

Application of SAN DIEGO GAS & ELECTRIC)
COMPANY for authority to update its gas and)
electric revenue requirement and base rates)
effective January 1, 2024 (U 902-M))

Application No. 22-05-016

Exhibit No.: (SDG&E-09-CWP-R)

REVISED CAPITAL WORKPAPERS TO
PREPARED DIRECT TESTIMONY
OF AMY KITSON / TRAVIS T. SERA
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

AUGUST 2022



2024 General Rate Case - REVISED
INDEX OF WORKPAPERS

Exhibit SDG&E-09-CWP-R - GAS INTEGRITY PROGRAMS

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San Diego Gas & Electric Company
 2024 GRC - REVISED
 Capital Workpapers

Overall Summary For Exhibit No. SDG&E-09-CWP-R

Area:	GAS INTEGRITY PROGRAMS
Witness:	Amy Kitson

In 2021 \$ (000)			
Adjusted-Forecast			
	2022	2023	2024
A. TIMP	21,477	19,173	9,290
B. DIMP	60,230	64,482	70,534
C. FIMP	0	0	145
D. GSEP	0	3,221	27,156
Total	81,707	86,876	107,125

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Category: A. TIMP
Workpaper: 034680

Summary for Category: A. TIMP

	In 2021\$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	153	1,647	1,628	1,022
Non-Labor	2,134	19,830	17,545	8,268
NSE	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	2,287	21,477	19,173	9,290
FTE	0.9	9.7	9.6	6.0

034680 TIMP

Labor	153	1,647	1,628	1,022
Non-Labor	2,134	19,830	17,545	8,268
NSE	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	2,287	21,477	19,173	9,290
FTE	0.9	9.7	9.6	6.0

Note: Totals may include rounding differences.

**Beginning of Workpaper Group
034680 - TIMP**

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 03468.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: 034680 - 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	280	188	350	212	153	1,647	1,628	1,022
Non-Labor	Base YR Rec	4,359	2,857	6,143	4,179	2,134	19,830	17,545	8,268
NSE	Base YR Rec	0	0	0	0	0	0	0	0
Total		4,639	3,045	6,493	4,392	2,288	21,477	19,173	9,290
FTE	Base YR Rec	1.4	0.9	2.0	1.4	0.9	9.7	9.6	6.0

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 SDG&E transmission system.

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 03468.0
Category: A. TIMP
Category-Sub: 1. TIMP
Workpaper Group: 034680 - 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.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 03468.0
Category: A. TIMP
Category-Sub: 1. TIMP
Workpaper Group: 034680 - 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	153	153	153	1,494	1,475	869	1,647	1,628	1,022
Non-Labor	Base YR Rec	2,134	2,134	2,134	17,696	15,411	6,134	19,830	17,545	8,268
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		2,287	2,287	2,287	19,190	16,886	7,003	21,477	19,173	9,290
FTE	Base YR Rec	0.9	0.9	0.9	8.8	8.7	5.1	9.7	9.6	6.0

Forecast Adjustment Details

Year	Labor	NLbr	NSE	Total	FTE
2022	1,494	17,696	0	19,190	8.8
Explanation:	This adjustment captures the incremental 2022 costs above the base year recorded. Cost forecasts are primarily based on the expected O&M activities. Additionally, in 2022, due to new GTSR Part 1 requirements, SDG&E plans to retrofit select pipeline segments for ILI assessment.				
2022 Total	1,494	17,696	0	19,190	8.8
2023	1,475	15,411	0	16,886	8.7
Explanation:	This adjustment captures the incremental 2023 costs above the base year recorded. Cost forecasts are primarily based on the expected O&M activities. Additionally, in 2022, due to new GTSR Part 1 requirements, SDG&E plans to retrofit select pipeline segments for ILI assessment.				
2023 Total	1,475	15,411	0	16,886	8.7
2024	869	6,134	0	7,003	5.1
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	869	6,134	0	7,003	5.1

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 03468.0
Category: A. TIMP
Category-Sub: 1. TIMP
Workpaper Group: 034680 - TIMP

Determination of Adjusted-Recorded:

