, contractors, and the public from the risk of a damaged pipeline.

Company Excavator Training is important so that contractors and excavators are informed of the potential safety issues that might arise when working around natural gas pipelines. Hitting one of these pipelines while conducting routine work such as digging, planting, or demolition work can cause serious injury, property damage, and loss of utility service. The benefits of calling 811 USA are communicated through awareness campaigns, such as, in-person excavator outreach events, targeted mailings, and the Big Shovel display. Excavator outreach is performed to be compliant with Title 49 CFR, section 192.616(d) subsections 1 through 5.

Table WR-7 below provides the RAMP activities, their respective cost forecasts, and the RSEs for this workpaper. For additional details on these RAMP activities, please refer to my workpapers SCG-05-WP 2SI001.

**TABLE WR-7  
RAMP Activity O&M Forecasts by Workpaper  
In 2021 Dollars (\$000)**

<b>Workpaper</b>	<b>RAMP ID</b>	<b>Description</b>	<b>BY2021 Embedded Base Costs (000s)</b>	<b>TY2024 Estimated Total (000s)</b>	<b>TY2024 Estimated Incremental (000s)</b>	<b>GRC RSE*</b>
2SI001.000	SCG-Risk-2 - C01	Locate and Mark Training - (MP)	90	90	0	0
2SI001.000	SCG-Risk-2 - C02	Locate and Mark Training - (HP)	21	21	0	0

2SI001.000	SCG-Risk-2 - C27	Company Excavator Training - (MP)	82	82	0	0
2SI001.000	SCG-Risk-2 - C28	Company Excavator Training (HP)	19	19	0	0
<b>Total</b>			<b>212</b>	<b>212</b>	<b>0</b>	<b>0</b>

\*An RSE was not calculated for activities with zero listed for RSE.

## 2. Forecast Method

The forecast method developed for this cost category is base year 2021. In general, Gas Operations Training and Development activity increases as levels of work and workforce attrition increase, as new programs, processes, and technologies are implemented, and as regulatory or compliance requirements change. The number of employees trained in 2020 and 2021, as well as a forecast for employees to be trained in 2022, is shown below in Table WR-8, for some of the key job classifications.

**TABLE WR-8**  
**Number of Employees Trained by Year and Key Classification**

<b>Job Classification</b>	<b>2020</b>	<b>2021</b>	<b>2022 (Forecast)</b>
Construction Technician	99	186	358
Energy Technician - Distribution	74	94	150
Lead Construction Technician	28	73	161
Oxy-Welder	45	97	185

As the data above shows, the training needs for these positions have increased by 100 – 500% over a period of about 2.5 years. Other forecasting methodologies do not accommodate for the significant increase in training needs SoCalGas is anticipating.

Additionally, the need for welders at the Company has more than tripled over the last few years, as shown by the data in Table WR-8 above. The training department needs to grow to accommodate the increased demand for training more welders to keep up with Company work requirements. New, more stringent welding qualifications introduced recently have nearly doubled the workload for each training Instructor. SoCalGas is taking appropriate measures to maintain its highly-skilled workforce, recognizing that safety and system reliability cannot be

1 compromised during times of employee transition. As new and less experienced employees step  
2 in to replace highly-skilled employees, SoCalGas is conscientiously training these employees.  
3 This forecast method is most appropriate because this activity has changed in recent years, as  
4 discussed above, and the base year is representative of SoCalGas's expectations for TY 2024.

5 Incremental adjustments were made to the forecast to accommodate anticipated growth  
6 between the base year and test year, as described in the cost drivers section below.

### 7 **3. Cost Drivers**

8 The Gas Operations Training and Development section is driven by costs in three major  
9 areas: operations leadership, operations support, and personnel training. All of which is  
10 increasingly influenced by, and evolving with multiple drivers, such as:

- 11 • The need to maintain a trained and qualified workforce. Turnover in  
12 workforce presents issues of knowledge transfer, skills development, and  
13 overall proficiency of the replacement workforce. This drives costs related to  
14 Training and Technical Support. SoCalGas is taking proactive action to  
15 address employee training with additional instructors and subject matter  
16 experts, modernization of its audio-visual aids, and improvements to its  
17 training facilities.
- 18 • The need to maintain data integrity and leverage new information  
19 depositories. This will drive costs associated with reports and tools that will  
20 gather, consolidate, and summarize newly available data to develop  
21 compliance reports and monitor the effectiveness of operations and identify  
22 future business improvements.
- 23 • Introduction of new construction and maintenance methods into office and  
24 field functions. This drives the costs associated with personnel needed to  
25 revise Gas Standards, training materials, conduct refresher training, provide  
26 technical support, and conduct assessments and enhancements of business  
27 process.
- 28 • The creation of new position types for training instructor positions. The  
29 training department has had difficulty attracting and retaining instructors. To  
30 solve this issue and promote proper knowledge transfer among employees, the  
31 training department is working to create new training instructor positions,

1 leveled appropriately to encourage experienced field employees to consider  
2 becoming a training instructor. This will enhance curriculum alignment,  
3 knowledge transfer, and employee retention. Furthermore, this will allow for  
4 a more resilient training organization in the future.

- 5 • Changes in Operator Qualification (OQ) requirements. The OQ department  
6 regularly makes changes to the number of and requirements for the  
7 qualification tasks as a result of process improvements and changing  
8 regulations. For instance, in late 2020, the OQ department added new tasks  
9 for High Priority High Pressure Standby and Spotting for Damage Prevention.  
10 These changes require modifications to the training programs and curriculum  
11 so students in training are well-prepared to become and remain Operator  
12 Qualified.

13 Safety is rooted in all phases of Gas Operations Training and Development. Maintaining  
14 a skilled, qualified, and dedicated workforce is critical to SoCalGas's success. Turnover in  
15 workforce is due primarily to retirements and employee movement as a result of promotions and  
16 transfers. This presents issues of knowledge transfer, skills development, and overall proficiency  
17 of the replacement workforce. Gas Operations is taking appropriate measures to maintain this  
18 highly skilled workforce, recognizing that safety and system reliability cannot be compromised  
19 during a time of employee transition.

20 In addition, SoCalGas is bringing in additional instructors and subject matter experts to  
21 help prevent this issue. Labor adjustments were made to accommodate for replacing training  
22 instructors at the primary training facility, in addition to new instructors at a new secondary  
23 training facility that caters to employees that live far away from the primary facility. Additional  
24 labor adjustments were also made for the addition of new instructors that specialize in on-the-job  
25 training to promote learning retention and additional instructional designers, which are necessary  
26 to keep up with the development of eLearning to allow for remote training of employees. Non-  
27 labor adjustments were made for the non-labor expenses associated with the hiring of additional  
28 employees, including rental vehicles, fuel for rental vehicles, employee development, training,  
29 office equipment, computers, and other associated costs. Incremental vehicles and electric carts  
30 were included in the testimony of Mr. Michael Franco (Ex. SCG-18) for these incremental

1 employees. Due to the long lead time needed for fleet vehicle purchases, rental vehicle costs  
2 were also included as interim vehicles until the fleet vehicles are delivered and ready for use.

3 In addition, to address this issue, SoCalGas is introducing Field Training Instructors, also  
4 known as on-the-job training (OJT). OJT is an integrated and coordinated activity that is  
5 strategically placed within the blend of media and training methods that make up the trainees'  
6 experience. It is a complement to classroom, hands-on, and eLearning. OJT "closes the loop"  
7 and aids in learning retention. There are numerous benefits of having field instructors, including:

- 8 • OJT allows employees to experience training within the context of the actual  
9 work activities of the job. Because OJT takes place in the work environment,  
10 it also includes aspects of SoCalGas's cultural, climate, and normative  
11 behavior.
- 12 • OJT provides individualized attention and mentoring. When a new employee  
13 begins work, more time and attention is required to coach and guide the  
14 employee's development of skills with each task. As competency improves,  
15 the intensity of supervision declines as the trainee masters the task and can  
16 perform it with limited guidance.
- 17 • OJT allows for different learning styles. Some employees learn by doing,  
18 some learn through listening, while still others learn visually, and each at a  
19 different rate. On-the-job training offers individualized instruction that  
20 accommodates different learning styles and learning rates.
- 21 • OJT offers flexibility in conducting training. External training, simulations,  
22 and even online training can supplement formal training.
- 23 • OJT can readily adapt to change. SoCalGas regularly makes improvements  
24 and upgrades equipment, rendering older equipment models obsolete.  
25 Likewise, field processes change depending on many operational factors.  
26 With OJT, training can be readily redesigned to reflect specific equipment, as  
27 well as changes and activities unique to operational processes.
- 28 • OJT simulations provide a safe environment to practice work methods. One  
29 of the necessary features of any training is that it allows employees to practice  
30 in a climate of safety. Employees under the watchful eye of a field instructor  
31 can be trained with equipment, operations, and environments not engaged in

the actual production or delivery of services. Once a level of competency is achieved with various job tasks, new employees gradually can be introduced to functions associated with actual operation.

The Gas Operation Training field instructor cost category includes:

1. Centralized training (classroom instructors, supervisors, and a training manager located at SoCalGas’s Pico Rivera skills training center);
2. Field instructors who accompany new gas operations technicians immediately following their formal training;
3. Administrative associates; and
4. Non-labor costs, such as cell phones, office supplies, fuel for rental vehicles, rental vehicles, and other miscellaneous expenses.

As Gas Operations Training is designed/developed, each training objective is analyzed to determine the appropriate instructional setting (e.g., classroom, hands-on, eLearning, OJT) and sequencing/segmenting. It is then integrated within the curriculum and documented on a “course map.” Field instructors conduct field training according to the course map. Therefore, OJT is a planned and formal component to the overall training course.

**B. Enterprise Asset Management**

Included in this section of the testimony are activities and associated O&M expenses for the Enterprise Asset Management organization. These activities and expenses are summarized in Table WR-9 below.

**TABLE WR-9  
Enterprise Asset Management**

<b>B. Enterprise Asset Management</b>	<b>2021 Adjusted- Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
1. Records Management	168	193	25
2. Gas Operations Technology	102	972	870
3. Enterprise Asset Management	182	807	625
4. Integrity Management Technology Systems	167	167	0
5. IM Program Controls & Operations Data Strategy	1,158	2,770	1,612
<b>Total</b>	<b>1,777</b>	<b>4,909</b>	<b>3,132</b>

1                   **1.       Description of Costs and Activities**

2                   The Enterprise Asset Management group is the lead for enhancing operational data  
3 management. SoCalGas has been in business for over 150 years, which has resulted in multiple  
4 data formats, data storage repositories, and disparate technology solutions that can make data  
5 formatting and importing challenging. The Enterprise Asset Management organization serves as  
6 a centralized data management organization to address data system architecture, improves data  
7 collection methods, and creates solutions to leverage existing data from disparate systems by  
8 reformatting it. This organization also addresses data governance and data quality opportunities,  
9 to improve the quality and accessibility of operational data to support data driven analytics  
10 capabilities.

11                   **Enterprise Asset Management (EAM):** The activities associated with this cost center  
12 include the labor and expenses associated with the implementation of an EAM program, which  
13 will align asset data to build capabilities through advanced technologies and analytics to increase  
14 the knowledge and accountability of asset owners through a more robust and comprehensive  
15 operating model. EAM improves safety, integrity, transparency, and availability of pipeline  
16 asset records by integrating asset data with equipment safety and processing information as well  
17 as validating that appropriate documentation is used. All costs in this cost center are part of  
18 RAMP and the activity is discussed in SCG-CFF-1 Asset and Records Management.<sup>5</sup> Expenses  
19 include labor and non-labor for a team of five, including a program manager, two project  
20 managers, a data scientist, and a technical advisor. In addition to internal labor costs, non-labor  
21 forecasts include contract labor to support the implementation and training associated with EAM.  
22 Activities performed by this team include several new initiatives, including development of a  
23 data lake platform for asset records, implementation of asset investment planning software,  
24 development of a technology roadmap that creates controls and integration for improving  
25 operational records by creating a comprehensive risk-informed approach to integrate pipeline  
26 assets and work management, and developing an operating model that builds a risk-based value  
27 framework to operationalize a risk-informed operations strategy. The information provided by  
28 this group, along with its related activities, helps support the operation and engineering groups to

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<sup>5</sup> RAMP SCG-CFF-1, available at [https://www.socalgas.com/sites/default/files/SCG-CFF-1\\_RAMP-Cross-Functional-Factor-Asset\\_Management\\_64.pdf](https://www.socalgas.com/sites/default/files/SCG-CFF-1_RAMP-Cross-Functional-Factor-Asset_Management_64.pdf).

1 assess probability and consequence of asset failure. This information supports the mitigation of  
2 safety and reliability risks.

3 As a proposed mitigation plan in SoCalGas's 2021 RAMP Report,<sup>6</sup> the specific EAM  
4 objectives are to:

- 5 1. Enhance the completeness, accuracy, and accessibility of operational records and  
6 associated records;
- 7 2. Enhance pipeline data analytics to support continuous improvement;
- 8 3. Replace paper records and manual data entry with electronic forms and foster  
9 increased automation;
- 10 4. Provide secure anytime, anywhere access to integrated critical pipeline  
11 information associated with data capture, reporting, and analysis tools;
- 12 5. Enhance compliance through work standardization and documentation; and
- 13 6. Enhance existing records and data governance practices by embedding these  
14 practices and controls into the EAM operating model, systems, and applications.

