

Application of SOUTHERN CALIFORNIA GAS)
COMPANY for authority to update its gas revenue)
requirement and base rates)
effective January 1, 2024 (U 904-G))

Application No. 22-05-____
Exhibit No.: (SCG-09-CWP)

CAPITAL WORKPAPERS TO
PREPARED DIRECT TESTIMONY
OF AMY KITSON / TRAVIS T. SERA
ON BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

May 2022



2024 General Rate Case - APP
INDEX OF WORKPAPERS

Exhibit SCG-09-CWP - GAS INTEGRITY PROGRAMS

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Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Overall Summary For Exhibit No. SCG-09-CWP

Area:	GAS INTEGRITY PROGRAMS
Witness:	Amy Kitson

		In 2021 \$ (000)		
		Adjusted-Forecast		
		2022	2023	2024
A. TIMP		134,129	134,979	167,838
B. DIMP		231,052	231,744	232,119
C. SIMP		54,417	46,791	26,982
D. FIMP		0	0	2,366
E. GSEP		6,936	48,340	108,588
	Total	426,534	461,854	537,893

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Category: A. TIMP
Workpaper: VARIOUS

Summary for Category: A. TIMP

	In 2021\$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	6,246	13,110	14,581	17,718
Non-Labor	106,392	121,019	120,398	150,120
NSE	0	0	0	0
Total	112,638	134,129	134,979	167,838
FTE	52.6	112.0	123.8	148.8

002760 TIMP - Distribution

Labor	265	1,754	1,595	1,146
Non-Labor	3,826	19,064	13,005	6,187
NSE	0	0	0	0
Total	4,091	20,818	14,600	7,333
FTE	2.4	15.9	14.4	10.4

P03120 TIMP

Labor	5,396	9,912	11,556	15,240
Non-Labor	98,573	93,084	98,608	135,750
NSE	0	0	0	0
Total	103,969	102,996	110,164	150,990
FTE	44.0	80.8	94.2	124.3

P07560 TIMP Data Management - IT

Labor	585	1,444	1,430	1,332
Non-Labor	3,993	8,871	8,785	8,183
NSE	0	0	0	0
Total	4,578	10,315	10,215	9,515
FTE	6.2	15.3	15.2	14.1

Note: Totals may include rounding differences.

Beginning of Workpaper Group
002760 - TIMP - Distribution

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00276.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: 002760 - TIMP - Distribution

Summary of Results (Constant 2021 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2017	2018	2019	2020	2021	2022	2023	2024
Years									
Labor	Base YR Rec	239	451	510	218	265	1,754	1,595	1,146
Non-Labor	Base YR Rec	3,905	9,457	7,517	3,986	3,826	19,064	13,005	6,187
NSE	Base YR Rec	0	0	0	0	0	0	0	0
Total		4,144	9,908	8,026	4,204	4,091	20,818	14,600	7,333
FTE	Base YR Rec	1.7	2.7	3.8	1.7	2.4	15.9	14.4	10.4

Business Purpose:

The TIMP is a federally-mandated program developed and implemented in compliance with 49 CFR Part 192, Subpart O and other related sections such as 49 CFR § 192.710.

Physical Description:

Remediation or replacement/installation of transmission pipeline assets managed by the Distribution organization as a result of TIMP assessments or other activities driven by 49 CFR Part 192, Subpart O (e.g., preventative and mitigative measures) and 49 CFR § 192.710.

Project Justification:

Remediation activities are necessary to maintain the integrity of the SoCalGas transmission system.

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 00276.0
Category: A. TIMP
Category-Sub: 1. TIMP
Workpaper Group: 002760 - TIMP - Distribution

Forecast Methodology:

Labor - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the current structure of the organization and cost drivers. Since forecasts are rooted in average costs and the number and types of assessments conducted each year and there is variability of assessment activity from year to year due to the compliance-driven reassessment cycles, SoCalGas adjusts the forecasts accordingly.

Non-Labor - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the current structure of the organization and cost drivers. Since forecasts are rooted in average costs and the number and types of assessments conducted each year and there is variability of assessment activity from year to year due to the compliance-driven reassessment cycles, SoCalGas adjusts the forecasts accordingly.

NSE - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the current structure of the organization and cost drivers. Since forecasts are rooted in average costs and the number and types of assessments conducted each year and there is variability of assessment activity from year to year due to the compliance-driven reassessment cycles, SoCalGas adjusts the forecasts accordingly.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00276.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: 002760 - TIMP - Distribution

Summary of Adjustments to Forecast

In 2021 \$ (000)										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	265	265	265	1,489	1,330	881	1,754	1,595	1,146
Non-Labor	Base YR Rec	3,826	3,826	3,826	15,238	9,179	2,361	19,064	13,005	6,187
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		4,091	4,091	4,091	16,727	10,509	3,242	20,818	14,600	7,333
FTE	Base YR Rec	2.4	2.4	2.4	13.5	12.0	8.0	15.9	14.4	10.4

Forecast Adjustment Details

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
2022	1,489	15,238	0	16,727	13.5
Explanation:	This adjustment captures the incremental 2022 costs above the base year recorded. Cost forecasts are primarily based on the expected O&M activities.				
2022 Total	1,489	15,238	0	16,727	13.5
2023	1,330	9,179	0	10,509	12.0
Explanation:	This adjustment captures the incremental 2023 costs above the base year recorded. Cost forecasts are primarily based on the expected O&M activities.				
2023 Total	1,330	9,179	0	10,509	12.0
2024	881	2,361	0	3,242	8.0
Explanation:	This adjustment captures the incremental 2024 costs above the base year recorded. Cost forecasts are primarily based on the expected O&M activities.				
2024 Total	881	2,361	0	3,242	8.0

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 00276.0
Category: A. TIMP
Category-Sub: 1. TIMP
Workpaper Group: 002760 - TIMP - Distribution

Determination of Adjusted-Recorded:

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	152	304	355	161	224
Non-Labor	2,913	7,474	6,224	3,456	3,523
NSE	0	0	0	0	0
Total	3,065	7,778	6,579	3,617	3,747
FTE	1.4	2.3	3.2	1.4	1.9
Adjustments (Nominal \$)**					
Labor	0	0	0	0	1
Non-Labor	2	0	0	9	303
NSE	0	0	0	0	0
Total	2	0	0	9	304
FTE	0.0	0.0	0.0	0.0	0.1
Recorded-Adjusted (Nominal \$)					
Labor	152	304	355	161	225
Non-Labor	2,914	7,474	6,224	3,465	3,826
NSE	0	0	0	0	0
Total	3,066	7,778	6,579	3,626	4,051
FTE	1.4	2.3	3.2	1.4	2.0
Vacation & Sick (Nominal \$)					
Labor	26	52	67	28	40
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	26	52	67	28	40
FTE	0.3	0.4	0.6	0.3	0.4
Escalation to 2021\$					
Labor	61	95	88	29	0
Non-Labor	991	1,983	1,293	521	0
NSE	0	0	0	0	0
Total	1,052	2,078	1,381	549	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2021\$)					
Labor	239	451	510	218	265
Non-Labor	3,905	9,457	7,517	3,986	3,826
NSE	0	0	0	0	0
Total	4,144	9,908	8,026	4,204	4,091
FTE	1.7	2.7	3.8	1.7	2.4

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00276.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: 002760 - TIMP - Distribution

Summary of Adjustments to Recorded:

In Nominal \$(000)					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	0	1
Non-Labor	2	0	0	9	303
NSE	0	0	0	0	0
Total	2	0	0	9	304
FTE	0.0	0.0	0.0	0.0	0.1

Detail of Adjustments to Recorded in Nominal \$:

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
2017	0	2	0	2	0.0
Explanation:	To reclassify 6215567, 6215568 material costs from indirect to direct.				
2017 Total	0	2	0	2	0.0
2018 Total	0	0	0	0	0.0
2019 Total	0	0	0	0	0.0
2020	0	9	0	9	0.0
Explanation:	To reclassify 6215567, 6215568 material costs from indirect to direct.				
2020 Total	0	9	0	9	0.0
2021	1	0	0	1	0.1
Explanation:	Cost reversal of 2016 spend, PSEP order, BC 278				
2021	0	303	0	303	0.0
Explanation:	To add material costs (6215567 and 6215568) that were misclassified as indirect				
2021 Total	1	303	0	304	0.1

Note: Totals may include rounding differences.

**Beginning of Workpaper Sub Details for
Workpaper Group 002760**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00276.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: 002760 - TIMP - Distribution
 Workpaper Detail: 002760.001 - 002760 - RAMP - Integrity Assessments and Remediation (HCA and non-HCA)
 In-Service Date: Not Applicable

Description:

TIMP Capital activities in budget code 276 include retrofitting pipelines for in-line inspection capability, replacements, and other capital remediation as a result of assessment findings on the DOT-defined transmission pipelines operated by the Distribution organization.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		1,754	1,595	1,146
Non-Labor		19,064	13,005	6,187
NSE		0	0	0
	Total	<u>20,818</u>	<u>14,600</u>	<u>7,333</u>
FTE		15.9	14.4	10.4

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00276.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: 002760 - TIMP - Distribution
 Workpaper Detail: 002760.001 - 002760 - RAMP - Integrity Assessments and Remediation (HCA and non-HCA)

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-1 Incident Related to the High Pressure System (Excluding Dig-in)

RAMP Line Item ID: C21 & M2 T1-T2

RAMP Line Item Name: Integrity Assessments & Remediation (HCA and Non-HCA)

Tranche(s): Tranche1: Transmission - HCA; Tranche2: Transmission - non-HCA

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	1,849	8,476	3,494	4,469	16,439	158,236	202,346
Tranche 2 Cost Estimate	2,242	12,342	11,106	2,864	26,312	262,687	335,975

Cost Estimate Changes from RAMP:

Costs presented in this workpaper are limited to Budget Code 276. Additional costs under C22 are presented in workpapers P03120 and P07560. The total costs across workpapers are within the RAMP range.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 No feasible units	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tranche 2 No feasible units	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:

No change to the work units from the RAMP report.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	4.600	83.100
Tranche 2	2.500	85.500

RSE Changes from RAMP:

Refer to O&M workpapers.

**Beginning of Workpaper Group
P03120 - TIMP**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: P0312.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: P03120 - TIMP

Summary of Results (Constant 2021 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2017	2018	2019	2020	2021	2022	2023	2024
Years									
Labor	Base YR Rec	5,233	6,862	5,588	6,322	5,396	9,912	11,556	15,240
Non-Labor	Base YR Rec	128,176	225,490	109,443	72,546	98,573	93,084	98,608	135,750
NSE	Base YR Rec	0	0	0	0	0	0	0	0
Total		133,410	232,351	115,031	78,868	103,969	102,996	110,164	150,990
FTE	Base YR Rec	34.1	49.5	38.3	45.3	44.0	80.8	94.2	124.3

Business Purpose:

The TIMP is a federally-mandated program developed and implemented in compliance with 49 CFR Part 192, Subpart O and other related sections such as 49 CFR § 192.710.

Physical Description:

Remediation and replacement/installation of transmission pipeline assets managed by the Transmission organization as a result of TIMP assessments or other activities driven by 49 CFR Part 192, Subpart O and 49 CFR § 192.710.

Project Justification:

Remediation activities are necessary to maintain the integrity of the SoCalGas transmission system.

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: P0312.0
Category: A. TIMP
Category-Sub: 1. TIMP
Workpaper Group: P03120 - TIMP

Forecast Methodology:

Labor - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the current structure of the organization and cost drivers. Since forecasts are rooted in average costs and the number and types of assessments conducted each year and there is variability of assessment activity from year to year due to the compliance-driven reassessment cycles, SoCalGas adjusts the forecasts accordingly.

Non-Labor - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the current structure of the organization and cost drivers. Since forecasts are rooted in average costs and the number and types of assessments conducted each year and there is variability of assessment activity from year to year due to the compliance-driven reassessment cycles, SoCalGas adjusts the forecasts accordingly.

NSE - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the current structure of the organization and cost drivers. Since forecasts are rooted in average costs and the number and types of assessments conducted each year and there is variability of assessment activity from year to year due to the compliance-driven reassessment cycles, SoCalGas adjusts the forecasts accordingly.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: P0312.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: P03120 - TIMP

Summary of Adjustments to Forecast

In 2021 \$ (000)										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	5,396	5,396	5,396	4,516	6,160	9,844	9,912	11,556	15,240
Non-Labor	Base YR Rec	98,573	98,573	98,573	-5,489	35	37,177	93,084	98,608	135,750
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		103,969	103,969	103,969	-973	6,195	47,021	102,996	110,164	150,990
FTE	Base YR Rec	44.0	44.0	44.0	36.8	50.2	80.3	80.8	94.2	124.3

Forecast Adjustment Details

Year	Labor	NLbr	NSE	Total	FTE
2022	4,516	-5,489	0	-973	36.8
Explanation:	This adjustment captures the incremental 2022 costs above the base year recorded. Cost forecasts are primarily based on the expected O&M activities.				
2022 Total	4,516	-5,489	0	-973	36.8
2023	6,160	35	0	6,195	50.2
Explanation:	This adjustment captures the incremental 2023 costs above the base year recorded. Cost forecasts are primarily based on the expected O&M activities.				
2023 Total	6,160	35	0	6,195	50.2
2024	9,844	37,177	0	47,021	80.3
Explanation:	This adjustment captures the incremental 2024 costs above the base year recorded. Cost forecasts are primarily based on the expected O&M activities.				
2024 Total	9,844	37,177	0	47,021	80.3

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: P0312.0
Category: A. TIMP
Category-Sub: 1. TIMP
Workpaper Group: P03120 - TIMP

Determination of Adjusted-Recorded:

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	3,339	4,627	3,889	4,672	4,581
Non-Labor	95,446	177,990	90,602	62,740	94,412
NSE	0	0	0	0	0
Total	98,785	182,617	94,492	67,412	98,994
FTE	29.0	42.0	32.1	37.9	36.9
Adjustments (Nominal \$)**					
Labor	0	0	0	0	5
Non-Labor	199	214	17	324	4,160
NSE	0	0	0	0	0
Total	199	214	17	324	4,166
FTE	0.0	0.0	0.0	0.0	0.1
Recorded-Adjusted (Nominal \$)					
Labor	3,339	4,627	3,889	4,672	4,587
Non-Labor	95,645	178,205	90,619	63,064	98,573
NSE	0	0	0	0	0
Total	98,984	182,831	94,509	67,736	103,159
FTE	29.0	42.0	32.1	37.9	37.0
Vacation & Sick (Nominal \$)					
Labor	566	796	737	823	810
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	566	796	737	823	810
FTE	5.1	7.5	6.2	7.4	7.0
Escalation to 2021\$					
Labor	1,328	1,439	961	826	0
Non-Labor	32,531	47,285	18,824	9,482	0
NSE	0	0	0	0	0
Total	33,859	48,724	19,785	10,308	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2021\$)					
Labor	5,233	6,862	5,588	6,322	5,396
Non-Labor	128,176	225,490	109,443	72,546	98,573
NSE	0	0	0	0	0
Total	133,410	232,351	115,031	78,868	103,969
FTE	34.1	49.5	38.3	45.3	44.0

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: P0312.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: P03120 - TIMP

Summary of Adjustments to Recorded:

In Nominal \$(000)					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	0	5
Non-Labor	199	214	17	324	4,160
NSE	0	0	0	0	0
Total	199	214	17	324	4,166
FTE	0.0	0.0	0.0	0.0	0.1

Detail of Adjustments to Recorded in Nominal \$:

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
2017	0	199	0	199	0.0
Explanation:	Adjustment to account for missed internal settlements. Sempra incurred costs for TIMP.				
2017 Total	0	199	0	199	0.0
2018	0	214	0	214	0.0
Explanation:	Adjustment to account for missed internal settlements. Sempra incurred costs for TIMP.				
2018 Total	0	214	0	214	0.0
2019	0	17	0	17	0.0
Explanation:	Adjustment to account for missed internal settlements. Sempra incurred costs for TIMP.				
2019 Total	0	17	0	17	0.0
2020	0	324	0	324	0.0
Explanation:	To reclassify 6215567, 6215568 material costs from indirect to direct.				
2020 Total	0	324	0	324	0.0
2021	0	4,148	0	4,148	0.0
Explanation:	To add material costs (6215567 and 6215568) that were misclassified as indirect				
2021	5	12	0	18	0.1
Explanation:	Costs belong in WKP P312.				
2021 Total	5	4,160	0	4,166	0.1

Note: Totals may include rounding differences.