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	182	129	253	162	133
Non-Labor	3,253	2,258	5,086	3,633	2,134
NSE	0	0	0	0	0
Total	3,435	2,387	5,340	3,795	2,268
FTE	1.2	0.8	1.7	1.2	0.8
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	182	129	253	162	133
Non-Labor	3,253	2,258	5,086	3,633	2,134
NSE	0	0	0	0	0
Total	3,435	2,387	5,340	3,795	2,268
FTE	1.2	0.8	1.7	1.2	0.8
Vacation & Sick (Nominal \$)					
Labor	27	20	36	23	20
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	27	20	36	23	20
FTE	0.2	0.1	0.3	0.2	0.1
Escalation to 2021\$					
Labor	71	40	60	28	0
Non-Labor	1,106	599	1,057	546	0
NSE	0	0	0	0	0
Total	1,177	639	1,117	574	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2021\$)					
Labor	280	188	350	212	153
Non-Labor	4,359	2,857	6,143	4,179	2,134
NSE	0	0	0	0	0
Total	4,639	3,045	6,493	4,392	2,288
FTE	1.4	0.9	2.0	1.4	0.9

* 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.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 03468.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: 034680 - TIMP

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 034680**

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 03468.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: 034680 - TIMP
 Workpaper Detail: 034680.001 - 03468A - RAMP - Integrity Assessments and Remediation (HCA and non-HCA)
 In-Service Date: Not Applicable
 Description:

TIMP Capital activities in budget code 03468 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.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		1,647	1,628	1,022
Non-Labor		19,830	17,545	8,268
NSE		0	0	0
	Total	<u>21,477</u>	<u>19,173</u>	<u>9,290</u>
FTE		9.7	9.6	6.0

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 03468.0
 Category: A. TIMP
 Category-Sub: 1. TIMP
 Workpaper Group: 034680 - TIMP
 Workpaper Detail: 034680.001 - 03468A - RAMP - Integrity Assessments and Remediation (HCA and non-HCA)

RAMP Item # 1

RAMP Activity

RAMP Chapter: SDG&E-Risk-3 Incident Related to the High Pressure System (Excluding Dig-in)

RAMP Line Item ID: C15 & M3 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	1,535	19,152	16,529	8,826	44,507	15,252	19,532
Tranche 2 Cost Estimate	752	2,325	2,643	464	5,432	3,579	4,579

Cost Estimate Changes from RAMP:

Forecasted projects have been updated since the RAMP report; SDG&E continuously updates the TIMP assessment plan and manages projects in alignment within compliance cycles and regulatory 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
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 work units since the RAMP report.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	19.800	355.300
Tranche 2	9.200	300.000

RSE Changes from RAMP:

Refer to O&M workpapers.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Category: B. DIMP
Workpaper: 095460

Summary for Category: B. DIMP

	In 2021\$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	886	778	837	914
Non-Labor	57,375	59,452	63,645	69,620
NSE	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	58,261	60,230	64,482	70,534
FTE	7.8	6.8	7.4	8.0

095460 DIMP

Labor	886	778	837	914
Non-Labor	57,375	59,452	63,645	69,620
NSE	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	58,261	60,230	64,482	70,534
FTE	7.8	6.8	7.4	8.0

Note: Totals may include rounding differences.

**Beginning of Workpaper Group
095460 - DIMP**

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 09546.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: 095460 - 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	985	2,517	2,983	2,578	886	778	837	914
Non-Labor	Base YR Rec	45,811	40,399	47,177	45,509	57,375	59,452	63,645	69,620
NSE	Base YR Rec	0	0	0	0	0	0	0	0
Total		46,796	42,916	50,159	48,087	58,261	60,230	64,482	70,534
FTE	Base YR Rec	5.9	23.5	29.3	29.4	7.8	6.8	7.4	8.0

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 the VIPP.

Project Justification:

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

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 09546.0
Category: B. DIMP
Category-Sub: 1. DIMP
Workpaper Group: 095460 - 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.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 09546.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: 095460 - 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	886	886	886	-108	-49	28	778	837	914
Non-Labor	Base YR Rec	57,375	57,375	57,375	2,077	6,270	12,245	59,452	63,645	69,620
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		58,261	58,261	58,261	1,969	6,221	12,273	60,230	64,482	70,534
FTE	Base YR Rec	7.8	7.8	7.8	-1.0	-0.4	0.2	6.8	7.4	8.0

