

Company: Southern California Gas Company (U 904 G)/San Diego Gas & Electric
Company (U 902 M)
Proceeding: 2024 General Rate Case
Application: A.22-05-015/A.22-05-016 (cons.)
Exhibit: SCG-03-S-2R-E/SDG&E-03-S-2R-E

SECOND REVISED
SUPPLEMENTAL TESTIMONY OF
GREGORY S. FLORES AND R. SCOTT PEARSON
(POST-TEST YEAR RISK SPEND EFFICIENCY CALCULATIONS)

ERRATA

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA



June 2023

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1 **ERRATA SECOND REVISED SUPPLEMENTAL TESTIMONY OF**
2 **GREGORY S. FLORES AND R. SCOTT PEARSON**
3 **(POST-TEST YEAR RISK SPEND EFFICIENCY CALCULATIONS)**
4
5

6 **I. INTRODUCTION**

7 On March 30, 2022, Commissioner Houck issued a ruling in A.21-05-011/-014 (cons.)
8 (the Ruling)¹ requiring Southern California Gas Company (SoCalGas) and San Diego Gas &
9 Electric Company (SDG&E) (collectively, the Companies) to submit supplemental testimony
10 “calculating the expected risk reduction and the revised RSE values for the post-test years (2025-
11 2027)” in their General Rate Case (GRC) Application proceedings within eight weeks of filing
12 their GRC Applications.² The purpose of this supplemental testimony is to provide the expected
13 risk reduction and revised RSE values for the 2025-2027 post-test years (PTY), as required by
14 the Ruling. The concurrently served supplemental testimony of Khai Nguyen and Melanie
15 Hancock (Exhibit (Ex.) SCG-40-S/SDG&E-45-S) provides background regarding PTY
16 ratemaking that supports the risk spend efficiency (RSE) calculations presented in this testimony.

17 Our prepared direct testimony (Ex. SCG-03/SDG&E-03, Chapter 2) stated that SoCalGas
18 and SDG&E will “apply their proposed post-test year mechanism...to calculate RSE values in
19 the post-test year period...These RSEs will be included in supplemental testimony the
20 Companies submit within eight weeks of filing their GRC Applications as required by the
21 Commissioner Ruling.”³ The Companies did just that, applying their proposed PTY mechanism,
22 with some assumptions, as further discussed below. The results of the Companies’ PTY RSE
23 calculations are provided in Appendix B. Below we discuss the process for calculating RSEs for
24 the post-test years.

¹ Application (A.) 21-05-011/-014 (cons.) is the consolidated application proceeding for SoCalGas and SDG&E to submit their 2021 Risk Assessment and Mitigation Phase (RAMP) Reports. SoCalGas’s and SDG&E’s RAMP Reports were submitted on May 17, 2021.

² A.21-05-011/-014 (cons.), Assigned Commissioner’s Ruling Directing Sempra Utilities to Incorporate Staff Recommendations on their Risk Assessment and Mitigation Phase in the Upcoming 2024 General Rate Case Applications (March 30, 2022) (referred to herein as “Ruling”). SoCalGas and SDG&E timely filed their GRC Applications on May 16, 2022. This supplemental testimony is timely submitted on July 11, 2022, within eight weeks of the date SoCalGas’s and SDG&E’s GRC Applications were filed.

³ 3. Ex. SCG-03/SDG&E-03, Chapter 2 at RSP/GSF-17.

1 **II. PROCESS FOR CALCULATING RISK SPEND EFFICIENCY VALUES FOR**
2 **THE POST-TEST YEARS**

3 **A. The Companies Used the Same Risk Analysis Framework Discussed in the**
4 **RAMP to GRC Integration Testimony in Calculating the RSE Values for**
5 **the Post-Test Years**

6 Our prepared direct testimony discussed the risk analysis framework and processes used
7 for incorporating the RAMP process into the Companies' Test Year (TY) 2024 GRC
8 applications. Those processes included revisions to the Multi-Attribute Value Framework
9 (MAVF) and recalibration of the baseline year and historical data.⁴ Unless otherwise discussed
10 below, the risk analysis framework and processes used in developing the RSE values for the
11 post-test years were the same as those used in developing the RSEs presented in Appendix D1
12 and D2 of our prepared direct testimony.⁵ In addition to utilizing the same underlying
13 framework, the Companies performed RSEs—including the costs of cross-functional factor
14 (CFF) initiatives—and analyzed whether supplemental analysis⁶ was needed using the same
15 process identified in our prepared direct testimony.⁶ No programs were identified that met the
16 criteria for supplemental analysis in the GRC when reviewing post-test year information.

17 **B. Applying the Post-Test Year Ratemaking Methodology**

18 The Ruling requires the Companies to submit supplemental testimony “calculating the
19 expected risk reduction and the revised RSE values for the post-test years (2025-2027).”⁷ RSEs
20 are an estimate of risk reduction per dollar spent and are calculated for programs or projects.
21 D.16-08-018, in discussing RSEs utilized by Southern California Edison Company (SCE),
22 describes them as follows:

23 It is defined as risk reduction (difference between pre-mitigation and post-
24 mitigation risk scores) divided by the cost of the risk mitigation program or
25 project. Programs and projects are prioritized by the risk spend efficiency
26 numbers, subject to various operational constraints, and other non-risk
27 considerations.
28
29

4 *Id.* at RSP/GSF-8 to RSP/GSF-11.

5 *Id.* at Appendix D1 and D2.

6 Decision (D.) 18-12-014 (Settlement Decision), Attachment A, at A-14 to A-17.

7 *See* Ruling at 3

1 Since, as SED points out, the quasi-absolute risk scores have little to no direct
2 physical interpretation in the real world, the relative RSE scores likewise have
3 little to no direct physical interpretation. The RSE scores could, however, be very
4 useful within SCE to inform decisions on mitigation activities.⁸
5

6 While RSEs are performed on projects or programs, in the TY 2024 GRC, with limited
7 exceptions, SoCalGas and SDG&E do not forecast projects or programs for the PTY period of
8 2025-2027. This includes activities denoted in the TY 2024 GRC as RAMP. Rather, consistent
9 with Commission precedent, the Companies request funds for 2025-2027 largely based on an
10 escalation-based mechanism described in the prepared direct testimony of Mr. Nguyen and Ms.
11 Hancock (Exs. SCG-40 and SDG&E-45, respectively).

12 As described in the supplemental testimony of Mr. Nguyen and Ms. Hancock, the PTY
13 proposals are “designed to provide the Companies with sufficient revenues during the PTY
14 period to continue providing safe and reliable service to their customers, while providing
15 shareholders a reasonable opportunity to earn the rate of return (ROR) authorized by the
16 California Public Utilities Commission.”⁹ This flexibility is also needed given the dynamic
17 nature of risks. As described in testimony, SoCalGas and SDG&E perform a risk management
18 process annually, as explained in the evidentiary record of this proceeding,¹⁰ which “update[s]
19 existing risk information and identif[ies] enterprise-level risks that emerged since the prior
20 assessment.”¹¹ Due to the sometimes changing nature of risks, “[i]ntegration of risk
21 management is an iterative and dynamic process, that must adapt to the evolving needs and
22 culture of the [Companies].”¹² This annual risk management process helps to reflect risks,
23 assessments, and prioritizations in more real-time than through RAMPs and GRCs.