15 SoCalGas's EAM initiative will provide asset health indices and additional analytics to  
16 provide asset information. This includes implementing a data lake to compile source data to  
17 enhance SoCalGas's risk-based decision making. This foundational data lake will serve as the  
18 repository to capture data from the following asset sources: Geographical Information, Asset  
19 Registers, Materials Management, Financials, Leaks/Incident Reports, Project Management,  
20 Work Orders, and External Sources. The data lake will aggregate the data by asset class to  
21 identify risks and, ultimately, allocate resources to mitigate the likelihood, frequency, and/or  
22 impact from asset failure risks. The data lake will allow SoCalGas to have one source for data  
23 gathered through all systems and processes to assess asset health. This approach is consistent  
24 with the statements made by the Commission in recognizing the value of adopting ISO 55000:

25 We reviewed the forecast for Asset Management and find it to be  
26 reasonable and supported by the evidence. The benefits of applying ISO  
27 55000 standards include: (a) greater optimal balance of asset cost, asset  
28 risk, and asset performance; (b) greater internal consistency; and (c) helps

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<sup>6</sup> RAMP SCG-CFF-1, available at [https://www.socalgas.com/sites/default/files/SCG-CFF-1\\_RAMP-Cross-Functional-Factor-Asset\\_Management\\_64.pdf](https://www.socalgas.com/sites/default/files/SCG-CFF-1_RAMP-Cross-Functional-Factor-Asset_Management_64.pdf).

1 ensure that employees at all levels understand their role in supporting the  
2 goals of the organization.<sup>7</sup>

3 The foundational data lake will also highlight compliance needs, integrate spatial and  
4 non-spatial data, enhance real-time analytics, and create a platform for enterprise-wide  
5 collaboration on safety and reliability issues. Thus, the foundational data lake will allow for one  
6 source of asset data to address asset condition and criticality and contribute to the reduction in  
7 the likelihood of failure and consequence of failure. The data lake will also support innovative  
8 solutions when evaluating failing assets in terms of safety, reliability, and financial impact.

9 In addition, an Asset Investment Planning (AIP) tool and decision-making processes will  
10 be implemented to evaluate risk and optimize investments at SoCalGas. The assessments  
11 provided by the AIP tool will provide risk quantification criteria to enhance risk-based decision-  
12 making capabilities. This will help mitigate potential asset failures and allow SoCalGas to  
13 respond to new business challenges and opportunities. The output from the AIP mitigation will  
14 assist in informing SoCalGas on how to receive the maximum benefit for dollars invested. This  
15 tool will enable SoCalGas to create asset lifecycle plans to meet risk-based EAM objectives,  
16 enhance SoCalGas's ability to use a risk-based approach to managing assets, and assist in  
17 documenting asset investment decision-making criteria.

18 SoCalGas will expand the existing EAM organization and implement a process to  
19 evaluate projects and programs across SoCalGas, formalize governance of asset management,  
20 and support the requirements of ISO 55000.

21 The future EAM operating model will be necessary in order to:

- 22 • Further engage SoCalGas leadership in the implementation of EAM;
- 23 • Develop the strategic EAM plan, including asset health indices and asset life  
24 cycle management in collaboration with the Gas Integrity Management  
25 Programs and Enterprise Risk Management (ERM);
- 26 • Develop algorithms for recommended maintenance intervals based upon risk  
27 management, health indices, and life cycle management;
- 28 • Coordinate the development and implementation of new systems (*e.g.*, Data  
29 Lake, Asset Investment Planning, Records Management);

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<sup>7</sup> D.19-09-051 at 265.

- 1 • Create processes that improve the accuracy and rigor of source information  
2 and related data;
- 3 • Develop and implement a change management strategy including  
4 communications and training regarding new processes and structures;
- 5 • Coordinate with the IMPs and ERM organizations to support the further  
6 implementation of risk-based decision-making including alignment of risk  
7 models to support day-to-day management and regulatory processes; and
- 8 • Establish processes for capturing lessons learned, accountability reporting,  
9 and continuous improvement.

10 To accomplish these objectives, the expanded EAM organization will provide policy  
11 direction, program management, coordination management, and change management required to  
12 implement EAM.

13 **Gas Operations Technology:** The activities associated with this cost center include the  
14 labor and expenses associated with building a technology roadmap for Gas Operations  
15 Technologies in partnership with the Gas System Staff & Technology and Information  
16 Technology organizations. This organization functions as a liaison between the Gas  
17 Transmission Operations and Construction, Gas Distribution, Gas Storage Operations and  
18 Construction, Information Technology, Safety & Risk Management System, Gas Integrity  
19 Management Programs, and Enterprise Risk organizations to support prioritization of technology  
20 enhancements. These expenses include one manager and contractors brought in to perform  
21 assessments for opportunities in the technology portfolio to improve efficiency, performance,  
22 safety, and reliability through technology implementations. Gas Operations Technology  
23 mitigates safety risks identified in the 2021 RAMP Report: Asset and Records Management  
24 (SCG-CFF-1). Accordingly, this cost center, in its entirety, aligns with a RAMP activity. This  
25 cost supports the Company goals of using data-driven decisions to continuously improve safety  
26 and reliability.

27 The work of Gas Operations Technology also supports the Gas Operations IT capital  
28 project portfolio, which includes the projects below. Capital costs for the forecast years 2022,  
29 2023, and 2024 for the projects below are sponsored by Mr. Exxon (Ex. SCG-21, Chapter 2). The  
30 purpose of this section of my testimony is to describe the business rationale for these projects.  
31 Refer to Mr. Exxon's workpapers (Ex. SCG-21, Chapter 2) for the basis of the costs.

- 1           **1. 2022-2023 Work Management & Safety and Regulatory Enhancements:** The  
2           Work Management project will enhance the field reporting of data associated with  
3           compliance work and improve cost tracking capabilities. The Control Center  
4           Modernization (CCM) Project will modernize Gas Operations Control by  
5           integrating Transmission & Storage gas control functionality with the Distribution  
6           pipeline system with enhanced remote monitoring, control, and analytic  
7           capabilities across Distribution assets in SAP.
- 8           **2. Asset Investment Planning & Management (AIPM):** Implementation of a  
9           software tool to incorporate risk into asset investment planning. This project  
10          includes purchase of an asset investment planning tool, development of a value  
11          framework, data governance for asset attributes that support risk modeling, and  
12          integrations with source systems.
- 13          **3. AVEVA & AutoCAD Enhancements - Phase 2:** The project will continue the  
14          implementation of Gas CAD application solutions to support Operations, as well  
15          as demonstrate safety and compliance with Federal and State regulations. The  
16          project focuses on software development, configuration, and data model  
17          enhancements of the existing Gas CAD systems. These Gas CAD application  
18          solutions will support system wide users to address compliance, safety, and  
19          emergency response requirements with the additional goal of improvements for  
20          data maintenance and availability for critical decision making.
- 21          **4. CLICK Mod Phase II Distribution Gas Ops Field Crew:** This is Phase 2 of a  
22          two-phase project. This phase will focus primarily on migrating the remaining  
23          Gas Distribution users from Click Mobile Classic and Schedule version 8.1 to  
24          Click Mobile Touch and Schedule version 8.3 as Silverlight software, which is  
25          used by Click Schedule. Upgrading to Click Mobile Touch will also provide  
26          mobile users with improved forms in an application that can run on both  
27          Windows and iOS devices.
- 28          **5. Electronic Leak Survey:** The Electronic Leak Survey project (ELS) will replace  
29          existing leak survey process involving paper maps with a GIS web-based portal  
30          application that is used to electronically prepare, review, audit, and store leak  
31          survey map completions. This is a mobile application used by operator qualified

1 technicians to report leak survey completions and to document conditions found  
2 that require follow-up such as leaks or CGIs (“can’t get in”) when a gate is  
3 locked. It is an integrated solution with GIS, SAP, and Click that leverages  
4 SoCalGas’s existing enterprise systems and business workflows to auto-create  
5 and generate follow-up work orders.

- 6 **6. Electronic Leak Survey - Pipeline Patrol:** Pipeline patrols leveraging ELS  
7 technology eliminates manual preparation and management, streamlines the  
8 business processes creating efficiencies and improved business controls. This  
9 tool automates the pipeline patrol process in Distribution creating efficiency,  
10 flexibility in cross district assignment and routing, and better utilization of  
11 workforce since there is no dependency on paper maps.
- 12 **7. Electronic Leak Survey - Special Leak Survey/Abnormal Operating**  
13 **Condition (AOC):** Electronic Leak Survey – Special Leak survey streamlines  
14 processes across multiple workgroups by eliminating printing, manual  
15 completions, reviews, and mailing of paper-based leak survey maps. This tool  
16 reduces risks associated with wait times for leak survey maps during major events  
17 and improves business controls with traceable completions and follow-up work  
18 that is generated.
- 19 **8. Electronic Leak Survey - Transmission Survey/Patrol (P):** Using digital and  
20 mobile technology, this tool will automate the leak survey and Pipeline patrol  
21 processes in Transmission, increasing processing efficiency and the visibility of  
22 these safety critical activities. The Electronic Leak Survey project (ELS) will  
23 replace existing leak survey process involving paper maps with a mobile  
24 application on an iPad device that is used by operator qualified technicians to  
25 report leak survey completions and to document conditions found that require  
26 follow-up such as leaks or CGIs (“can’t get in”) when a gate is locked. This is an  
27 integrated solution with GIS that leverages existing business workflows to auto-  
28 create and generate follow-up work orders.
- 29 **9. High Pressure Project Record (HPPR) Closeout:** Implement technology to  
30 develop uniform methodology to perform HPPR Closeout across Construction,  
31 Distribution, Storage Above Ground Program Management Office (AG PMO),

1 Storage Well Lateral, and Transmission. This will help standardize the HPPR  
2 Closeout process.

3 **10. GIS, Portal and Mobility Enhancements:** The continuing work on the GIS  
4 Portal and Mobile tools is focused on increasing functionality to support  
5 compliance, safety, and timeliness of regulatory requests. This work includes  
6 software development, software upgrades, configuration, and data model  
7 enhancements specific to the Gas GIS Portal system. These Gas GIS application  
8 solutions will support system wide users to address compliance, safety, and  
9 emergency response requirements, as well as efficiency improvements for data  
10 maintenance.

11 **11. APPBASE: Application** platform for all AppBase applications including:  
12 Pipeline Data Management System (PDMS), MyProjects, Work Management  
13 System (WMS), Transmission Service Request (TSR), Pressure Reporting,  
14 Integration, and System Management (PRISM), Right of Way (ROW),  
15 Distribution Engineering Lifecycle Tracking Application (DELTA) and Lab  
16 Document Library.

17 **12. DELTA (Distribution Engineering Lifecycle Tracking Application)**  
18 **Integration:** System for initiating and processing request for Distribution  
19 Engineering and EGIS update to provide robust Management of Change solution  
20 to Distribution Engineering.

21 **13. Gas Materials QA/QC, Field Management & Traceability:** Materials  
22 Traceability and Tracking is a mandatory compliance requirement. SoCalGas is  
23 required to maintain traceable, verifiable, and complete records readily available  
24 for natural gas intrastate transmission line segments.

25 **14. MAXIMO 2023 – 2024:** This project focuses on enhancing and/or replacing the  
26 maintenance and inspection activity in Maximo for all pipeline, station, and  
27 storage field inspection and work activities, and includes leak survey, patrol,  
28 bridges & spans, cathodic protection (CP), meters, compressor stations, and wells.  
29 The project will focus on software development, configuration, data model, and  
30 mobile solutions. The solution will support system wide users, compliance,  
31 safety, and emergency response requirements.

- 1           **15. Maximo Enhancement 2022:** This project will incorporate mobile technology  
2 solutions for field data collection and workorder management. This system is the  
3 primary work management system for Transmission and Storage, and will enable  
4 field data capture, reducing labor intensive manual processes and improve record  
5 keeping.
- 6           **16. Measurement and Reliability (M&R) Compliance:** New Construction Planning  
7 & Design (CPD) order data and metrics will need to be added to M&R  
8 Compliance reports to enhance visibility into these orders to support routine audit  
9 and operational requests.
- 10          **17. Operator Qualification (OpQual) Process Automation:** Digitization of OpQual  
11 knowledge and performance testing. Enhancing the current system of record  
12 (SAP) to allow for content development, real-time results integration from testing  
13 to updated compliance records, and provide data analytics. Enhance work force  
14 management infrastructure (Click/Maximo) to integrate with Operator  
15 Qualification records (SAP).
- 16          **18. OSI PI GO Methane Abatement Monitoring:** Process Information (PI)  
17 application developed by OSIsoft, used to collect time-sequenced Gas Operation  
18 data and to generate Regulatory required compliance reports. Enhance the  
19 existing infrastructure to improve system reliability and integration with other  
20 enterprise platforms to support compliance with Federal and State regulatory  
21 requirements, pipeline safety, and customer satisfaction.
- 22          **19. PDMS System of Record on OpenText:** Pipeline Document Management  
23 System (PDMS) is the Enterprise Pipeline Document Management system for  
24 Pipeline Integrity, Transmission and Distribution Technical services. This  
25 application is currently based on a configurable Digital Content Management  
26 solution (DCM) from Eccentex/Appbase. This project will move PDMS from  
27 Eccentex to the OpenText platform. Improved functionality includes combined  
28 business process task-based workflow, integrated document and content  
29 management, business rules to enforce policies, and knowledge base and  
30 collaboration tools for a business function.