Forecast Adjustment Details

Year	Labor	NLbr	NSE	Total	FTE
2022	-108	2,077	0	1,969	-1.0
Explanation:	This adjustment captures DIMP incremental 2022 costs above the base year recorded. In alignment with D.19-09-051, SDG&E 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.				
2022 Total	-108	2,077	0	1,969	-1.0
2023	-49	6,270	0	6,221	-0.4
Explanation:	This adjustment captures DIMP incremental 2023 costs above the base year recorded. In alignment with D.19-09-051, SDG&E 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 Total	-49	6,270	0	6,221	-0.4
2024	28	12,245	0	12,273	0.2
Explanation:	This adjustment captures DIMP incremental 2024 costs above the base year recorded. In alignment with D.19-09-051, SDG&E 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 Total	28	12,245	0	12,273	0.2

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 09546.0
Category: B. DIMP
Category-Sub: 1. DIMP
Workpaper Group: 095460 - DIMP

Determination of Adjusted-Recorded:

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	640	1,728	2,133	1,896	695
Non-Labor	34,184	31,927	38,609	38,204	54,615
NSE	0	0	0	0	0
Total	34,824	33,655	40,741	40,099	55,310
FTE	2.7	0.4	0.4	0.0	0.0
Adjustments (Nominal \$)**					
Labor	0	0	28	67	76
Non-Labor	0	0	453	1,357	2,760
NSE	0	0	0	0	0
Total	0	0	481	1,424	2,835
FTE	2.3	19.7	24.8	25.3	6.7
Recorded-Adjusted (Nominal \$)					
Labor	640	1,728	2,160	1,963	770
Non-Labor	34,184	31,927	39,062	39,561	57,375
NSE	0	0	0	0	0
Total	34,824	33,655	41,223	41,524	58,145
FTE	5.0	20.1	25.2	25.3	6.7
Vacation & Sick (Nominal \$)					
Labor	95	262	309	278	116
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	95	262	309	278	116
FTE	0.9	3.4	4.1	4.1	1.1
Escalation to 2021\$					
Labor	250	528	513	337	0
Non-Labor	11,627	8,472	8,114	5,948	0
NSE	0	0	0	0	0
Total	11,877	8,999	8,627	6,285	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2021\$)					
Labor	985	2,517	2,983	2,578	886
Non-Labor	45,811	40,399	47,177	45,509	57,375
NSE	0	0	0	0	0
Total	46,796	42,916	50,159	48,087	58,261
FTE	5.9	23.5	29.3	29.4	7.8

* 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.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 09546.0
Category: B. DIMP
Category-Sub: 1. DIMP
Workpaper Group: 095460 - DIMP

Summary of Adjustments to Recorded:

In Nominal \$(000)					
Years	2017	2018	2019	2020	2021
Labor	0	0	28	67	76
Non-Labor	0	0	453	1,357	2,760
NSE	0	0	0	0	0
Total	0	0	481	1,424	2,835
FTE	2.3	19.7	24.8	25.3	6.7

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	0.001	0	0	0.001	2.3
Explanation:	FTE correction.				
2017 Total	0.001	0	0	0.001	2.3
2018	0.001	0	0	0.001	19.7
Explanation:	FTE correction.				
2018 Total	0.001	0	0	0.001	19.7
2019	0	0.100	0	0.100	0.0
Explanation:	Correcting the previous adjustment transfer of Daisy Chain Riser Replacement program to DIMP				
2019	28	453	0	481	0.1
Explanation:	Transferring costs to DIMP DREAMS				
2019	0.001	0	0	0.001	24.7
Explanation:	FTE correction.				
2019 Total	28	453	0	481	24.8
2020	67	1,357	0	1,424	0.1
Explanation:	Transferring costs to DIMP DREAMS				
2020	0.001	0	0	0.001	25.2
Explanation:	FTE correction.				
2020 Total	67	1,357	0	1,424	25.3
2021	0.001	0	0	0.001	6.6
Explanation:	FTE adjustment				
2021	76	2,760	0	2,835	0.1
Explanation:	Transfer DCRR costs from Witness Area 5 Gas Distribution to DIMP				
2021 Total	76	2,760	0	2,835	6.7

Note: Totals may include rounding differences.