**Beginning of Workpaper Sub Details for
Workpaper Group P03120**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: P0312.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: P03120 - TIMP
 Workpaper Detail: P03120.001 - P03120 - RAMP - Integrity Assessments and Remediation (HCA and non-HCA)
 In-Service Date: Not Applicable

Description:

TIMP Capital activities in budget code 312 include retrofitting pipelines for in-line inspection capability, replacements, and other capital remediation as a result of assessment findings on the DOT-defined transmission pipelines operated by the Transmission organization.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		9,912	11,114	14,340
Non-Labor		93,084	84,307	106,650
NSE		0	0	0
	Total	<u>102,996</u>	<u>95,421</u>	<u>120,990</u>
FTE		80.8	90.6	116.9

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: P0312.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: P03120 - TIMP
 Workpaper Detail: P03120.001 - P03120 - RAMP - Integrity Assessments and Remediation (HCA and non-HCA)

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-1 Incident Related to the High Pressure System (Excluding Dig-in)

RAMP Line Item ID: C21 & M2 T1-T2

RAMP Line Item Name: Integrity Assessments & Remediation (HCA and Non-HCA)

Tranche(s): Tranche1: Transmission - HCA; Tranche2: Transmission - non-HCA

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	46,993	41,933	22,836	73,735	138,504	158,236	202,346
Tranche 2 Cost Estimate	56,976	61,063	87,327	77,255	225,645	262,687	335,975

Cost Estimate Changes from RAMP:

Costs presented in this workpaper are limited to Budget Code 312. Additional costs under C22 are presented in the workpapers 002760 and P07560. The total costs across workpapers are within the RAMP range.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 No feasible units	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tranche 2 No feasible units	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:

No change to the work units from the RAMP report.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	4.600	83.100
Tranche 2	2.500	85.500

RSE Changes from RAMP:

Refer to O&M workpapers.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: P0312.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: P03120 - TIMP
 Workpaper Detail: P03120.002 - P03120 - RAMP - Integrity Assessments and Remediation - L235 (SAME RAMP Item as 003120.001)
 In-Service Date: Not Applicable

Description:

TIMP Capital activities in budget code 312 include retrofitting pipelines for in-line inspection capability, replacements, and other capital remediation as a result of assessment findings on the DOT-defined transmission pipelines operated by the Transmission organization. These costs are specific to repairs on L235 and are captured within the non-HCA tranche (C21-T2).

Forecast In 2021 \$(000)				
	Years	2022	2023	2024
Labor		0	442	900
Non-Labor		0	14,301	29,100
NSE		0	0	0
	Total	0	14,743	30,000
FTE		0.0	3.6	7.4

Note: Totals may include rounding differences.

**Beginning of Workpaper Group
P07560 - TIMP Data Management - IT**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: P0756.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: P07560 - TIMP Data Management - IT

Summary of Results (Constant 2021 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2017	2018	2019	2020	2021	2022	2023	2024
Years									
Labor	Base YR Rec	1,251	1,163	1,523	623	585	1,444	1,430	1,332
Non-Labor	Base YR Rec	4,695	5,202	4,154	4,583	3,993	8,871	8,785	8,183
NSE	Base YR Rec	0	0	0	0	0	0	0	0
Total		5,946	6,365	5,677	5,206	4,578	10,315	10,215	9,515
FTE	Base YR Rec	10.5	10.8	14.6	6.0	6.2	15.3	15.2	14.1

Business Purpose:

The TIMP is a federally-mandated program developed and implemented in compliance with 49 CFR Part 192, Subpart O and other related sections such as 49 CFR § 192.710. Activities presented in this workpaper are related to the systems and applications that are used to manage the TIMP.

Physical Description:

Implementation of software enhancements such as new software applications for data management initiatives in support of risk and threat evaluation.

Project Justification:

Data management is a foundational element of integrity management and SoCalGas continues to enhance applications to support this activity.

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: P0756.0
Category: A. TIMP
Category-Sub: 1. TIMP
Workpaper Group: P07560 - TIMP Data Management - IT

Forecast Methodology:

Labor - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the most current level of activity; adjustments in support of new initiatives are made accordingly.

Non-Labor - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the most current level of activity; adjustments in support of new initiatives are made accordingly.

NSE - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the most current level of activity; adjustments in support of new initiatives are made accordingly.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: P0756.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: P07560 - TIMP Data Management - IT

Summary of Adjustments to Forecast

In 2021 \$ (000)										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	585	585	585	859	845	747	1,444	1,430	1,332
Non-Labor	Base YR Rec	3,993	3,993	3,993	4,878	4,792	4,190	8,871	8,785	8,183
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		4,578	4,578	4,578	5,737	5,637	4,937	10,315	10,215	9,515
FTE	Base YR Rec	6.2	6.2	6.2	9.1	9.0	7.9	15.3	15.2	14.1

Forecast Adjustment Details

Year	Labor	NLbr	NSE	Total	FTE
2022	859	4,878	0	5,737	9.1
Explanation:	This adjustment captures incremental 2022 costs above the base year recorded for TIMP data management. Cost increases are associated with capital enhancements such as new software applications to integrate TIMP data with an Enterprise Asset Management system.				
2022 Total	859	4,878	0	5,737	9.1
2023	845	4,792	0	5,637	9.0
Explanation:	This adjustment captures incremental 2023 costs above the base year recorded for TIMP data management. Cost increases are associated with capital enhancements such as new software applications to integrate TIMP data with an Enterprise Asset Management system.				
2023 Total	845	4,792	0	5,637	9.0
2024	747	4,190	0	4,937	7.9
Explanation:	This adjustment captures incremental 2024 costs above the base year recorded for TIMP data management. Cost increases are associated with capital enhancements such as new software applications to integrate TIMP data with an Enterprise Asset Management system.				
2024 Total	747	4,190	0	4,937	7.9

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: P0756.0
Category: A. TIMP
Category-Sub: 1. TIMP
Workpaper Group: P07560 - TIMP Data Management - IT

Determination of Adjusted-Recorded:

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	798	784	1,060	461	497
Non-Labor	3,504	4,111	3,440	3,984	3,738
NSE	0	0	0	0	0
Total	4,302	4,896	4,500	4,445	4,236
FTE	8.9	9.2	12.2	5.0	5.2
Adjustments (Nominal \$)**					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	255
NSE	0	0	0	0	0
Total	0	0	0	0	255
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	798	784	1,060	461	497
Non-Labor	3,504	4,111	3,440	3,984	3,993
NSE	0	0	0	0	0
Total	4,302	4,896	4,500	4,445	4,491
FTE	8.9	9.2	12.2	5.0	5.2
Vacation & Sick (Nominal \$)					
Labor	135	135	201	81	88
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	135	135	201	81	88
FTE	1.6	1.6	2.4	1.0	1.0
Escalation to 2021\$					
Labor	318	244	262	81	0
Non-Labor	1,192	1,091	715	599	0
NSE	0	0	0	0	0
Total	1,509	1,335	977	680	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2021\$)					
Labor	1,251	1,163	1,523	623	585
Non-Labor	4,695	5,202	4,154	4,583	3,993
NSE	0	0	0	0	0
Total	5,946	6,365	5,677	5,206	4,578
FTE	10.5	10.8	14.6	6.0	6.2

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: P0756.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: P07560 - TIMP Data Management - IT

Summary of Adjustments to Recorded:

In Nominal \$(000)					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	255
NSE	0	0	0	0	0
Total	0	0	0	0	255
FTE	0.0	0.0	0.0	0.0	0.0

Detail of Adjustments to Recorded in Nominal \$:

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
2017 Total	0	0	0	0	0.0
2018 Total	0	0	0	0	0.0
2019 Total	0	0	0	0	0.0
2020 Total	0	0	0	0	0.0
2021	0	255	0	255	0.0
Explanation:	One-sided entry to move ESRI licensing costs to GRC (from SDGE sending order 7131156 mapped to SDGE nonGRC)				
2021 Total	0	255	0	255	0.0

Note: Totals may include rounding differences.

**Beginning of Workpaper Sub Details for
Workpaper Group P07560**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: P0756.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: P07560 - TIMP Data Management - IT
 Workpaper Detail: P07560.001 - P0756A - RAMP - TIMP - Data Management
 In-Service Date: Not Applicable

Description:

TIMP Capital activities in budget code 756 include enhancements to TIMP data management such as software upgrades (e.g., new applications).

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		911	897	799
Non-Labor		5,598	5,512	4,910
NSE		0	0	0
	Total	6,509	6,409	5,709
FTE		9.7	9.6	8.5

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: P0756.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: P07560 - TIMP Data Management - IT
 Workpaper Detail: P07560.001 - P0756A - RAMP - TIMP - Data Management

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-1 Incident Related to the High Pressure System (Excluding Dig-in)

RAMP Line Item ID: C21 & M2 T1-T2

RAMP Line Item Name: Integrity Assessments & Remediation (HCA and Non-HCA)

Tranche(s): Tranche1: Transmission - HCA; Tranche2: Transmission - non-HCA

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	2,069	2,650	2,609	2,324	7,583	158,236	202,346
Tranche 2 Cost Estimate	2,509	3,859	3,800	3,385	11,044	262,687	335,975

Cost Estimate Changes from RAMP:

Costs presented in this workpaper are limited to Budget Code 756. Additional costs under C22 are presented in the workpapers 002760 and P03120. The total costs across workpapers are within the RAMP range.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 No feasible units	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tranche 2 No feasible units	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:

No change to the work units from the RAMP report.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	4.600	83.100
Tranche 2	2.500	85.500

RSE Changes from RAMP:

Refer to O&M workpapers.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: P0756.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: P07560 - TIMP Data Management - IT
 Workpaper Detail: P07560.002 - P0756A - RAMP - TIMP - Data Management - EAM Data Build
 In-Service Date: Not Applicable

Description:

TIMP Capital activities in budget code 756 include enhancements to TIMP data management such as software upgrades (e.g., new applications). These costs are specific to a new data application build for Enterprise Asset Management.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		533	533	533
Non-Labor		3,273	3,273	3,273
NSE		0	0	0
	Total	<u>3,806</u>	<u>3,806</u>	<u>3,806</u>
FTE		5.6	5.6	5.6

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: P0756.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: P07560 - TIMP Data Management - IT
 Workpaper Detail: P07560.002 - P0756A - RAMP - TIMP - Data Management - EAM Data Build

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-CFF-1 Asset and Records Management

RAMP Line Item ID: 05

RAMP Line Item Name: Establishing a Data Lake

Tranche(s): Tranche1: Overall

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	0	3,806	3,806	3,806	11,418	8,867	12,808

Cost Estimate Changes from RAMP:

Costs are within the range of the RAMP report.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 No feasible units	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:

No change to the work units from the RAMP report.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:

No change from the RAMP report.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Category: B. DIMP
Workpaper: VARIOUS

Summary for Category: B. DIMP

	In 2021\$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	17,138	18,165	18,420	19,005
Non-Labor	195,676	212,887	213,324	213,114
NSE	0	0	0	0
Total	212,814	231,052	231,744	232,119
FTE	166.5	176.5	178.9	184.6

002770 DIMP

Labor	16,570	17,569	17,823	18,409
Non-Labor	192,029	208,857	209,295	209,084
NSE	0	0	0	0
Total	208,599	226,426	227,118	227,493
FTE	160.6	170.3	172.7	178.4

D07560 DIMP Data Management - IT

Labor	568	596	597	596
Non-Labor	3,647	4,030	4,029	4,030
NSE	0	0	0	0
Total	4,215	4,626	4,626	4,626
FTE	5.9	6.2	6.2	6.2

Note: Totals may include rounding differences.

**Beginning of Workpaper Group
002770 - DIMP**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00277.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: 002770 - DIMP

Summary of Results (Constant 2021 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2017	2018	2019	2020	2021	2022	2023	2024
Years									
Labor	Base YR Rec	9,766	11,050	11,045	19,049	16,570	17,569	17,823	18,409
Non-Labor	Base YR Rec	112,883	185,769	129,109	201,058	192,029	208,857	209,295	209,084
NSE	Base YR Rec	0	0	0	0	0	0	0	0
Total		122,649	196,819	140,154	220,107	208,599	226,426	227,118	227,493
FTE	Base YR Rec	82.6	71.5	60.0	133.0	160.6	170.3	172.7	178.4

Business Purpose:

The DIMP is a federally-mandated program developed and implemented in compliance with 49 CFR Part 192, Subpart P.

Physical Description:

Replacement or installation of Distribution assets in support of the different DIMP PAARs , such as pipe replacement under VIPP and BSRP or installation of protective infrastructure under GIPP .

Project Justification:

Remediation and other activities as presented in this workpaper are necessary to mitigate risks on and maintain the integrity of the SoCalGas Distribution system.

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP
Workpaper Group: 002770 - DIMP

Forecast Methodology:

Labor - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the current structure of the project teams and cost drivers. Since forecasts are rooted in average costs and the number and types of activities conducted each year, SoCalGas adjusts the forecasts accordingly.

Non-Labor - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the current structure of the project teams and cost drivers. Since forecasts are rooted in average costs and the number and types of activities conducted each year, SoCalGas adjusts the forecasts accordingly.