- 1       **20. PPMS - Construction - ES2P Implementation:** Reporting and functionality  
2       enhancements to the enterprise SAP Ariba and Fieldglass platforms to support  
3       Construction specific reporting requirements.
- 4       **21. PPMS - Construction - Mobile Field Inspections:** Today the Construction  
5       organization utilizes the E2 M2M system to gather field inspection data. The  
6       application and data are stored in a vendor owned cloud environment. Data is  
7       manually extracted from the system by exporting inspection data into PDF  
8       documents. This project will replace the E2 M2M tool with the system selected  
9       in the enterprise mobile initiative, migrate SoCalGas data off the third-party  
10      owned system into a SoCalGas managed environment and create an interface  
11      between the mobile system and OpenText (document system of record).
- 12      **22. PPMS – Construction – Phase 1:** This project will implement a central project  
13      management system (PPMS) and toolset to provide best in class project  
14      management for large scope high value projects through standardization,  
15      transparency, and consistency.
- 16      **23. PPMS – Construction – Phase 2:** Project and Portfolio Management System  
17      (PPMS) will enable automation, integration, and improve project outcomes. The  
18      PPMS supports the process and deliverables outlined in the Capital Delivery  
19      Model (CDM) and will improve capabilities to consistently manage, track, and  
20      report on construction projects.
- 21      **24. PPMS – Gas Distribution – Phase 1:** This project will implement a central  
22      project management system (PPMS) and toolset to support best in class project  
23      management for large scope high value projects through standardization,  
24      transparency, and consistency for projects managed by Distribution operations.
- 25      **25. PPMS – Gas Distribution – Phase 2:** Project and Portfolio Management System  
26      (PPMS) will enable automation, integration, and improve project outcomes. The  
27      PPMS supports the process and deliverables outlined in the Capital Delivery  
28      Model (CDM) and will improve capabilities to consistently manage, track, and  
29      report on construction projects managed by Distribution Operations.
- 30      **26. PPMS – Storage:** This project will implement a central project management  
31      system (PPMS) and toolset to support best in class project management for large

1 scope high value projects through standardization, transparency, and consistency  
2 for projects managed by Storage operations.

3 **27. PPMS – Transmission:** This project will implement a central project  
4 management system (PPMS) and toolset to support best in class project  
5 management for large scope high value projects through standardization,  
6 transparency, and consistency for projects managed by Transmission operations.

7 **28. GOSI – PRISM (PSMD):** Enterprise Electronic Pressure Monitoring and  
8 Pressure Alarm System for Gas Operations. PRISM is an application for tracking  
9 attributes and relationships of Distribution Pressure Systems, High Pressure  
10 Pipelines, District Regulator Stations, and Electronic Pressure Monitors (EPMs).  
11 It provides Management of Change (MOC) functionality for GIS update  
12 notifications. This project includes managing some EPM attributes and relating  
13 them to Pressure Districts.

14 **29. PRISM Enhancements Ph 2:** Enterprise Electronic Pressure Monitoring and  
15 Pressure Alarm System for Gas Operations. PRISM is an application for tracking  
16 attributes and relationships of Distribution Pressure Systems, High Pressure  
17 Pipelines, District Regulator Stations, and Electronic Pressure Monitors (EPMs).  
18 It provides Management of Change (MOC) functionality for GIS update  
19 notifications. Phase II includes adding more attributes about the EPM assets and  
20 enablement of Change Management functionality through Business Case  
21 Management tools. The change management part is handled through integration  
22 with Distribution Engineering Lifecycle Tracking Application (DELTA).

23 **30. RDMS for Distribution:** Develop project document management system for  
24 Distribution to improve records management of unstructured records.

25 **31. RDMS Phases V+:** Supports ongoing enhancements to the Records and  
26 Document Management System to support increased needs for data accessibility  
27 to support risk modeling, compliance, safety, and process improvements.

28 **32. RDMS Operations KTLO:** Streamline processes to enhance storage and  
29 searchability of construction project records that are traceable, verifiable,  
30 complete. This activity supports compliance and productivity.

- 1       **33. RDMS ProCore – RDMS Integration:** Integrate Portfolio & Project  
2       Management system, ProCore, with OpenText RDMS for enhanced  
3       recordkeeping.
- 4       **34. RDMS TSR-CDM Integration:** Integrate TSR, the management of  
5       change/workflow system for Gas transmission technical services solution on  
6       Appbase platform with OpenText RDMS for enhanced recordkeeping.
- 7       **35. Opus - Work Management Improvement Program:** This project will  
8       modernize the Work Management Systems to improve efficiency, reduce manual  
9       work, increase support for compliance reporting, and optimize resources.
- 10      **36. Work Management Program - Next Generation FSD (Field Service**  
11      **Delivery):** This project replaces the existing CLICK Mobile solution which has  
12      its end of life in December 2023. This project will align processes across the  
13      Business and Systems and Technology and will begin the replacement assessment  
14      for a Modern Enterprise WFM and Mobile platform.
- 15      **37. STP11: CloseOut in RDMS:** Enhancements to RDMS to eliminate dual entry in  
16      MyProjects and Open Text (CDM) to streamline processes for HP Closeout  
17      Activities.
- 18      **38. Gas Operations Document Management:** This project will align processes and  
19      technology for Records and Document Management Systems, as well as  
20      construction planning, across departments leveraging shared technology assets,  
21      OpenText and PPMS. This is a shared asset that also benefits SDG&E.
- 22      **39. Gas Pipe Asset Management:** This project creates processes and technology  
23      enablement to capture GPS data on pipe infrastructure that will integrate with the  
24      GIS system. This will help improve infrastructure protection, as well as timeliness  
25      and efficiency of uploading new infrastructure information into GIS after  
26      construction. This is a shared asset that also benefits SDG&E.

27      **Operations Data Strategy:** The Operations Data Strategy team provides operational  
28      oversight regarding the management of asset records. SoCalGas launched this centralized  
29      records management and programs organization for several reasons. First, it allows SoCalGas to  
30      continue executing on its proposal of an EAM system and the modernization of records while  
31      identifying other potential opportunities to improve SoCalGas’s records management program

1 and oversight of day-to-day activities. This organization provides centralized operational  
2 oversight for records management processes in specific operational areas and conducts dedicated  
3 full-time records management over the daily tasks and activities performed. Records  
4 management specialists representing each functional area in Gas Operations will serve as data  
5 stewards of the centralized operational records management organization and be a bridge to  
6 provide real time feedback on continual improvement of SoCalGas's records-related programs.  
7 Additionally, this group will work with expert consulting resources to help evaluate the current  
8 Records Management policies and procedures, benchmark industry best practices, evaluate  
9 compliance with current and proposed regulatory requirements, and identify any potential areas  
10 of improvement. As a proposed mitigation plan in RAMP SCG-CFF-1 Asset and Records  
11 Management,<sup>8</sup> the centralized Data Strategy organization will establish a Data Governance  
12 Council to oversee efforts in managing data as an asset. This includes a project manager to lead  
13 a centralized data governance organization, and two project specialists to support broad  
14 implementation across the enterprise. This centralized organization will develop a data  
15 catalogue, documenting critical data elements, data ownership, and responsible parties for data  
16 stewardship. SoCalGas anticipates needing an additional six employees matrixed into operations  
17 who would effectively be records management specialists: two individuals for each functional  
18 area (Gas Transmission, Gas Distribution, and Gas Storage). The individuals are included in the  
19 forecasts for workpapers for Gas Distribution (Ex. SCG-04), Gas Transmission Operations and  
20 Construction (Ex. SCG-06), and Gas Storage Operations and Construction (Ex. SCG-10). These  
21 resources would be in addition to the existing centralized team. These new resources will  
22 contribute to the enhancement of records management within SoCalGas by strengthening written  
23 procedures so that operating maps and data are updated and accurate, while also increasing  
24 analysis of systems by adding continuous improvements to these processes to support the  
25 mitigation of incidents, providing data stewardship, auditing data for quality, and providing  
26 governance of data standards and policies. The new resources will also contribute to the  
27 advancement of information maturity scores, under the Generally Accepted Records Keeping  
28 Principles (GARP), while also communicating recordkeeping expectations to Gas Transmission,  
29 Gas Distribution, and Storage, reinforcing employees' responsibilities in records management

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<sup>8</sup> SoCalGas 2021 RAMP Report, available at <https://www.socalgas.com/regulatory/2021-ramp-report>.

1 policies and procedures. In addition, these resources will enhance existing training on records  
2 management that will further support increasing GARP maturity levels. This group defines roles  
3 to govern and own decisions on data-related matters, specifies metrics and Key Performance  
4 Indicators (KPIs) to track data quality, integrity, and scalability, as well as develops Data  
5 Governance operating processes to carry out policies and procedures. The group is accountable  
6 for setting processes, policies, procedures, and standards surrounding data to manage risk and  
7 improve quality and usability of data. This aligns with the ISO 55000 standard and is a core  
8 component of SoCalGas's Safety Management Systems (SMS) program, aligned with the  
9 American Petroleum Institute (API) 1173 recommended practice for pipeline safety. This effort  
10 will support regulatory reporting, safety, compliance, and integrity management.

11 **Integrity Management Project Controls:** The activities associated with this cost center  
12 include the labor and expenses associated with management of Underground Storage Data and  
13 the administration of the data systems used for Underground Storage, specifically the Well  
14 Integrity Management Solution (WIMS). WIMS was developed in response to federal, state, and  
15 local agency regulations to improve data collection, accessibility, analyses, and regulatory  
16 reporting. In addition, consolidation and integration of key Underground Storage Operation Data  
17 Systems into this enterprise solution allows for maintenance, monitoring, and improvements of  
18 the existing data systems and future expansions to absorb industry changes. Moreover, Integrity  
19 Management Program Controls is responsible for implementation of the records management  
20 plan to consolidate underground storage records into an electronic central repository to enhance  
21 documentation accessibility. This organization governs document generation workflows,  
22 creation of processes and procedures, training, document scanning, standard naming  
23 methodology, and establishment of a filing structure and storage strategy to support accessibility  
24 of records and compliance with records retention requirements.

25 Expected activities and work products include administration of WIMS; standardized  
26 data collection and data entry into existing and future systems; enhanced data and records  
27 management processes and procedures; electronic well file system (scanning and digitization);  
28 implementation of upgraded document filing and storage (paper and digital); and training for  
29 new software systems, processes, and procedures. Activities performed by this team include  
30 development of a data management system to support gathering and maintaining critical data  
31 elements associated with Underground Storage, facilitating data capture, development, and

1 training around data management practices, and leading data system enhancement efforts.  
2 Activities are associated with maintaining data related to storage assets and operations, in  
3 compliance with California Geologic Energy Management Division's (CalGEM) Requirements  
4 for California Underground Gas Storage Projects (UGS Regulations) 14 CCR §1726 and U.S.  
5 Department of Transportation Pipeline and Hazardous Materials Safety Administration  
6 (PHMSA) Underground Natural Gas Storage regulations, Pipeline Safety: Safety of  
7 Underground Natural Gas Storage, 49 Code of Federal Regulations (CFR) §192.12 (Final Rule) .  
8 The information provided by this group, along with its related activities, helps support the  
9 operation and engineering groups to assess probability and consequence of asset failure. This  
10 information supports the mitigation of safety and reliability risks.

11 **Integrity Management Technology Systems:** Gas System Staff & Technology is  
12 sponsoring the non-refundable portion of the costs for Integrity Management Technology  
13 Systems. Integrity Management Technology Systems will primarily support the Facilities  
14 Integrity Management Program (FIMP). The activities and the refundable costs associated with  
15 this cost center are discussed in the Gas Integrity Management Programs testimony of Ms. Amy  
16 Kitson and Mr. Travis Sera, Ex. SCG-09.

17 **Records Management:** Records Management activities include Gas Standards  
18 Governance, which contributes to operating and maintenance procedures that help mitigate  
19 human error and compliance, while promoting consistently safe employee actions. These quality  
20 control procedures support adherence to establish standards and procedures for pipeline  
21 materials, equipment, and construction that will reside within the Records Management and  
22 Programs organization.

23 **a. RAMP Activities**

24 RAMP-related costs for Enterprise Asset Management include the costs for the following  
25 activities: (1) Asset and Records Management and (2) Operational Compliance & Oversight. As  
26 described in Table WR-4 above, Asset and Records Management is establishing a new EAM  
27 Operating Model, as part of continuous improvement. The future EAM operating model will  
28 improve the quality and accessibility of operational data to support data driven analytics  
29 capabilities.

30 Regarding Operational Compliance & Oversight, SoCalGas has established an  
31 Information Governance (IG) program team to continue executing on the records management

1 element of Enterprise Asset Management (EAM) and to improve records management  
 2 capabilities and oversight of day-to-day activities. In alignment with SoCalGas’s safety culture,  
 3 this organization provides operational oversight for records management processes in specific  
 4 operational areas. The program seeks to develop policies, guidelines, and job aids to foster  
 5 consistent practices to manage corporate information for use by all employees and contractors  
 6 for the safe performance of their day-to-day work.

7 Table WR-10 below provides the RAMP activities, their respective cost forecasts, and the  
 8 RSEs for this workpaper. For additional details on these RAMP activities, please refer to my  
 9 workpapers SCG-05-WP 2SI002.

10 **TABLE WR-10**  
 11 **RAMP Activity O&M Forecasts by Workpaper**  
 12 **In 2021 Dollars (\$000)**

<b>Workpaper</b>	<b>RAMP ID</b>	<b>Description</b>	<b>BY2021 Embedded Base Costs (000s)</b>	<b>TY2024 Estimated Total (000s)</b>	<b>TY2024 Estimated Incremental (000s)</b>	<b>GRC RSE*</b>
2SI002.002	SCG-CFF-1 - 7	Asset and Records Management	182	807	625	0
2SI002.004	SCG-CFF-1 - 2	Operational Compliance and Oversight	239	239	0	0
<b>Total</b>			<b>421</b>	<b>1,046</b>	<b>625</b>	<b>0</b>

13 \*An RSE was not calculated for activities with zero listed for RSE.

14 **2. Forecast Method**

15 The forecast method developed for the Enterprise Asset Management Organization is  
 16 base year 2021. This method is most appropriate because the activities discussed above recently  
 17 started or changed in 2021 and do not have a long expense history. The base year is  
 18 representative of expectations for TY 2024. Incremental adjustments were made to the forecast  
 19 to accommodate anticipated growth between the base year and test year, including staffing needs  
 20 for both current and future internal and external resources, as well as non-labor costs based on  
 21 specific project requirements, such as software licensing.