**Beginning of Workpaper Sub Details for
Workpaper Group 095460**

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 09546.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: 095460 - DIMP
 Workpaper Detail: 095460.001 - 095460 - RAMP - Distribution Integrity Management Program (DIMP)
 In-Service Date: Not Applicable

Description:

DIMP Capital activities in budget code 9546 include installations, replacements, and other risk mitigation or remediation activities driven by DIMP Projects and Activities to Address Risk (PAARs). These costs reflect expected activity levels under the VIPP, which consists of replacement of non-state-of-the-art Aldyl-A pipe.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		778	837	914
Non-Labor		59,452	63,645	69,620
NSE		0	0	0
	Total	60,230	64,482	70,534
FTE		6.8	7.4	8.0

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 09546.0
 Category: B. DIMP
 Category-Sub: 1. DIMP
 Workpaper Group: 095460 - DIMP
 Workpaper Detail: 095460.001 - 095460 - RAMP - Distribution Integrity Management Program (DIMP)

RAMP Item # 1

RAMP Activity

RAMP Chapter: SDG&E-Risk-9 Incident Related to the Medium Pressure System (Excluding Dig-in)
 RAMP Line Item ID: C16 T1
 RAMP Line Item Name: Distribution Integrity Management Program (DIMP)
 Tranche(s): Tranche1: Plastic - Main (VIPP)

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	58,261	60,230	64,482	70,534	195,246	157,605	182,490

Cost Estimate Changes from RAMP:

Since the RAMP report, per unit cost forecasts for the VIPP have been evaluated and updated - the cost of replacements has generally increased so costs are slightly higher than 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 Miles replaced - Plastic	52.00	54.00	56.00	60.00	170.00	140.00	170.00

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	0.200	3.400

RSE Changes from RAMP:

RSE inputs have been updated since the RAMP report.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Category: C. FIMP
Workpaper: 214780

Summary for Category: C. FIMP

	In 2021\$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	0	0	7
Non-Labor	0	0	0	138
NSE	0	0	0	0
Total	<u>0</u>	<u>0</u>	<u>0</u>	<u>145</u>
FTE	0.0	0.0	0.0	0.2

214780 FIMP

Labor	0	0	0	7
Non-Labor	0	0	0	138
NSE	0	0	0	0
Total	<u>0</u>	<u>0</u>	<u>0</u>	<u>145</u>
FTE	0.0	0.0	0.0	0.2

Note: Totals may include rounding differences.

**Beginning of Workpaper Group
214780 - FIMP**

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21478.0
 Category: C. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 214780 - FIMP

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	7	
Non-Labor	Zero-Based	0	0	0	0	0	0	138	
NSE	Zero-Based	0	0	0	0	0	0	0	
Total		0	0	0	0	0	0	145	
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.2	

Business Purpose:

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

Physical Description:

Remediation of 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 SDG&E facilities and associated equipment. Upon inspection, it is possible that equipment will need to be repaired or replaced.

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 21478.0
Category: C. FIMP
Category-Sub: 1. FIMP
Workpaper Group: 214780 - FIMP

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.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21478.0
 Category: C. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 214780 - FIMP

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	7	0	0	7
Non-Labor	Zero-Based	0	0	0	0	0	138	0	0	138
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	145	0	0	145
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2

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.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21478.0
 Category: C. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 214780 - FIMP

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.

San Diego Gas & Electric Company
 2024 GRC - REVISED
 Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21478.0
 Category: C. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 214780 - FIMP

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 214780**

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21478.0
 Category: C. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 214780 - FIMP
 Workpaper Detail: 214780.001 - 214780 -RAMP- Facility Integrity Management Program (FIMP) - Distribution SDG&E
 In-Service Date: Not Applicable

Description:

FIMP is a newly developed integrity management program that will enhance the safety of facilities in the SDG &E system by applying integrity management principles to facility equipment. Activities forecasted under workpaper 214780.001 are related to Distribution facilities and include equipment remediation. Refer to supplemental workpapers in workpaper 214780 for more detail.

Forecast In 2021 \$(000)				
	Years	2022	2023	2024
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.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21478.0
 Category: C. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 214780 - FIMP
 Workpaper Detail: 214780.001 - 214780 -RAMP- Facility Integrity Management Program (FIMP) - Distribution SDG&E

RAMP Item # 1

RAMP Activity

RAMP Chapter: SDG&E-Risk-3 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 SDG&E 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	20.700	0.000

RSE Changes from RAMP:

RSE Score has been calculated since RAMP report.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21478.0
 Category: C. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 214780 - FIMP
 Workpaper Detail: 214780.002 - 214780 -RAMP- Facility Integrity Management Program (FIMP) - Transmission SDG&E
 In-Service Date: Not Applicable