NSE - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the current structure of the project teams and cost drivers. Since forecasts are rooted in average costs and the number and types of activities conducted each year, SoCalGas adjusts the forecasts accordingly.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP
Workpaper Group: 002770 - DIMP

Summary of Adjustments to Forecast

In 2021 \$ (000)										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	16,570	16,570	16,570	999	1,253	1,839	17,569	17,823	18,409
Non-Labor	Base YR Rec	192,029	192,029	192,029	16,828	17,266	17,055	208,857	209,295	209,084
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		208,599	208,599	208,599	17,827	18,519	18,894	226,426	227,118	227,493
FTE	Base YR Rec	160.6	160.6	160.6	9.7	12.1	17.8	170.3	172.7	178.4

Forecast Adjustment Details

Year	Labor	NLbr	NSE	Total	FTE
2022	178	13,690	0	13,868	1.7
Explanation:	This DREAMS adjustment captures VIPP and BSRP incremental 2022 costs above the base year recorded. In alignment with D.19-09-051, SoCalGas is planning an increase to the rate of replacement of non-state-of-the-art pipe and costs are driven by units and per-unit costs.				
2022	821	3,138	0	3,959	8.0
Explanation:	This adjustment captures GIPP incremental 2022 costs above the base year recorded. Costs are driven by the number of mitigations completed and mitigations may be standard or non-standard. Costs are forecasted using a per-unit average that is adjusted to account for the higher cost of non-standard mitigations. Standard mitigations are expected to be completed in 2022.				
2022 Total	999	16,828	0	17,827	9.7
2023	436	14,089	0	14,525	4.2
Explanation:	" This DREAMS adjustment captures VIPP and BSRP incremental 2023 costs above the base year recorded. In alignment with D.19-09-051, SoCalGas is planning an increase to the rate of replacement of non-state-of-the-art pipe. Costs are driven by units and per-unit costs."				
2023	817	3,177	0	3,994	7.9
Explanation:	This adjustment captures GIPP incremental 2023 costs above the base year recorded. Costs are driven by the number of mitigations completed and mitigations in 2023 are expected to be non-standard. Costs are forecasted using a per-unit average that is adjusted to account for the higher cost of non-standard mitigations.				
2023 Total	1,253	17,266	0	18,519	12.1
2024	1,044	13,923	0	14,967	10.1
Explanation:	This DREAMS adjustment captures VIPP and BSRP incremental 2024 costs above the base year recorded. In alignment with D.19-09-051, SoCalGas is planning an increase to the rate of replacement of non-state-of-the-art pipe. Costs are driven by units and per-unit costs.				
2024	795	3,132	0	3,927	7.7
Explanation:	This adjustment captures GIPP incremental 2024 costs above the base year recorded. Costs are driven by the number of mitigations completed and mitigations in 2024 are expected to be non-standard. Costs are forecasted using a per-unit average that is adjusted to account for the higher cost of non-standard mitigations.				
2024 Total	1,839	17,055	0	18,894	17.8

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP
Workpaper Group: 002770 - DIMP

Determination of Adjusted-Recorded:

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	6,566	7,561	7,758	14,114	14,102
Non-Labor	84,374	146,818	106,903	174,782	193,235
NSE	0	0	0	0	0
Total	90,940	154,379	114,661	188,895	207,338
FTE	73.6	61.7	50.8	111.5	135.3
Adjustments (Nominal \$)**					
Labor	-335	-110	-70	-35	-18
Non-Labor	-140	-5	-1	-2	-1,206
NSE	0	0	0	0	0
Total	-475	-115	-71	-37	-1,225
FTE	-3.4	-1.1	-0.6	-0.2	-0.2
Recorded-Adjusted (Nominal \$)					
Labor	6,231	7,451	7,688	14,079	14,084
Non-Labor	84,234	146,813	106,902	174,780	192,029
NSE	0	0	0	0	0
Total	90,465	154,264	114,590	188,859	206,113
FTE	70.2	60.6	50.2	111.3	135.1
Vacation & Sick (Nominal \$)					
Labor	1,056	1,282	1,458	2,481	2,486
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	1,056	1,282	1,458	2,481	2,486
FTE	12.4	10.9	9.8	21.7	25.5
Escalation to 2021\$					
Labor	2,479	2,317	1,900	2,490	0
Non-Labor	28,650	38,956	22,207	26,278	0
NSE	0	0	0	0	0
Total	31,128	41,273	24,106	28,768	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2021\$)					
Labor	9,766	11,050	11,045	19,049	16,570
Non-Labor	112,883	185,769	129,109	201,058	192,029
NSE	0	0	0	0	0
Total	122,649	196,819	140,154	220,107	208,599
FTE	82.6	71.5	60.0	133.0	160.6

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP
Workpaper Group: 002770 - DIMP

Summary of Adjustments to Recorded:

In Nominal \$(000)					
Years	2017	2018	2019	2020	2021
Labor	-335	-110	-70	-35	-18
Non-Labor	-140	-5	-1	-2	-1,206
NSE	0	0	0	0	0
Total	-475	-115	-71	-37	-1,225
FTE	-3.4	-1.1	-0.6	-0.2	-0.2

Detail of Adjustments to Recorded in Nominal \$:

Year	Labor	NLbr	NSE	Total	FTE
2017	42	2	0	44	0.5
Explanation:	Transfer of DIMP-related project trailing cost from Gas Distribution 002520 to Integrity Management 002770. \$44,366 (2017)				
2017	0.027	0	0	0.027	0.1
Explanation:	Transfer of DIMP-related project trailing cost from Gas Distribution 002560 to Integrity Management 002770. \$27 (2017)				
2017	-377	-150	0	-527	-4.0
Explanation:	Adjustment to move costs that should be O&M.				
2017	0	8	0	8	0.0
Explanation:	Add back capital from previous one sided entry with error.				
2017 Total	-335	-140	0	-475	-3.4
2018	-110	-5	0	-115	-1.1
Explanation:	Adjustment to move costs that should be O&M.				
2018	0	-0.616	0	-0.616	0.0
Explanation:	Costs were erroneously mapped as GRC; adjustment to map costs as non-GRC.				
2018 Total	-110	-5	0	-115	-1.1
2019	1	0.780	0	2	0.1
Explanation:	Transferring costs from BC593 to BC277 related to costs not properly remapped. (Order 5198774)				
2019	-69	-1	0	-71	-0.6
Explanation:	Adjustment to move costs that should be O&M.				
2019	-2	-0.647	0	-2	-0.1

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00277.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: 002770 - DIMP

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
Explanation:	Costs were erroneously mapped as GRC; adjustment to map costs as non-GRC.				
2019 Total	-70	-1	0	-71	-0.6
2020	-37	-2	0	-38	-0.3
Explanation:	Adjustment to move costs that should be O&M.				
2020	1	0	0	1	0.1
Explanation:	Costs were erroneously mapped as non-GRC; adjustment to map costs back to BC277				
2020 Total	-35	-2	0	-37	-0.2
2021	0	-1,206	0	-1,206	0.0
Explanation:	One-sided entry to reduce capital amounts already accounted in O&M				
2021	-18	-0.114	0	-18	-0.2
Explanation:	One-sided adj to reduce capital amounts already accounted in O&M, budget code E01 and E41				
2021 Total	-18	-1,206	0	-1,225	-0.2

Note: Totals may include rounding differences.

**Beginning of Workpaper Sub Details for
Workpaper Group 002770**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00277.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: 002770 - DIMP
 Workpaper Detail: 002770.001 - 002770 - RAMP - DIMP - DREAMS (VIPP and BSRP)
 In-Service Date: Not Applicable

Description:

DIMP Capital activities in budget code 277 include installations, replacements, and other risk mitigation or remediation activities driven by DIMP Projects and Activities to Address Risk (PAARs). These costs are associated with executing the VIPP, which consists of replacement of vintage non-state-of-the-art (NSOTA) plastic distribution pipeline segments, and the BSRP, which consists of replacement of vintage NSOTA steel distribution pipeline segments. These plans fall under the Distribution Risk Evaluation and Monitoring System (DREAMS) umbrella.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		14,293	14,551	15,159
Non-Labor		197,458	197,856	197,690
NSE		0	0	0
	Total	<u>211,751</u>	<u>212,407</u>	<u>212,849</u>
FTE		138.5	141.0	146.9

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00277.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: 002770 - DIMP
 Workpaper Detail: 002770.001 - 002770 - RAMP - DIMP - DREAMS (VIPP and BSRP)

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-3 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C21 T1-T2

RAMP Line Item Name: DIMP - Distribution Risk Evaluation and Monitoring System (DREAMS)

Tranche(s): Tranche1: Plastic - Main (VIPP); Tranche2: Steel - Main (BSRP)

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	135,853	118,595	140,250	188,034	446,879	501,072	606,561
Tranche 2 Cost Estimate	62,030	93,156	72,157	24,815	190,128	214,745	259,955

Cost Estimate Changes from RAMP:

Since the RAMP report, SoCalGas has updated the DREAMS model and based on preliminary analysis of the quantitative risk result, plans to adjust the ratio of VIPP and BSRP replacements over time. Additionally, per unit cost forecasts for VIPP and BSRP have been evaluated and updated. Costs presented in this work paper are limited to Budget Code 277; other costs associated with C21 are presented in workpaper D07560.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 Miles replaced - Plastic	92.00	104.00	111.00	136.00	351.00	270.00	327.00
Tranche 2 Miles replaced - Steel	43.00	40.00	30.00	10.00	80.00	115.00	139.00

Work Unit Changes from RAMP:

Since the RAMP report, SoCalGas has updated the DREAMS model and based on preliminary analysis of the quantitative risk result, plans to adjust the ratio of VIPP and BSRP replacements over time; as a result, VIPP units are higher while BSRP units are lower than presented in the RAMP report. However, the combined units of VIPP and BSRP are within range of the RAMP report.

Southern California Gas Company
 2024 GRC - APP
 Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00277.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: 002770 - DIMP
 Workpaper Detail: 002770.001 - 002770 - RAMP - DIMP - DREAMS (VIPP and BSRP)

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.300	1.200
Tranche 2	0.100	0.900

RSE Changes from RAMP:
 RSE inputs have been updated since the RAMP report.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00277.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: 002770 - DIMP
 Workpaper Detail: 002770.002 - 002770 - RAMP - DIMP - Gas Infrastructure Protection Program (GIPP)
 In-Service Date: Not Applicable

Description:

DIMP Capital activities in budget code 277 include installations, replacements, and other risk mitigation or remediation activities driven by DIMP Projects and Activities to Address Risk (PAARs). These costs are associated with executing the GIPP, which is driven by risk mitigation of third-party damage associated with aboveground pressurized facilities and includes installation of protection measures (e.g., bollards or block walls).

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		3,276	3,272	3,250
Non-Labor		11,399	11,439	11,394
NSE		0	0	0
	Total	<u>14,675</u>	<u>14,711</u>	<u>14,644</u>
FTE		31.8	31.7	31.5

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00277.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: 002770 - DIMP
 Workpaper Detail: 002770.002 - 002770 - RAMP - DIMP - Gas Infrastructure Protection Program (GIPP)

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-3 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C22

RAMP Line Item Name: DIMP - Gas Infrastructure Protection Program (GIPP)

Tranche(s): Tranche1: Meter & Beyond

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	10,716	14,675	14,711	14,644	44,030	49,146	62,798

Cost Estimate Changes from RAMP:

Since the RAMP report, per unit cost forecasts for the GIPP have been evaluated and updated. Costs presented in this work paper are limited to Budget Code 277; other costs associated with C21 are presented in workpaper D07560.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 # of mitigations	2,384.00	2,400.00	500.00	600.00	3,500.00	2,970.00	3,795.00

Work Unit Changes from RAMP:

The GRC forecasted units are within range of the RAMP forecast.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	36.300	221.000

RSE Changes from RAMP:

RSE inputs have been updated since the RAMP report.

**Beginning of Workpaper Group
D07560 - DIMP Data Management - IT**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: D0756.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: D07560 - DIMP Data Management - IT

Summary of Results (Constant 2021 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2017	2018	2019	2020	2021	2022	2023	2024
Years									
Labor	Base YR Rec	999	575	839	593	568	596	597	596
Non-Labor	Base YR Rec	2,108	3,892	5,238	4,614	3,647	4,030	4,029	4,030
NSE	Base YR Rec	0	0	0	0	0	0	0	0
Total		3,107	4,467	6,077	5,207	4,214	4,626	4,626	4,626
FTE	Base YR Rec	8.4	5.2	7.2	5.6	5.9	6.2	6.2	6.2

Business Purpose:

The DIMP is a federally-mandated program developed and implemented in compliance with 49 CFR Part 192, Subpart P. Activities presented in this workpaper are related to the systems and applications that are used to manage the TIMP .

Physical Description:

Implementation of software enhancements such as new software applications for data modeling/management initiatives in support of risk and threat evaluation (e.g., a new quantitative risk assessment model).

Project Justification:

DIMP data management is critical to the development and measurement of DIMP Projects and Activities Addressing Risk (PAARs).

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: D0756.0
Category: B. DIMP
Category-Sub: 1. DIMP
Workpaper Group: D07560 - DIMP Data Management - IT

Forecast Methodology:

Labor - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the most current level of activity; adjustments in support of new initiatives are made accordingly.

Non-Labor - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the most current level of activity; adjustments in support of new initiatives are made accordingly.

NSE - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the most current level of activity; adjustments in support of new initiatives are made accordingly.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: D0756.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: D07560 - DIMP Data Management - IT

Summary of Adjustments to Forecast

In 2021 \$ (000)										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	568	568	568	28	29	28	596	597	596
Non-Labor	Base YR Rec	3,647	3,647	3,647	383	382	383	4,030	4,029	4,030
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		4,215	4,215	4,215	411	411	411	4,626	4,626	4,626
FTE	Base YR Rec	5.9	5.9	5.9	0.3	0.3	0.3	6.2	6.2	6.2

Forecast Adjustment Details

Year	Labor	NLbr	NSE	Total	FTE
2022	23	362	0	385	0.2
Explanation:	This adjustment captures the DREAMS-allocated portion of incremental IT 2022 costs above the base year recorded. Costs are driven by software enhancement activities such as the implementation of new software applications to support and improve data management. The portion of IT costs allocated to DREAMS is informed by a ratio of DREAMS vs. GIPP activity levels.				
2022	5	21	0	26	0.1
Explanation:	This adjustment captures the GIPP-allocated portion of incremental IT 2022 costs above the base year recorded. Costs are driven by software enhancement activities such as the implementation of new software applications to support and improve data management. The portion of IT costs allocated to GIPP is informed by a ratio of DREAMS vs. GIPP activity levels.				
2022 Total	28	383	0	411	0.3
2023	25	361	0	386	0.2
Explanation:	This adjustment captures the DREAMS-allocated portion of incremental IT 2023 costs above the base year recorded. Costs are driven by software enhancement activities such as the implementation of new software applications to support and improve data management. The portion of IT costs allocated to DREAMS is informed by a ratio of DREAMS vs. GIPP activity levels.				
2023	4	21	0	25	0.1
Explanation:	This adjustment captures the GIPP-allocated portion of incremental IT 2023 costs above the base year recorded. Costs are driven by software enhancement activities such as the implementation of new software applications to support and improve data management. The portion of IT costs allocated to GIPP is informed by a ratio of DREAMS vs. GIPP activity levels.				
2023 Total	29	382	0	411	0.3
2024	29	362	0	391	0.4
Explanation:	This adjustment captures the DREAMS-allocated portion of incremental IT 2024 costs above the base year recorded. Costs are driven by software enhancement activities such as the implementation of new software applications to support and improve data management. The portion of IT costs allocated to DREAMS is informed by a ratio of DREAMS vs. GIPP activity levels.				
2024	-1	21	0	20	-0.1

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: D0756.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: D07560 - DIMP Data Management - IT

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
Explanation:	This adjustment captures the GIPP-allocated portion of incremental IT 2024 costs above the base year recorded. Costs are driven by software enhancement activities such as the implementation of new software applications to support and improve data management. The portion of IT costs allocated to GIPP is informed by a ratio of DREAMS vs. GIPP activity levels.				
2024 Total	28	383	0	411	0.3

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: D0756.0
Category: B. DIMP
Category-Sub: 1. DIMP
Workpaper Group: D07560 - DIMP Data Management - IT

Determination of Adjusted-Recorded:

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	638	388	584	438	483
Non-Labor	1,573	3,076	4,337	4,011	3,392
NSE	0	0	0	0	0
Total	2,211	3,464	4,921	4,449	3,874
FTE	7.1	4.4	6.0	4.7	5.0
Adjustments (Nominal \$)**					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	255
NSE	0	0	0	0	0
Total	0	0	0	0	255
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	638	388	584	438	483
Non-Labor	1,573	3,076	4,337	4,011	3,647
NSE	0	0	0	0	0
Total	2,211	3,464	4,921	4,449	4,129
FTE	7.1	4.4	6.0	4.7	5.0
Vacation & Sick (Nominal \$)					
Labor	108	67	111	77	85
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	108	67	111	77	85
FTE	1.3	0.8	1.2	0.9	0.9
Escalation to 2021\$					
Labor	254	121	144	77	0
Non-Labor	535	816	901	603	0
NSE	0	0	0	0	0
Total	789	937	1,045	681	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2021\$)					
Labor	999	575	839	593	568
Non-Labor	2,108	3,892	5,238	4,614	3,647
NSE	0	0	0	0	0
Total	3,107	4,467	6,077	5,207	4,214
FTE	8.4	5.2	7.2	5.6	5.9

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: D0756.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: D07560 - DIMP Data Management - IT

Summary of Adjustments to Recorded:

In Nominal \$(000)					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	255
NSE	0	0	0	0	0
Total	0	0	0	0	255
FTE	0.0	0.0	0.0	0.0	0.0

Detail of Adjustments to Recorded in Nominal \$:

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
2017 Total	0	0	0	0	0.0
2018 Total	0	0	0	0	0.0
2019 Total	0	0	0	0	0.0
2020 Total	0	0	0	0	0.0
2021	0	255	0	255	0.0
Explanation:	One-sided entry to move ESRI licensing costs to GRC (from SDGE sending order 7131156 mapped to SDGE nonGRC)				
2021 Total	0	255	0	255	0.0

Note: Totals may include rounding differences.