1 **3. Cost Drivers**

2 Enterprise Asset Management

3 The cost drivers behind this forecast are the project expenses and activities to implement  
4 the development of solutions related to asset management, including the following new EAM  
5 initiatives: (1) create a data lake to capture asset data, (2) incorporate a tool for asset investment  
6 planning to develop strategies to optimize the useful life of assets, (3) create an operating model  
7 to govern asset management activities, and (4) further implementation of records management to  
8 enhance documentation of criteria used to make decisions.

9 EAM is an enterprise-wide framework that provides a standardized approach for  
10 managing risk and safety across assets and activities. The EAM activities span multiple lines of  
11 business and help mitigate several RAMP risks, as discussed in the 2021 Ramp Report, SCG-  
12 CFF-1 Asset and Records Management.<sup>9</sup>

13 Gas Operations Technology

14 The work performed by Gas Operations Technology consists of analyzing, defining,  
15 reconciling, and removing the inconsistencies of the pipeline related data in various systems,  
16 making recommendations to consolidate redundant systems, redefining business processes, and  
17 partnering with IT to select and implement new hardware and software infrastructure.

18 The cost drivers behind this forecast include developing a core operating environment  
19 that integrates historical and current data stored in various SoCalGas enterprise systems,  
20 including the Geographic Information System (GIS),<sup>10</sup> Records and Document Management  
21 System,<sup>11</sup> Maintenance Management Systems,<sup>12</sup> and System Monitoring and Control.<sup>13</sup> Aligning  
22 these systems and the data within them improves safety, integrity, transparency, and availability  
23 of pipeline asset records by integrating asset data with equipment safety and handling  
24 information, as well as validating that appropriate documentation is used. Experience has shown

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<sup>9</sup> RAMP SCG-CFF-1, available at <https://www.socalgas.com/regulatory/2021-ramp-report>.

<sup>10</sup> GIS contains asset material attributes, locational and connectivity details, pipeline integrity assessment details, etc.

<sup>11</sup> Records and Document Management System contains work order documents, pipeline condition maintenance reports, photographic records, etc.

<sup>12</sup> Maintenance Management Systems contain asset material attributes, inspection details, etc.

<sup>13</sup> System Monitoring and Control Systems contain monitoring information, historical SCADA information, etc.

1 that effective integration with GIS, Work Management (WM), Material Management (MM),  
2 Document Management (DMS), and Real-Time Monitoring Systems provides the ability to  
3 access, use, display, and manage pipeline related records and data in a timely and efficient  
4 manner.

5 SoCalGas hosts a variety of information systems to fulfill the unique needs of all  
6 workgroups, including critical records, maintenance, safety, legal, fiscal, and contractual records.  
7 Applications maintained on foundational technology systems allow employees to track and retain  
8 accurate records and complete their day-to-day tasks. To make more effective use of and enable  
9 more integrated data analytics and decision-making capabilities, this department has been  
10 established to evaluate existing systems and processes in a more holistic manner, to determine  
11 more effective ways to manage the operational information, leverage technology to enhance the  
12 value of the data, identify other potential opportunities to improve the records management  
13 program, and to perform oversight of day-to-day activities.

#### 14 Operations Data Strategy

15 The cost drivers behind this forecast are the time and effort to develop the new Data  
16 Strategy organization. As a proposed mitigation in RAMP SCG-CFF-1 Asset and Records  
17 Management,<sup>8</sup> the centralized Data Strategy organization will establish a Data Governance  
18 Council to oversee efforts in managing data as an asset. Cost drivers will include an incremental  
19 project manager to lead a centralized data governance organization and two incremental project  
20 specialists to support broad implementation across the enterprise, in addition to contractor  
21 resources to perform data quality management. This effort will support regulatory reporting,  
22 safety, compliance, and integrity management. This organization oversees Data Governance,  
23 which contributes to the reliability of operating and maintenance data which supports mitigation  
24 of human error and compliance, while promoting consistently safe employee actions. These  
25 quality control procedures will support adherence to established standards and procedures for  
26 data related to pipeline materials, gas operations assets, maintenance, equipment, and  
27 construction that will reside within the Data Strategy organization. An additional non-labor cost  
28 driver will be software licensing costs transitioning from capital to O&M due to a capitalization  
29 policy change.

1 Integrity Management Project Controls

2 The cost drivers behind this forecast are safety, risk management, and state and federal  
3 regulations. The primary drivers are CalGEM Requirements for California Underground Gas  
4 Storage Projects 14 CCR §1726 and PHMSA Underground Natural Gas Storage Regulations  
5 §192.12. Other federal, state, and local agency considerations also play a role.

6 Expenses include labor and non-labor for an existing team of seven, including one project  
7 manager, one team lead, and five technical advisors. In addition to internal labor costs, non-  
8 labor costs include contract labor to support high volume periods and special projects, as well as  
9 software licenses. This organization also supports data management for SIMP work, and costs  
10 associated with that work are included in Gas Integrity Management Programs testimony of Ms.  
11 Amy Kitson and Mr. Travis Sera (Ex. SCG-09). In addition to the existing team, SoCalGas  
12 anticipates needing incremental employee time to support increasing regulatory requirements for  
13 data requests and data capture.

14 Integrity Management Technology Systems

15 Gas System Staff & Technology is sponsoring the non-refundable portion of the costs for  
16 Integrity Management Technology Systems. The refundable activities associated with this cost  
17 center are discussed in the Gas Integrity Management Programs testimony of Ms. Amy Kitson  
18 and Mr. Travis Sera (Ex. SCG-09). The cost drivers for this forecast include labor and expenses  
19 associated with management of Underground Storage Data and the administration of the data  
20 systems used for Underground Storage, specifically the Well Integrity Management Solution  
21 (WIMS). The non-labor cost is composed of employee training and development, software  
22 license and hosting fees, and consulting fees.

23 Records Management

24 The cost drivers behind this forecast are the labor and non-labor expenses necessary to  
25 maintain the Gas Standards Governance team. The labor is composed of the salaries associated  
26 with the work to support the management and execution of Gas Standard Governance. The non-  
27 labor cost is composed of materials, employee training and developments, software license fees  
28 for project management and control systems, and consulting fees. An incremental adjustment  
29 was made to the forecast to accommodate a known increase in the licensing fees for a software  
30 system.

1 **C. Damage Prevention**

2 Included in this section of the testimony are activities and associated O&M expenses to  
3 address core Damage Prevention Public Awareness Program duties. These activities and  
4 expenses are summarized in Table WR-11 below.

5 **TABLE WR-11**  
6 **SCG Public Awareness**  
7 **In 2021 Dollars (\$000)**

<b>C. Damage Prevention</b>	<b>2021 Adjusted-Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
1. SCG Public Awareness	1,612	675	-937
<b>Total</b>	<b>1,612</b>	<b>675</b>	<b>-937</b>

8 **1. Description of Costs and Activities**

9 SoCalGas has developed and implemented a federally mandated Public Awareness  
10 Program, as prescribed in 49 C.F.R. § 192.616. The Public Awareness department oversees the  
11 public awareness program which focuses on the compliance program and overall public  
12 awareness through media, social campaigns, and relationships with organizations that provide  
13 outreach on preventing excavation damages to SoCalGas’s buried pipelines. Damages resulting  
14 from excavation activity are the greatest threat to SoCalGas’s pipeline infrastructure, with  
15 potential for catastrophic consequences to public safety. The Public Awareness Program  
16 contributes to enhanced safety by providing certain risk mitigation measures, as described in my  
17 testimony further below. In adopting these Public Awareness Program requirements, PHMSA  
18 determined that “[e]ffective public awareness programs are vital to continued safe pipeline  
19 operations” and that “[s]uch programs are an important factor in establishing communications  
20 with affected stakeholders, providing information necessary to enhance public awareness of  
21 pipelines, and communicating stakeholder roles relative to pipeline safety.”<sup>14</sup> The federal  
22 regulations directing the implementation of this program specifically require that the program  
23 include activities to educate the public, appropriate government organizations, and persons  
24 engaged in excavation-related activities regarding: (1) use of the One-Call notification system  
25 prior to excavation and other damage prevention activities (known as 811 or USA ticket); (2)  
26 possible hazards associated with unintended releases from a gas pipeline facilities; (3) physical

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<sup>14</sup> Public Safety: Pipeline Operator Public Awareness Program; Final Rule, 70 Fed. Reg. 28833-01 (posted May 19, 2005) (*codified at* 49 C.F.R. § 192, 195).

1 indications that such a release may have occurred; (4) steps that should be taken for public safety  
2 in the event of a gas pipeline release; and (5) procedures for reporting such an event.<sup>15</sup>

3 “The program and media used must be as comprehensive as necessary to reach all areas  
4 in which the operator transports gas” and “must include activities to advise affected  
5 municipalities, school districts, businesses, and residents of pipeline facility locations.”<sup>16</sup> The  
6 program must be conducted not only in English, but also “in other languages commonly  
7 understood by a significant number and concentration of the non-English speaking population in  
8 the operator’s area.”<sup>17</sup> The operator is required to track these communications and evaluate the  
9 messages for resonance and impact and “[t]he operator’s program documentation and evaluation  
10 results must be available for periodic review by appropriate regulatory agencies.”<sup>18</sup>

11 Annually, SoCalGas’s Public Awareness Program reaches approximately:

- 12 • 21.8 million consumers;
- 13 • 156,090 excavators and land developers;
- 14 • 19,980 solar and electrical contractors;
- 15 • 610 public officials; and
- 16 • 37 emergency county coordinators.

17 Every two years, the program reaches:

- 18 • 750,153 residents and businesses along pipeline rights-of-way within  
19 SoCalGas distribution service territory;
- 20 • 12,069 residents and businesses along pipeline rights-of-way outside  
21 SoCalGas distribution service territory;
- 22 • 1,173 residents and businesses near storage facilities and compressor stations;  
23 and
- 24 • 8,545 schools.

25 To implement the Public Awareness Program, the Public Awareness Administrator  
26 (PAA) uses a matrix-managed approach relying upon multiple organizations within SoCalGas

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<sup>15</sup> 49 C.F.R. § 192.616(d).

<sup>16</sup> 49 C.F.R. § 192.616(e)-(f).

<sup>17</sup> 49 C.F.R. § 192.616(g).

<sup>18</sup> 49 C.F.R. § 192.616(i).

1 for plan element execution. The PAA is responsible for coordinating and managing the  
2 execution of the activities to successful completion. The program requires that the PAA use  
3 various tools, such as software, to track and document activities. There are multiple audience  
4 categories for communications, and each has its own message, medium, and frequency. Potential  
5 communication categories include, but are not limited to, gas consumers, excavators and land  
6 developers, solar and electrical contractors, public officials, emergency county coordinators, and  
7 emergency responders. New audiences can be developed, because certain audiences, such as  
8 farmers or solar contractors, may benefit from receiving specific information suited to a  
9 particular context, or otherwise do not identify with the content of another audience. SoCalGas  
10 faces the additional challenge of identifying and reaching non-gas customers who reside along  
11 pipeline rights-of-way. Developing mailing lists and messages that would be recognizable as  
12 pertinent and not junk mail by this segment is complex, and SoCalGas is required to  
13 continuously revise messaging to keep it fresh and relevant.

14 Strategic outreach and activities will also be necessary to address SoCalGas's damage  
15 reduction goals. Damage prevention data demonstrates that when additional public awareness  
16 activities are performed, there is a correlation between decreasing damages and increasing  
17 Underground Service Alert (USA) tickets.

18 **a. RAMP Activities**

19 RAMP-related costs for Damage Prevention include the costs for the following activities:  
20 (1) Public Awareness. As described in Table WR-4 above, SoCalGas continues to promote  
21 awareness of the Underground Service Alert (811, "call-before-you-dig") system to the affected  
22 public by reaching out to contractors and the general public so that pipelines are properly marked  
23 and located before excavation activities. When residents or contractors dial 811 or USA before  
24 any project that involves digging, SoCalGas marks the locations of underground lines to prevent  
25 damage, which could cause injury or service outages. In addition, SoCalGas has the  
26 responsibility to train its employees in emergency procedures as well as establishing a liaison  
27 with first responders. Through strong communication and coordination with first responders,  
28 SoCalGas promotes compliance of Title 49 Code of Federal Regulations (CFR), section 192.615  
29 by learning about the responsibility and resources available to each party in the event of a gas  
30 pipeline emergency, and by educating each other on how to best respond to a gas system  
31 emergency.

1 To comply with Title 49 CFR, section 192.616(d) subsections 1 through 5 and prevent  
 2 unsafe excavation practices that could result in damage to underground facilities, SoCalGas  
 3 works directly with city officials involved in construction activities within their jurisdiction to  
 4 raise public awareness in an effort to (1) educate city personnel on the specific requirements of  
 5 the California safe excavation laws, (2) help officials understand their role in enforcing the laws  
 6 by promoting the use of 811 USA for excavation tickets (through their project review and  
 7 permitting activities and through field inspections their employees perform), and (3) by  
 8 explaining the city’s potential cost savings. Lastly, SoCalGas engages in excavator outreach so  
 9 that contractors and excavators are informed of the potential safety issues that might arise when  
 10 working around natural gas pipelines. Hitting one of these pipelines while conducting routine  
 11 work such as digging, planting, or demolition work can cause serious injury, property damage,  
 12 and loss of utility service. The benefits of calling 811 USA are communicated through  
 13 awareness campaigns, such as in-person excavator outreach events, targeted mailings, and the  
 14 Big Shovel display. Excavator outreach is performed to be compliant with Title 49 CFR, section  
 15 192.616(d) subsections 1 through 5.