24 The proposed PTY mechanism sponsored by Mr. Nguyen and Ms. Hancock separately
25 escalates operations and maintenance (O&M) expenses and capital-related costs, as described

⁸ D.16-08-018 at 35-36.

⁹ Ex. SCG-40-S/SDG&E-45-S at KN/MEH-1.

¹⁰ Ex. SCG-03/SDG&E-03, Chapter 1 at DMN-12 to DMN-13 and MMS-7 to MMS-8.

¹¹ Ex. SCG-03/SDG&E-03, Chapter 1 at DMN-12; see also Ex. SCG-03/SDG&E-03, Chapter 1 at MMS-9 (“The ERR is refreshed and reviewed, at least annually . . . providing an opportunity to discuss emerging risks that may need to be included in the ERR.”)

¹² Ex. SCG-03/SDG&E-03, Chapter 1 at DMN-7; see also Ex. SCG-03/SDG&E-03, Chapter 1 at MMS-5 to MMS-6.

1 below:

2 [The] PTY ratemaking mechanism comprises two adjustment components:

- 3 • O&M margin and medical expense escalation (excluding franchise fees
4 and uncollectible expense); and
- 5 • Growth in capital-related margin.¹³

6
7
8 The methodology for forecasts in the post-test years differs by O&M and capital. The PTY
9 mechanism's methodology and how it was applied for purposes of calculating RSEs is discussed
10 below.

11 **1. O&M**

12 Mr. Nguyen and Ms. Hancock explain that the Companies' proposed "PTY mechanism
13 escalates the TY 2024 base margin component of revenue requirement" using Global Insight's
14 utility-specific forecast and "separately escalate[s] medical expenses."¹⁴ For calculating RSEs,
15 the general O&M escalation factors of the post-test year mechanism were used. Consistent with
16 the proposed PTY mechanism, to calculate O&M-related RSEs for the post-test years, the
17 Companies started with the forecasts for 2024 as presented in the various witness testimonies.
18 Those forecasts are expressed in 2021 Base Year dollars. The process for taking O&M forecasts
19 of the various witnesses and converting those forecasts into 2024 dollars is described in the
20 Summary of Earnings testimony of Ryan Hom, as follows:

21 O&M expense estimates for each category of expense are summarized for the
22 2021 recorded and 2024 estimated year in constant 2021 dollars. Constant dollars
23 refer to costs unadjusted for inflation. As described in the Cost Escalation
24 testimony of Scott Wilder (Ex. SCG-36) [(Ex. SDG&E-41)], labor and non-labor
25 escalation rates were applied to the 2021 constant dollar estimates to determine
26 the estimated test year O&M expense in 2024 dollar terms.¹⁵

27
28 Based on the same process described by Mr. Hom, the Companies escalated the 2024
29 RAMP-related forecasts from 2021 to 2024 dollars using the escalation factors presented in Mr.
30 Wilder's testimony. The Companies then used the escalation rates in Mr. Wilder's testimony to

¹³ Ex. SCG-40 at KH-4; see also Ex. SDG&E-45 at MEH-4.

¹⁴ Ex. SCG-40 at KH-4; see also Ex. SDG&E-45 at MEH-4.

¹⁵ Ex. SCG-39 at RH-3; see also Ex. SDG&E-44 at RH-3 to RH-4.

1 convert the 2024 forecasts (in 2024 dollars) to 2025-2027, consistent with the testimony of Mr.
2 Nguyen and Ms. Hancock. Because the Companies are not forecasting additional work, the 2024
3 units were held constant.

4 **2. Base Capital**

5 Mr. Nguyen and Ms. Hancock propose a historical average-based methodology for the
6 capital component of the PTY mechanism:

7 [The Companies] propose[] to use the five-year average level of capital additions
8 (2020-2021 recorded and 2022-2024 forecast, as presented in this TY 2024 GRC)
9 as a proxy for the annual PTY 2025, 2026, and 2027 actual level of capital
10 additions.

11 ...the 2020-2024 capital additions would be escalated into 2024 dollars and then
12 averaged. This process escalates the five-year average of capital additions to 2024
13 dollars. To determine the capital additions for 2025, 2026, and 2027, the five-year
14 average capital addition amount is escalated to the appropriate PTY dollars using
15 the above-mentioned Global Insight indices.¹⁶
16
17
18

19 Although the PTY mechanism is applied to capital additions, the Companies calculated
20 RSEs by applying this methodology to the capital expenditures, consistent to program forecasts.
21 To do so, the Companies replicated the five-year average of capital expenditures and units from
22 2020-2024. Information was available for years 2021-2024 by RAMP activity and tranche. Data
23 for 2020 was not available in the needed framework by RAMP activity and tranche.
24 Accordingly, the Companies used the 2021 dollars and units as a proxy for 2020. Once the
25 Companies had capital expenditure costs and unit forecasts by RAMP activity and tranche for
26 each of the five-years (2020-2024), the costs were escalated to 2024 dollars using Mr. Wilder's
27 escalation factors. The five-year average of the escalated forecasts for years 2020-2024 was
28 computed. Then, the costs were escalated using Mr. Wilder's escalation factors to 2025, 2026,
29 and 2027 dollars. This process aligns with the PTY mechanism calculations.

30 **3. Capital Exceptions**

31 Mr. Nguyen and Ms. Hancock also propose certain incremental capital exception

¹⁶ Ex. SCG-40 at KN-7 to KH-8; see also Ex. SDG&E-45 at MEH-7.

1 adjustments as part of SoCalGas’s and SDG&E’s post-test year revenue requirements. Mr.
2 Nguyen and Ms. Hancock explain that these capital projects warrant different treatment, separate
3 from the capital component of the PTY mechanism because these projects are “either going into
4 service in the post-test years or are proposed to be balanced in balancing accounts for which
5 revenue requirement for each post-test year is needed for tracking of costs.”¹⁷ These projects are
6 summarized below:

7 **TABLE GF/SP-1**
8 **Summary of Post-Test Year Capital Exceptions¹⁸**

Capital Project	Sponsoring GRC Exhibit
Gas Integrity Management Programs (DIMP, TIMP, SIMP, ¹⁹ FIMP, and GSEP)	SCG-09, SDG&E-09
Customer Information System (CIS) Replacement Program	SCG-13
Honor Rancho Compressor Modernization	SCG-10
Moreno Compressor Modernization	SDG&E-06
Wildfire Mitigation	SDG&E-13
Smart Meter 2.0	SDG&E-17

9
10 Each of the above-mentioned projects in the corresponding witness testimony provide PTY
11 forecasts for the applicable years 2025-2027. Accordingly, the Companies utilized these discrete
12 projects’ forecasted costs and units to perform RSE calculations for those capital exceptions
13 denoted as RAMP. This, in turn, is the same methodology for PTY RSEs as the calculations
14 performed in the TY.

