

SAN DIEGO GAS & ELECTRIC COMPANY

Risk Assessment and Mitigation Phase

2025 Report

Chapter: SDG&E-Risk-2

Number: SDG&E-R02-CWP

High Pressure Gas System Capital Workpapers

SAN DIEGO GAS & ELECTRIC COMPANY

May 15, 2025



2025 Risk Assessment & Mitigation Phase

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Summary of Risk Chapter: 1CR02 - SDG&E-Risk-2 High Pressure Gas System

In 2024 \$ (000s) Incurred Costs												
	Adjusted Recorded					Adjusted Forecast						
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Control/Mitigation	24,639	26,154	50,001	49,146	53,621	89,368	32,165	17,956	31,782	74,652	57,425	44,585
Alternative Mitigation	0	0	0	0	0	5,611	5,611	5,611	5,611	5,611	5,611	5,611
Units	See detailed pages for Units as the unit measure can vary for each mitigation.											

Note: Totals may include rounding differences.

Risk Chapter: **SDG&E-Risk-2 High Pressure Gas System**
Risk ID: **1CR02**

In 2024 \$ (000s) Incurred Costs

Mitigation		Unit Measure	Adjusted Recorded					Adjusted Forecast						
ID	Name		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
A125	Pipeline Rerouting to Mitigat	No feasible	0	0	0	0	0	3,595	3,595	3,595	3,595	3,595	3,595	3,595
A171	DIMP - High Pressure Pipeli	No feasible	0	0	0	0	0	2,016	2,016	2,016	2,016	2,016	2,016	2,016
C010	Pipeline Monitoring Technolo	OPM Monitc	0	0	0	0	324	1,323	931	931	931	555	555	495
C013	Gas Transmission Safety Ru	Miles	0	0	0	2,703	11,423	39,901	4,088	0	1,948	28,673	18,649	17,540
C104	Cathodic Protection - Capita	No feasible	261	1,304	510	59	58	58	58	58	58	58	58	58
C113	Leak Repair	No feasible	0	0	0	0	0	1,008	1,008	1,008	1,008	1,008	1,008	1,008
C118	Rupture Mitigation Valve Ins	Valves	0	0	0	0	0	0	0	0	4,051	8,102	8,102	4,051
C125	Pipeline Relocation/Replace	No feasible	617	4,724	16,600	9,571	200	200	200	200	200	200	200	200
C126	Shallow/Exposed Pipe Remu	No feasible	1,957	766	943	3,671	2,230	2,230	2,230	2,230	2,230	2,230	2,230	2,230
C136	Compressor Stations - Capit	No feasible	9,641	14,021	16,288	4,876	4,761	4,761	4,761	4,761	4,761	4,761	4,761	4,761
C151	Measurement & Regulation :	No feasible	6,116	2,226	1,104	964	2,686	2,686	2,686	2,686	2,686	2,686	2,686	2,686
C171	Integrity Assessments & Rer	No feasible	6,047	3,112	14,556	27,301	31,938	37,200	16,202	6,081	13,908	26,378	19,175	11,555

Units

Mitigation		Unit Measure	Adjusted Recorded					Adjusted Forecast						
ID	Name		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
A125	Pipeline Rerouting to Mitigat	No feasible	0	0	0	0	0	0	0	0	0	0	0	0
A171	DIMP - High Pressure Pipeli	No feasible	0	0	0	0	0	0	0	0	0	0	0	0
C010	Pipeline Monitoring Technolo	OPM Monitc	0	0	0	0	0	24	21	21	21	21	21	18
C013	Gas Transmission Safety Ru	Miles	0	0	0	0	0	5	0	0	0	9	4	4
C104	Cathodic Protection - Capita	No feasible	0	0	0	0	0	0	0	0	0	0	0	0
C113	Leak Repair	No feasible	0	0	0	0	0	0	0	0	0	0	0	0
C118	Rupture Mitigation Valve Ins	Valves	0	0	0	0	0	0	0	0	1	2	2	1
C125	Pipeline Relocation/Replace	No feasible	0	0	0	0	0	0	0	0	0	0	0	0

Note: Totals may include rounding differences.