16 Table WR-12 below provides the RAMP activities, their respective cost forecasts, and the  
 17 RSEs for this workpaper. For additional details on these RAMP activities, please refer to my  
 18 workpapers SCG-05-WP 2SI003.

19 **TABLE WR-12**  
 20 **RAMP Activity O&M Forecasts by Workpaper**  
 21 **In 2021 Dollars (\$000)**

<b>Workpaper</b>	<b>RAMP ID</b>	<b>Description</b>	<b>BY2021 Embedded Base Costs (000s)</b>	<b>TY2024 Estimated Total (000s)</b>	<b>TY2024 Estimated Incremental (000s)</b>	<b>GRC RSE</b>
2SI003.000	SCG-Risk-2 - C15-T1 thru T4	Public Awareness MP (T1 - T4)	546	546	0	25
2SI003.000	SCG-Risk-2 - C16-T1 thru T4	Public Awareness HP (T1 - T4)	129	129	0	115
<b>Total</b>			<b>675</b>	<b>675</b>	<b>0</b>	<b>140</b>

1                                   **2.     Forecast Method**

2                   The forecast method developed for this cost category is base year 2021. The base year  
3 most accurately represents SoCalGas’s expectations for TY 2024. This activity has changed in  
4 recent years due to new regulations, including the Wade Kilpatrick Bill that increases fines up to  
5 \$100,000 for third party damages. Over the last five years (2017-2021), USA tickets have  
6 increased by 35% and SoCalGas expects this trend to continue over the next five years based on  
7 forecasted economic growth and planned infrastructure investment. Over the next five years,  
8 construction in Southern California is expected to grow, especially when the effects of the recent  
9 federal infrastructure bill begin to be realized.<sup>19</sup>

10                  As such, the Public Awareness Program needs to keep up with the anticipated demand in  
11 the region. Incremental adjustments were made to the forecast to accommodate the anticipated  
12 growth between the base year and test year, including a non-labor adjustment that allows the  
13 Public Awareness Program to grow with expected construction and ticket growth to increase  
14 outreach, advertising, and media campaigns.

15                                   **3.     Cost Drivers**

16                  The cost drivers behind this forecast are: (1) the requirements of 49 C.F.R. § 192.616; (2)  
17 the technical document, Public Awareness Programs for Pipeline Operators, API RP 1162, First  
18 Edition, also referred to as simply RP1162 or 1162, because 49 C.F.R. § 192.616 expressly  
19 requires operators to follow the guidelines and recommendations set forth in API RP 1162; and  
20 (3) program expansion recommendations by regulators.

21                  Federal Public Awareness regulations specifically direct pipeline operators to continually  
22 assess and improve the effectiveness of their Public Awareness Programs. A key to helping  
23 promote continuous improvement is for SoCalGas to evaluate the impact of its Public Awareness  
24 program. The impact from the Public Awareness Program is derived from effective  
25 communications both in content and medium (delivery). It is therefore necessary for SoCalGas  
26 to evaluate both the content of its messages and message delivery systems.

27                  An example would be to undertake an assessment of messaging to raise safety awareness.  
28 This measurement requires surveys and focus groups of various audiences to determine how and  
29 to what extent the Public Awareness messages are reaching them. Not all messages or delivery

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<sup>19</sup> H.R.3684 - Infrastructure Investment and Jobs Act.

1 systems work for all stakeholders. In other words, a one-size-fits-all approach is not the most  
2 effective way to communicate. Through formal measurements or surveys of the various  
3 audiences, SoCalGas assesses what is working and what is not.

4 The frequency of formal measurements or surveys, and how tailored those measurements  
5 and surveys are, are key factors that impact the costs of implementing a successful Public  
6 Awareness Program. More frequent and targeted assessments help SoCalGas to develop more  
7 succinct and relevant messages and deliver them in formats and mediums that meet the needs of  
8 each particularly identified audience. More frequent and targeted surveys, however, result in  
9 higher costs for conducting those surveys.

10 Another cost driver is the recommendations from the Commission’s Safety Enforcement  
11 Division (SED) when it concluded its Public Awareness audit, in which it recommended  
12 additional communication messages to existing audiences to further promote pipeline safety.  
13 SoCalGas is judiciously incorporating staff recommendations through continuous improvement  
14 initiatives into its Public Awareness plan, but the amount of information can become  
15 overwhelming to recipients. Therefore, caution must be exercised, and carefully crafted  
16 messages must be developed to avoid having information overlooked or discarded as “junk  
17 mail.”

18 An additional cost driver is making the necessary additions to SoCalGas’s program when  
19 changes to the API RP 1162, Third Edition become final.

20 Another cost driver is SoCalGas’s damage reduction goals. SoCalGas is dedicated to  
21 mitigating the risk and associated hazards of excavation damages. Achieving these goals  
22 requires an increase in public awareness activities and outreach.

23 Resources are needed to meet these cost drivers and to allow for an expansion of the  
24 Public Awareness program to identify communication opportunities and exceed regulatory  
25 requirements. Outreach and activities will be necessary to address the need for excavation  
26 damage reductions. Damage prevention data demonstrates that when public awareness activities  
27 are performed, there is a correlation between decreasing damages and increasing USA tickets.  
28 An augmented Public Awareness program would include enhanced media campaigns,  
29 collaborations with external organizations, participation in outreach events, and support of  
30 employees to be public awareness advocates and provide damage prevention messaging.

1 **D. High Pressure Project Record Closeout**

2 Included in this section of the testimony are activities and associated O&M expenses for  
3 the High Pressure Project Record Closeout Program. These activities and expenses are  
4 summarized in Table WR-13 below.

5 **TABLE WR-13**  
6 **High Pressure Project Record Closeout**

<b>D. High Pressure Project Record Closeout</b>	<b>2021 Adjusted-Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
1. High Pressure Project Record Closeout	669	1,088	419
<b>Total</b>	<b>669</b>	<b>1,088</b>	<b>419</b>

7 **1. Description of Costs and Activities**

8 To make more effective use of resources and have a more integrated and consistent  
9 approach, the HPPR department has been established to evaluate existing systems and processes  
10 in a more holistic manner, to determine more effective ways to reconcile and close out projects,  
11 evaluate technology to streamline the close out process, identify other potential opportunities to  
12 improve the HPPR program, and to perform oversight of day-to-day activities.

13 The HPPR program will support the development of process flows, clarify procedures,  
14 enhance training modules and job aids, and develop metrics to track and monitor high pressure  
15 projects. This will support the Company’s goals for the safety of employees, the public, and the  
16 pipeline system and maintain compliance with 49 CFR Part 192 and Company Gas Standards. In  
17 addition, business requirements will be developed for high-pressure project closeout to  
18 implement and standardize an enterprise technology solution to create reports to track and  
19 monitor HPPR project close out. These costs also allow SoCalGas to remain in compliance with  
20 49 CFR Part 192 and Company Gas Standards by having funding for resources to perform the  
21 activities specified above.

22 The labor component will fund resources to develop process flows, clarify procedures,  
23 enhance training modules and job aids, and develop metrics to track and monitor high pressure  
24 projects. The non-labor component will fund membership fees, analytics, employee  
25 development, training on how to perform high pressure closeout and related software  
26 applications, and associated employee expenses.

1                                   **2. Forecast Method**

2                   A zero-based methodology was selected for this cost category. This activity is new as of  
3 2021 and there is no cost history. The work done by this initiative also supports the refundable  
4 work discussed in the Gas Integrity Management Programs testimony of Ms. Amy Kitson and  
5 Mr. Travis Sera (Ex. SCG-09). As the work level increases, the HPPR department will need to  
6 grow to accommodate the increasing workload. New and impending gas rules and regulations,  
7 such as the PHMSA Gas Transmission Safety Rule (GTSR) Parts 1 and 2 and the Valve  
8 Installation and Minimum Rupture Standards rule, will also increase the workload for the HPPR  
9 department. While the additional impacts of the GTSR Part 1 have been assessed and validated  
10 by Gas Integrity Management Programs, there are requirements stemming from the GTSR Part 2  
11 and Valve Installation rule that are expected to result in incremental workload. Additional  
12 resourcing will be needed to support the expanded scope of implementing and managing these  
13 new rules and regulations. Thus, incremental adjustments were made to the forecast to  
14 accommodate this anticipated growth between the base year and test year.

15                                   **3. Cost Drivers**

16                   Labor adjustments were made to accommodate the increase in labor dollars as the team  
17 grows from one to multiple employees. Non-labor adjustments were made to accommodate the  
18 increase in non-labor dollars as the program grows, including employee development and  
19 training, office equipment, materials, software fees, and contractors.

20                   Resources are needed to build out a Centralized Department to develop processes,  
21 policies, gas standards, metrics, and training material to standardize the high-pressure closeout  
22 process across the organization. Activities driving costs include:

- 23                   • Train 200+ employees, including SoCalGas Employees and contractors, on  
24                   HPPR Closeout across Construction, Distribution, Storage, and Transmission;
- 25                   • Review Gas Standards and identify improvement opportunities to standardize  
26                   processes in the HPPR Closeout process;
- 27                   • Review metrics for HPPR Closeout and validate source data for HP Projects;  
28                   and
- 29                   • Identify training requirements, develop training material, and job aids for  
30                   Company employees and contractor resources to utilize.



1 the Gas Integrity Management Programs testimony of Ms. Amy Kitson and Mr. Travis Sera (Ex.  
2 SCG-09), including the cost drivers.

3 **V. SHARED COSTS**

4 As described in the Shared Services & Shared Assets Billing, Segmentation, & Capital  
5 Reassignments testimony of Mr. Angel Le (Ex. SCG-30), shared services are activities  
6 performed by a utility shared services department (*i.e.*, functional area) for the benefit of: (i)  
7 SDG&E or SoCalGas, (ii) Sempra Energy Corporate Center, and/or (iii) any affiliate  
8 subsidiaries. The utility providing shared services allocates and bills incurred costs to the entity  
9 or entities receiving those services. Table WR-15 summarizes the total shared O&M forecasts  
10 for the listed cost categories.

11 **TABLE WR-15**  
12 **Shared O&M Summary of Costs**

<b>GAS SYSTEM STAFF &amp; TECHNOLOGY (In 2021 \$)</b>			
<b>(In 2021 \$) Incurred Costs (100% Level)</b>			
<b>Categories of Management</b>	<b>2021 Adjusted-Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
A. Damage Prevention	1,570	4,305	2,735
B. Pipeline Policy	1,950	2,342	392
C. Operator Qualification	1,912	3,043	1,131
D. Gas Systems Staff	168	168	0
<b>Total Shared Services (Incurred)</b>	<b>5,600</b>	<b>9,858</b>	<b>4,258</b>

13 I am sponsoring the forecasts on a total incurred basis, as well as the shared services  
14 allocation percentages related to those costs. Those percentages are presented in my shared  
15 services workpapers, along with a description explaining the activities being allocated. Please  
16 see my workpapers, Ex. SCG-05-WP. The dollar amounts allocated to affiliates are presented in  
17 the Shared Services & Shared Assets Billing, Segmentation, & Capital Reassignments testimony  
18 [SCG/SDG&E-30 (Angel Le)].



1 addition, as stated in the 2021 RAMP Report,<sup>20</sup> this activity is mandated pursuant by Title 49  
 2 C.F.R. § 6 192.616. Its purpose is to develop and implement a continuing public education  
 3 program.

4 These costs support the Company’s goals of reducing excavation damages to enhance the  
 5 safety and reliability of natural gas infrastructure system. This FTE will perform the following  
 6 activities:

- 7 • Provide leadership and strategic direction to the SoCalGas and SDG&E  
 8 Damage Prevention and Public Awareness teams;
- 9 • Develop action plans to address damage trends and audit recommendations;
- 10 • Champion and lead technology improvements initiatives; and
- 11 • Lead and project manage damage prevention continuous improvement  
 12 initiatives.

13 **B. Gas Systems Staff (Cost Center 2200-2144)**

14 **TABLE WR-17**  
 15 **Gas System Staff**

<b>D. Gas Systems Staff</b>	<b>2021 Adjusted- Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
1. Gas Systems Staff	168	168	0

16 **1. Description of Costs and Activities**

17 This cost center includes the salaries for the Gas System Staff & Technology Director  
 18 and the Administrative Associate who supports this organization. This cost center also includes  
 19 the associated employee expenses, as well as miscellaneous supplies, materials, and training and  
 20 development for employees.

21 **2. Forecast Method**

22 The forecast method developed for this cost category is base year 2021. The activities  
 23 that impact this cost center changed in mid-2021 due to a reorganization and the previous  
 24 expense history does not reflect the activities in their current state. The costs are expected to  
 25 remain level over time. The base year forecast is representative of expectations for TY 2024.

<sup>20</sup> RAMP SCG-Risk-2, Excavation Damage (Dig-in) On The Gas System (May 17, 2021), available at [https://www.socalgas.com/sites/default/files/SCG-Risk-2\\_RAMPCchapter\\_Dig-in\\_23.pdf](https://www.socalgas.com/sites/default/files/SCG-Risk-2_RAMPCchapter_Dig-in_23.pdf).

1                   **3. Cost Drivers**

2                   The cost driver for this work category is the labor necessary for the Director to provide  
3 leadership and guidance to the Gas System Staff & Technology organization driving the  
4 Company’s gas system’s practices and procedures and regulatory compliance requirements.