**Beginning of Workpaper Sub Details for
Workpaper Group D07560**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: D0756.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: D07560 - DIMP Data Management - IT
 Workpaper Detail: D07560.001 - 007560 - RAMP - DIMP - Data Management (DREAMS)
 In-Service Date: Not Applicable

Description:

DIMP Capital activities in budget code 756 include IT-based enhancements to DIMP data management such as software upgrades (e.g., new applications). These costs are the costs allocated to DREAMS based on the ratio of expected DREAMS vs. GIPP activity levels.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		485	487	491
Non-Labor		3,809	3,809	3,810
NSE		0	0	0
	Total	<u>4,294</u>	<u>4,296</u>	<u>4,301</u>
FTE		5.0	5.1	5.1

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: D0756.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: D07560 - DIMP Data Management - IT
 Workpaper Detail: D07560.001 - 007560 - RAMP - DIMP - Data Management (DREAMS)

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-3 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C21 T1-T2

RAMP Line Item Name: DIMP - Distribution Risk Evaluation and Monitoring System (DREAMS)

Tranche(s): Tranche1: Plastic - Main (VIPP); Tranche2: Steel - Main (BSRP)

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	2,684	2,500	2,501	2,504	7,505	501,072	606,561
Tranche 2 Cost Estimate	1,226	1,795	1,795	1,797	5,387	214,745	259,955

Cost Estimate Changes from RAMP:

Costs presented in this workpaper are only for the IT-related data management activities for DIMP. Primary costs under C21 are presented in workpaper 002770.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 No feasible units	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tranche 2 No feasible units	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:

IT activity is not measurable by units since activities consist of data management system enhancements.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.300	1.200
Tranche 2	0.100	0.900

RSE Changes from RAMP:

Refer to workpaper 002770. The RSE is based on the combined DREAMS Capital costs.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: D0756.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: D07560 - DIMP Data Management - IT
 Workpaper Detail: D07560.002 - 007560 - RAMP - DIMP - Data Management (GIPP)
 In-Service Date: Not Applicable

Description:

DIMP Capital activities in budget code 756 include IT-based enhancements to DIMP data management such as software upgrades (e.g., new applications). These costs are the costs allocated to GIPP based on the ratio of expected DREAMS vs. GIPP activity levels.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		111	110	105
Non-Labor		221	220	220
NSE		0	0	0
	Total	332	330	325
FTE		1.2	1.1	1.1

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: D0756.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: D07560 - DIMP Data Management - IT
 Workpaper Detail: D07560.002 - 007560 - RAMP - DIMP - Data Management (GIPP)

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-3 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C22

RAMP Line Item Name: DIMP - Gas Infrastructure Protection Program (GIPP)

Tranche(s): Tranche1: Meter & Beyond

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	305	331	330	325	986	49,146	62,798

Cost Estimate Changes from RAMP:

Costs presented in this workpaper are only for the IT-related data management activities for DIMP. Primary costs under C22 are presented in workpaper 002770.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 No feasible units	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:

IT activity is not measurable by units since activities consist of data management system enhancements.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	36.300	221.000

RSE Changes from RAMP:

Refer to workpaper 002770. The RSE is based on the combined GIPP Capital costs.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Category: C. SIMP
Workpaper: 004410

Summary for Category: C. SIMP

	In 2021\$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	1,692	1,060	912	528
Non-Labor	85,539	53,357	45,879	26,454
NSE	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	87,231	54,417	46,791	26,982
FTE	12.5	7.9	6.8	3.9

004410 SIMP

Labor	1,692	1,060	912	528
Non-Labor	85,539	53,357	45,879	26,454
NSE	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	87,231	54,417	46,791	26,982
FTE	12.5	7.9	6.8	3.9

Note: Totals may include rounding differences.

**Beginning of Workpaper Group
004410 - SIMP**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00441.0
 Category: C. SIMP
 Category-Sub: 1. SIMP
 Workpaper Group: 004410 - SIMP

Summary of Results (Constant 2021 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2017	2018	2019	2020	2021	2022	2023	2024
Years									
Labor	Base YR Rec	1,229	1,495	1,687	1,757	1,692	1,060	912	528
Non-Labor	Base YR Rec	84,607	112,965	75,750	92,084	85,539	53,357	45,879	26,454
NSE	Base YR Rec	0	0	0	0	0	0	0	0
Total		85,836	114,461	77,437	93,840	87,231	54,417	46,791	26,982
FTE	Base YR Rec	7.9	9.5	10.9	11.4	12.5	7.9	6.8	3.9

Business Purpose:

The SIMP is a compliance program applied to SoCalGas storage fields and managed in accordance with state and federal regulations.

Physical Description:

Capital activities include well remediation and abandonment when applicable and is driven by SIMP assessments.

Project Justification:

Remediation activities are required and necessary to maintain the integrity of SoCalGas storage fields.

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 00441.0
Category: C. SIMP
Category-Sub: 1. SIMP
Workpaper Group: 004410 - SIMP

Forecast Methodology:

Labor - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the current structure of the organization and cost drivers. Since forecasts are rooted in average costs and the number of assessments conducted each year, SoCalGas adjusts the forecasts accordingly.

Non-Labor - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the current structure of the organization and cost drivers. Since forecasts are rooted in average costs and the number of assessments conducted each year, SoCalGas adjusts the forecasts accordingly.

NSE - Base YR Rec

The forecast method selected for this workpaper is Base Year Recorded . This method is most appropriate because the base year most closely represents the current structure of the organization and cost drivers. Since forecasts are rooted in average costs and the number of assessments conducted each year, SoCalGas adjusts the forecasts accordingly.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 00441.0
Category: C. SIMP
Category-Sub: 1. SIMP
Workpaper Group: 004410 - SIMP

Summary of Adjustments to Forecast

In 2021 \$ (000)										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	1,692	1,692	1,692	-632	-780	-1,164	1,060	912	528
Non-Labor	Base YR Rec	85,539	85,539	85,539	-32,182	-39,660	-59,085	53,357	45,879	26,454
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		87,231	87,231	87,231	-32,814	-40,440	-60,249	54,417	46,791	26,982
FTE	Base YR Rec	12.5	12.5	12.5	-4.6	-5.7	-8.6	7.9	6.8	3.9

Forecast Adjustment Details

Year	Labor	NLbr	NSE	Total	FTE
2022	-656	-33,218	0	-33,874	-4.8
Explanation:	This adjustment presents 2022 costs as compared to the base year recorded for SIMP remediation activities resulting from integrity inspections. Costs are forecasted based on the number of expected well assessments and are calculated using average cost assumptions. Actual remediation may vary based on inspections and findings.				
2022	24	1,036	0	1,060	0.2
Explanation:	This adjustment captures incremental 2022 costs above the base year recorded for SIMP abandonments. Costs are forecasted based on the number of expected well abandonment activities and are calculated using average cost assumptions. Actual abandonments may vary from year to year based on inspection findings.				
2022 Total	-632	-32,182	0	-32,814	-4.6
2023	-804	-40,696	0	-41,500	-5.9
Explanation:	This adjustment presents 2023 costs as compared to the base year recorded for SIMP remediation activities resulting from integrity inspections. Costs are forecasted based on the number of expected well assessments and are calculated using average cost assumptions. Actual remediation may vary based on inspections and findings.				
2023	24	1,036	0	1,060	0.2
Explanation:	This adjustment captures incremental 2023 costs above the base year recorded for SIMP abandonments. Costs are forecasted based on the number of expected well abandonment activities and are calculated using average cost assumptions. Actual abandonments may vary from year to year based on inspection findings.				
2023 Total	-780	-39,660	0	-40,440	-5.7
2024	24	1,036	0	1,060	0.2
Explanation:	This adjustment captures incremental 2024 costs above the base year recorded for SIMP abandonments. Costs are forecasted based on the number of expected well abandonment activities and are calculated using average cost assumptions. Actual abandonments may vary from year to year based on inspection findings.				
2024	-1,188	-60,121	0	-61,309	-8.8
Explanation:	This adjustment presents 2024 costs as compared to the base year recorded for SIMP remediation activities resulting from integrity inspections. Costs are forecasted based on the number of expected well assessments and are calculated using average cost assumptions. Actual remediation may vary based on inspections and findings.				

Note: Totals may include rounding differences.

Southern California Gas Company
 2024 GRC - APP
 Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00441.0
 Category: C. SIMP
 Category-Sub: 1. SIMP
 Workpaper Group: 004410 - SIMP

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
2024 Total	-1,164	-59,085	0	-60,249	-8.6

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 00441.0
Category: C. SIMP
Category-Sub: 1. SIMP
Workpaper Group: 004410 - SIMP

Determination of Adjusted-Recorded:

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	790	1,008	1,174	1,298	1,438
Non-Labor	63,152	89,277	62,721	80,048	85,539
NSE	0	0	0	0	0
Total	63,942	90,285	63,895	81,347	86,977
FTE	6.8	8.1	9.1	9.5	10.5
Adjustments (Nominal \$)**					
Labor	-6	0	0	0	0
Non-Labor	-19	0	0	0	0
NSE	0	0	0	0	0
Total	-25	0	0	0	0
FTE	-0.1	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	784	1,008	1,174	1,298	1,438
Non-Labor	63,133	89,277	62,721	80,048	85,539
NSE	0	0	0	0	0
Total	63,918	90,285	63,895	81,347	86,977
FTE	6.7	8.1	9.1	9.5	10.5
Vacation & Sick (Nominal \$)					
Labor	133	174	223	229	254
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	133	174	223	229	254
FTE	1.2	1.4	1.8	1.9	2.0
Escalation to 2021\$					
Labor	312	314	290	230	0
Non-Labor	21,473	23,689	13,029	12,035	0
NSE	0	0	0	0	0
Total	21,785	24,002	13,319	12,265	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2021\$)					
Labor	1,229	1,495	1,687	1,757	1,692
Non-Labor	84,607	112,965	75,750	92,084	85,539
NSE	0	0	0	0	0
Total	85,836	114,461	77,437	93,840	87,231
FTE	7.9	9.5	10.9	11.4	12.5

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00441.0
 Category: C. SIMP
 Category-Sub: 1. SIMP
 Workpaper Group: 004410 - SIMP

Summary of Adjustments to Recorded:

In Nominal \$(000)					
Years	2017	2018	2019	2020	2021
Labor	-6	0	0	0	0
Non-Labor	-19	0	0	0	0
NSE	0	0	0	0	0
Total	-25	0	0	0	0
FTE	-0.1	0.0	0.0	0.0	0.0

Detail of Adjustments to Recorded in Nominal \$:

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
2017	-6	-19	0	-25	-0.1
Explanation:	PSEP GMA costs allocated incorrectly to SIMP. PSEP planner confirmed that one-sided adjustment was appropriate.				
2017 Total	-6	-19	0	-25	-0.1
2018 Total	0	0	0	0	0.0
2019 Total	0	0	0	0	0.0
2020 Total	0	0	0	0	0.0
2021 Total	0	0	0	0	0.0

Note: Totals may include rounding differences.

**Beginning of Workpaper Sub Details for
Workpaper Group 004410**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00441.0
 Category: C. SIMP
 Category-Sub: 1. SIMP
 Workpaper Group: 004410 - SIMP
 Workpaper Detail: 004410.001 - 00441A - RAMP - SIMP - Integrity Demonstration, Verification, Monitoring Practices
 In-Service Date: Not Applicable

Description:

SIMP capital activities in budget code 441 are driven by remediation as a result of integrity inspections on gas storage wells. Remediation activities may include replacement of the wellhead, replacement of valves, replacement of the tubing and packer, installation of an inner casing string or liner, and installation of shallow-set subsurface safety valves, as well as abandonment. These costs are associated with the forecasted non-abandonment remediation activities.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		1,025	877	493
Non-Labor		51,892	44,414	24,989
NSE		0	0	0
	Total	<u>52,917</u>	<u>45,291</u>	<u>25,482</u>
FTE		7.6	6.5	3.6

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00441.0
 Category: C. SIMP
 Category-Sub: 1. SIMP
 Workpaper Group: 004410 - SIMP
 Workpaper Detail: 004410.001 - 00441A - RAMP - SIMP - Integrity Demonstration, Verification, Monitoring Practices

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-4 Incident Related to the Storage System (Excluding Dig-in)

RAMP Line Item ID: C01

RAMP Line Item Name: Integrity Demonstration, Verification, and Monitoring Practices

Tranche(s): Tranche1: Underground Components

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	86,791	52,917	45,291	25,482	123,690	263,720	319,240

Cost Estimate Changes from RAMP:

Forecasted activity has changed since the RAMP report and is expected to decrease. Costs for this RAMP activity are shared with SCG's Gas Storage Operations and Construction; refer to workpaper 004120. Costs presented in this workpaper are only for the SIMP.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 No feasible units	0.00	0.00	0.00	0.00	0.00	174.00	210.00

Work Unit Changes from RAMP:

SoCalGas has determined that Capital remediation is driven by O&M activities presented in workpaper 2TD003.000 and therefore, a stand-alone Capital unit cannot be forecasted. Refer to workpaper 2TD003.000 for work unit estimates. Units for this RAMP activity are shared with SCG's Gas Storage Operations and Construction; refer to workpaper 004120.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	4.300	0.300

RSE Changes from RAMP:

RSE inputs have been updated since the RAMP report.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00441.0
 Category: C. SIMP
 Category-Sub: 1. SIMP
 Workpaper Group: 004410 - SIMP
 Workpaper Detail: 004410.002 - 00441A - RAMP - SIMP - Well Abandonment and Replacement
 In-Service Date: Not Applicable
 Description:

SIMP capital activities in budget code 441 are driven by remediation as a result of integrity inspections on gas storage wells. Under certain circumstances, SoCalGas may abandon a well rather than continue to utilize it for gas storage operations. These costs are associated with forecasted abandonment activities.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		35	35	35
Non-Labor		1,465	1,465	1,465
NSE		0	0	0
	Total	<u>1,500</u>	<u>1,500</u>	<u>1,500</u>
FTE		0.3	0.3	0.3

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00441.0
 Category: C. SIMP
 Category-Sub: 1. SIMP
 Workpaper Group: 004410 - SIMP
 Workpaper Detail: 004410.002 - 00441A - RAMP - SIMP - Well Abandonment and Replacement

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-4 Incident Related to the Storage System (Excluding Dig-in)

RAMP Line Item ID: C02

RAMP Line Item Name: SIMP Well Abandonment and Replacement

Tranche(s): Tranche1: Underground Components

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	440	1,500	1,500	1,500	4,500	120,626	146,020

Cost Estimate Changes from RAMP:

Costs for this RAMP activity are shared with SCG's Gas Storage Operations and Construction; refer to workpaper 004120. Costs presented in this workpaper are only for the SIMP.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 # of assets abandoned - Wells	9.00	1.00	1.00	1.00	3.00	24.00	27.00

Work Unit Changes from RAMP:

Units for this RAMP activity are shared with SCG's Gas Storage Operations and Construction; refer to workpaper 004120. Units presented in this workpaper are only for the SIMP.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	2.600	2.800

RSE Changes from RAMP:

RSE inputs have been updated since the RAMP report.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Category: D. FIMP
Workpaper: VARIOUS

Summary for Category: D. FIMP

	In 2021\$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	0	0	159
Non-Labor	0	0	0	2,207
NSE	0	0	0	0
Total	0	0	0	2,366
FTE	0.0	0.0	0.0	1.4

002400 FIMP - Distribution

Labor	0	0	0	5
Non-Labor	0	0	0	95
NSE	0	0	0	0
Total	0	0	0	100
FTE	0.0	0.0	0.0	0.1

003700 FIMP - Transmission

Labor	0	0	0	70
Non-Labor	0	0	0	926
NSE	0	0	0	0
Total	0	0	0	996
FTE	0.0	0.0	0.0	0.6

00460A FIMP- Storage

Labor	0	0	0	84
Non-Labor	0	0	0	1,186
NSE	0	0	0	0
Total	0	0	0	1,270
FTE	0.0	0.0	0.0	0.7

Note: Totals may include rounding differences.