15 It should be noted that not all the projects in Table GF/SP-1 above are considered
16 “RAMP.” SoCalGas’s CIS Replacement Project and SDG&E’s Smart Meter 2.0 project are not
17 associated with the Companies’ identified RAMP risks. Accordingly, RSEs were not calculated
18 for these two projects.

¹⁷ Ex. SCG-40 at KH-10 to KH-11; see also Ex. SDG&E-45 at MEH-10.

¹⁸ Summarizing Table KN-5 from Ex. SCG-40 and Table MH-5 from Ex. SDG&E-45.

¹⁹ SIMP only applies to SoCalGas.

1 **C. Differences Resulting From Application of the Post-Test Year Methodology**

2 **1. Use of a 2024 Baseline**

3 In our prepared direct testimony, we discussed how, at the recommendation of the
4 Commission’s Safety Policy Division (SPD) and other parties, the Companies recalibrated the
5 baseline year for risk reduction and RSE calculations.²⁰ Specifically, the pre-mitigated risk
6 scores used to determine RSE and risk reduction values were calculated using an end of 2023
7 baseline. In calculating PTY RSE values for 2025-2027, the Companies used an end of 2024
8 baseline. Risk reduction benefits in the TY 2024 GRC Application were captured from end of
9 2023 through end of 2024. In order to calculate RSEs for the years 2025-2027 without
10 duplicating the benefits in 2024, the baseline or starting point for the PTY RSEs was shifted to
11 the end of 2024. The 2024 baseline risk profiles were forecasted from the last known point of
12 2021, based on which specific activities permanently reduce risk versus counteract the ongoing
13 increase in risk due to operation of the system and its components.

14 **2. RSE values for Capital Projects with No Dollars in 2024**

15 In our prepared direct testimony, no RSE was calculated for projects that were completed
16 prior to the end of 2023. As described in Section I.C.1 above, risk calculations included in our
17 prepared direct testimony utilized a baseline at the end of 2023. Accordingly, projects that were
18 completed prior to this, were captured in the baseline risk score and no additional risk reduction
19 or RSE was identified. Also as addressed above in Section II.B.2, the PTY mechanism is based
20 on a five-year historical average of capital. The supplemental testimony of Mr. Nguyen and Ms.
21 Hancock explains that the historical capital project cost data is used as a proxy for the necessary
22 funding the Companies need for 2025-2027. Given that the Companies are seeking capital
23 funding in years 2025-2027 based on a historical average, an RSE was calculated for certain
24 projects that may not have previously had an RSE computed.

25 **3. Constant Activity Levels**

26 Since the Companies do not forecast projects or programs into the post-test years, with
27 limited capital exceptions, activity levels or units for 2025 – 2027 were assumed to be constant.

²⁰ Ex. SCG-03/SDG&E-03, Chapter 2 at RSP/GSF-11.

1 The PTY mechanism assumes an activity that ends during the GRC cycle is a proxy for another,
2 similar activity that will be implemented during the post-test years. However, the actual level for
3 the new activity is unknown. When calculating PTY RSEs, the Companies assumed constant
4 activity levels, which may differ from the amount of activity when implementing the project.

5 **4. Constant Risk Levels in the PTY Period**

6 The risk calculations in this GRC, like forecasts, are based on a known point in time,
7 specifically the end of 2021 for TY 2024 GRC. For purposes of calculating PTY RSEs, the
8 Companies assumed a constant risk score with no adjustment (outside of the current activities
9 forecasted in GRC and assumed in PTY) from 2021 – 2027. There are many factors that could
10 increase a risk score over time and there are also mitigations that, if implemented, could reduce a
11 risk score. Therefore, the Companies did not offer assumptions or forecast increases in risk
12 levels in the PTY period.

13 **III. CONCLUSION**

14 This supplemental testimony provides the expected risk reduction and revised RSE
15 values for the 2025-2027 post-test years, as required by the Ruling.

APPENDIX A
GLOSSARY OF TERMS

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GLOSSARY OF TERMS

Acronym	Definition
A.	Application
CIS	Customer Information System
CFF	Cross-Functional Factor
Commission or CPUC	California Public Utilities Commission
Companies	SoCalGas and SDG&E
D.	Decision
DIMP	Distribution Integrity Management Program
Ex.	Exhibit
FIMP	Facilities Integrity Management Program
GSEP	Gas Safety Enhancement Programs
GRC	General Rate Case
MAVF	Multi Attribute Value Function
O&M	Operations and Maintenance
PTY	Post-Test Year
RAMP	Risk Assessment Mitigation Phase
ROR	Rate of Return
RSE	Risk Spend Efficiency
SCE	Southern California Edison Company
SDG&E	San Diego Gas and Electric Company
SIMP	Storage Integrity Management Program
SoCalGas	Southern California Gas Company
SPD	Safety Policy Division
TIMP	Transmission Integrity Management Program
TY	Test Year

APPENDIX B

POST-TEST YEAR RSE RESULTS

APPENDIX B

POST-TEST YEAR RSE RESULTS

Table B-1: SoCalGas PTY RSE Results

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFF}	Risk Reduction
High Pressure	SCG-RISK-3-C09	Pipeline Monitoring (Bridge & Span)	682	551	62
High Pressure	SCG-RISK-3-C04	Meter & Regulator (M&R) Station and Electronic Pressure Monitors (EPM) Inspection and Maintenance	557	450	463
Employee Safety	SCG-RISK-5-C10	Workplace Violence Prevention Programs	442	428	249
High Pressure	SCG-RISK-1-C01-T01	Cathodic Protection - Capital - HCA	421	390	138
High Pressure	SCG-RISK-1-C02-T01	Cathodic Protection - Maintenance - HCA	401	324	206
Medium Pressure	SCG-RISK-3-C11	Pipeline Monitoring (Unstable Earth Inspection)	387	311	21
High Pressure	SCG-RISK-1-C04-T01	Leak Survey & Patrol - HCA	295	239	250
High Pressure	SCG-RISK-1-C01-T02	Cathodic Protection - Capital - Non-HCA	248	229	164
High Pressure	SCG-RISK-3-C10	Pipeline Monitoring (Pipeline Patrol, Bridge & Span Inspections, Unstable Earth Inspection)	232	188	18
Employee Safety	SCG-RISK-5-M07	Workplace Violence Prevention Program Enhancements	231	223	2
High Pressure	SCG-RISK-1-C02-T02	Cathodic Protection - Maintenance - Non-HCA	226	183	237
High Pressure	SCG-RISK-3-C07	EPM Installations & Replacements	226	210	19
High Pressure	SCG-RISK-1-C13-T01	Measurement & Regulation Station - Maintenance - HCA	224	181	7
Cyber Security	SCG-RISK-6-C04	Operational Technology (OT) Cybersecurity	215	203	449
High Pressure	SCG-RISK-1-C06-T01	Shallow/Exposed Pipe Remediations - HCA	215	199	32
High Pressure	SCG-RISK-1-C07-T01	Pipeline Maintenance - HCA	161	149	155
High Pressure	SCG-RISK-1-C06-T02	Shallow/Exposed Pipe Remediations - Non-HCA	139	129	42