5                   **C. Operator Qualification (Cost Center 2200-2344)**

6   **TABLE WR-18**  
7   **Operator Qualification**

<b>C. Operator Qualification</b>	<b>2021 Adjusted- Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
1. Operator Qualification	1,912	3,043	1,131

8                   **1. Description of Costs and Activities**

9                   Safety is fundamental to employee training and qualifications. Maintaining a skilled,  
10 dedicated, and qualified workforce is critical to SoCalGas’s and SDG&E’s success. It is through  
11 the efforts of these employees that the Companies can continue to deliver safe, clean, and  
12 reliable service to customers and maintain the integrity of SoCalGas’s pipeline infrastructure.  
13 An integral component of overall workforce proficiency is the Operator Qualification (OQ)  
14 program, which is essentially the management and process for the qualification of pipeline  
15 personnel as mandated by Title 49 of the CFR Section 192, Subpart N and G.O. 112-F.

16                   Activities associated with this work group are performed by the Operator Qualification  
17 department, which manages the implementation and continual enhancements of the Operator  
18 Qualification Program. The Operator Qualification department is responsible for scheduling  
19 qualification activities, reviewing and auditing contractor qualification programs, keeping  
20 qualification records, monitoring records for possible compliance issues, evaluating the program  
21 for any deficiencies, and making changes and enhancements to the program. The activities and  
22 forecast in this department are part of the following RAMP Risk: SCG-Risk-2 Excavation  
23 Damage (Dig-In) on the Gas System.

24                   The Operator Qualification Department has initiated 33 task interval changes, reducing  
25 the requalification intervals from 5 years to 3 years. This significant change requires additional  
26 incremental employees to manage the increase in requalification frequencies for the respective  
27 covered tasks. Additionally, the Operator Qualification Department is expanding the quantity of  
28 identified covered tasks in its OQ program. This effort will be led by an incremental employee

1 addition as a Subject Matter Expert for Task Development. Furthermore, the Operator  
 2 Qualification Department is increasing the frequency and quantity of Contractor Oversight  
 3 initiatives with respect to their qualification programs and requalification of employees when  
 4 tasks are suspended or disqualified.

5 **a. RAMP Activities**

6 RAMP-related costs for Operator Qualification include the costs for the following  
 7 activities: (1) Locate and Mark Qualification. As described in Table WR-4 above, Locate and  
 8 Mark Operator Qualification (OQ) training requires employees to field-demonstrate their  
 9 knowledge and competency to perform locate and mark tasks. This includes activities such as  
 10 obtaining proper locating signals and interpreting the signals by placing accurate and proper  
 11 markings on the ground to indicate the location of the pipe. OQ training is mandated by  
 12 PHMSA.

13 Table WR-19 below provides the RAMP activities, their respective cost forecasts, and the  
 14 RSEs for this workpaper. For additional details on these RAMP activities, please refer to my  
 15 workpapers SCG-05-WP 2200-2344.

16 **TABLE WR-19**  
 17 **RAMP Activity O&M Forecasts by Workpaper**  
 18 **In 2021 Dollars (\$000)**

Workpaper	RAMP ID	Description	BY2021 Embedded Base Costs (000s)	TY2024 Estimated Total (000s)	TY2024 Estimated Incremental (000s)	GRC RSE*
2200-2344.000	SCG-Risk-2 - C07	Locate and Mark Operator Qualification - (MP)	101	101	0	0
2200-2344.000	SCG-Risk-2 - C08	Locate and Mark Operator Qualification - (HP)	24	24	0	0
<b>Total</b>			<b>125</b>	<b>125</b>	<b>0</b>	<b>0</b>

19 \*An RSE was not calculated for activities with zero listed for RSE.



1 program, and updating the qualifications record management system. In 2023, there will be 33  
 2 task re-qualifications due to operator qualification intervals reducing from five years to three  
 3 years. This has led to a large increase in workload for the operator qualification evaluators.  
 4 Additionally, evaluators have had to develop new covered tasks to align with industry norms and  
 5 audit recommendations, further increasing their workload. A labor adjustment was made for  
 6 additional incremental employees, including additional evaluators, SMEs, and oversight  
 7 specialists to accommodate for increasing workloads. Non-labor adjustments were made to  
 8 accommodate for a new Operator Qualification IT system subscription fee and the expenses  
 9 associated with the hiring of additional employees, including rental vehicles, fuel for rental  
 10 vehicles, employee development, training, office equipment, and computers. Incremental  
 11 vehicles were included in the testimony of Mr. Michael Franco (Ex. SCG-18) for these  
 12 incremental employees. Due to the long lead time needed for fleet vehicle purchases, rental  
 13 vehicle costs were also included as interim vehicles until the fleet vehicles are delivered and  
 14 ready for use.

15 **D. Policy Quality Assurance Control Effectiveness (Cost Center 2200-0970)**

16 **TABLE WR-20**  
 17 **Policy Quality Assurance / Quality Control & Effectiveness**

<b>B. Pipeline Policy</b>	<b>2021 Adjusted-Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
1. Policy QA/QC & Effectiveness	592	809	217

18 **1. Description of Costs and Activities**

19 Recorded to this cost center are the labor, employee expenses, and non-labor consulting,  
 20 materials and services required to develop and maintain the Gas Standard Effectiveness Program.  
 21 Title 49 of the CFR 192.605(b)(8) prescribes the minimum requirements to periodically review  
 22 the work performed by operator personnel to determine the adequacy and effectiveness of the  
 23 procedures. The periodic review is to be completed on SoCalGas and SDG&E procedures,  
 24 normally referred as Gas Operation Standards (GOS), which are listed in the Operating and  
 25 Maintenance Plan as required by PHMSA in 49 CFR § 192.605. The Gas Standard  
 26 Effectiveness Program is responsible for verifying observations that are conducted on Company  
 27 operations standards to determine and document the adequacy and effectiveness of procedures.  
 28 The group is comprised of one Manager and three technical advisors, who conduct the field

1 observations. Underlying activities include identifying the Company operation standards that  
 2 require observations, scheduling the field observation, documenting adequacy and effectiveness  
 3 of the procedure, initiating updates to the procedure when edits are recorded, and publishing and  
 4 deploying the enhanced procedure.

5 **2. Forecast Method**

6 The forecast method developed for this cost category is base year 2021. This method is  
 7 most appropriate because this activity is new as of 2021 and does not have a long expense  
 8 history. The base year is representative of SoCalGas’s expectations for TY 2024. As new  
 9 regulations continue to be introduced, relevant gas standards and Company policies need to be  
 10 updated to remain in compliance with the changes. This creates incremental workload for this  
 11 group as they work to promote the changes to the Gas Standards remain effective. As such,  
 12 incremental adjustments were made to the forecast to accommodate anticipated growth between  
 13 the base year and test year, as discussed below.

14 **3. Cost Drivers**

15 Labor adjustments were made to the forecast to accommodate for the salaries of existing  
 16 employees that joined the group in a reorganization in 2021. A non-labor adjustment was made  
 17 to accommodate estimated non-labor expenses for employee development, training, office  
 18 equipment, and computers for the employees that joined the group in 2021.

19 **E. Leakage Policy & Technologies (Cost Center 2200-2484)**

20 **TABLE WR-21**  
 21 **Leakage Policy & Technologies**

<b>B. Pipeline Policy</b>	<b>2021 Adjusted- Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
4. Leakage Policy & Technologies	329	429	100

22 **1. Description of Costs and Activities**

23 Recorded to this cost center are the labor, employee expenses, and non-labor materials  
 24 and services required to develop and maintain policies needed for gas operations, maintenance,  
 25 and emergency response related to leakage detection, identification, mitigation, and pipeline  
 26 patrol. The group is comprised of four FTEs, one Manager, and three Technical Advisors.  
 27 These positions act as a Subject Matter Expert (SME) for standards affecting field operations in

1 the areas of leakage clerical, pipeline patrol, leak detection, leak identification and coding,  
2 leakage mitigation, and leakage policy.

### 3 **2. Forecast Method**

4 The forecast method developed for this cost category is base year 2021. Over the last  
5 five years, over 5,000 leak detection related devices and equipment were purchased and  
6 deployed by the Leakage Policy group, averaging 1,000 units/year. In 2021, the group was able  
7 to deploy a count of 3,000 units, 5,000 when including supporting equipment, such as upgrades,  
8 adapters, probes, etc. As the amount of equipment deployed has increased by three to five times  
9 as much as previous years, other forecasting methodologies do not account for the increase in  
10 equipment deployment and associated costs in 2021. The base year 2021 method is most  
11 appropriate because this activity has changed in recent years and the base year is representative  
12 of SoCalGas's expectations for TY 2024, as discussed above. Incremental adjustments were  
13 made to the forecast to accommodate anticipated growth between the base year and test year, as  
14 discussed in the cost drivers below.

### 15 **3. Cost Drivers**

16 The common drivers for the costs in this workgroup include implementation of best  
17 practices and Company goals related to the reduction in methane emissions that impact changes  
18 in policies, processes, and technology used for leakage abatement, and shaping the future in  
19 clean energy. These practices and policies provide enhancements to emergency procedures,  
20 training, leakage detection, leakage mitigation, new methane detection technology, and  
21 electronic leak survey. Other cost drivers include continuous improvement opportunities  
22 identified during incident evaluations and process reviews. These evaluations create the need to  
23 update training materials, the leak mitigation standards, and the Notice of Publications (NOP).  
24 In addition, cost drivers include new technology in detection equipment, such as leakage-type  
25 deployment of field technologies (*e.g.* RMLDs, Gas Surveyor 700) and creation of new  
26 Company operations standards for the detection and identification of a hydrogen blended system  
27 and hydrogen detection equipment.

**F. Field Technologies (Cost Center 2200-2023)**

**TABLE WR-22  
Field Technologies**

<b>B. Pipeline Policy</b>	<b>2021 Adjusted- Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
2. Field Technologies	375	450	75

**1. Description of Costs and Activities**

Recorded to this cost center are the labor, employee expense, and non-labor materials and services to research and evaluate new tools and technologies that enhance or replace existing processes or tools and provide benefits in the form of improved safety and efficiency. This team helps mitigate risks associated with leak identification and repairs, locating gas pipelines ahead of excavations, reducing gas emissions, and prevention of injuries to employees and the public. Field Technologies supports Field Operations by conducting evaluations of new tools and technologies, development of Request for Proposals, deployment of new equipment, and training to help employees become proficient in the use of new and existing tools and equipment.

California Assembly Bill 1346 restricts the purchase of certain tools and equipment that create exhaust and emissions. Within AB1346, it has been interpreted that certain fuel-powered equipment under 25 horsepower will not be allowed for purchase. This includes generators, which are critical for Field Operations when working in remote areas where an alternative power source is required to remain compliant with safe practices and procedures. Field Technologies is working to find a battery powered alternative that is strong enough to power the equipment needed to perform duties required of Field Operations and once identified, the team will need to make appropriate purchases to rollout the new equipment.

**2. Forecast Method**

The forecast method developed for this cost category is base year 2021. Supply chain issues resulting from the COVID-19 pandemic and moderate price increases of materials in 2021 have raised base level costs for this activity. These cost increases have an undetermined end date but are expected to continue through the 2022 to 2024 period, at a minimum. Therefore, this forecasting method is most appropriate because the costs to perform this activity have changed in recent years and the base year is representative of SoCalGas's expectations for TY 2024.

Incremental adjustments were made to the forecast to accommodate anticipated growth between the base year and test year, as described in the cost drivers below.

**3. Cost Drivers**

The cost drivers for this work category support the mitigation of risks by providing services such as procurement, deployment, policy, technology support, and research of equipment, to meet the Company’s practices, procedures, and regulatory requirements.

Examples include:

- Identification and repair of leaks to reduce the risk of explosion or fire;
- Accurate locating of gas pipelines ahead of excavation to avoid damaging gas lines;
- Prevention of injuries to employees and the public;
- Continuous improvements for leak mitigation equipment, for both public safety and environmental compliance for methane leaks at facilities;
- Refresher training on key equipment and technologies needed to meet regulatory compliance and public safety and to minimize the potential for fines; and
- Develop strategies for tracking inspections and repairs to critical tools and equipment.

**G. Gas Operations Construction And Maintenance Staff (Cost Center 2200-2345)**

**TABLE WR-23  
Gas Operations Construction and Maintenance Staff**

<b>B. Pipeline Policy</b>	<b>2021 Adjusted-Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
3. Gas Operations Construction & Maintenance Staff	654	654	0

**1. Description of Costs and Activities**

Recorded to this cost center are the labor, employee expenses, and non-labor materials and services required to develop and maintain policies needed for gas operations, construction, and maintenance. The group is comprised of a Manager and Technical Advisors. These positions act as Subject Matter Experts (SME) for standards affecting field operations in the

1 areas of pressure control, construction, excavations, pipeline policy, maintenance, welding,  
 2 construction inspections, and self-audit requirements.

3 **2. Forecast Method**

4 The forecast method developed for this cost category is base year 2021. This method is  
 5 most appropriate because this activity has changed in 2021 due to a reorganization among the  
 6 Pipeline Policy Groups and the cost center does not have a long expense history in its current  
 7 form. The base year is representative of SoCalGas’s expectations for TY 2024. Incremental  
 8 adjustments were made to the forecast to accommodate anticipated growth between the base year  
 9 and test year.

10 **3. Cost Drivers**

11 Title 49 of the Code of Federal Regulations, sections 192.301, 192.601 and 192.701  
 12 prescribe the minimum requirements for construction, operations, training, and maintenance  
 13 procedures, respectively. The cost drivers in this area pertain to the development and  
 14 maintenance of standards impacting these areas including, but not limited to, tapping, pressure  
 15 control, maintenance, inspections, valve operations, and other standards. Other cost drivers  
 16 include continuous improvements based on incident reviews, process assessments, construction  
 17 contractor management, and inspections of construction activities.