Beginning of Workpaper Group
002400 - FIMP - Distribution

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00240.0
 Category: D. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 002400 - FIMP - Distribution

Summary of Results (Constant 2021 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2017	2018	2019	2020	2021	2022	2023	2024
Years									
Labor	Zero-Based	0	0	0	0	0	0	5	
Non-Labor	Zero-Based	0	0	0	0	0	0	95	
NSE	Zero-Based	0	0	0	0	0	0	0	
Total		0	0	0	0	0	0	100	
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.1	

Business Purpose:

FIMP is a newly developed integrity management program that will enhance the safety of facilities in the SoCalGas system by applying integrity management principles to facility equipment. FIMP includes facilities such as compressor stations, storage facilities, pressure limiting stations, natural gas vehicle stations, renewable natural gas facilities and associated equipment.

Physical Description:

Remediation of distribution facility equipment and related assets as a result of FIMP inspections . Refer to supplemental workpapers for details.

Project Justification:

Remediation activities are needed to maintain the integrity of SoCalGas facilities and associated equipment. Upon inspection, it is possible that equipment will need to be repaired or replaced.

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 00240.0
Category: D. FIMP
Category-Sub: 1. FIMP
Workpaper Group: 002400 - FIMP - Distribution

Forecast Methodology:

Labor - Zero-Based

Zero-based method selected due to the FIMP being a new program.

Non-Labor - Zero-Based

Zero-based method selected due to the FIMP being a new program.

NSE - Zero-Based

Zero-based method selected due to the FIMP being a new program.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00240.0
 Category: D. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 002400 - FIMP - Distribution

Summary of Adjustments to Forecast

In 2021 \$ (000)										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	5	0	0	5
Non-Labor	Zero-Based	0	0	0	0	0	95	0	0	95
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	100	0	0	100
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1

Forecast Adjustment Details

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
2022 Total	0	0	0	0	0.0
2023 Total	0	0	0	0	0.0
2024 Total	0	0	0	0	0.0

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 00240.0
Category: D. FIMP
Category-Sub: 1. FIMP
Workpaper Group: 002400 - FIMP - Distribution

Determination of Adjusted-Recorded:

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Adjustments (Nominal \$)**					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Vacation & Sick (Nominal \$)					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Escalation to 2021\$					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2021\$)					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00240.0
 Category: D. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 002400 - FIMP - Distribution

Summary of Adjustments to Recorded:

In Nominal \$(000)					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
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Note: Totals may include rounding differences.

**Beginning of Workpaper Sub Details for
Workpaper Group 002400**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00240.0
 Category: D. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 002400 - FIMP - Distribution
 Workpaper Detail: 002400.001 - 00240- RAMP- Facility Integrity Management Program (FIMP) - Distribution
 In-Service Date: Not Applicable
 Description:

FIMP is a newly developed integrity management program that will enhance the safety of facilities in the SoCalGas system by applying integrity management principles to facility equipment. Activities forecasted under budget code 240 are related to Distribution facilities and include equipment remediation. Refer to supplemental workpapers in workpaper 003700 for more detail.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		0	0	5
Non-Labor		0	0	95
NSE		0	0	0
	Total	0	0	100
FTE		0.0	0.0	0.1

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00240.0
 Category: D. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 002400 - FIMP - Distribution
 Workpaper Detail: 002400.001 - 00240- RAMP- Facility Integrity Management Program (FIMP) - Distribution

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-1 Incident Related to the High Pressure System (Excluding Dig-in)

RAMP Line Item ID: NEW 01

RAMP Line Item Name: NEW - Facility Integrity Management (FIMP) - Distribution

Tranche(s): Tranche1: Supply Line - Facilities

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	0	0	0	100	100	0	0

Cost Estimate Changes from RAMP:

Applying the FIMP to distribution facilities was not considered at the time of the RAMP report. Capital costs are associated with equipment repair and replacement as a result of integrity inspections.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 No feasible units	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:

Capital costs are driven by inspections and are therefore not forecasted by unit.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	15.500	0.000

RSE Changes from RAMP:

RSE score has been calculated since RAMP report.

**Beginning of Workpaper Group
003700 - FIMP - Transmission**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00370.0
 Category: D. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 003700 - FIMP - Transmission

Summary of Results (Constant 2021 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2017	2018	2019	2020	2021	2022	2023	2024
Years									
Labor	Zero-Based	0	0	0	0	0	0	70	
Non-Labor	Zero-Based	0	0	0	0	0	0	926	
NSE	Zero-Based	0	0	0	0	0	0	0	
Total		0	0	0	0	0	0	996	
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.6	

Business Purpose:

FIMP is a newly developed integrity management program that will enhance the safety of facilities in the SoCalGas system by applying integrity management principles to facility equipment. FIMP includes facilities such as compressor stations, storage facilities, pressure limiting stations, natural gas vehicle stations, renewable natural gas facilities and associated equipment.

Physical Description:

Remediation of Transmission facility equipment and related assets as a result of FIMP inspections. Refer to supplemental workpapers for details.

Project Justification:

Remediation activities are needed to maintain the integrity of SoCalGas facilities and associated equipment. Upon inspection, it is possible that equipment will need to be repaired or replaced.

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 00370.0
Category: D. FIMP
Category-Sub: 1. FIMP
Workpaper Group: 003700 - FIMP - Transmission

Forecast Methodology:

Labor - Zero-Based

Zero-based method selected due to the FIMP being a new program.

Non-Labor - Zero-Based

Zero-based method selected due to the FIMP being a new program.

NSE - Zero-Based

Zero-based method selected due to the FIMP being a new program.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00370.0
 Category: D. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 003700 - FIMP - Transmission

Summary of Adjustments to Forecast

In 2021 \$ (000)										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	70	0	0	70
Non-Labor	Zero-Based	0	0	0	0	0	926	0	0	926
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	996	0	0	996
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6

Forecast Adjustment Details

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
2022 Total	0	0	0	0	0.0
2023 Total	0	0	0	0	0.0
2024 Total	0	0	0	0	0.0

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 00370.0
Category: D. FIMP
Category-Sub: 1. FIMP
Workpaper Group: 003700 - FIMP - Transmission

Determination of Adjusted-Recorded:

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Adjustments (Nominal \$)**					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Vacation & Sick (Nominal \$)					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Escalation to 2021\$					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2021\$)					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

Southern California Gas Company
 2024 GRC - APP
 Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00370.0
 Category: D. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 003700 - FIMP - Transmission

Summary of Adjustments to Recorded:

In Nominal \$(000)					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
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Note: Totals may include rounding differences.

**Beginning of Workpaper Sub Details for
Workpaper Group 003700**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00370.0
 Category: D. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 003700 - FIMP - Transmission
 Workpaper Detail: 003700.001 - 003700 - RAMP - Facility Integrity Management Program (FIMP) - Transmission
 In-Service Date: Not Applicable
 Description:

FIMP is a newly developed integrity management program that will enhance the safety of facilities in the SoCalGas system by applying integrity management principles to facility equipment. Activities forecasted under budget code 370 are related to Transmission facilities and include equipment remediation. Refer to supplemental workpapers in workpaper 003700 for more detail.

Forecast In 2021 \$(000)			
Years	2022	2023	2024
Labor	0	0	70
Non-Labor	0	0	926
NSE	0	0	0
Total	0	0	996
FTE	0.0	0.0	0.6

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00370.0
 Category: D. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 003700 - FIMP - Transmission
 Workpaper Detail: 003700.001 - 003700 - RAMP - Facility Integrity Management Program (FIMP) - Transmission

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-1 Incident Related to the High Pressure System (Excluding Dig-in)

RAMP Line Item ID: C20

RAMP Line Item Name: Facility Integrity Management Program (FIMP) - Transmission

Tranche(s): Tranche1: Transmission Facilities

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	0	0	0	996	996	0	0

Cost Estimate Changes from RAMP:

At the time of the RAMP report, FIMP forecasts did not include capital activities. Capital costs are associated with equipment repair and replacement as a result of integrity inspections.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 No feasible units	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:

Capital costs are primarily driven by inspections and are therefore not forecasted by unit.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	3.100	0.000

RSE Changes from RAMP:

RSE Score has been calculated since RAMP report.

Supplemental Workpapers for Workpaper Group 003700

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

FIMP SCG Capital Supplemental Workpaper

Table 1: SCG Capital Forecast												
Year	Organization	Workpaper #	Category	Unit Measure	Labor	Non-labor	Total	Units	\$/Unit	Narrative		
2024	Storage	00460A	Fixed equipment	# of facilities	\$31,250	\$593,750	\$625,000	4	\$ 156,250	Capital costs include repair and replacement costs associated with inspection results. In addition, the rotating equipment includes installation of a new vibration monitoring system at compressor stations located in Storage facilities.		
			Electrical equipment	# of facilities	\$7,471	\$141,950	\$149,421	4	\$ 37,355			
			Rotating equipment	# of compressors	\$44,850	\$450,000	\$494,850	2	\$ 247,425			
	Transmission	003700	Fixed Equipment	# of facilities	\$16,250	\$308,750	\$325,000	5	\$ 65,000		Capital costs include repair and replacement costs associated with inspection results. In addition, the rotating equipment includes installation of a new vibration monitoring system at compressor stations located in Transmission facilities.	
			Electrical equipment	# of facilities	\$8,781	\$166,831	\$175,612	5	\$ 35,122			
			Rotating equipment	# of compressors	\$44,850	\$450,000	\$494,850	2	\$ 247,425			
	Distribution	002400	NGV Stations - Fixed Equipment & Electrical Equipment	# of facilities	\$5,000	\$95,000	\$100,000	5	\$ 20,000		Capital costs include repair and replacement costs associated with inspection results.	
	2024 Totals					\$158,452	\$2,206,281	\$2,364,733				
	2025	Storage		Fixed equipment	# of facilities	\$31,250	\$593,750	\$625,000	4		\$ 156,250	Capital costs include repair and replacement costs associated with inspection results. In addition, the rotating equipment includes installation of a new vibration monitoring system at compressor stations located in Storage facilities.
				Electrical equipment	# of facilities	\$7,471	\$141,950	\$149,421	4		\$ 37,355	
Rotating equipment				# of compressors	\$44,850	\$450,000	\$494,850	2	\$ 247,425			
Transmission			Fixed Equipment	# of facilities	\$21,250	\$403,750	\$425,000	5	\$ 85,000	Capital costs include repair and replacement costs associated with inspection results. In addition, the rotating equipment includes installation of a new vibration monitoring system at compressor stations located in Transmission facilities.		
			Electrical equipment	# of facilities	\$8,781	\$166,831	\$175,612	5	\$ 35,122			
			Rotating equipment	# of compressors	\$44,850	\$450,000	\$494,850	2	\$ 247,425			
Distribution			NGV Stations - Fixed Equipment & Electrical Equipment	# of facilities	\$5,000	\$95,000	\$100,000	5	\$ 20,000	Capital costs include repair and replacement costs associated with inspection results.		
2025 Totals					\$163,452	\$2,301,281	\$2,464,733					
2026		Storage		Fixed equipment	# of facilities	\$31,250	\$593,750	\$625,000	4	\$ 156,250	Capital costs include repair and replacement costs associated with inspection results. In addition, the rotating equipment includes installation of a new vibration monitoring system at compressor stations located in Storage facilities.	
				Electrical equipment	# of facilities	\$7,471	\$141,950	\$149,421	4	\$ 37,355		
	Rotating equipment			# of compressors	\$44,850	\$450,000	\$494,850	2	\$ 247,425			
	Transmission		Fixed Equipment	# of facilities	\$21,250	\$403,750	\$425,000	5	\$ 85,000	Capital costs include repair and replacement costs associated with inspection results. In addition, the rotating equipment includes installation of a new vibration monitoring system at compressor stations located in Transmission facilities.		
			Electrical equipment	# of facilities	\$8,781	\$166,831	\$175,612	5	\$ 35,122			
			Rotating equipment	# of compressors	\$44,850	\$450,000	\$494,850	2	\$ 247,425			
	Distribution		NGV Stations - Fixed Equipment & Electrical Equipment	# of facilities	\$5,000	\$95,000	\$100,000	5	\$ 20,000	Capital costs include repair and replacement costs associated with inspection results.		
	2026 Totals					\$163,452	\$2,301,281	\$2,464,733				
	2027	Storage		Fixed equipment	# of facilities	\$31,250	\$593,750	\$625,000	4	\$ 156,250		Capital costs include repair and replacement costs associated with inspection results. In addition, the rotating equipment includes installation of a new vibration monitoring system at compressor stations located in Storage facilities.
				Electrical equipment	# of facilities	\$7,471	\$141,950	\$149,421	4	\$ 37,355		
Rotating equipment				# of compressors	\$44,850	\$450,000	\$494,850	2	\$ 247,425			
Transmission			Fixed Equipment	# of facilities	\$21,250	\$403,750	\$425,000	5	\$ 85,000	Capital costs include repair and replacement costs associated with inspection results. In addition, the rotating equipment includes installation of a new vibration monitoring system at compressor stations located in Transmission facilities.		
			Electrical equipment	# of facilities	\$8,781	\$166,831	\$175,612	5	\$ 35,122			
			Rotating equipment	# of compressors	\$44,850	\$450,000	\$494,850	2	\$ 247,425			
Distribution			NGV Stations - Fixed Equipment & Electrical Equipment	# of facilities	\$5,000	\$95,000	\$100,000	5	\$ 20,000	Capital costs include repair and replacement costs associated with inspection results.		
2027 Totals					\$163,452	\$2,301,281	\$2,464,733					
Total cost					\$648,807	\$9,110,125	\$9,758,932					

Notes: 50% of the total IM&SP costs in Table 2 were split between Storage and Transmission fixed equipment categories.