Description:

FIMP is a newly developed integrity management program that will enhance the safety of facilities in the SDG &E system by applying integrity management principles to facility equipment. Activities forecasted under workpaper 214780.002 are related to Transmission facilities and include equipment remediation . Refer to supplemental workpapers in workpaper 214780 for more detail.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		0	0	2
Non-Labor		0	0	43
NSE		0	0	0
	Total	0	0	45
FTE		0.0	0.0	0.1

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21478.0
 Category: C. FIMP
 Category-Sub: 1. FIMP
 Workpaper Group: 214780 - FIMP
 Workpaper Detail: 214780.002 - 214780 -RAMP- Facility Integrity Management Program (FIMP) - Transmission SDG&E

RAMP Item # 1

RAMP Activity

RAMP Chapter: SDG&E-Risk-3 Incident Related to the High Pressure System (Excluding Dig-in)
 RAMP Line Item ID: NEW 04
 RAMP Line Item Name: NEW - Facility Integrity Management (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	45	45	0	0

Cost Estimate Changes from RAMP:

Applying the FIMP to SDG&E transmission 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	37.000	0.000

RSE Changes from RAMP:

RSE Score has been calculated since RAMP report.

Supplemental Workpapers for Workpaper Group 214780

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

FIMP SDG&E Capital Supplemental Workpaper

Table 1: SDG&E Distribution Capital Forecast										
Year	Organization	Workpaper #	Category	Unit Measure	Labor	Non-labor	Total	Units	\$/Unit	Narrative
2024	Distribution	214780.001	NGV Stations - Fixed Equipment & Electrical Equipment	# of facilities	\$5,000.00	\$95,000.00	\$100,000.00	6	\$16,666.67	Capital costs include repair and replacement costs associated with inspection results.
2025					\$5,000.00	\$95,000.00	\$100,000.00	6	\$16,666.67	
2026					\$5,000.00	\$95,000.00	\$100,000.00	6	\$16,666.67	
2027					\$5,000.00	\$95,000.00	\$100,000.00	6	\$16,666.67	
Total					\$20,000.00	\$380,000.00	\$400,000.00			

Table 2: SDG&E Transmission Capital Forecast										
Year	Organization	Workpaper #	Category	Unit Measure	Labor	Non-labor	Total	Units	\$/Unit	Narrative
2024	Transmission	214780.002	Compressor Station- Fixed Equipment, Rotating, and Electrical Equipment	# of stations	\$2,250.00	\$42,750.00	\$45,000.00	1	\$45,000.00	Capital costs include repair and replacement costs associated with inspection results.
2025					\$2,250.00	\$42,750.00	\$45,000.00	1	\$45,000.00	
2026					\$2,250.00	\$42,750.00	\$45,000.00	1	\$45,000.00	
2027					\$2,250.00	\$42,750.00	\$45,000.00	1	\$45,000.00	
Total					\$9,000.00	\$171,000.00	\$180,000.00			

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Category: D. GSEP
Workpaper: 214770

Summary for Category: D. GSEP

	In 2021\$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	0	293	1,477
Non-Labor	0	0	2,928	25,679
NSE	0	0	0	0
Total	0	0	3,221	27,156
FTE	0.0	0.0	2.9	14.7

214770 Gas Safety Enhancement Programs

Labor	0	0	293	1,477
Non-Labor	0	0	2,928	25,679
NSE	0	0	0	0
Total	0	0	3,221	27,156
FTE	0.0	0.0	2.9	14.7

Note: Totals may include rounding differences.

Beginning of Workpaper Group
214770 - Gas Safety Enhancement Programs

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21477.0
 Category: D. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: 214770 - 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	0	293	1,477
Non-Labor	Zero-Based	0	0	0	0	0	0	2,928	25,679
NSE	Zero-Based	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	3,221	27,156
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	2.9	14.7

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.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 21477.0
Category: D. GSEP
Category-Sub: 1. Gas Rules & Regulations Implementation
Workpaper Group: 214770 - 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.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21477.0
 Category: D. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: 214770 - Gas Safety Enhancement Programs

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	293	1,477	0	293	1,477
Non-Labor	Zero-Based	0	0	0	0	2,928	25,679	0	2,928	25,679
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	3,221	27,156	0	3,221	27,156
FTE	Zero-Based	0.0	0.0	0.0	0.0	2.9	14.7	0.0	2.9	14.7