18 **H. Shared Public Awareness Activities (Cost Center 2200-2417)**

19 **TABLE WR-24**  
 20 **Shared Public Awareness Activities**

<b>A. Damage Prevention</b>	<b>2021 Adjusted- Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
2. Shared Public Awareness Activities	102	547	445

21 **1. Description of Costs and Activities**

22 The activities associated with the shared service component of Public Awareness include  
 23 the central management of both SoCalGas and SDG&E’s Public Awareness plans. This co-  
 24 operator approach offers some resource efficiencies by leveraging the knowledge to the benefit  
 25 of both companies. As noted in the non-shared service discussion, the Public Awareness work  
 26 group is focused on the mandates from 49 C.F.R. § 192.616, and the additional outreach and  
 27 promotion of messaging which requires the development and implementation of a public  
 28 awareness program. The Public Awareness team is an intra-company group consisting of

1 representatives of the key departments that assist in the communications and outreach with  
2 targeted audiences and are involved in the development and implementation of public awareness  
3 communications.

4 Public Awareness manages the public awareness programs which focuses on the  
5 compliance program and overall public awareness, including media, social, and ad campaigns  
6 and relationships with external organizations that provide outreach on preventing excavation  
7 damages to SoCalGas and SDG&E's buried pipelines. Damages resulting from excavation  
8 activity are the greatest threat to SoCalGas and SDG&E's pipeline infrastructure, with potential  
9 for catastrophic consequences to public safety.

10 **a. RAMP Activities**

11 RAMP-related costs for Shared Public Awareness Activities include the costs for the  
12 following activities: (1) Outreach for Latent 3<sup>rd</sup> Party Damages. As described in Table WR-4  
13 above, this mitigation encompasses the efforts to identify and communicate with excavators who  
14 may have damaged a SoCalGas underground facility and fail to comply with safe excavation  
15 laws and best practices. Occasionally, during routine activities, SoCalGas will expose a section  
16 of underground piping and upon visual inspection determine that previously unknown damage  
17 has occurred. To identify excavators who may have conducted the excavation, further  
18 investigations is required to determine if any USA tickets or excavation/construction permits  
19 were issued in the area over a given time period.

20 Table WR-25 below provides the RAMP activities, their respective cost forecasts, and the  
21 RSEs for this workpaper. For additional details on these RAMP activities, please refer to my  
22 workpapers SCG-05-WP 2200-2417.  
23

**TABLE WR-25**  
**RAMP Activity O&M Forecasts by Workpaper**  
**In 2021 Dollars (\$000)**

<b>Workpaper</b>	<b>RAMP ID</b>	<b>Description</b>	<b>BY2021 Embedded Base Costs (000s)</b>	<b>TY2024 Estimated Total (000s)</b>	<b>TY2024 Estimated Incremental (000s)</b>	<b>GRC RSE*</b>
2200-2417.000	SCG-Risk-2 - M11	Outreach for Latent 3rd Party Damages (MP)	0	20	20	0
2200-2417.000	SCG-Risk-2 - M12	Outreach for Latent 3rd Party Damages (HP)	0	5	5	0
<b>Total</b>			<b>0</b>	<b>25</b>	<b>25</b>	<b>0</b>

\*An RSE was not calculated for activities with zero listed for RSE.

**2. Forecast Method**

The forecast method developed for this cost category is base year 2021. This method is most appropriate because this activity has changed in recent years and the base year is representative of SoCalGas’s expectations for TY 2024. Over the last 5 years (2017-2021), USA tickets have increased by 35% and SoCalGas expects this trend to continue over the next five years based on forecasted economic growth and planned infrastructure investment. Over the next five years, construction in Southern California is expected to grow, especially when the effects of the recent federal infrastructure bill begin to be realized.<sup>21</sup>

Because the Public Awareness Program needs to keep up with the anticipated growth in the region, incremental adjustments were made to the forecast to accommodate anticipated growth between the base year and test year, as discussed in the cost drivers below.

**3. Cost Drivers**

The cost drivers behind this forecast are increased PHMSA requirements and increased communication activities brought about by Public Awareness audit recommendations made by

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<sup>21</sup> H.R.3684 - Infrastructure Investment and Jobs Act.

1 the CPUC. In addition, as stated in the 2021 RAMP Report, Public Awareness is mandated  
2 pursuant to Title 49 C.F.R. § 192.616.<sup>22</sup>

3 The Damage Prevention Public Awareness Program’s purpose is to develop and  
4 implement a continuing public education program focused on use of the One-Call notification  
5 system; hazards associated with the unintended release of gas; physical indications that an  
6 unintended release of gas has occurred; steps that should be taken to protect public safety in the  
7 event of gas release; and procedures for reporting unintended releases of gas.

8 SoCalGas and SDG&E utilize multiple channels for this communication, such as  
9 billboards, bill inserts, radio announcements, bumper stickers, safety outreach events, press  
10 releases, social media, ad campaigns and sponsorships to capture a vast audience. More creative  
11 avenues are needed to enhance the program and provide opportunities for the various groups to  
12 “take-in” the messaging so that information is not overlooked or discarded.

13 Another cost driver is the damage reduction sustainability goal of 40-50% by Year 2030  
14 for SoCalGas. The utilities are dedicated to mitigating the risk and associated hazards of  
15 excavation damages. To achieve this goal, an increase in communications, activities and  
16 outreach for public awareness are needed to meet goals.

17 Additional resources are needed to meet these cost drivers and to allow for expansion of  
18 the Public Awareness program to identify communication opportunities. Incremental  
19 management employees are needed to support expanding the program, supporting Damage  
20 Prevention, and other internal stakeholders to improve public awareness communications  
21 throughout the service territory. As such, a labor adjustment was made to accommodate  
22 incremental Public Awareness advisors to be hired. A non-labor adjustment was made to  
23 accommodate the estimated non-labor expenses for incremental employees, including employee  
24 development, training, office equipment, and computers. These FTEs will support the  
25 compliance program, devise collaborations and campaigns with external organizations, work  
26 with Marketing Communications to expand public awareness campaigns, team with internal  
27 departments like Regional Public Affairs and Community Relations to create public awareness  
28 partnership opportunities throughout the service territory, and partner with Damage Prevention  
29 analysts to target excavators and their activities.

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<sup>22</sup> 49 C.F.R. § 192.616.

1 **I. Damage Prevention Strategies (Cost Center 2200- 2623)**

2 **TABLE WR-26**  
3 **Damage Prevention Strategies**

<b>A. Damage Prevention</b>	<b>2021 Adjusted- Recorded (000s)</b>	<b>TY2024 Estimated (000s)</b>	<b>Change (000s)</b>
3. Damage Prevention Strategies	1,439	3,466	2,027

4 **1. Description of Costs and Activities**

5 Damage Prevention Strategies manages the damage prevention program focusing on  
6 preventing excavation damages to SoCalGas’s buried pipelines. Damages resulting from  
7 excavation activity are the greatest threat to SoCalGas’s pipeline infrastructure, with potential for  
8 catastrophic consequences to public safety.

9 Membership Fees

10 Over the last five years (2017-2021), USA tickets have increased by 35%. This growth is  
11 forecast to continue into the future as the current California excavation law gains additional  
12 enforcement and existing public awareness efforts increase excavators’ awareness of digging  
13 laws. The California Underground Facilities Safe Excavation Board has been established to act  
14 against those parties who violate the excavation law. In addition, in October 2021, the Governor  
15 signed Senate Bill 297 into law, which enacted the Wade Kilpatrick Gas Safety and Workforce  
16 Adequacy Act of 2021. The bill holds any contractor liable that causes damage to a subsurface  
17 installation by 1) failing to provide notice of the need for a gas corporation to locate and mark its  
18 subsurface installations, 2) commencing excavation before a gas corporation marks its  
19 subsurface installations subject to a civil penalty in an amount not to exceed \$100,000 and  
20 possible suspension or revocation of the contractor’s license if specified conditions are met. The  
21 State’s added enforcement and SB 297’s amendments increasing the maximum penalties for  
22 violations are expected to compel more excavators to call USA, which is expected to increase the  
23 ticket volume in the State. Thus, the increased ticket volume will directly increase membership  
24 fees for Underground Service Alert of Southern California (DigAlert) and Underground Service  
25 Alert of Northern California, as further discussed in the testimony of Gas Distribution (Ex. SCG-  
26 04).

1 Expanding Damage Prevention Program Activities and Continuous Improvement

2 SoCalGas is dedicated to mitigating the risk and associated hazards of excavation  
3 damages through the expansion of its Damage Prevention program by employing additional  
4 resources to proactively identify specific threats to its pipelines. Incremental management  
5 employees are needed to analyze the excavation data collection and identify trends and develop  
6 continuous improvement action plans. The team will focus on excavation trends with the highest  
7 risk and have a presence in the field to meet with excavators on the jobsite and provide safe  
8 digging education. The team will also work with internal stakeholders to improve internal locate  
9 and mark activities and provide incident investigation support. An analysis of SoCalGas's  
10 excavation damage prevention program substantiates the need to increase resources dedicated to  
11 preventing damage to its natural gas pipelines and averting the potential for injuries and property  
12 damage:

- 13 • Approximately sixty percent (60%) of excavation damages to SoCalGas's  
14 natural gas system results from contractors and property owners failing to call  
15 USA prior to digging. It is important to enhance outreach to educate the  
16 public about the requirement to notify SoCalGas, through the Regional  
17 Notification Centers, of planned excavations in the vicinity of its gas  
18 pipelines. SoCalGas intends to assign resources to patrol its service territory  
19 to proactively identify contractors or property owners digging without USA  
20 tickets and educate them on the requirements of California's excavation laws.
- 21 • Improve data collection for trend analysis and development of actions to  
22 address the root causes and offenders driving excavation damages in  
23 SoCalGas's service territory. Resources in the field and in the office are  
24 needed to collect this data.
- 25 • Strengthen partnerships with local cities and municipalities to identify repeat  
26 offenders and work collectively to require excavation laws are followed as  
27 part of the permitting process. Resources familiar with the state's excavation  
28 laws are needed to effectively communicate to city officials of their ability to  
29 take actions and sanction parties not adhering to the law.

- Expand coordination of contractor and public education to avoid damaging underground substructures when excavating and improve safe digging behavior.

These FTEs will perform the following duties:

- Investigate and collect detailed data on excavation damages;
- Visit excavators in the field; meet and discuss the 811 USA process for safe excavation
- Solicit feedback on SoCalGas’s procedures and processes for continuous improvement opportunities;
- Reduce damages caused by repeat offenders;
- Analyze locate and mark activities, especially higher risk tickets;
- Collaborate with Operating Districts to improve equipment, procedures, and locate and mark techniques;
- Meet with Municipal Planning Departments about excavation laws and permitting process;
- Meet with builders, new business planners, and contractors to discuss opportunities to minimize excavation damages; and
- Supervise Damage Prevention analysts and activities by managing work assignments, activities, and provide coaching, mentoring, and training to Damage Prevention Analysts.

Gold Shovel

The Gold Shovel Standard (GSS) Program utilizes an external organization that certifies contractors’ policies and procedures to protect underground facilities against an established GSS. SoCalGas requires all pipeline contractors to participate in the Gold Shovel Program. The GSS provides positive guidance to underground contractors, aligning their excavation practices against established safe digging practices and procedures. It helps to educate contractors about industry excavation standards and identify and address gaps in their processes. SoCalGas requires contractors who perform excavation on behalf of SoCalGas to be GSS certified. GSS serves as an additional quality check for its contractors. Actively supporting the GSS Program helps to improve use of the 811 USA one-call requirement and to improve safe digging techniques, such as hand-digging when near gas pipelines.



Automating Third Party Excavation incident reporting into one system will centralize the reporting and data analysis. This will assist with meeting compliance reporting obligations, develop a better understanding of the data collected in an investigation, simplify reporting, and enhance data analysis processes. Title 49 Code of Federal Regulation, section 192.614 and California Government Code, section 4216 require SoCalGas to collect data on third-party excavation incidents. Automating third-party excavation incident reporting is an effort to consolidate and simplify the data collection process involved in investigating a gas incident. Field supervisors complete the investigations of gas incidents. Currently, there are multiple systems and processes used to capture and report data, internally and externally, for a gas incident. All systems and processes might not be updated simultaneously, thereby creating additional manual steps when using the data for internal process improvement analysis or generate reports for internal or external stakeholders. SoCalGas is undertaking an initiative to centralize these processes and systems into one system to minimize data quality issues, simplify reporting, and standardize data collection with field supervisors. Standardizing data collection into one system will centralize reporting and data analysis, assist with meeting compliance reporting obligations, develop a better understanding of data collected during incident evaluations, simplify reporting, and enhance data analysis processes.

Table WR-27 below provides the RAMP activities, their respective cost forecasts, and the RSEs for this workpaper. For additional details on these RAMP activities, please refer to my workpapers SCG-05-WP 2200-2623.

**TABLE WR-27**  
**RAMP Activity O&M Forecasts by Workpaper**  
**In 2021 Dollars (\$000)**

<b>Workpaper</b>	<b>RAMP ID</b>	<b>Description</b>	<b>BY2021 Embedded Base Costs (000s)</b>	<b>TY2024 Estimated Total (000s)</b>	<b>TY2024 Estimated Incremental (000s)</b>	<b>GRC RSE*</b>
2200-2623.000	SCG-Risk-2 - C03	Locate and Mark Activities - (MP)	1,052	1,052	0	14
2200-2623.000	SCG-Risk-2 - C04	Locate and Mark Activities - (HP)	249	249	0	98

2200-2623.000	SCG-Risk-2 - C11	Damage Prevention Analysts - (MP)	0	1,214	1,214	52
2200-2623.000	SCG-Risk-2 - C12	Damage Prevention Analysts (HP)	0	303	303	37
2200-2623.000	SCG-Risk-2 - C19	Damage Prevention Policy Activities - (MP)	1	1	0	0
2200-2623.000	SCG-Risk-2 - C22	Gold Shovel Standard Program - (MP)	2	2	0	0
2200-2623.000	SCG-Risk-2 - C23	Gold Shovel Standard Program (HP)	1	1	0	0
2200-2623.000	SCG-Risk-2 - M1	Automate Third Party Excavation Incident Reporting (MP)	0	85	85	86
2200-2623.000	SCG-Risk-2 - M2	Automate Third Party Excavation Incident Reporting (HP)	0	19	19	127
<b>Total</b>			<b>1,305</b>	<b>340</b>	<b>1,621</b>	<b>414</b>

\*An RSE was not calculated for activities with zero listed for RSE.