Table 2: Program Development Capital Forecast						
Year	Organization	Category	Unit Measure	Total Cost	Units	\$/Unit
2024	IM&SP	Program Development	# of programs	\$250,000	1	\$ 250,000
2025	IM&SP	Program Development	# of programs	\$250,000	1	\$ 250,000
2026	IM&SP	Program Development	# of programs	\$250,000	1	\$ 250,000
2027	IM&SP	Program Development	# of programs	\$250,000	1	\$ 250,000
Total cost				\$1,000,000		

Note: 50% of the total costs in Table 2 were split between Storage and Transmission fixed equipment categories in Table 1.

**Beginning of Workpaper Group
00460A - FIMP- Storage**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00460.0
 Category: D. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 00460A - FIMP- Storage

Summary of Results (Constant 2021 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2017	2018	2019	2020	2021	2022	2023	2024
Years									
Labor	Zero-Based	0	0	0	0	0	0	84	
Non-Labor	Zero-Based	0	0	0	0	0	0	1,186	
NSE	Zero-Based	0	0	0	0	0	0	0	
Total		0	0	0	0	0	0	1,270	
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.7	

Business Purpose:

FIMP is a newly developed integrity management program that will enhance the safety of facilities in the SoCalGas system by applying integrity management principles to facility equipment. FIMP includes facilities such as compressor stations, storage facilities, pressure limiting stations, natural gas vehicle stations, renewable natural gas facilities and associated equipment.

Physical Description:

Remediation of Storage facility equipment and related assets as a result of FIMP inspections. Refer to supplemental workpapers for details.

Project Justification:

Remediation activities are needed to maintain the integrity of SoCalGas facilities and associated equipment. Upon inspection, it is possible that equipment will need to be repaired or replaced.

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 00460.0
Category: D. FIMP
Category-Sub: 1. FIMP
Workpaper Group: 00460A - FIMP- Storage

Forecast Methodology:

Labor - Zero-Based

Zero-based method selected due to the FIMP being a new program.

Non-Labor - Zero-Based

Zero-based method selected due to the FIMP being a new program.

NSE - Zero-Based

Zero-based method selected due to the FIMP being a new program.

**Beginning of Workpaper Sub Details for
Workpaper Group 00460A**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00460.0
 Category: D. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 00460A - FIMP- Storage
 Workpaper Detail: 00460A.001 - *004600 - RAMP - Facility Integrity Management Program (FIMP) - Storage
 In-Service Date: Not Applicable
 Description:

FIMP is a newly developed integrity management program that will enhance the safety of facilities in the SoCalGas system by applying integrity management principles to facility equipment. Activities forecasted under budget code 460 are related to Storage facilities and include equipment remediation. Refer to supplemental workpapers in workpaper 003700 for more detail.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		0	0	84
Non-Labor		0	0	1,186
NSE		0	0	0
	Total	0	0	1,270
FTE		0.0	0.0	0.7

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 00460.0
 Category: D. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 00460A - FIMP- Storage
 Workpaper Detail: 00460A.001 - *004600 - RAMP - Facility Integrity Management Program (FIMP) - Storage

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-4 Incident Related to the Storage System (Excluding Dig-in)
 RAMP Line Item ID: M01
 RAMP Line Item Name: Facility Integrity Management (FIMP) - Storage
 Tranche(s): Tranche1: Aboveground Facilities

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	0	0	0	1,270	1,270	0	0

Cost Estimate Changes from RAMP:

At the time of the RAMP report, FIMP forecasts did not include capital activities. Capital costs are associated with equipment repair and replacement as a result of integrity inspections.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 No feasible units	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:

Capital costs are driven by inspections and are therefore not forecasted by unit.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	1.000	0.000

RSE Changes from RAMP:

RSE score has been calculated since RAMP report.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Category: E. GSEP
Workpaper: X0367A

Summary for Category: E. GSEP

	In 2021\$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	694	6,207	12,103
Non-Labor	0	6,242	42,133	96,485
NSE	0	0	0	0
Total	0	6,936	48,340	108,588
FTE	0.0	6.9	62.0	121.0

X0367A Gas Safety Enhancement Programs

Labor	0	694	6,207	12,103
Non-Labor	0	6,242	42,133	96,485
NSE	0	0	0	0
Total	0	6,936	48,340	108,588
FTE	0.0	6.9	62.0	121.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
X0367A - Gas Safety Enhancement Programs

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: X0367.0
 Category: E. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: X0367A - Gas Safety Enhancement Programs

Summary of Results (Constant 2021 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2017	2018	2019	2020	2021	2022	2023	2024
	Years								
Labor	Zero-Based	0	0	0	0	0	694	6,207	12,103
Non-Labor	Zero-Based	0	0	0	0	0	6,242	42,133	96,485
NSE	Zero-Based	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	6,936	48,340	108,588
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	6.9	62.0	121.0

Business Purpose:

Compliance with new gas safety rules and regulations, such as the Gas Transmission Safety Rule Parts 1 and 2 or other rules driven by the PIPES Act of 2020.

Physical Description:

Implementation of compliance requirements such as reconfirmation of transmission pipeline MAOP through pressure testing or replacement or installation of automatic shut-off valves or remote-controlled valves. Refer to supplemental workpaper for more detail.

Project Justification:

Activities presented in this workpaper are required or are expected to be required by new regulations.

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: X0367.0
Category: E. GSEP
Category-Sub: 1. Gas Rules & Regulations Implementation
Workpaper Group: X0367A - Gas Safety Enhancement Programs

Forecast Methodology:

Labor - Zero-Based

Zero-based method selected due to the implementation activities resulting from new regulations.

Non-Labor - Zero-Based

Zero-based method selected due to the implementation activities resulting from new regulations.

NSE - Zero-Based

Zero-based method selected due to the implementation activities resulting from new regulations.

**Beginning of Workpaper Sub Details for
Workpaper Group X0367A**

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: X0367.0
 Category: E. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: X0367A - Gas Safety Enhancement Programs
 Workpaper Detail: X0367A.001 - X03670 - RAMP - Gas Transmission Safety Rule (GTSR) - MAOP-Reconfirmation/ISEP
 In-Service Date: Not Applicable
 Description:

Capital activities in budget code X03670 address the requirements of the GTSR Parts 1 and 2, as well as the Valve Rule. These costs are forecasted for the reconfirmation of maximum allowable operating pressure (MAOP) in accordance with 49 CFR § 192.624 and PUC 958 on DOT-defined transmission pipelines and consist of reconfirmation using the following methods: pressure testing and replacement.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		694	3,460	9,613
Non-Labor		6,242	31,141	86,519
NSE		0	0	0
	Total	6,936	34,601	96,132
FTE		6.9	34.6	96.1

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: X0367.0
 Category: E. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: X0367A - Gas Safety Enhancement Programs
 Workpaper Detail: X0367A.001 - X03670 - RAMP - Gas Transmission Safety Rule (GTSR) - MAOP-Reconfirmation/ISEP

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-1 Incident Related to the High Pressure System (Excluding Dig-in)
 RAMP Line Item ID: M01 T1-T2
 RAMP Line Item Name: Gas Transmission Safety Rule - MAOP Reconfirmation (HCA and Non-HCA)
 Tranche(s): Tranche1: Transmission - HCA; Tranche2: Transmission - Non-HCA

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	81	5,306	26,470	73,541	105,317	43,844	140,296
Tranche 2 Cost Estimate	33	1,630	8,131	22,591	32,352	17,909	57,304

Cost Estimate Changes from RAMP:

Costs are within the RAMP range. While pressure testing cost estimates have been capitalized in accordance with FERC guidance (refer to workpaper 2TD005), scope and compliance activities have also been evaluated and updated since the RAMP report.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 Miles reconfirmed - HCA	0.00	0.02	1.54	66.07	67.63	4.20	14.30
Tranche 2 Miles reconfirmed - Non-HCA	0.00	0.00	0.47	20.29	20.76	1.80	6.00

Work Unit Changes from RAMP:

Activities have been evaluated and updated since the RAMP report.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	3.300	2.700
Tranche 2	11.400	1.800

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: X0367.0
Category: E. GSEP
Category-Sub: 1. Gas Rules & Regulations Implementation
Workpaper Group: X0367A - Gas Safety Enhancement Programs
Workpaper Detail: X0367A.001 - X03670 - RAMP - Gas Transmission Safety Rule (GTSR) - MAOP-Reconfirmation/ISEP

RSE Changes from RAMP:
RSE inputs have been updated since the RAMP report.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: X0367.0
 Category: E. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: X0367A - Gas Safety Enhancement Programs
 Workpaper Detail: X0367A.003 - X03670 - RAMP - Gas Transmission Safety Rule (GTSR) Part 2
 In-Service Date: Not Applicable

Description:

Capital activities in budget code X03670 address the requirements of the GTSR Parts 1 and 2, as well as the Valve Rule. These costs are forecasted for the implementation of GTSR Part 2 requirements; activities will be driven by compliance with 49 CFR §§ 192.465, 192.461, 192.319, and 192.473.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		0	828	1,044
Non-Labor		0	3,315	4,179
NSE		0	0	0
	Total	<u>0</u>	<u>4,143</u>	<u>5,223</u>
FTE		0.0	8.2	10.4

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: X0367.0
 Category: E. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: X0367A - Gas Safety Enhancement Programs
 Workpaper Detail: X0367A.003 - X03670 - RAMP - Gas Transmission Safety Rule (GTSR) Part 2

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-1 Incident Related to the High Pressure System (Excluding Dig-in)

RAMP Line Item ID: NEW 03

RAMP Line Item Name: NEW - Gas Transmission Safety Rule (GTSR) Part 2

Tranche(s): Tranche1: Transmission - HCA & non-HCA

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	0	0	4,143	5,223	9,366	0	0

Cost Estimate Changes from RAMP:

GTSR Part 2 was not considered at the time of the RAMP report since the requirements and timing of publication were not known at the time. PHMSA has established a projected publication date of June 2022 and forecasts have been developed for expected requirements.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 No feasible units	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:

A unit of measure is not feasible for the wide range of activities that are expected to be required under GTSR Part 2. Refer to supplemental workpapers in workpaper X03670 for additional detail.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:

New mitigation since the RAMP report.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: X0367.0
 Category: E. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: X0367A - Gas Safety Enhancement Programs
 Workpaper Detail: X0367A.005 - X03670 - RAMP - PHMSA Valve Rule
 In-Service Date: Not Applicable

Description:

Capital activities in budget code X03670 address the requirements of the GTSR Parts 1 and 2, as well as the Valve Rule. These costs are forecasted for the implementation of the Valve Rule requirements, which include the installation of rupture mitigation valves for new or replacement transmission pipelines of at least 2 contiguous miles based on HCA and class location. Costs are inclusive of materials, communications equipment, and installation. Activities will be driven by compliance with 85 FR 7162.

Forecast In 2021 \$(000)				
	Years	2022	2023	2024
Labor		0	1,919	1,446
Non-Labor		0	7,677	5,787
NSE		0	0	0
	Total	0	9,596	7,233
FTE		0.0	19.2	14.5

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - APP
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: X0367.0
 Category: E. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: X0367A - Gas Safety Enhancement Programs
 Workpaper Detail: X0367A.005 - X03670 - RAMP - PHMSA Valve Rule

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-1 Incident Related to the High Pressure System (Excluding Dig-in)

RAMP Line Item ID: NEW 02

RAMP Line Item Name: NEW - Valve Rule

Tranche(s): Tranche1: Transmission - HCA & non-HCA

GRC Forecast Cost Estimates (\$000)

	2021 Historical Embedded Costs (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2022 to 2024 Forecast (2021 \$)	2022 to 2024 RAMP Range (2020 Incurred \$)	
						Low	High
Tranche 1 Cost Estimate	0	0	9,596	7,233	16,829	0	0

Cost Estimate Changes from RAMP:

The Valve Rule was not considered at the time of the RAMP report since the timing of publication was not known . PHMSA has since issued the Valve Rule as of March 2022 and forecasts have been developed based on a preliminary analysis of required compliance activities.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities	
						Low	High
Tranche 1 # of assets installed - Valves	0.00	0.00	2.90	2.12	5.02	0.00	0.00

Work Unit Changes from RAMP:

New mitigation since the RAMP report. PHMSA issued the Valve Rule as of March 2022 and valve installation was determined to be the most appropriate unit to reflect the work.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:

New mitigation since the RAMP report.

Supplemental Workpapers for Workpaper Group X0367A

	2022	2023	2024	2025	2026	2027
Active Miles	233.83	341.13	229.02	273.41	366.93	131
Miles Completed (Incremental)	0.02	2.02	86.33	55.03	25.48	25.48
Projected Spend	\$ 6,935,462.19	\$ 34,601,342.49	\$ 96,132,014.28	\$ 159,811,816.18	\$ 162,467,932.42	\$ 179,141,569.04

HCA (76.5%)	\$5,305,629	\$26,470,027	\$73,540,991	\$122,256,039	\$124,287,280	\$137,063,300
Non-HCA (23.5%)	\$1,629,834	\$8,131,315	\$22,593,237	\$37,555,777	\$38,179,753	\$42,098,269

*Percentages established by HCA and non-HCA mileage in current total MAOP-B scope as of January 31, 2022 (subject to change as project teams validate scoping)