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.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21477.0
 Category: D. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: 214770 - Gas Safety Enhancement Programs

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.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21477.0
 Category: D. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: 214770 - Gas Safety Enhancement Programs

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 214770**

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21477.0
 Category: D. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: 214770 - Gas Safety Enhancement Programs
 Workpaper Detail: 214770.001 - 214770 - RAMP - Gas Transmission Safety Rule (GTSR) - ISEP
 In-Service Date: Not Applicable

Description:

GTSR capital activities in budget code 214770 include reconfirming the maximum allowable operating pressure (MAOP) in accordance with 49 CFR § 192.624 and PUC § 958 on the DOT-defined transmission pipelines. For these transmission lines, costs include reconfirmation using the following methods: pressure testing and replacement.

Forecast In 2021 \$(000)				
	Years	<u>2022</u>	<u>2023</u>	<u>2024</u>
Labor		0	117	1,318
Non-Labor		0	2,226	25,043
NSE		0	0	0
	Total	0	2,343	26,361
FTE		0.0	1.2	13.2

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21477.0
 Category: D. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: 214770 - Gas Safety Enhancement Programs
 Workpaper Detail: 214770.001 - 214770 - RAMP - Gas Transmission Safety Rule (GTSR) - ISEP

RAMP Item # 1

RAMP Activity

RAMP Chapter: SDG&E-Risk-3 Incident Related to the High Pressure System (Excluding Dig-in)

RAMP Line Item ID: M02 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	0	0	2,202	24,780	26,982	9,360	29,952
Tranche 2 Cost Estimate	0	0	141	1,581	1,722	390	1,248

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 1TD005), 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	0.00	0.00	1.79	1.79	0.60	2.04
Tranche 2 Miles reconfirmed - non-HCA	0.00	0.00	0.00	0.11	0.11	0.02	0.07

Work Unit Changes from RAMP:

Units are within the RAMP range.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	5.400	6.900
Tranche 2	7.600	4.100

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
Witness: Amy Kitson
Budget Code: 21477.0
Category: D. GSEP
Category-Sub: 1. Gas Rules & Regulations Implementation
Workpaper Group: 214770 - Gas Safety Enhancement Programs
Workpaper Detail: 214770.001 - 214770 - RAMP - Gas Transmission Safety Rule (GTSR) - ISEP

RSE Changes from RAMP:

RSE inputs have been updated since the RAMP report.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21477.0
 Category: D. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: 214770 - Gas Safety Enhancement Programs
 Workpaper Detail: 214770.003 - 214470 - RAMP - Gas Transmission Safety Rule (GTSR) - Part 2
 In-Service Date: Not Applicable

Description:

Part 2 of GTSR focuses on repair requirements for High Consequence Areas (HCAs) and non-HCAs. Inspection of pipelines within 72 hours of extreme weather and natural disasters will be conducted. Work will be in compliance with §192.465, §192.461, §192.319, and §192.473.

Forecast In 2021 \$(000)				
	Years	2022	2023	2024
Labor		0	53	67
Non-Labor		0	212	266
NSE		0	0	0
	Total	0	265	333
FTE		0.0	0.5	0.6

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21477.0
 Category: D. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: 214770 - Gas Safety Enhancement Programs
 Workpaper Detail: 214770.003 - 214470 - RAMP - Gas Transmission Safety Rule (GTSR) - Part 2

RAMP Item # 1

RAMP Activity

RAMP Chapter: SDG&E-Risk-3 Incident Related to the High Pressure System (Excluding Dig-in)

RAMP Line Item ID: NEW

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	265	333	598	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 N/A	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 214770 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.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21477.0
 Category: D. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: 214770 - Gas Safety Enhancement Programs
 Workpaper Detail: 214770.005 - 214770 - RAMP - PHMSA Valve Rule
 In-Service Date: Not Applicable

Description:

Capital activities in budget code 214770 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	123	92
Non-Labor		0	490	370
NSE		0	0	0
	Total	0	613	462
FTE		0.0	1.2	0.9

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

Area: GAS INTEGRITY PROGRAMS
 Witness: Amy Kitson
 Budget Code: 21477.0
 Category: D. GSEP
 Category-Sub: 1. Gas Rules & Regulations Implementation
 Workpaper Group: 214770 - Gas Safety Enhancement Programs
 Workpaper Detail: 214770.005 - 214770 - RAMP - PHMSA Valve Rule