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFE}	Risk Reduction
HPDG	SCG-RISK-2-C06	Locate and Mark Annual Refresher Training and Competency Program (HP)	130	104	2
High Pressure	SCG-RISK-1-C13-T02	Measurement & Regulation Station - Maintenance - Non-HCA	127	102	8
High Pressure	SCG-RISK-3-C05	Regulator Station Installation & Replacement	113	105	1
Medium Pressure	SCG-RISK-3-C06	Meter Set Assembly (MSA) Inspection and Maintenance	104	84	20
HPDG	SCG-RISK-2-C16-T01/T02/T03/T04	Public Awareness	102	82	15
High Pressure	SCG-RISK-1-C07-T02	Pipeline Maintenance - Non-HCA	90	84	178
High Pressure	SCG-RISK-1-C04-T02	Leak Survey & Patrol - Non-HCA	88	71	150
HPDG	SCG-RISK-2-C04	Locate & Mark Activities (HP)	87	70	487
Cyber Security	SCG-RISK-6-C05	Obsolete Information Technology (IT) Infrastructure and Application Replacement	85	80	225
Cyber Security	SCG-RISK-6-C01	Perimeter Defenses	80	75	374
MPDG	SCG-RISK-2-M1	Automate Third Party Excavation Incident Reporting	78	62	2
High Pressure	SCG-RISK-3-C12	Valve Inspection & Maintenance	67	54	46
Contractor Safety	SCG-RISK-7-C01	Contractor Safety Oversight*	53	51	18
Medium Pressure	SCG-RISK-3-C20	DIMP: Distribution Riser Inspection Project (DRIP)	52	48	145
MPDG	SCG-RISK-2-C11	Damage Prevention Analyst Program	47	38	66
MPDG	SCG-RISK-2-C15-T01/T02/T03/T04	Public Awareness	44	36	14
HPDG	SCG-RISK-2-C26	Pipeline Patrol and Pipeline Markers	41	33	21
HPDG	SCG-RISK-2-M2	Automate Third Party Excavation Incident Reporting	38	35	1
Cyber Security	SCG-RISK-6-C02	Internal Defenses	37	35	300
Medium Pressure	SCG-RISK-3-C12	Valve Inspections and Maintenance	35	28	20
Employee Safety	SCG-RISK-5-C07	Near Miss, Stop the Job and Jobsite Safety Programs	35	34	13
Employee Safety	SCG-RISK-5-M06	Industrial Hygiene Program Expansion	34	33	6

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFE}	Risk Reduction
Storage	SCG-RISK-4-C05 - T3	Storage Field Maintenance - Underground Components	33	32	567
HPDG	SCG-RISK-2-C12	Damage Prevention Analyst Program	33	27	12
Cyber Security	SCG-RISK-6-C03	Sensitive Data Protection	31	29	150
High Pressure	SCG-RISK-1-C22-T03.2	Pipeline Safety Enhancement Plan - Pipeline Replacement (Phase 2A, GRC base)	29	27	43
High Pressure	SCG-RISK-1-C09-T01	Class Location (Hydrotest) - Maintenance - HCA	29	27	4
Medium Pressure	SCG-RISK-3-C18	Residential Meter Protection	25	23	29
High Pressure	SCG-RISK-3-C01	Cathodic Protection Base Activities	24	19	33
Employee Safety	SCG-RISK-5-C02	Drug and Alcohol Testing Programs	22	22	8
High Pressure	SCG-RISK-1-C03-T01	Leak Repair - HCA	22	21	5
Employee Safety	SCG-RISK-5-C04	Employee Safety Training and Awareness Programs	22	21	18
HPDG	SCG-RISK-2-C14	Locating Equipment and supporting computer Hardware/Software	21	20	12
Medium Pressure	SCG-RISK-3-C04 T2	Meter and Regulator (M&R) Station Maintenance + Electronic Pressure Monitor (EPM) Maintenance	21	17	86
MPDG	SCG-RISK-2-C05	Locate and Mark Annual Refresher Training and Competency Program (MP)	20	16	1
Medium Pressure	SCG-RISK-3-C22	DIMP: Gas Infrastructure Protection Project (GIPP)- Medium Pressure and High pressure	20	18	43
Employee Safety	SCG-RISK-5-M04	Creation of a Safety Video Library	19	18	1
Contractor Safety	SCG-RISK-7-C03	Contractor Engagement	19	18	2
Medium Pressure	SCG-RISK-3-C03	Cathodic Protection- 100mV Requalification	18	15	3
High Pressure	SCG-RISK-1-C09-T02	Class Location (Hydrotest) - Maintenance - Non-HCA	16	15	4
Contractor Safety	SCG-RISK-7-C02	Third-Party Administration Tools*	14	13	5

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFE}	Risk Reduction
Medium Pressure	SCG-RISK-3-C07	EPM Replacements & Installs	13	12	2
High Pressure	SCG-RISK-1-C03-T02	Leak Repair - Non-HCA	13	12	6
Medium Pressure	SCG-RISK-3-C10	Pipeline Monitoring (Bridge & Span)	13	10	1
MPDG	SCG-RISK-2-C03	Locate and Mark Activities (MP)	12	10	299
Employee Safety	SCG-RISK-5-C05	Safe Driving Programs	11	11	13
Medium Pressure	SCG-RISK-3-C30	MSA Inspection Program	11	8	108
Employee Safety	SCG-RISK-5-C08	Safety Culture Programs	8	8	6
Employee Safety	SCG-RISK-5-M03	Proactive Monitoring and Indoor Air Quality and Chemicals of Concern	8	8	1
High Pressure	SCG-RISK-1-C20	Facility Integrity Management Program (FIMP) - Transportation	6	6	28
Medium Pressure	SCG-RISK-3-C08/C17	Leak Survey and Main & Service Leak Repair	6	4	40
HPDG	SCG-RISK-2-C32	Ticket Risk Assessment, and evaluating City permit data	5	4	1
High Pressure	SCG-RISK-1-C21-T01	Integrity Assessments & Remediation - HCA	5	4	396
High Pressure	SCG-RISK-1-New-FIMP-Dist	NEW - Facility Integrity Management Program (FIMP) - Distribution	5	4	10
High Pressure	SCG-RISK-1-C21-T02	Integrity Assessments & Remediation - Non-HCA	5	4	199
Medium Pressure	SCG-RISK-3-C02	Cathodic Protection- CP10 Activities	4	4	3
Employee Safety	SCG-RISK-5-C03	Employee Wellness Programs	4	3	5
High Pressure	SCG-RISK-3-C13	Valve Installs and Replacements	3	3	0
High Pressure	SCG-RISK-1-M01-T02	Gas Transmission Safety Rule - MAOP Reconfirmation - Non-HCA	3	3	54
Employee Safety	SCG-RISK-5-C09	Utilizing Industry Best Practices and Benchmarking	3	3	4
High Pressure	SCG-RISK-1-C08-T01	Right of Way - HCA	3	3	8
High Pressure	SCG-RISK-1-C22-T03.4	Pipeline Safety Enhancement Plan - Hydrotesting (Phase 2A, GRC base)	3	3	72
Medium Pressure	SCG-RISK-3-C05	Regulator Station Replacements/Installs	3	3	1