Project	Section Name	Project Type	Total Miles	Estimated TIC	2022	2023	2024	2025	2026	2027	Total 2022-2027
GTSR-Sample-01-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	23.1	\$ 31,200,000	\$ 520,000.00	\$ 2,740,400.00	\$ 15,912,488.00	\$ 5,691,400.00	\$ 257,400.00	\$ -	\$ 25,141,688.00
GTSR-Sample-01-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					19	4			
GTSR-Sample-02-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	24.56	\$ 31,200,000	\$ 520,000.00	\$ 2,740,400.00	\$ 15,912,488.00	\$ 5,691,400.00	\$ 257,400.00	\$ -	\$ 25,141,688.00
GTSR-Sample-02-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					20	4			
GTSR-Sample-03-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	9.28	\$ 12,000,000	\$ 160,000.00	\$ 713,000.00	\$ 5,746,720.00	\$ 3,190,000.00	\$ 198,000.00	\$ -	\$ 10,007,720.00
GTSR-Sample-03-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					6	3			
GTSR-Sample-04-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	4.97	\$ 7,200,000	\$ 96,000.00	\$ 427,800.00	\$ 3,448,032.00	\$ 1,914,000.00	\$ 118,800.00	\$ -	\$ 6,004,632.00
GTSR-Sample-04-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					3	2			
GTSR-Sample-05-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	22.93	\$ 31,200,000	\$ 520,000.00	\$ 2,740,400.00	\$ 15,912,488.00	\$ 5,691,400.00	\$ 257,400.00	\$ -	\$ 25,141,688.00
GTSR-Sample-05-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					19	4			
GTSR-Sample-06-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	0.64	\$ 1,506,659	\$ 20,088.79	\$ 89,520.65	\$ 721,528.92	\$ 400,520.17	\$ 24,859.87	\$ -	\$ 1,256,518.39
GTSR-Sample-06-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					0	0			
GTSR-Sample-07-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	12.26	\$ 16,800,000	\$ 224,000.00	\$ 998,200.00	\$ 8,045,408.00	\$ 4,466,000.00	\$ 277,200.00	\$ -	\$ 14,010,808.00
GTSR-Sample-07-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					8	4			
GTSR-Sample-08-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	19.96	\$ 46,873,240	\$ 468,732.40	\$ 1,453,070.45	\$ 31,451,944.26	\$ 16,370,479.18	\$ 1,156,421.43	\$ -	\$ 50,900,647.73
GTSR-Sample-08-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					10	10			
GTSR-Sample-09-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	8.73	\$ 20,501,172	\$ 205,011.72	\$ 635,536.32	\$ 11,756,286.24	\$ 7,160,034.23	\$ 505,789.53	\$ -	\$ 22,262,658.05
GTSR-Sample-09-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					4	4			
GTSR-Sample-10-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	5.57	\$ 13,080,358	\$ 130,803.58	\$ 405,491.10	\$ 8,776,920.32	\$ 4,568,315.08	\$ 322,708.79	\$ -	\$ 14,204,238.87
GTSR-Sample-10-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					3	3			
GTSR-Sample-11-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	5.40	\$ 12,681,137	\$ 112,721.22	\$ 371,275.52	\$ 30,984.25	\$ 7,346,605.46	\$ 5,486,705.35	\$ 417,146.01	\$ 13,765,437.80
GTSR-Sample-11-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					2	4			
GTSR-Sample-12-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	5.28	\$ 12,999,334	\$ 110,216.30	\$ 363,024.95	\$ 30,295.71	\$ 7,183,347.56	\$ 5,364,778.56	\$ 407,876.10	\$ 13,459,539.18
GTSR-Sample-12-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					2	2			
GTSR-Sample-13-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	4.41	\$ 10,956,262	\$ 92,055.66	\$ 303,208.34	\$ 25,303.80	\$ 455,673.53	\$ 7,442,700.30	\$ 2,744,279.98	\$ 10,663,223.61
GTSR-Sample-13-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					3	3			
GTSR-Sample-14-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	3.44	\$ 8,073,515	\$ 62,794.01	\$ 222,470.19	\$ 39,451.58	\$ 5,417,328.57	\$ 2,810,703.42	\$ 1	\$ 8,552,748.76
GTSR-Sample-14-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					2	2			
GTSR-Sample-15-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	3.46	\$ 8,128,217	\$ 33,219.46	\$ 223,977.53	\$ 39,719.89	\$ 5,454,033.36	\$ 2,829,747.18	\$ -	\$ 8,610,697.42
GTSR-Sample-15-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					2	2			
GTSR-Sample-16-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	3.29	\$ 15,758,709	\$ 122,567.74	\$ 434,239.99	\$ 77,007.56	\$ -	\$ 693,383.21	\$ 11,289,224.00	\$ 12,616,422.70
GTSR-Sample-16-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					2	2			
GTSR-Sample-17-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	24.91	\$ 119,395,828	\$ 795,972.19	\$ 3,084,392.23	\$ 875,171.42	\$ -	\$ -	\$ 79,859,699.66	\$ 84,615,226.50
GTSR-Sample-17-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					12	12			
GTSR-Sample-18-Hydrotest	EST INCREMENTAL - \$ BUDGET SPEND	Test	26.66	\$ 62,604,170	\$ 417,361.13	\$ 1,617,274.39	\$ 458,888.57	\$ -	\$ -	\$ 21,966,551.20	\$ 24,460,075.29
GTSR-Sample-18-Hydrotest	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					17	17			
Test Bundle 03	EST INCREMENTAL - \$ BUDGET SPEND	Test	16.6	\$ 39,085,585	\$ -	\$ 605,826.56	\$ 859,492.01	\$ 8,598,828.62	\$ 29,021,046.59	\$ 3,214,300.77	\$ 42,299,494.54
Test Bundle 03	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					1	1			
Test Bundle 04	EST INCREMENTAL - \$ BUDGET SPEND	Test	35.5	\$ 83,258,212	\$ -	\$ 1,290,502.29	\$ 1,830,848.09	\$ -	\$ -	\$ 40,473,065.93	\$ 43,594,416.31
Test Bundle 04	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					6	6			
Test Bundle 05	EST INCREMENTAL - \$ BUDGET SPEND	Test	35.5	\$ 83,258,212	\$ -	\$ 1,290,502.29	\$ 1,830,848.09	\$ -	\$ -	\$ -	\$ 3,121,350.38
Test Bundle 05	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					1	1			
Test Bundle 06	EST INCREMENTAL - \$ BUDGET SPEND	Test	35.5	\$ 83,258,212	\$ -	\$ -	\$ 813,710.26	\$ 3,358,081.23	\$ -	\$ -	\$ 4,171,791.50
Test Bundle 06	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					1	1			
Test Bundle 07	EST INCREMENTAL - \$ BUDGET SPEND	Test	35.5	\$ 83,258,212	\$ -	\$ -	\$ 813,710.26	\$ 3,358,081.23	\$ -	\$ -	\$ 4,171,791.50
Test Bundle 07	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					1	1			
Test Bundle 08	EST INCREMENTAL - \$ BUDGET SPEND	Test	35.5	\$ 83,258,212	\$ -	\$ -	\$ 67,809.19	\$ 2,035,200.75	\$ 2,442,240.90	\$ -	\$ 4,545,250.83
Test Bundle 08	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					1	1			
Test Bundle 09	EST INCREMENTAL - \$ BUDGET SPEND	Test	35.5	\$ 83,258,212	\$ -	\$ -	\$ -	\$ 610,560.22	\$ 3,052,801.12	\$ 912,926.30	\$ 4,576,287.65
Test Bundle 09	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					1	1			
Test Bundle 10	EST INCREMENTAL - \$ BUDGET SPEND	Test	35.5	\$ 83,258,212	\$ -	\$ -	\$ -	\$ -	\$ 1,831,680.67	\$ 2,738,778.90	\$ 4,570,459.57
Test Bundle 10	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					1	1			
Replace Bundle 01	EST INCREMENTAL - \$ BUDGET SPEND	Replace	9.9	\$ 47,324,206	\$ -	\$ 366,762.60	\$ 1,387,545.73	\$ 12,493,590.47	\$ 32,587,448.47	\$ 3,736,151.44	\$ 50,571,498.71
Replace Bundle 01	EST INCREMENTAL - PIPELINE MILES INSTALLED	Replace					10	10			
Replace Bundle 02	EST INCREMENTAL - \$ BUDGET SPEND	Replace	9.9	\$ 47,324,206	\$ -	\$ 336,199.05	\$ 1,416,452.93	\$ 12,493,590.47	\$ 32,587,448.47	\$ 3,736,151.44	\$ 50,569,842.36
Replace Bundle 02	EST INCREMENTAL - PIPELINE MILES INSTALLED	Replace					10	10			
Secondary Replace Projects Bundle 01	EST INCREMENTAL - \$ BUDGET SPEND	Replace	0.095	\$ 457,268	\$ -	\$ -	\$ -	\$ -	\$ 5,029.96	\$ 20,055.77	\$ 25,085.72
Secondary Replace Projects Bundle 01	EST INCREMENTAL - PIPELINE MILES INSTALLED	Replace					1	1			
GTSR Pilot-TEST* 01	EST INCREMENTAL - \$ BUDGET SPEND	Test	2.08	\$ 4,350,598	\$ 87,011.96	\$ 505,757.02	\$ 2,359,851.37	\$ 430,709.20	\$ -	\$ -	\$ 3,383,329.55
GTSR Pilot-TEST* 01	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					2	2			
GTSR Pilot-TEST* 02	EST INCREMENTAL - \$ BUDGET SPEND	Test	0.43	\$ 1,045,817	\$ 20,916.34	\$ 112,576.23	\$ 567,272.06	\$ 103,538.88	\$ -	\$ -	\$ 813,305.51
GTSR Pilot-TEST* 02	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					0	0			
GTSR/P Pilot-TEST 01	EST INCREMENTAL - \$ BUDGET SPEND	Test	5.90	\$ 13,848,645	\$ 553,945.80	\$ 6,546,946.95	\$ 3,222,960.54	\$ 342,753.97	\$ -	\$ -	\$ 10,666,607.26
GTSR/P Pilot-TEST 01	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					4	4			
GTSR/P Pilot-REPLACE 01	EST INCREMENTAL - \$ BUDGET SPEND	Replace	0.04	\$ 1,732,459	\$ 651,864.17	\$ 801,722.14	\$ 4,970.18	\$ -	\$ -	\$ -	\$ 1,458,556.49
GTSR/P Pilot-REPLACE 01	EST INCREMENTAL - PIPELINE MILES INSTALLED	Replace					0	0			
GTSR/P Pilot-REPLACE 02	EST INCREMENTAL - \$ BUDGET SPEND	Replace	0.03	\$ 3,102,762	\$ 640,119.60	\$ 1,852,723.67	\$ 3,510.96	\$ -	\$ -	\$ -	\$ 2,496,354.23
GTSR/P Pilot-REPLACE 02	EST INCREMENTAL - PIPELINE MILES INSTALLED	Replace					0	0			
GTSR/P Pilot-TEST 02	EST INCREMENTAL - \$ BUDGET SPEND	Test	0.25	\$ 1,239,786	\$ 34,795.72	\$ 202,250.12	\$ 943,694.72	\$ 172,238.81	\$ -	\$ -	\$ 1,352,979.38
GTSR/P Pilot-TEST 02	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					0	0			
P Pilot-HYDROTEST 01	EST INCREMENTAL - \$ BUDGET SPEND	Test	16.12	\$ 37,851,551	\$ 294,400.95	\$ 1,043,020.50	\$ 12,485,333.96	\$ 19,534,554.40	\$ 1,561,376.46	\$ -	\$ 34,918,686.27
P Pilot-HYDROTEST 01	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					3	13			
GTSR Pilot-Sample-01	EST INCREMENTAL - \$ BUDGET SPEND	Replace	0.13	\$ 630,780	\$ 10,863.44	\$ 73,871.40	\$ 188,027.25	\$ 264,591.39	\$ 29,142.06	\$ -	\$ 566,495.54
GTSR Pilot-Sample-01	EST INCREMENTAL - PIPELINE MILES INSTALLED	Replace					1	1			
			TOTAL Miles Started	518.5							

	Active Miles	2022	2023	2024	2025	2026	2027
Test	498.5	\$ 5,632,614.97	\$ 31,170,063.63	\$ 93,131,507.23	\$ 134,560,043.86	\$ 97,257,963.47	\$ 171,649,210.38
Replace	20.0	\$ 1,302,847.22	\$ 3,431,278.86	\$ 3,000,507.05	\$ 25,251,772.33	\$ 65,209,068.95	\$ 7,492,358.65
Total (Check)	518.5	\$ 6,935,462.19	\$ 34,601,342.49	\$ 96,132,014.28	\$ 159,811,816.18	\$ 162,467,932.42	\$ 179,141,569.04

	Miles Completed (Incremental)	2022	2023	2024	2025	2026	2027
Test	0.02	-	1.97	86.31	54.94	47.28	25.48
Replace	0.00	0.05	-	-	19.75	-	-
Total (Check)	0.02	0.02	2.02	86.31	54.94	67.03	25.48

Project Cost Assumptions		
Cost Per Mile	TEST	REPLACE
Test = Pressure Test	\$2,348,359	\$4,793,165

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GSEP Part 2 Supplemental Workpaper - SCG O&M, SCG Capital, SDGE O&M, SDGE Capital, Shared Services

	192.461 and 192.319	
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Total Survey Scope for DCVG/ACVG (All Programs)

Item	CY2022 Coating Survey Scope (feet/year)	CY2023 Coating Survey Scope (feet/year)	CY2024 Coating Survey Scope (feet/year)	CY2025 Coating Survey Scope (feet/year)	CY2026 Coating Survey Scope (feet/year)	CY2027 Coating Survey Scope (feet/year)
Class 1	-	158,024.39	8,943.73	-	110,880.00	-
Class 2	-	-	-	-	-	-
Class 3	-	19,008.00	-	52,944.00	44,352.00	-
Class 4	-	-	-	-	-	-
Total (feet/year)	-	177,032.39	8,943.73	52,944.00	155,232.00	-
Total (miles/year)	-	33.53	1.69	10.03	29.40	-

Area	Coating Survey Cost (\$/mile)	Coating Survey Cost (\$/foot)
Class 1	\$ 17,000.00	\$ 3.22
Class 2	\$ 18,000.00	\$ 3.41
Class 3	\$ 26,666.67	\$ 5.05
Class 4	\$ 43,333.33	\$ 8.21

Notes

The average cost to do a coating survey was obtained from the 2016 PHMSA Impact Assessment and adjusted based on feedback from the SME.

Average Remediation/Mitigation costs per foot.

Item	Recoat Average Cost (\$/foot of repair)
Repair Cost	\$4,458.22

Notes

Based on approximated historical project costs

Program Estimate (Gross, non-adjusted)

Item	CY2022 Program Estimate (2021 dollars)	CY2023 Program Estimate (2021 dollars)	CY2024 Program Estimate (2021 dollars)	CY2025 Program Estimate (2021 dollars)	CY2026 Program Estimate (2021 dollars)	CY2027 Program Estimate (2021 dollars)
Coating Survey (DCVG/ACVG)	\$ -	\$ 604,790.65	\$ 28,796.10	\$ 267,393.94	\$ 581,000.00	\$ -
Repair (Recoat)	\$ -	\$ 1,317,336.30	\$ 66,552.23	\$ 393,967.75	\$ 1,155,114.88	\$ -
Total	\$ -	\$ 1,922,126.95	\$ 95,348.33	\$ 661,361.69	\$ 1,736,114.88	\$ -

Notes

It is assumed projects will take one year

Program Scaling Factors

Item	Ramp Up CY2022 (unitless)	Ramp Up CY2023 (unitless)	Ramp Up CY2024 (unitless)	Ramp Up CY2025 (unitless)	Ramp Up CY2026 (unitless)	Ramp Up CY2027 (unitless)
Scaling Factor	0.01	0.50	0.65	0.75	0.85	1.00

Notes

The scaling factors (0-1) are designed to account for the gradual increase in spend as the program scales.

Shared Service Factor

Item	Shared Services CY2022 (unitless)
SoCalGas	0.94
SDG&E	0.06

Notes

The shared service factor includes the distribution of costs between SoCalGas and SDG&E, and was based on the ratio of transmission lines in company database

Capital vs. O&M Distribution Factors

Item	Distribution CY2022 (unitless)
Capital	0.95
O&M	0.05

Notes

The distribution factors are being included to account for the fact that the cost per dig factor includes the remediation cost.