Risk Chapter: **SDG&E-Risk-2 High Pressure Gas System**
Risk ID: **1CR02**

Units

Mitigation		Unit Measure	Adjusted Recorded					Adjusted Forecast						
ID	Name		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
C126	Shallow/Exposed Pipe Removal	No feasible	0	0	0	0	0	0	0	0	0	0	0	0
C136	Compressor Stations - Capital	No feasible	0	0	0	0	0	0	0	0	0	0	0	0
C151	Measurement & Regulation	No feasible	0	0	0	0	0	0	0	0	0	0	0	0
C171	Integrity Assessments & Repair	No feasible	0	0	0	0	0	0	0	0	0	0	0	0

Note: Totals may include rounding differences.

Supplemental Workpapers

San Diego Gas & Electric Company

2025 RAMP

Capital Workpapers

Area: SDG&E Gas Transmission
 Mitigation Name: Pipeline Rerouting - Landslide Mitigation
 Proposed Budget Code: Capital - 412
 Forecast Methodology: Zero-Based

Summary Results (in 000s)	Forecast Methodology	Adjusted Recorded Dollars					Adjusted Forecast Dollars						
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Labor	Zero-Based	-	-	-	-	-	\$143	\$143	\$143	\$143	\$143	\$143	\$143
Labor V&S	Zero-Based	-	-	-	-	-	\$22	\$22	\$22	\$22	\$22	\$22	\$22
Non-Labor	Zero-Based	-	-	-	-	-	\$3,429	\$3,429	\$3,429	\$3,429	\$3,429	\$3,429	\$3,429
NSE	Zero-Based	-	-	-	-	-	-	-	-	-	-	-	-
Total		-	-	-	-	-	\$3,594	\$3,594	\$3,594	\$3,594	\$3,594	\$3,594	\$3,594

	Forecast Methodology	Adjusted Recorded FTE					Adjusted Forecast FTE						
		2020	2021	2022	2023	2024							
FTE Total	Zero-Based	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

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Capital Workpapers

PRIVILEGED AND CONFIDENTIAL/WORK PRODUCT

2025 RAMP
SCG-Risk-2-Supplemental
Workpaper

SCG DIMP - High Pressure Pipeline Assessments

Assumptions:

The DIMP High Pressure Pipeline Assessments identifies threats to high pressure pipelines; determines the risk posed by these threats; schedules prescribed assessments to evaluate these threats; collects information about the condition of the pipelines; and takes actions to minimize applicable threat and integrity concerns to reduce the risk of a pipeline failure.

Costs are based on estimated robotic ILLI costs at \$5,000,00 per mile

Assumed 3 O&M digs and 2 capital digs based on SME experience

Labor and non-labor splits are assumed to be close to TIMP ILLI at 16% and 84% respectively for SCG O&M and 5% and 95% for Capital

Forecast projected spend is before 16% V&S factor.

O&M Forecast

	2025	2026	2027	2028	2029	2030	2031
Miles Assessed	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Project	3	3	3	3	3	3	3
O&M Projected Spend	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000

O&M Forecast Cost Breakdown

	2025	2026	2027	2028	2029	2030	2031
Estimated robotic ILLI cost per mile	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000
O&M digs per project (assuming 3 projects for 2.5 miles with 3 digs each)	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Projects	3	3	3	3	3	3	3
Forecasted Miles	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Projected Cost	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000

Labor/Non-Labor

	2025	2026	2027	2028	2029	2030	2031
Labor at 16%	\$ 2,720,000	\$ 2,720,000	\$ 2,720,000	\$ 2,720,000	\$ 2,720,000	\$ 2,720,000	\$ 2,720,000
Non-Labor at 84%	\$ 14,280,000	\$ 14,280,000	\$ 14,280,000	\$ 14,280,000	\$ 14,280,000	\$ 14,280,000	\$ 14,280,000
Total Projected Cost	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000	\$ 17,000,000

Capital Forecast Breakdown

	2025	2026	2027	2028	2029	2030	2031
O&M digs per project (assuming 2 digs per project)	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Projects	3	3	3	3	3	3	3
Projected Cost	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000

Labor/Non-Labor

	2025	2026	2027	2028	2029	2030	2031
Labor at 5%	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000
Non-Labor at 95%	\$ 5,700,000	\$ 5,700,000	\$ 5,700,000	\$ 5,700,000	\$ 5,700,000	\$ 5,700,000	\$ 5,700,000
Total Projected Cost	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000