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFR}	Risk Reduction
Storage	SCG-RISK-4-C05 - T2	Storage Field Maintenance - Aboveground Piping	3	3	39
High Pressure	SCG-RISK-1-C11	Compressor Station - Maintenance	3	2	38
High Pressure	SCG-RISK-3-C14	Cathodic Protection- Install / Replace Impressed Current Systems	3	2	0
High Pressure	SCG-RISK-1-C22-T02.4	Pipeline Safety Enhancement Plan - Pipeline Replacement (Phase 1B, GRC base) - Non-HCA	3	2	11
Medium Pressure	SCG-RISK-3-C13	Valve Installs and Replacements	2	3	0
Storage	SCG-RISK-4-C06	Compressor Overhauls	2	2	6
Medium Pressure	SCG-RISK-3-C14	Cathodic Protection – Install/Replace Impressed Current Systems	2	2	2
Medium Pressure	SCG-RISK-3-C01	Cathodic Protection Base Activities	2	2	32
Medium Pressure	SCG-RISK-3-C23	DIMP: Sewer Lateral Inspection Project (SLIP)	1	1	2
High Pressure	SCG-RISK-1-C08-T02	Right of Way - Non-HCA	2	2	9
High Pressure	SCG-RISK-1-C05-T01	Pipeline Relocation/Replacement - Capital - HCA	2	2	1
Storage	SCG-RISK-4-C01	Integrity Demonstration, Verification, and Monitoring Practices	2	1	108
High Pressure	SCG-RISK-1-C12-T01	Measurement & Regulation - Capital - HCA	1	1	3
High Pressure	SCG-RISK-1-C10	Compressor Stations - Capital	1	1	3
Medium Pressure	SCG-RISK-3-C16	Service Replacements- Leakage, Abnormal Op. Conditions, CP Related	1	1	3
High Pressure	SCG-RISK-1-C15	Security and Auxiliary Equipment	1	1	2
High Pressure	SCG-RISK-1-C05-T02	Pipeline Relocation/Replacement - Capital - Non-HCA	1	1	2
High Pressure	SCG-RISK-1-M01-T01	Gas Transmission Safety Rule - MAOP Reconfirmation - HCA	1	1	47
High Pressure	SCG-RISK-1-C12-T02	Measurement & Regulation - Capital - Non-HCA	1	1	3
MPDG	SCG-RISK-2-C13	Locating Equipment (MP)	1	1	0
Storage	SCG-RISK-4-C02	Well Abandonment and Replacement	1	1	50
Medium Pressure	SCG-RISK-3-C28	Quality Assurance Program	0.5	0.4	0

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFF}	Risk Reduction
High Pressure	SCG-RISK-3-C16	Service Replacements- Leakage, Abnormal Op. Conditions, CP Related	0.4	1.1	0
High Pressure	SCG-RISK-3-C19-T1	Main Replacements- Leakage, Abnormal Op. Conditions, CP Related	0.4	0.3	0
High Pressure	SCG-RISK-3-C08/C17	Leak Survey & Main Repair	0.3	0.3	0
Medium Pressure	SCG-RISK-3-C21-T1	DIMP: DREAMS- Vintage Integrity Plastic Plan (VIIP)	0.3	0.2	6
Employee Safety	SCG-RISK-5-M02	Industrial Hygiene Program Refresh	0.3	0.2	0
Storage	SCG-RISK-4-M1	Facility Integrity Management Program (FIMP)	0.2	0.2	4
Medium Pressure	SCG-RISK-3-C19-T3	Main Replacements- Leakage, Abnormal Op. Conditions, CP Related	0.2	0.2	0
Medium Pressure	SCG-RISK-3-C32	Safety Related Field Orders	0.2	0.2	63
Medium Pressure	SCG-RISK-3-C19-T2	Main Replacements- Leakage, Abnormal Op. Conditions, CP Related	0.2	0.2	0
Storage	HRCM - Principal Component	Honor Rancho Compressor Modernization (HRCM) - Principal Component	0.1	0.1	3
High Pressure	SCG-RISK-1-C23-T1	Blythe Compressor Station Modernization	0.1	0.1	0
Medium Pressure	SCG-RISK-3-C21-T2	DIMP: DREAMS- Bare Steel Replacement Program (BSRP)	0.1	0.1	0
Storage	SCG-RISK-4-C05 - T1	Storage Field Maintenance - Aboveground Facilities	0.1	0.1	17
Medium Pressure	SCG-RISK-3-C33	Natural Gas Appliance Testing	0.1	0.1	1
High Pressure	SCG-RISK-1-C14	Odorization	0.1	0.1	0
Medium Pressure	SCG-RISK-3-C25	Field Employee Skills Training	0.1	0.0	0
Storage	SCG-RISK-4-C07	Upgrade to Purification Equipment	0.02	0.0	1
High Pressure	SCG-RISK-1-C22-T04.3	Pipeline Safety Enhancement Plan - Valve Enhancement (GRC base)	0.00	0.0	0
High Pressure	SCG-RISK-1-C22-T04.4	Pipeline Safety Enhancement Plan - Valve Enhancement (GRC base)	0.00	0.0	0