RAMP Item # 1

RAMP Activity

RAMP Chapter: SDG&E-Risk-3 Incident Related to the High Pressure System (Excluding Dig-in)
 RAMP Line Item ID: NEW
 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	613	462	1,075	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 Valves	0.00	0.18	0.18	0.14	0.50	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 214770

SDGE Capital Part 1 Supplemental Workpaper

Budget Code: 214770.001

Directs Only	2022	2023	2024	2025	2026	2027
Active Miles	0.00	1.90	6.90	11.80	12.50	10.60
Miles Completed (Incremental)	0.00	0.00	2.06	4.07	6.15	4.68
Projected Spend	\$ -	\$ 2,342,448.00	\$ 26,361,431.00	\$ 31,891,380.00	\$ 25,372,603.00	\$ 20,605,215.00

	2022	2023	2024	2025	2026	2027
HCA (8%)	\$0	\$2,201,901	\$24,779,745	\$29,977,897	\$23,850,247	\$19,368,902
Non-HCA (6%)	\$0	\$140,547	\$1,581,686	\$1,913,483	\$1,522,356	\$1,236,313

*Percentages established by HCA and non-HCA mileage in current total MAOP-R scope as of December 2021 (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-Replacement 1	EST INCREMENTAL - \$ BUDGET SPEND	Replace	1.36	\$ 22,310,678.75	\$ -	\$ 1,784,854	\$ 17,848,543	\$ 2,677,281	\$ -	\$ -	\$ 22,310,678
GTSR-Replacement 1	EST INCREMENTAL - PIPELINE MILES INSTALLED	Replace					1.36				
GTSR-Replacement 2	EST INCREMENTAL - \$ BUDGET SPEND	Replace	0.50	\$ 7,111,094.70	\$ -	\$ 376,470	\$ 903,527	\$ 5,831,098	\$ -	\$ -	\$ 7,111,095
GTSR-Replacement 2	EST INCREMENTAL - PIPELINE MILES INSTALLED	Replace					0.50				
GTSR-Test 1	EST INCREMENTAL - \$ BUDGET SPEND	Test	1.2	\$ 5,492,708.03	\$ -	\$ -	\$ 549,271	\$ 4,430,784	\$ 512,653	\$ -	\$ 5,492,708
GTSR-Test 1	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					1.20				
GTSR-Test 2	EST INCREMENTAL - \$ BUDGET SPEND	Test	0.9	\$ 4,084,144.25	\$ -	\$ -	\$ -	\$ 735,146	\$ 3,185,633	\$ 163,366	\$ 4,084,145
GTSR-Test 2	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test						0.90			
GTSR-Test 3	EST INCREMENTAL - \$ BUDGET SPEND	Test	2.8	\$ 5,932,148.10	\$ -	\$ -	\$ -	\$ 800,840	\$ 4,419,450	\$ 711,858	\$ 5,932,148
GTSR-Test 3	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test						2.80			
GTSR-Test 4	EST INCREMENTAL - \$ BUDGET SPEND	Test	2.4	\$ 12,509,083.19	\$ -	\$ -	\$ -	\$ -	\$ 2,251,635	\$ 9,256,722	\$ 11,508,357
GTSR-Test 4	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test						2.40			
GTSR-Test 5	EST INCREMENTAL - \$ BUDGET SPEND	Test	1.8	\$ 4,769,803.45	\$ -	\$ -	\$ -	\$ -	\$ 429,282	\$ 3,768,145	\$ 4,197,427
GTSR-Test 5	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test						1.80			
GTSR-Test 6	EST INCREMENTAL - \$ BUDGET SPEND	Test	0.4	\$ 4,012,639.08	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 722,275	\$ 722,275
GTSR-Test 6	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test								0.40	
GTSR-Test 7	EST INCREMENTAL - \$ BUDGET SPEND	Test	0.2	\$ 3,772,577.41	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 679,064	\$ 679,064
GTSR-Test 7	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test								0.20	
GTSR-Test 8	EST INCREMENTAL - \$ BUDGET SPEND	Test	0.5	\$ 4,528,098.91	\$ -	\$ 181,124	\$ 3,924,352	\$ 422,623	\$ -	\$ -	\$ 4,528,099
GTSR-Test 8	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					0.50				
GTSR-Test 9	EST INCREMENTAL - \$ BUDGET SPEND	Test	0.3	\$ 2,747,945.38	\$ -	\$ -	\$ 1,777,005	\$ 970,941	\$ -	\$ -	\$ 2,747,946
GTSR-Test 9	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					0.20	0.10			
GTSR-Test 10	EST INCREMENTAL - \$ BUDGET SPEND	Test	0.6	\$ 5,219,989.61	\$ -	\$ -	\$ 835,198	\$ 4,315,191	\$ 69,600	\$ -	\$ 5,219,989
GTSR-Test 10	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					0.60				
GTSR-Test 11	EST INCREMENTAL - \$ BUDGET SPEND	Test	0.5	\$ 3,263,279.46	\$ -	\$ -	\$ 326,328	\$ 2,762,910	\$ 174,042	\$ -	\$ 3,263,280
GTSR-Test 11	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					0.50				
GTSR-Test 12	EST INCREMENTAL - \$ BUDGET SPEND	Test	0.7	\$ 4,930,170.15	\$ -	\$ -	\$ 197,207	\$ 4,272,814	\$ 460,149	\$ -	\$ 4,930,170
GTSR-Test 12	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					0.70				
GTSR-Test 13	EST INCREMENTAL - \$ BUDGET SPEND	Test	0.7	\$ 4,816,323.83	\$ -	\$ -	\$ -	\$ 3,114,556	\$ 1,701,768	\$ -	\$ 4,816,324
GTSR-Test 13	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test					0.47	0.23			
GTSR-Test 14	EST INCREMENTAL - \$ BUDGET SPEND	Test	0.5	\$ 3,943,097.91	\$ -	\$ -	\$ -	\$ 630,896	\$ 3,259,628	\$ 52,575	\$ 3,943,099
GTSR-Test 14	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test						0.50			
GTSR-Test 15	EST INCREMENTAL - \$ BUDGET SPEND	Test	0.3	\$ 2,123,825.65	\$ -	\$ -	\$ -	\$ 212,383	\$ 1,798,172	\$ 113,271	\$ 2,123,826
GTSR-Test 15	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test						0.30			
GTSR-Test 16	EST INCREMENTAL - \$ BUDGET SPEND	Test	1.7	\$ 9,518,903.26	\$ -	\$ -	\$ -	\$ 713,918	\$ 6,552,178	\$ 2,252,807	\$ 9,518,903
GTSR-Test 16	EST INCREMENTAL - PIPELINE MILES INSTALLED	Test						1.42	0.28		
GTSR-Replacement 3	EST INCREMENTAL - \$ BUDGET SPEND	Replace	0.24	\$ 3,490,080.98	\$ -	\$ -	\$ -	\$ -	\$ 558,413	\$ 2,885,134	\$ 3,443,547
GTSR-Replacement 3	EST INCREMENTAL - PIPELINE MILES INSTALLED	Replace								0.20	
TOTAL Miles Started			17.5								