CCM - High Consequence Area (HCA) Methane Sensors

Unit Count

	2025	2026	2027	2028	2029	2030	2031
HCA Methane Sensor	24	21	21	21	21	21	18

Cost Per Unit Breakdown & Assumptions

Cost Per Month

COST TYPE	LABOR/NON-LABOR	CLASSIFICATION	DESCRIPTION	COST/Month	Cost/Year
Capital	Labor	Internal Resources	Project Mgmt (<i>cost is per month</i>)	\$ 10,000.00	\$ 120,000.00
Capital	Non-Labor	External Resources	PM Support	\$ 12,500.00	\$ 150,000.00
Capital	Non-Labor	External Resources	Site Acquisition and Engineering Design Reviews	\$ 16,950.00	\$ 203,400.00
Capital	Non-Labor	External Resources	Technical Advisor	\$ 7,560.00	\$ 90,720.00
Capital	Non-Labor	External Resources	Logistics and Warehousing	\$ 5,000.00	\$ 60,000.00

Cost Per Sensor

COST TYPE	LABOR/NON-LABOR	CLASSIFICATION	DESCRIPTION	COST
Capital	Labor	Internal Resources	Plan, permit, test, and configure (<i>cost is per site</i>)	\$ 1,142.86
Capital	Non-Labor	External Resources	Construction Inspector	\$ 2,896.00
Capital	Non-Labor	External Resources	Contractor Installation (2025 ONLY)	\$ 13,735.00
Capital	Non-Labor	External Resources	Contractor Installation (2026+)	\$ 5,975.00
Capital	Non-Labor	Materials & Expenses	Sensor/Enclosure/Comm Equipment (2025 ONLY)	\$ 10,347.79
Capital	Non-Labor	Materials & Expenses	Sensor/Enclosure/Comm Equipment (2026+)	\$ 3,500.00
Capital	Non-Labor	Materials & Expenses	Airlink License	\$ 70.00
Total Unit Cost				\$ 37,666.65

Capital Forecast

		2025	2026	2027	2028	2029	2030	2031
Labor	Internal Labor	\$ 147,428.64	\$ 144,000.06	\$ 144,000.06	\$ 144,000.06	\$ 144,000.06	\$ 144,000.06	\$ 140,571.48
	V&S*	\$ 23,588.58	\$ 23,040.01	\$ 23,040.01	\$ 23,040.01	\$ 23,040.01	\$ 23,040.01	\$ 22,491.44
	Total Labor	\$ 171,017.22	\$ 167,040.07	\$ 167,040.07	\$ 167,040.07	\$ 167,040.07	\$ 167,040.07	\$ 163,062.92
	FTE	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Non-Labor	External Resources	\$ 903,264.00	\$ 690,411.00	\$ 690,411.00	\$ 690,411.00	\$ 314,803.65	\$ 314,803.65	\$ 269,831.70
	Materials & Expenses	\$ 248,346.96	\$ 73,500.00	\$ 73,500.00	\$ 73,500.00	\$ 73,500.00	\$ 73,500.00	\$ 63,000.00
	Total NL	\$ 1,151,610.96	\$ 763,911.00	\$ 763,911.00	\$ 763,911.00	\$ 388,303.65	\$ 388,303.65	\$ 332,831.70
Total		\$ 1,322,628.18	\$ 930,951.07	\$ 930,951.07	\$ 930,951.07	\$ 555,343.72	\$ 555,343.72	\$ 495,894.62

Assumptions

The CCM HCA Methane Sensor project was proposed as part of enhanced pipeline safety to enhance the monitoring and response along its high-pressure pipeline routes in high consequence areas. V&S is 16%

The program is intended to leverage emerging technologies to monitor and manage information gathered from sensors placed along these routes. The project costs include the continual evaluation and testing of the latest point sensor technologies to support wide scale deployment throughout the system.

This information will allow Gas Control to complement existing pipeline safety efforts to identify abnormal operating conditions or emergency conditions more quickly for increased system integrity and remediation response in support of enhanced public and employee safety.

The CCM HCA Methane Sensor project will not replace any existing activities intended for pipeline safety. This includes but is not limited to leak surveys, aerial monitoring, and vehicle monitoring.

Permits will be needed for all installation sites as they will be installed in public right of way (PROW).

Does not include any electrical or lease agreement costs for co-locations.

Additional efforts will be needed for the hardware, software, and system customization and enhancement of the Advanced Meter (SCG) network to accommodate the additional field assets.