Table B-2: SDG&E PTY RSE Results

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFE}	Risk Reduction
Wildfire	SDG&E-Risk-1-C15 / M10-T1-T2	Resiliency Assistance Programs (HFTD Tier 3)	5392	4805	98
High Pressure	SDG&E-RISK-3-C02-T01	Cathodic Protection - Maintenance - HCA	3583	2719	246
High Pressure	SDG&E-RISK-3-C05-T01	Shallow/Exposed Pipe Remediations - HCA	2344	2120	90
Wildfire	SDG&E-Risk-1-C06 / M1-T2	SCADA Capacitors - (HFTD Tier 2)	2286	2037	645
Employee Safety	SDG&E-Risk-8-C13	Enhanced Mandatory Employee Training (OSHA): Certified Occupational Safety Specialist, Certified Utility Safety Professional; Certified Safety Professional	1800	1769	12
High Pressure	SDG&E-RISK-3-C02-T02	Cathodic Protection - Maintenance - Non-HCA	1526	1158	23
EII	SDG&E-Risk-2-C18 - T2	Distribution Circuit Reliability - Overhead	977	113	25
Medium Pressure	SDG&E-RISK-9-C07	Pipeline Monitoring (Leak Mitigation, Bridge & Span, Unstable Earth, and Pipeline Patrol	897	682	71
Wildfire	SDG&E-Risk-1-C30-T1-T2	Distribution System Inspection – CMP – Annual Patrol (HFTD Tier 3)	875	780	1361
Wildfire	SDG&E-Risk-1-C11 / M6-T1	Advanced Protection (HFTD Tier 3)	725	646	599
High Pressure	SDG&E-RISK-3-C11-T01	Measurement & Regulation Station – Maintenance - HCA	691	524	9
High Pressure	SDG&E-RISK-9-C04	Regulator Station, Valve, and Large Meter Set Inspection	674	512	59
Medium Pressure	SDG&E-RISK-9-C06 T4	Leak Repair	512	463	38
High Pressure	SDG&E-RISK-3-New-FIMP-Trans	NEW - Facility Integrity Management (FIMP)-Transmission	484	437	53
Wildfire	SDG&E-Risk-1-C25-T2	Distribution System Inspection – CMP – 10 Year Intrusive (HFTD Tier 3)	481	429	142
EII	SDG&E-Risk-2-C10-T1-T2	Underground Cable Replacement Program (Proactive)	476	426	259

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFF}	Risk Reduction
Wildfire	SDG&E-Risk-1-C30-T1-T2	Distribution System Inspection – CMP – Annual Patrol (HFTD Tier 2)	469	418	866
HPDG	SDG&E-RISK-7-C04	Locate & Mark Activities (HP)	430	327	133
Wildfire	SDG&E-Risk-1-C13 / M8-T1-T2	Resiliency Grant Programs (HFTD Tier 2)	420	374	1136
EII	SDG&E-Risk-2-C11	Tee Modernization Program	381	341	167
Wildfire	SDG&E-Risk-1-C13 / M8-T1-T2	Resiliency Grant Programs (HFTD Tier 3)	376	335	509
Medium Pressure	SDG&E-RISK-9-C06 T3	Leak Repair	360	326	41
Employee Safety	SDG&E-Risk-8-C03	Strong Safety Culture	342	336	93
Wildfire	SDG&E-Risk-1-C24-T1-T2	Distribution System Inspection – IR/Corona (HFTD Tier 2)	335	299	201
Medium Pressure	SDG&E-RISK-9-C11 - T2	Gas Distribution Emergency Department - Service	307	233	14
EII	SDG&E-Risk-2-C08-T1	Avian Protection (HFTD Tier 3)	306	300	54
High Pressure	SDG&E-RISK-3-C11-T02	Measurement & Regulation Station – Maintenance Non-HCA	295	224	1
High Pressure	SDG&E-RISK-9-C05	Reg Station Replacement Program	281	254	13
Contractor Safety	SDG&E-Risk-4-C01	Contractor Oversight Program	254	247	312
Wildfire	SDG&E-Risk-1-C09 / M4-T2	PSPS Sectionalizing (HFTD Tier 2)	244	218	89
Contractor Safety	SDG&E-Risk-4-M2	Enhanced Verification of Class 1 Contractor Employee Specific Training	244	238	39
Wildfire	SDG&E-Risk-1-C12 / M7-T1-T2	Hotline Clamps (HFTD Tier 3)	238	212	8
Wildfire	SDG&E-Risk-1-C03-T1-T3	Wireless Fault Indicators -(HFTD Tier 3)	236	210	25
Wildfire	SDG&E-Risk-1-C21 / M14-T1	Lightning Arrestor Removal/Replacement Program (HFTD Tier 3)	214	190	83
Wildfire	SDG&E-Risk-1-C03-T1-T3	Wireless Fault Indicators- (HFTD Tier 2)	213	190	22
Cyber Security	SDG&E-RISK-6-C01	Planned: Perimeter Defenses	212	193	513
Wildfire	SDG&E-Risk-1-C33 / M16-T1-T2	Enhanced Vegetation Management (HFTD Tier 3)	207	184	356

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFF}	Risk Reduction
EII	SDG&E-Risk-2-C18 - T1	Distribution Circuit Reliability - Underground	205	98	41
High Pressure	SDG&E-RISK-3-C05-T02	Shallow/Exposed Pipe Remediations - Non-HCA	201	182	2
Wildfire	SDG&E-Risk-1-C31-T1-T2	Detailed Inspection of Vegetation (HFTD Tier 3)	200	178	8472
Wildfire	SDG&E-Risk-1-C16 / M11-T1-T2	Strategic Undergrounding (HFTD Tier 3)	194	224	7551
High Pressure	SDG&E-RISK-3-C01-T01	Cathodic Protection - Capital - HCA	188	170	13
Wildfire	SDG&E-Risk-1-C31-T1-T2	Detailed Inspection of Vegetation (HFTD Tier 2)	181	161	9217
Employee Safety	SDG&E-Risk-8-C08	OSHA Voluntary Protection Program	177	174	43
Cyber Security	SDG&E-RISK-6-C04	Operational Technology (OT) Cybersecurity	173	158	615
Wildfire	SDG&E-Risk-1-C15 / M10-T1-T2	Resiliency Assistance Programs (HFTD Tier 2)	171	153	73
Wildfire	SDG&E-Risk-1-C27	Distribution System Inspection – HFTD Tier 3 Inspections (HFTD Tier 3)	163	146	1326
Wildfire	SDG&E-Risk-1-C33 / M16-T1-T2	Enhanced Vegetation Management (HFTD Tier 2)	157	140	357
Wildfire	SDG&E-Risk-1-C22-T1-T2	Distribution System Inspection – CMP – 5 Year Detailed Inspections (HFTD Tier 3)	149	132	1480
Employee Safety	SDG&E-Risk-8-C09	Safe Driving Programs	148	146	15
Wildfire	SDG&E-Risk-1-C35-T1-T3	Aviation Firefighting Program (HFTD Tier 2)	129	115	211
Cyber Security	SDG&E-RISK-6-C05	Planned: Obsolete Information Technology (IT) Infrastructure and Application Replacement	124	113	308
Medium Pressure	SDG&E-RISK-9-C04	Regulator Station, Valve, and Large Meter Set Inspection	121	92	18
Wildfire	SDG&E-Risk-1-C14 / M9-T1-T2	Standby Power Programs (HFTD Tier 3)	120	107	345
High Pressure	SDG&E-RISK-3-C06-T01	Pipeline Maintenance - HCA	113	102	184
Employee Safety	SDG&E-Risk-8-C04	Employee Behavioral Accident Prevention Process Program	111	109	62