## 2. Forecast Method

The forecast method developed for this cost category is base year 2021. This method is most appropriate because this activity has changed in recent years and the base year is representative of SoCalGas's expectations for TY 2024. Over the last 5 years (2017-2021), USA tickets have increased by 35% and SoCalGas expects this trend to continue over the next five years based on forecasted economic growth and planned infrastructure investment. This increase

1 in ticket volume drives the resources needed to proactively mitigate the potential for damage to  
2 the pipeline infrastructure. Incremental costs were added to the forecast to accommodate  
3 anticipated additional labor and non-labor resources needed to support the expected increased  
4 focus on damage prevention programs between the base year and test year.

### 5 **3. Cost Drivers**

6 The cost drivers behind this forecast are increased ticket costs and volume driven by the  
7 enforcement of excavation laws<sup>23</sup> by the California Underground Facilities Safe Excavation  
8 Board and by the level of general construction and development activity in the public and private  
9 sectors. Examples of these types of construction activities include private construction projects,  
10 such as commercial and industrial centers, strip malls, residential remodeling projects, and city,  
11 county, and state projects, such as freeway and street improvements, and storm drain and sewer  
12 work. In addition, as SoCalGas's infrastructure expands into outlying areas to provide service to  
13 new residential developments, increased activity follows, as developers move in to construct  
14 schools, shops, restaurants, etc., to meet the needs of those new communities

15 Over the next five years, construction in Southern California is expected to grow,  
16 especially when the effects of the recent federal infrastructure bill begin to be realized.<sup>24</sup> Labor  
17 adjustments were made to accommodate incremental hires to support increased focus on damage  
18 prevention programs. Non-labor adjustments were made to accommodate expected ticket growth  
19 as construction increases in Southern California, in addition to a known increase in ticket fees.  
20 Additionally, a non-labor adjustment was made to accommodate the estimated non-labor  
21 expenses for incremental new employees, which includes rental vehicles, fuel for rental vehicles,  
22 employee development, training, office equipment, and computers.

## 23 **VI. NATURAL GAS LEAK ABATEMENT PROGRAM MEMORANDUM ACCOUNT** 24 **(NGLAPMA) RECOVERY**

25 As part of my testimony, I am providing the business justification for the costs incurred  
26 for the program administration activities from July 17, 2017, through December 31, 2021, that  
27 have been posted to the NGLAPMA. The NGLAPMA records the incremental costs associated

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<sup>23</sup> 49 C.F.R. § 192.616; Cal. Govt. Code § 4216; 19 Cal. Code. Regs. § 4100.

<sup>24</sup> H.R.3684 - Infrastructure Investment and Jobs Act.

1 with program administration as part of the Natural Gas Leak Abatement Program (NGLAP)  
2 authorized by the Commission in D.17-06-015.

3 On January 22, 2015, the CPUC issued Rulemaking (R.) 15-01-008 to implement  
4 provisions of Senate Bill (SB) 1371, which set forth targets for natural gas leak abatement.  
5 Phase I of R.15-01-008 was established to specifically address the overall policies and guidelines  
6 for a natural gas leak abatement program consistent with SB 1371. On June 15, 2017, the CPUC  
7 issued D.17-06-015 outlining the NGLA Program for the Utilities, pursuant to Pub. Util. Code §§  
8 975, 977, 978. The Decision directed the Utilities to submit a Tier 3 Advice Letters to establish  
9 2018 and 2019 revenue requirement forecasts and caps for the NGLA Program. On July 17,  
10 2017, SoCalGas and SDG&E submitted the requisite Tier 3 ALs (AL 5166 and 2593-G  
11 respectively) per R.15-01-008 to implement provisions of SB 1371.

12 On March 12, 2020, SoCalGas submitted AL 5603 to provide forecasted costs for its  
13 2020 Compliance Plan, including its forecast of costs and emissions reductions for the years  
14 2021 and 2022 and revenue requirements for the life of the capital projects. Pursuant to Energy  
15 Division's request, dated April 16, 2020, SoCalGas was directed to supplement AL 5603. On  
16 June 12, 2020, SoCalGas submitted AL 5603-A which replaced AL 5603 in its entirety and  
17 provided updated cost forecasts and included a discussion about the emission reduction forecast.  
18 On June 25, 2020, Energy Division directed SoCalGas to supplement AL 5603-A. Therefore,  
19 SoCalGas submitted AL 5603-B on June 29, 2020, to replace AL 5603-A in its entirety. On  
20 October 2, 2020, SoCalGas submitted AL 5603-C to replace AL 5603-B in its entirety and  
21 correct rate impact figures. On December 17, 2020, the CPUC approved the Utilities' ALs and  
22 Compliance Plans through Resolution G-3576.

23 Details of costs related to the NGLAPMA are determined in a separate Tier 3 advice  
24 letter in compliance with D.17-06-015. Based on D. 17-06-015, Ordering Paragraph 12,  
25 SoCalGas will seek cost recovery in an appropriate ratemaking proceeding, therefore SoCalGas  
26 respectfully requests NGLAPMA recovery in this GRC. Based on the foregoing, the  
27 administrative costs recorded by SoCalGas are in compliance with D.17-06-015, are reasonable,  
28 and should be approved by the Commission. Additional information regarding regulatory  
29 accounts is provided in the Regulatory Accounts testimony of Ms. Rae Marie Yu (Ex. SCG-38).  
30 Table WR-28 below shows the activity in this memorandum account.

1  
2 **Table WR-28**  
**Natural Gas Leak Abatement Program Memo Account**

<b>Year</b>	<b>Expenses (\$)</b>
<b>2018</b>	631,970
<b>2019</b>	2,136,696
<b>2020</b>	638,137
<b>2021</b>	761,643

3 **VII. CONCLUSION**

4 The SoCalGas forecast of the O&M expenses represented in my testimony balances  
5 compliance obligations, risk, and the cost to deliver safe, clean, and reliable natural gas service.  
6 Thus, SoCalGas requests the Commission adopt a TY 2024 forecast of \$23,616,000 for Gas  
7 System Staff & Technology O&M expenses, which is composed of \$13,758,000 for non-shared  
8 service activities and \$9,858,000 for shared service activities, in addition to the IT capital  
9 projects presented in this testimony, the capital costs of which are sponsored by Mr. Exxon (Ex.  
10 SCG-21, Chapter 2).

11 In summary, these forecasts reflect sound judgment and represent the impact from higher  
12 regulatory expectations to continuously enhance the safety of the SoCalGas natural gas system  
13 and provide safe, clean, and reliable natural gas service at reasonable rates. The Commission  
14 should adopt the forecasted expenditures discussed in this testimony because they are prudent  
15 and reasonable.

16 This concludes my prepared direct testimony.

1 **VIII. WITNESS QUALIFICATIONS**

2 My name is Wallace Rawls. My business address is 555 West Fifth Street, Los Angeles,  
3 California 90013. I am employed by SoCalGas as the Director of Gas System Integrity Staff &  
4 Programs. In this position, I am responsible for providing strategic direction and management of  
5 policies, procedures, training, operator qualification, and programs to comply with safety and  
6 other codes in an efficient and repeatable manner. SoCalGas's Safety Management System  
7 continuous improvement value is embedded in the Company's processes to optimize and  
8 standardize activities and enhance safety. Performance metrics are established to monitor and  
9 adjust as needed with Operations.

10 I have been employed at SoCalGas since 1989 and have held a variety of positions with  
11 increasing responsibility within Operations. I've held leadership roles in Gas Distribution, Area  
12 Resource Scheduling, Safety & Wellness, and Gas Engineering Staff & Programs. I have  
13 worked in various areas responsible for planning, installing, performing maintenance, and  
14 replacing gas infrastructure. My team provides leadership and oversight implementing Gas  
15 Standards, business process enhancements, and damage prevention policy development and  
16 support. I have held my current position as Director of Gas System Integrity Staff & Programs  
17 since May 2020.

18 I hold a Bachelor's degree in Business Administration from the University of Laverne and  
19 a Master of Business Administration degree from Azusa Pacific University.

20 I have not previously testified before the Commission.

## **APPENDIX A**

### **GLOSSARY OF TERMS**

**APPENDIX A**  
**Glossary of Terms**

Acronym	Definition
811	National Call-Before-You-Dig Phone Number
49 CFR 192	Transportation of Natural Gas By Pipeline: Minimum Federal Safety Standards
AIP	Asset Investment Planning
AIPM	Asset Investment Planning & Management
API	American Petroleum Institute
BY	Base Year
CalGEM	California Geologic Energy Management Division
CDM	Capital Delivery Model
CFR	Code of Federal Regulations
CPUC	California Public Utilities Commission
CSLB	California State Licensing Board
DCM	Digital Content Management
DELTA	Distribution Engineering Lifecycle Tracking Application
DIMP	Distribution Integrity Management Program
DMS	Document Management System
EAM	Enterprise Asset Management
ELS	Electronic Leak Survey
ERM	Enterprise Risk Management
FSD	Field Service Delivery
GARP	Generally Accepted Records Keeping Principles
GIS	Geographic Information System
GSS	Gold Shovel Standard Program
GTSR	Gas Transmission Safety Rule
HP	High Pressure
HPPR	High Pressure Project Record
IG	Information Governance
ISO	International Standards Organization
IT	Information Technology
KPIs	Key Performance Indicators
MM	Material Management
MP	Medium Pressure
NGLA	Natural Gas Leak Abatement

NGLAPMA	Natural Gas Leak Abatement Program Memorandum Account
O&M	Operations & Maintenance
OJT	On-The-Job-Training
OQ	Operator Qualification
PAA	Public Awareness Administrator
PDMS	Pipeline Data Management System
PHMSA	Pipeline and Hazardous Materials Safety Administration
PI	Process Information
PPMS	Project and Portfolio Management System
psi	Pounds per square inch
RAMP	Risk Assessment Mitigation Phase
RIM	Records and Information Management
SMS	Safety Management Systems
SPD	Safety Policy Division
TY	Test Year
WIMS	Well Integrity Management Solution
WM	Work Management
WMS	Work Management System

**APPENDIX B**

**RAMP ACTIVITIES SORTED BY WORKPAPER**

**APPENDIX B**  
**RAMP Activities Sorted By Workpaper**

<b>GAS SYSTEM STAFF &amp; TECHNOLOGY</b>						
<b>RAMP Activity O&amp;M Forecasts by Workpaper (In 2021 \$)</b>						
<b>Workpaper</b>	<b>RAMP ID</b>	<b>Description</b>	<b>BY2021 Embedded Base Costs (000s)</b>	<b>TY2024 Estimated Total (000s)</b>	<b>TY2024 Estimated Incremental (000s)</b>	<b>GRC RSE*</b>
2200-2344.000	SCG-Risk-2 - C07	Locate and Mark Operator Qualification - (MP)	101	101	0	0
2200-2344.000	SCG-Risk-2 - C08	Locate and Mark Operator Qualification - (HP)	24	24	0	0
2200-2417.000	SCG-Risk-2 - M11	Outreach for Latent 3rd Party Damages (MP)	0	20	20	0
2200-2417.000	SCG-Risk-2 - M12	Outreach for Latent 3rd Party Damages (HP)	0	5	5	0
2200-2623.000	SCG-Risk-2 - C03	Locate and Mark Activities - (MP)	1,052	1,052	0	14
2200-2623.000	SCG-Risk-2 - C04	Locate and Mark Activities - (HP)	249	249	0	98
2200-2623.000	SCG-Risk-2 - C11	Damage Prevention Analysts - (MP)	0	1,214	1,214	52

2200-2623.000	SCG-Risk-2 - C12	Damage Prevention Analysts (HP)	0	303	303	37
2200-2623.000	SCG-Risk-2 - C19	Damage Prevention Policy Activities - (MP)	1	1	0	0
2200-2623.000	SCG-Risk-2 - C22	Gold Shovel Standard Program - (MP)	2	2	0	0
2200-2623.000	SCG-Risk-2 - C23	Gold Shovel Standard Program (HP)	1	1	0	0
2200-2623.000	SCG-Risk-2 - M1	Automate Third Party Excavation Incident Reporting (MP)	0	85	85	86
2200-2623.000	SCG-Risk-2 - M2	Automate Third Party Excavation Incident Reporting (HP)	0	19	19	127
2SI001.000	SCG-Risk-2 - C01	Locate and Mark Training - (MP)	90	90	0	0
2SI001.000	SCG-Risk-2 - C02	Locate and Mark Training - (HP)	21	21	0	0
2SI001.000	SCG-Risk-2 - C27	Company Excavator Training - (MP)	82	82	0	0
2SI001.000	SCG-Risk-2 - C28	Company Excavator Training (HP)	19	19	0	0

2SI002.002	SCG-CFF-1 - 7	Asset and Records Management	182	807	625	0
2SI002.004	SCG-CFF-1 - 2	Operational Compliance and Oversight	239	239	0	0
2SI003.000	SCG-Risk-2 - C15-T1 thru T4	Public Awareness MP (T1 - T4)	546	546	0	25
2SI003.000	SCG-Risk-2 - C16-T1 thru T4	Public Awareness HP (T1 - T4)	129	129	0	115
<b>Total</b>			<b>2,738</b>	<b>5,009</b>	<b>2,271</b>	<b>554</b>

\*An RSE was not calculated for activities with zero listed for RSE.