	Active Miles	2022	2023	2024	2025	2026	2027
Test	15.4	-	181,124.00	7,609,361.70	23,383,005.57	24,814,194.59	17,720,086.84
Replace	2.1	-	2,161,324.00	18,752,070.00	8,508,379.00	558,413.00	2,885,134.00
Total (Check)			2,342,448.00	26,361,431.70	31,891,384.57	25,372,607.59	20,605,220.84

	Miles Completed (Incremental)	2022	2023	2024	2025	2026	2027
Test		-	-	0.7	3.6	6.2	4.5
Replace		-	-	1.4	0.5	-	0.2
Total (Check)				2.06	4.07	6.15	4.68

Project Cost Assumptions		
Cost Per Mile	TEST	REPLACE
	\$ 6,059,179.86	\$ 10,092,251.68

Test = Pressure Test
 Replace = Replacement
 **Based on SME input – individual costs for each project were updated

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

PRIVILEGED AND CONFIDENTIAL/WORK PRODUCT: Created at the Direction of Counsel Setareh Mortazavi

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	\$ -

Workpaper X03670.003

2TD005.000

214770.003

1TD005.000

2200.7003

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

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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

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

PRIVILEGED AND CONFIDENTIAL/WORK PRODUCT: Created at the Direction of Counsel Setareh Mortazavi

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

San Diego Gas & Electric Company
2024 GRC - REVISED
Capital Workpapers

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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