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFF}	Risk Reduction
MPDG	SDG&E-RISK-7-C11	Damage Prevention Analyst Program	107	82	11
MPDG	SDG&E-RISK-7-C13	Locating Equipment	107	96	27
HPDG	SDG&E-RISK-7-C16-T1/T2/T3/T4	Public Awareness	105	80	4
Employee Safety	SDG&E-RISK-8-C16	Energized Skills Training and Testing Yard	102	101	41
Wildfire	SDG&E-Risk-1-C34-T1-T3	Pole Brushing (HFTD Tier 3)	97	86	1010
Wildfire	SDG&E-Risk-1-C16 / M11-T1-T2	Strategic Undergrounding (HFTD Tier 2)	94	139	2143
Contractor Safety	SDG&E-Risk-4-C02	Field Safety Oversight	89	87	390
Wildfire	SDG&E-Risk-1-C34-T1-T3	Pole Brushing (HFTD Tier 2)	81	73	910
Wildfire	SDG&E-Risk-1-C12 / M7-T1-T2	Hotline Clamps (HFTD Tier 2)	72	64	3
Cyber Security	SDG&E-RISK-6-C02	Planned: Internal Defenses	71	65	410
High Pressure	SDG&E-RISK-9-C02	Cathodic Protection Program - Capital	69	62	4
Wildfire	SDG&E-Risk-1-C35-T1-T3	Aviation Firefighting Program (HFTD Tier 3)	62	55	371
High Pressure	SDG&E-RISK-3-C01-T02	Cathodic Protection - Capital - Non-HCA	61	55	1
High Pressure	SDG&E-RISK-3-C15-T02	Integrity Assessments & Remediation - Non-HCA	61	55	32
Wildfire	SDG&E-Risk-1-C36-T1-T2	Wildfire Infrastructure Protection Teams (HFTD Tier 2)	61	54	201
Wildfire	SDG&E-Risk-1-C18 / M13-T1-T2	Overhead Transmission Fire Hardening – Distribution Underbuilt (HFTD Tier 3)	59	52	9
EII	SDG&E-Risk-2-C04	Distribution Overhead Switch Replacement Program	58	52	8
Employee Safety	SDG&E-Risk-8-New01	Industrial Athletic Trainer	57	56	10
Wildfire	SDG&E-Risk-1-C36-T1-T2	Wildfire Infrastructure Protection Teams (HFTD Tier 3)	57	51	443
MPDG	SDG&E-RISK-7-C15-T1/T2/T3/T4	Public Awareness	54	41	10

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFF}	Risk Reduction
Employee Safety	SDG&E-Risk-8-M1	Purchasing and testing more protective respiratory protection for wildfire smoke particulates.	53	52	6
HPDG	SDG&E-RISK-7-C12	Damage Prevention Analyst Program	51	39	1
High Pressure	SDG&E-RISK-3-M04	Adobe Falls Relocation Project	51	46	4
Cyber Security	SDG&E-RISK-6-C03	Planned: Sensitive Data Protection	51	46	205
Medium Pressure	SDG&E-RISK-9-C09-T01	Early Vintage Program (Components) - Oil Drip Piping Removal	51	46	9
Medium Pressure	SDG&E-RISK-9-C11 - T1	Gas Distribution Emergency Department - Mains	51	38	3
High Pressure	SDG&E-RISK-3-C06-T02	Pipeline Maintenance - Non-HCA	49	44	17
Wildfire	SDG&E-Risk-1-C21 / M14-T1	Lightning Arrestor Removal/Replacement Program (HFTD Tier 2)	46	41	2
Medium Pressure	SDG&E-RISK-9-M04	New RAMP Mitigation: MSAs inside Bldgings and Alcoves	45	41	3
EII	SDG&E-Risk-2-C28	Field SCADA RTU Replacement	41	156	26
EII	SDG&E-Risk-2-C14	DOE Switch Replacement – Underground	38	34	37
Wildfire	SDG&E-Risk-1-C22-T1-T2	Distribution System Inspection – CMP – 5 Year Detailed Inspections (HFTD Tier 2)	37	33	467
Wildfire	SDG&E-Risk-1-C18/M13-T1-T2	Overhead Transmission Fire Hardening – Distribution Underbuilt (HFTD Tier 2)	36	32	73
High Pressure	SDG&E-RISK-3-C09	Compressor Station - Maintenance	36	27	122
Wildfire	SDG&E-Risk-1-C17 / M12-T1-T3	Overhead Distribution Fire Hardening – Bare Conductor (HFTD Tier 3)	35	32	29
Wildfire	SDG&E-Risk-1-C07 / M2-T1	Overhead Distribution Fire Hardening – Covered Conductor (HFTD Tier 3)	35	31	690
High Pressure	SDG&E-RISK-3-C04-T02	Pipeline Relocation/Replacement - Non-HCA	33	30	2
Employee Safety	SDG&E-Risk-8-C15	Enhanced Employee Safe Driving Training	32	31	31

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFF}	Risk Reduction
High Pressure	SDG&E-RISK-3-C15-T01	Integrity Assessments & Remediation - HCA	30	27	225
EII	SDG&E-Risk-2-C06	Tree Trimming (non-HFTD)	30	19	548
EII	SDG&E-Risk-2-C08	Aviation Protection Program	29	26	5
High Pressure	Moreno Principal	Moreno Principal	26	21	66
High Pressure	SDG&E-RISK-9-C01	Cathodic Protection - O&M	26	24	2
Wildfire	SDG&E-Risk-1-C10 / M5-T2	Microgrids (HFTD Tier 2)	25	22	23
Medium Pressure	SDG&E-RISK-9-C06 T2	Leak Repair	25	22	13
Wildfire	SDG&E-Risk-1-C07 / M2-T2	Overhead Distribution Fire Hardening – Covered Conductor (HFTD Tier 2)	23	21	101
High Pressure	SDG&E-RISK-3-C03-T02	Leak Repair - Non-HCA	22	20	0
High Pressure	SDG&E-RISK-3-M02-T02	Gas Transmission Safety Rule - MAOP Reconfirmation - Non-HCA	20	19	13
Wildfire	SDG&E-Risk-1-C28-T1-T2	Distribution System Inspection – Drone Inspections (HFTD Tier 3)	20	18	868
EII	SDG&E-Risk-2-New 09	Strategic Pole Replacement Program (Non-HFTD)	20	17	4
Employee Safety	SDG&E-Risk-8-M2	Purchasing break/rest trailers with filtered air systems to reduce wildfire smoke exposure	18	18	3
Wildfire	SDG&E-Risk-1-C32 / M15-T1-T2	Fuel management and reduction of “slash” from vegetation management activities (HFTD Tier 3)	17	15	302
High Pressure	SDG&E-RISK-3-C04-T01	Pipeline Relocation/Replacement - HCA	17	16	6
High Pressure	SDG&E-RISK-3-C08	Compressor Stations - Capital	15	13	13
Medium Pressure	SDG&E-RISK-9-M03	Replace Curb Valves with EFVs	15	13	1
HPDG	SDG&E-RISK-7-M2	Automate Third Party Excavation Incident Reporting	14	13	0
High Pressure	SDG&E-RISK-3-M02-T01	Gas Transmission Safety Rule - MAOP Reconfirmation - HCA	14	13	136