Forecast assumes a more cost efficient and equally effective sensor begins being installed in 2026

San Diego Gas & Electric Company

2025 RAMP

Capital Workpapers

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SDGE Capital GTSR Part 1 - RAMP Supplemental Workpaper

Budget Code: 21477

Assumptions:

The cost forecast for the Gas Transmission Safety Rule reconfirmation of maximum allowable operating pressure (MAOP) consists of project implementation in accordance with 49 CFR § 192.624 and PUC 958 on DOT-defined transmission pipelines through pressure testing or replacement. The project scheduling is based on a discrete number of projects driven by GTSR Part 1 to meet 100% mileage completion by July 2035. 2026 costs are trailing construction costs from work that will be completed in 2025. 2028 costs are for planning, materials, and start of construction.

Note: Forecast projected spend is before 16% V&S factor.

HCA (86%)

Non-HCA (14%)

*Percentages established by HCA and non-HCA mileage in current total MAOP-R scope as of January 31, 2025 (subject to change as project teams validate scoping).

Table 1: Forecast Totals

	2025	2026	2027	2028	2029	2030	2031
Miles Completed	5.2	0	0	0	8.8	4.1	4.1
Forecast Projected Spend	\$ 39,693,111	\$ 4,087,762	\$ -	\$ 1,947,773	\$ 26,023,123	\$ 17,828,237	\$ 16,718,603
Direct Labor	\$ 1,300,088	\$ -	\$ -	\$ -	\$ 16,566,628	\$ 5,131,823	\$ 5,131,823
Non-Labor	\$ 38,393,024	\$ 4,087,762	\$ -	\$ 1,947,773	\$ 9,456,495	\$ 12,696,414	\$ 11,586,780

Table 2: Forecast Project List

Program Detail	Project Type	Category	2025	2026	2027	2028	2029	2030	2031
GTSR 49-11 Hydrotest	TEST	Direct Costs	\$ 14,908,788	\$ 738,495	\$ -	\$ -	\$ -	\$ -	\$ -
GTSR-SL49-11-MP IMPROVEMENTS	TEST	Direct Labor	\$ 1,084,750	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GTSR-SL49-11-MP IMPROVEMENTS	TEST	Non-Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GTSR-49-11 S1 HYDRO	TEST	Direct Labor	\$ 28,199	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GTSR-49-11 S1 HYDRO	TEST	Non-Labor	\$ 8,896,405	\$ 738,495	\$ -	\$ -	\$ -	\$ -	\$ -
GTSR-49-11 S2 HYDRO	TEST	Direct Labor	\$ 134,301	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GTSR-49-11 S2 HYDRO	TEST	Non-Labor	\$ 4,763,125	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GTSR-SL49-18-HYDROTEST	TEST	Direct Costs	\$ 7,014	\$ -	\$ -	\$ -	\$ 400,926	\$ 1,546,572	\$ 7,861,795
GTSR-L49-18-REPL MLV 826	REPL	Direct Labor	\$ 390	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GTSR-L49-18-REPL MLV 826	REPL	Non-Labor	\$ 6,615	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GTSR-SL49-18-HYDROTEST S3	TEST	Non-Labor	\$ -	\$ -	\$ -	\$ -	\$ 518,148	\$ 2,700,938	\$ 2,700,938
GTSR-SL49-18-HYDROTEST S1	TEST	Non-Labor	\$ -	\$ -	\$ -	\$ 287,670	\$ 575,340	\$ 2,855,685	\$ 2,855,685
GTSR-SL49-18-HYDROTEST S2	TEST	Non-Labor	\$ -	\$ -	\$ -	\$ 113,256	\$ 453,084	\$ 2,305,173	\$ 2,305,173
GTSR-SL49-16-HYDROTEST-NORTH	TEST	Direct Costs	\$ 11,692	\$ -	\$ -	\$ -	\$ 13,859,024	\$ 4,905,370	\$ 4,905,370
GSEP-GTSR-SL49-16 HWY 94 REPL	REPL	Direct Labor	\$ -	\$ -	\$ -	\$ -	\$ 13,191,579	\$ 1,278,027	\$ 1,278,027
GSEP-GTSR-SL49-16 HWY 94 REPL	REPL	Non-Labor	\$ 11,692	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GTSR-SL49-16-HYDROTEST-NORTH TEST PH2	TEST	Non-Labor	\$ -	\$ -	\$ -	\$ -	\$ 667,445	\$ 3,627,343	\$ 3,627,343
GTSR-SL49-16-HYDROTEST-SOUTH	TEST	Direct Costs	\$ 1,435,467	\$ -	\$ -	\$ 350,780	\$ 701,632	\$ 2,678,957	\$ 2,678,957
GTSR-SL49-16-HYDROTEST-SOUTH	TEST	Direct Labor	\$ -	\$ -	\$ -	\$ -	\$ 701,632	\$ 2,481,314	\$ 2,481,314
GTSR-SL49-16-HYDROTEST-SOUTH	TEST	Non-Labor	\$ 1,435,467	\$ -	\$ -	\$ 350,780	\$ -	\$ 97,643	\$ 97,643
GTSR-SL49-16-HYDROTEST-CENTRAL	TEST	Direct Costs	\$ -	\$ -	\$ -	\$ 394,875	\$ 2,673,417	\$ 1,372,482	\$ 1,372,482
GTSR-SL49-16-HYDROTEST-CENTRAL	TEST	Direct Labor	\$ -	\$ -	\$ -	\$ -	\$ 2,673,417	\$ 1,372,482	\$ 1,372,482
GTSR-SL49-16-HYDROTEST-CENTRAL	TEST	Non-Labor	\$ -	\$ -	\$ -	\$ 394,875	\$ -	\$ -	\$ -
GTSR-SL49-14-REPL	REPL	Direct Costs	\$ 23,330,152	\$ 3,349,267	\$ -	\$ -	\$ -	\$ -	\$ -
GTSR-SL49-14-REPL	REPL	Direct Labor	\$ 52,434	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GTSR-SL49-14-REPL	REPL	Non-Labor	\$ 23,277,719	\$ 3,349,267	\$ -	\$ -	\$ -	\$ -	\$ -
GTSR-SL49-24-Hydrotest	TEST	Direct Costs	\$ -	\$ -	\$ -	\$ 801,192	\$ 7,242,478	\$ 1,109,634	\$ -
GTSR-SL49-24-Hydrotest	TEST	Non-Labor	\$ -	\$ -	\$ -	\$ 801,192	\$ 7,242,478	\$ 1,109,634	\$ -
Total			\$ 39,693,111	\$ 4,087,762	\$ -	\$ 1,947,773	\$ 26,023,123	\$ 17,828,237	\$ 16,718,603