Capital vs. O&M Distribution of the Program Estimate for Each Utility

Item	CY2022 Program Estimate (2021 dollars)	CY2023 Program Estimate (2021 dollars)	CY2024 Program Estimate (2021 dollars)	CY2025 Program Estimate (2021 dollars)	CY2026 Program Estimate (2021 dollars)	CY2027 Program Estimate (2021 dollars)
SoCalGas						
Capital	0	\$ 858,229.68	\$ 55,344.94	\$ 442,946.99	\$ 1,317,798.00	\$ -
O&M	0	\$ 45,169.98	\$ 2,912.89	\$ 23,313.00	\$ 69,357.79	\$ -
SoCalGas Total	0	\$ 903,399.67	\$ 58,257.83	\$ 466,259.99	\$ 1,387,155.79	\$ -
SDG&E						
Capital	0	\$ 54,780.62	\$ 3,532.66	\$ 28,273.21	\$ 84,114.77	\$ -
O&M	0	\$ 2,594.87	\$ 167.34	\$ 1,339.26	\$ 3,984.38	\$ -
Shared Services	0	\$ 288.32	\$ 18.59	\$ 148.81	\$ 442.71	\$ -
SDG&E Total	0	\$ 57,663.81	\$ 3,718.58	\$ 29,761.28	\$ 88,541.86	\$ -
Grand Total	0	\$ 961,063.47	\$ 61,976.41	\$ 496,021.27	\$ 1,475,697.65	\$ -

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GSEP Part 2 Supplemental Workpaper - SCG O&M, SCG Capital, SDGE O&M, SDGE Capital, Shared Services

192.465

Total Incremental Survey Scope for Close Interval Surveys (CIS), by Class Location

Item	CY2022 CIS 1 Scope (feet/year)	CY2023 CIS 1 Scope (feet/year)	CY2024 CIS 1 Scope (feet/year)	CY2025 CIS 1 Scope (feet/year)	CY2026 CIS 1 Scope (feet/year)	CY2027 CIS 1 Scope (feet/year)
Class 1	48960	48960	48960	48960	48960	48960
Class 2	3060	3060	3060	3060	3060	3060
Class 3	91800	91800	91800	91800	91800	91800
Class 4	3060	3060	3060	3060	3060	3060
Total (feet/year)	146,880	146,880	146,880	146,880	146,880	146,880
Total (miles/year)	28	28	28	28	28	28

Area	Close Interval Survey Cost (\$/mile)	CIS Cost (\$/foot)
Class 1	\$ 34,000.00	\$ 6.44
Class 2	\$ 36,000.00	\$ 6.82
Class 3	\$ 53,333.33	\$ 10.10
Class 4	\$ 86,666.67	\$ 16.41

Notes

The average cost to do a coating survey was obtained from the 2016 PHMSA Impact Assessment and adjusted based on feedback from the SME. The cost per mile of conducting a CIS includes a factor of 2 to account for proposed language requiring 5 ft. interval spacing for a CIS (current practice is 10 ft)

Average Remediation/Mitigation costs per foot.

Item	Recoat Average Cost (\$/foot of repair)
Repair Cost	\$12,737.77

Notes

Based on approximated historical project costs

Program Estimate (Gross, non-adjusted)

Item	CY2022 Program Estimate (2021 dollars)	CY2023 Program Estimate (2021 dollars)	CY2024 Program Estimate (2021 dollars)	CY2025 Program Estimate (2021 dollars)	CY2026 Program Estimate (2021 dollars)	CY2027 Program Estimate (2021 dollars)
CIS 1	\$ 1,313,636.36	\$ 1,313,636.36	\$ 1,313,636.36	\$ 1,313,636.36	\$ 1,313,636.36	\$ 1,313,636.36
Repair (Recoat)	\$ -	\$ 5,667,091.67	\$ 5,667,091.67	\$ 5,667,091.67	\$ 5,667,091.67	\$ 5,667,091.67
CIS 2	\$ -	\$ -	\$ 1,545,454.55	\$ 1,545,454.55	\$ 1,545,454.55	\$ 1,545,454.55
Total	\$ 1,313,636.36	\$ 6,980,728.03	\$ 8,526,182.58	\$ 8,526,182.58	\$ 8,526,182.58	\$ 8,526,182.58

Notes

It is assumed projects will take one year and permitting will take one year

Program Scaling Factors

Item	Ramp Up CY2022 (unitless)	Ramp Up CY2023 (unitless)	Ramp Up CY2024 (unitless)	Ramp Up CY2025 (unitless)	Ramp Up CY2026 (unitless)	Ramp Up CY2027 (unitless)
Scaling Factor	0.01	0.50	0.65	0.75	0.85	1.00

Notes

The scaling factors (0-1) are designed to account for the gradual increase in spend as the program scales.

Shared Service Factor

Item	Shared Services CY2022 (unitless)
SoCalGas	0.94
SDG&E	0.06

Capital vs. O&M Distribution Factors

Item	Distribution CY2022 (unitless)
Capital	0.95
O&M	0.05

Notes

Same assumptions as for 192.461 and 192.319

Capital vs. O&M Distribution of the Program Estimate for Each Utility

Workpaper
X03670.003
2TD005.000

214770.003
1TD005.000
2200.7003

Item	CY2022 Program Estimate (2021 dollars)	CY2023 Program Estimate (2021 dollars)	CY2024 Program Estimate (2021 dollars)	CY2025 Program Estimate (2021 dollars)	CY2026 Program Estimate (2021 dollars)	CY2027 Program Estimate (2021 dollars)
SoCalGas						
Capital	0	\$ 3,116,895.07	\$ 4,949,022.68	\$ 5,710,410.78	\$ 6,471,798.88	\$ 7,613,881.04
O&M	0	\$ 164,047.11	\$ 260,474.88	\$ 300,547.94	\$ 340,620.99	\$ 400,730.58
SoCalGas Total	0	\$ 3,280,942.17	\$ 5,209,497.55	\$ 6,010,958.72	\$ 6,812,419.88	\$ 8,014,611.62
SDG&E						
Capital	0	\$ 198,950.75	\$ 315,895.06	\$ 364,494.31	\$ 413,093.55	\$ 485,992.41
O&M	0	\$ 9,423.98	\$ 14,963.45	\$ 17,270.02	\$ 19,567.59	\$ 23,020.69
Shared Services	0	1047.109	1662.606	1913.891	2174.177	2557.855
SDG&E Total	0	\$ 209,421.84	\$ 332,521.12	\$ 383,678.22	\$ 434,835.31	\$ 511,570.95
Grand Total	0	\$ 3,490,364.02	\$ 5,542,018.67	\$ 6,394,636.93	\$ 7,247,255.19	\$ 8,526,182.58

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GSEP Part 2 Supplemental Workpaper - SCG O&M, SCG Capital, SDGE O&M, SDGE Capital, Shared Services

192.473

Total Incremental Survey Scope for Interference Current Surveys, by Class Location

Item	CY2022 Interference Current Survey Scope (miles/year)	CY2023 Interference Current Survey Scope (miles/year)	CY2024 Interference Current Survey Scope (miles/year)	CY2025 Interference Current Survey Scope (miles/year)	CY2026 Interference Current Survey Scope (miles/year)	CY2027 Interference Current Survey Scope (miles/year)
Class 1	4.198	4.198	4.198	4.198	4.198	4.198
Class 2	0.26	0.26	0.26	0.26	0.26	0.26
Class 3	3.144	3.144	3.144	3.144	3.144	3.144
Class 4	0	0	0	0	0	0
Total (feet/year)	40138.56	40138.56	40138.56	40138.56	40138.56	40138.56
Total (miles/year)	7.60	7.60	7.60	7.60	7.60	7.60

Estimated Cost to Complete an Interference Current Survey, by Class Location

Area	Interference Current Survey Cost (\$/mile)
Class 1	\$ 17,000.00
Class 2	\$ 18,000.00
Class 3	\$ 26,666.67
Class 4	\$ 43,333.33

Notes

The average cost to do a coating survey was obtained from the 2016 PHMSA Impact Assessment and adjusted based on feedback from the SME.

Average Remediation/Mitigation costs per mile, by Class Location.

Item	Average AC Mitigation Cost (\$/mile)
Class 1	\$1,666,799.34
Class 2	\$2,083,499.18
Class 3	\$2,916,898.85
Class 4	\$0.00

Notes

Based on approximated historical project costs

Program Estimate (Gross, non-adjusted)

Item	CY2022 Program Estimate (2021 dollars)	CY2023 Program Estimate (2021 dollars)	CY2024 Program Estimate (2021 dollars)	CY2025 Program Estimate (2021 dollars)	CY2026 Program Estimate (2021 dollars)	CY2027 Program Estimate (2021 dollars)
Interference Current Survey	\$ 159,886.00	\$ 159,886.00	\$ 159,886.00	\$ 159,886.00	\$ 159,886.00	\$ 159,886.00
Repair (AC Mitigation)	-	\$ 216,974.37	\$ 216,974.37	\$ 216,974.37	\$ 216,974.37	\$ 216,974.37
Total	\$ 159,886.00	\$ 376,860.37	\$ 376,860.37	\$ 376,860.37	\$ 376,860.37	\$ 376,860.37

Notes

It is assumed interference current studies will take one year and AC mitigation will take one year

Program Scaling Factors

Item	Ramp Up CY2022 (unitless)	Ramp Up CY2023 (unitless)	Ramp Up CY2024 (unitless)	Ramp Up CY2025 (unitless)	Ramp Up CY2026 (unitless)	Ramp Up CY2027 (unitless)
Scaling Factor	0.01	0.50	0.65	0.75	0.85	1.00

Notes

The scaling factors (0-1) are designed to account for the gradual increase in spend as the program scales.

Shared Service Factor

Item	Shared Services CY2022 (unitless)
SoCalGas	0.94
SDG&E	0.06

Capital vs. O&M Distribution Factors

Item	Distribution CY2022 (unitless)
Capital	0.95
O&M	0.05

Notes

Same assumptions as for 192.461 and 192.319

Capital vs. O&M Distribution of the Program Estimate for Each Utility

Workpaper	Item	CY2022 Program Estimate (2021 dollars)	CY2023 Program Estimate (2021 dollars)	CY2024 Program Estimate (2021 dollars)	CY2025 Program Estimate (2021 dollars)	CY2026 Program Estimate (2021 dollars)	CY2027 Program Estimate (2021 dollars)
	SoCalGas						
X03670.003	Capital	0	\$ 168,268.15	\$ 218,748.60	\$ 252,402.23	\$ 286,055.86	\$ 336,536.31
2TD005.000	O&M	0	\$ 8,856.22	\$ 11,513.08	\$ 13,284.33	\$ 15,055.57	\$ 17,712.44
	SoCalGas Total	0	\$ 177,124.37	\$ 230,261.68	\$ 265,686.56	\$ 301,111.43	\$ 354,248.74
	SDG&E						
214770.003	Capital	0	\$ 10,740.52	\$ 13,962.68	\$ 16,110.78	\$ 18,258.88	\$ 21,481.04
1TD005.000	O&M	0	\$ 508.76	\$ 661.39	\$ 763.14	\$ 864.89	\$ 1,017.52
2200.7003	Shared Services	0	\$ 56.53	\$ 73.49	\$ 84.79	\$ 96.10	\$ 113.06
	SDG&E Total	0	\$ 11,305.81	\$ 14,697.55	\$ 16,958.72	\$ 19,219.88	\$ 22,611.62
	Grand Total	0	\$ 188,430.18	\$ 244,959.24	\$ 282,645.27	\$ 320,331.31	\$ 376,860.37

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GSEP Valve Rule Supplemental Workpaper - SCG O&M, SCG Capital, SDGE O&M, SDGE Capital, Shared Services

Project Scope for Valve Rule

Project Name	CY2022 Replacement Pipeline (miles/year)	CY2023 Replacement Pipeline (miles/year)	CY2024 Replacement Pipeline (miles/year)	CY2025 Replacement Pipeline (miles/year)	CY2026 Replacement Pipeline (miles/year)	CY2027 Replacement Pipeline (miles/year)
Total	0.00	15.92	9.00	9.84	9.84	0.00

Notes
Estimating projects that start after effective date

Valve Requirements for the Rule

Project Name	CY2022 Valve Requirement (valves/year)	CY2023 Valve Requirement (valves/year)	CY2024 Valve Requirement (valves/year)	CY2025 Valve Requirement (valves/year)	CY2026 Valve Requirement (valves/year)	CY2027 Valve Requirement (valves/year)
Total	0	4	2	2	2	2

Notes
Based on spacing requirements (8) and project mileage assumptions

Item	CY2022 Program Estimate (2021 dollars)	CY2023 Program Estimate (2021 dollars)	CY2024 Program Estimate (2021 dollars)	CY2025 Program Estimate (2021 dollars)	CY2026 Program Estimate (2021 dollars)	CY2027 Program Estimate (2021 dollars)
Valves and Valve Installation	\$0.00	\$14,328,000.00	\$8,100,000.00	\$8,856,000.00	\$8,856,000.00	\$8,856,000.00
Total	\$0.00	\$14,328,000.00	\$8,100,000.00	\$8,856,000.00	\$8,856,000.00	\$8,856,000.00

Notes
Based on historical valve project costs, assume \$3.6M per valve

Program Scaling Factors

Item	Ramp Up CY2022 (unitless)	Ramp Up CY2023 (unitless)	Ramp Up CY2024 (unitless)	Ramp Up CY2025 (unitless)	Ramp Up CY2026 (unitless)	Ramp Up CY2027 (unitless)
Scaling Factor	0.00	0.75	1.00	1.00	1.00	1.00

Notes
The scaling factors (0-1) are designed to account for the gradual increase in spend as the program scales. 2022 is assumed to be 0 since the effective date of these activities are in early 2023

Program Estimate (net, adjusted)

Item	CY2022 Program Estimate (2021 dollars)	CY2023 Program Estimate (2021 dollars)	CY2024 Program Estimate (2021 dollars)	CY2025 Program Estimate (2021 dollars)	CY2026 Program Estimate (2021 dollars)	CY2027 Program Estimate (2021 dollars)
Valves and Valve Installation	\$0.00	\$10,746,000.00	\$8,100,000.00	\$8,856,000.00	\$8,856,000.00	\$8,856,000.00
Total	\$0.00	\$10,746,000.00	\$8,100,000.00	\$8,856,000.00	\$8,856,000.00	\$8,856,000.00

Notes
The adjusted (net) program estimate incorporates the abandonment factor and program scaling factor.

Shared Service Factor

Item	Shared Services (unitless)
SoCalGas	0.94
SDG&E	0.06

Notes
The shared service factor includes the distribution of costs between SoCalGas and SDG&E, and was based on the ratio of transmission lines in company database

Capital vs. O&M Distribution Factors

Item	Distribution (unitless)
Capital	0.95
O&M	0.05

Notes
O&M based on SME judgment of possible non-capital costs associated with the requirements

Capital vs. O&M Distribution of the Program Estimate for Each Utility

Item	CY2022 Program Estimate (2021 dollars)	CY2023 Program Estimate (2021 dollars)	CY2024 Program Estimate (2021 dollars)	CY2025 Program Estimate (2021 dollars)	CY2026 Program Estimate (2021 dollars)	CY2027 Program Estimate (2021 dollars)
SoCalGas						
Capital	\$0.00	\$9,596,178.00	\$7,233,300.00	\$7,908,408.00	\$7,908,408.00	\$7,908,408.00
O&M	\$0.00	\$505,062.00	\$380,700.00	\$416,232.00	\$416,232.00	\$416,232.00
SoCalGas Total	\$0.00	\$10,101,240.00	\$7,614,000.00	\$8,324,640.00	\$8,324,640.00	\$8,324,640.00
SDG&E						
Capital	\$0.00	\$612,522.00	\$461,700.00	\$504,792.00	\$504,792.00	\$504,792.00
O&M	\$0.00	\$32,238.00	\$24,300.00	\$26,568.00	\$26,568.00	\$26,568.00
Shared Services	\$0.00	\$3,223.80	\$2,430.00	\$2,656.80	\$2,656.80	\$2,656.80
SDG&E Total	\$0.00	\$644,760.00	\$486,000.00	\$531,360.00	\$531,360.00	\$531,360.00
Grand Total	\$0.00	\$10,746,000.00	\$8,100,000.00	\$8,856,000.00	\$8,856,000.00	\$8,856,000.00

Workpaper
X03670.005
2TD005.000

214770.005
1TD005.000
2200.7003