Table 3: Miles Completed

	2025	2026	2027	2028	2029	2030	2031
Test	3.4	0	0	0	6.7	0	0
Replace	1.8	0	0	0	2.1	4.1	4.1

San Diego Gas & Electric Company

2025 RAMP

Capital Workpapers

Area: SDG&E Gas Transmission
 Mitigation Name: High Pressure Gas System Leak Repair
 Mitigation ID: 1CR02C113
 Budget Code: Capital - 412
 Forecast Methodology: Zero-Based

Summary Results (in 000s)	Forecast Methodology	Adjusted Recorded Dollars					Adjusted Forecast Dollars						
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Labor	Zero-Based	-	-	-	-	-	\$61	\$61	\$61	\$61	\$61	\$61	\$61
V&S	Zero-Based	-	-	-	-	-	\$10	\$10	\$10	\$10	\$10	\$10	\$10
Non-Labor	Zero-Based	-	-	-	-	-	\$937	\$937	\$937	\$937	\$937	\$937	\$937
NSE	Zero-Based	-	-	-	-	-	-	-	-	-	-	-	-
Total		-	-	-	-	-	\$1,008	\$1,008	\$1,008	\$1,008	\$1,008	\$1,008	\$1,008

	Forecast Methodology	Adjusted Recorded FTE					Adjusted Forecast FTE						
		2020	2021	2022	2023	2024							
FTE Total	Zero-Based	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.30	0.30	0.30	0.30	0.30

San Diego Gas & Electric Company
2025 RAMP
Capital Workpapers

PRIVILEGED AND CONFIDENTIAL/WORK PRODUCT

GSEP Valve Rule Supplemental Workpaper - SDGE Capital

Budget Code: 23481

Assumptions:

The Gas Safety Enhancement Programs (GSEP) Valve Enhancement projects are planned in accordance with the Pipeline Safety: Requirement of Valve Installation and Minimum Rupture Detection Standards and California PUC 957 on DOT-defined transmission pipelines. The cost forecast comprises the installation of rupture mitigation valves (RMVs) on newly constructed or "entirely replaced" transmission pipeline segments with six inches or greater diameters. SDG&E's forecast of RMV installations and costs are initial estimates based on historical valve project costs. The SDG&E Valve Rule assumes 1 valve project in 2028, 2 valve projects in 2029, 2 valve projects in 2030, and 1 valve project in 2031. The SDG&E Valve Rule forecast assumes similar labor and non-labor splits as historical valve projects at 8% and 92% respectively.

Note: Forecast projected spend is before 16% V&S factor.

Project Name	CY2025 Valves/year	CY2026 Valves/year	CY2027 Valves/year	CY2028 Valves/year	CY2029 Valves/year	CY2030 Valves/year	CY2031 Valves/year
SDGE Total	0	0	0	1	2	2	1

Item	CY2025 Program Estimate	CY2026 Program Estimate	CY2027 Program Estimate	CY2028 Program Estimate	CY2029 Program Estimate	CY2030 Program Estimate	CY2031 Program Estimate
SDGE Valves and Valve Installation	\$0.00	\$0.00	\$0.00	\$4,000,000.00	\$8,000,000.00	\$8,000,000.00	\$4,000,000.00
Total	\$0.00	\$0.00	\$0.00	\$4,000,000.00	\$8,000,000.00	\$8,000,000.00	\$4,000,000.00

Notes

Based on historical valve project costs.

Labor vs. Non-Labor Distribution of the Program Estimate

Item	CY2025 Program Estimate	CY2026 Program Estimate	CY2027 Program Estimate	CY2028 Program Estimate	CY2029 Program Estimate	CY2030 Program Estimate	CY2031 Program Estimate
Labor (8%)	\$0.00	\$0.00	\$0.00	\$320,000.00	\$640,000.00	\$640,000.00	\$320,000.00
Non-labor (92%)	\$0.00	\$0.00	\$0.00	\$3,680,000.00	\$7,360,000.00	\$7,360,000.00	\$3,680,000.00
SDG&E Valve Rule Total	\$0.00	\$0.00	\$0.00	\$4,000,000.00	\$8,000,000.00	\$8,000,000.00	\$4,000,000.00

Risk Chapter: **SDG&E-Risk-2 High Pressure Gas System**

Risk ID: **1CR02**

Appendix A: Forecast Methodology

Mitigation ID	Mitigation Name	Labor	Non-Labor	NSE	Units
A125	Pipeline Rerouting to Mitigate Landslide Impacts	Zero-Based	Zero-Based	Zero-Based	Zero-Based
A171	DIMP - High Pressure Pipeline In-Line Inspections	Zero-Based	Zero-Based	Zero-Based	Zero-Based
C010	Pipeline Monitoring Technologies	Zero-Based	Zero-Based	Zero-Based	Zero-Based
C013	Gas Transmission Safety Rule - MAOP Reconfirmation	Zero-Based	Zero-Based	Zero-Based	Zero-Based
C104	Cathodic Protection - Capital	Base YR Rec	Base YR Rec	Base YR Rec	Base YR Rec
C113	Leak Repair	Zero-Based	Zero-Based	Zero-Based	Zero-Based
C118	Rupture Mitigation Valve Installation - Valve Rule	Zero-Based	Zero-Based	Zero-Based	Zero-Based
C125	Pipeline Relocation/Replacement	Base YR Rec	Base YR Rec	Base YR Rec	Base YR Rec
C126	Shallow/Exposed Pipe Remediations	Base YR Rec	Base YR Rec	Base YR Rec	Base YR Rec
C136	Compressor Stations - Capital	Base YR Rec	Base YR Rec	Base YR Rec	Base YR Rec
C151	Measurement & Regulation Station Capital	Base YR Rec	Base YR Rec	Base YR Rec	Base YR Rec
C171	Integrity Assessments & Remediation	Base YR Rec	Base YR Rec	Base YR Rec	Base YR Rec

Risk Chapter: SDG&E-Risk-2 High Pressure Gas System

Risk ID: 1CR02

Appendix B: Unit Measure

Mitigation ID	Mitigation Name	Unit Measure
A125	Pipeline Rerouting to Mitigate Landslide Impacts	No feasible units
A171	DIMP - High Pressure Pipeline In-Line Inspections	No feasible units
C010	Pipeline Monitoring Technologies	OPM Monitoring Stations/Methane Sensors
C013	Gas Transmission Safety Rule - MAOP Reconfirmation	Miles
C104	Cathodic Protection - Capital	No feasible units
C113	Leak Repair	No feasible units
C118	Rupture Mitigation Valve Installation - Valve Rule	Valves
C125	Pipeline Relocation/Replacement	No feasible units
C126	Shallow/Exposed Pipe Remediations	No feasible units
C136	Compressor Stations - Capital	No feasible units
C151	Measurement & Regulation Station Capital	No feasible units
C171	Integrity Assessments & Remediation	No feasible units