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFF}	Risk Reduction
Medium Pressure	SDG&E-RISK-9-C06 T1	Leak Repair	14	12	12
High Pressure	SDG&E-RISK-3-New-FIMP-Dist	NEW - Facility Integrity Management (FIMP)-Distribution	13	11	5
High Pressure	SDG&E-RISK-3-C03-T01	Leak Repair - HCA	13	11	1
High Pressure	SDG&E-RISK-3-C12	Odorization	11	8	0
MPDG	SDG&E-RISK-7-M1	Automate Third Party Excavation Incident Reporting	10	9	0
Wildfire	SDG&E-Risk-1-C25-T2	Distribution System Inspection – CMP – 10 Year Intrusive (HFTD Tier 2)	9	8	39
Wildfire	SDG&E-Risk-1-C32 / M15-T1-T2	Fuel management and reduction of “slash” from vegetation management activities (HFTD Tier 2)	9	8	38
EII	SDG&E-Risk-2-C03	4kV Modernization Program – Distribution	8	7	5
Wildfire	SDG&E-Risk-1-C28-T1-T2	Distribution System Inspection – Drone Inspections (HFTD Tier 2)	8	7	186
High Pressure	SDG&E-RISK-3-C10-T01	Measurement & Regulation Station – Capital - HCA	7	6	1
EII	SDG&E-Risk-2-C01	Overhead Public Safety (OPS) Program	7	6	6
MPDG	SDG&E-RISK-7-C03	Locate and Mark Activities*	6	5	69
Medium Pressure	SDG&E-RISK-9-C08-T03	Underperforming Steel Replacement Program – Other Steel (Post 1965 vintage)	6	5	2
EII	SDG&E-Risk-2-C13	Replacement of Live Front Equipment - Proactive	5	5	0
EII	SDG&E-Risk-2-C21	Distribution Substation Obsolete Equipment	5	1	0
EII	SDG&E-Risk-2-C29-T2	SCADA Capacitors - Underground	5	20	2
Medium Pressure	SDG&E-RISK-9-C03	Piping in Vaults Replacement Program	4	4	1
EII	SDG&E-Risk-2-C29-T1	SCADA Capacitors - Overhead	3	22	5
Medium Pressure	SDG&E-RISK-9-C09-T03	Early Vintage Program (Components) - Removal of Closed Valves between High/Medium Pressure Zones	3	2	0

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFF}	Risk Reduction
EII	SDG&E-Risk-2-C20-T2	Substation Reliability for Distribution Components – Bernardo 12kV Breakers Replacements	2	3	0
EII	SDG&E-Risk-2-C24	Urban Substation Rebuild	2	0	0
EII	SDG&E-Risk-2-C20-T5	Substation Reliability for Distribution Components – Miramar 12kV Replacements	2	2	0
Medium Pressure	SDG&E-RISK-9-C08-T02	Underperforming Steel Replacement Program (1934-1965 vintage)	1	1	1
Medium Pressure	SDG&E-RISK-9-C02	Cathodic Protection Program - Capital	1	1	2
MPDG	SDG&E-RISK-7-C09	Locate and Mark Quality Assurance	1	1	1
EII	SDG&E-Risk-2-New 01	Mission 12KV Replacements	1	1	0.1
High Pressure	SDG&E-RISK-3-C10-T02	Measurement & Regulation Station – Capital - Non-HCA	1	1	0.02
Medium Pressure	SDG&E-RISK-9-C10	Code Compliance Mitigation	1	1	0.3
EII	SDG&E-Risk-2-C15	GO165 Corrective Maintenance Program – Underground	1	1	1.3
Medium Pressure	SDG&E-RISK-9-C09-T02	Early Vintage Program (Components) - Dresser Mechanical Coupling Removal	1	1	0.2
High Pressure	SDG&E-RISK-3-C13	Security and Auxiliary Equipment	1	1	0.1
Medium Pressure	SDG&E-RISK-9-C14	Human Factors Mitigations - Operator Qualification Training and Certification	1	1	0.3
High Pressure	SDG&E-RISK-9-C12	Cathodic Protection System Enhancements	1	1	0.03
Medium Pressure	SDG&E-RISK-9-C05	Regulator Station Replacement	1	1	0.1
EII	SDG&E-Risk-2-New 02	Stuart 12kV Transformer Replacement	1	1	0.02
Medium Pressure	SDG&E-RISK-9-C01	Cathodic Protection Program - O&M	0.5	0.3	0.2
Medium Pressure	SDG&E-RISK-9-C08-T01	Underperforming Steel Replacement Program (Pre-1934 vintage)	0.4	0.4	0.3
EII	SDG&E-Risk-2-New 03	La Jolla 69/12kV Transformer Replacement	0.3	0.3	0.02

Risk	Mitigation ID	Mitigation Name	RSE	RSE_{CFF}	Risk Reduction
EII	SDG&E-Risk-2-C20-T8	Substation Reliability for Distribution Components – Coronado 69/12kV Transformer Replacements	0.2	1	0.1
Medium Pressure	SDG&E-RISK-9-C16-T01	DIMP – DREAMS – Vintage Integrity Plastic Plan (VIPP)	0.2	0.2	1.9
Medium Pressure	SDG&E-RISK-9-C21	CSF Quality Assurance (QA) Program	0.1	0.1	0.01
Medium Pressure	SDG&E-RISK-9-C12	Cathodic Protection System Enhancements - Base	0.02	0.02	0.02
Medium Pressure	SDG&E-RISK-9-C19	Field and Public Safety	0.02	0.02	0.3
Medium Pressure	SDG&E-RISK-9-C20	Natural Gas Appliance Testing (NGAT)	0.02	0.02	0.04
EII	SDG&E-Risk-2-New 06	Substation Modification To Support FLISR	0.01	0.01	0.01
EII	SDG&E-Risk-2-New 05	San Marcos Substation 69kV Rebuild & 12kV Switchgear	0.004	0.004	0.02
EII	SDG&E-Risk-2-New 04	Poway 69kV Substation Rebuild	0.002	0.002	0.01
Wildfire	SDG&E-Risk-1-C06 / M1 T2	SCADA Capacitors - (HFTD Tier 3)	0.0	0	0
Wildfire	SDG&E-Risk-1-C09 / M4-T1	PSPS Sectionalizing (HFTD Tier 3)	0	0	0
Wildfire	SDG&E-Risk-1-C14 / M9-T1-T2	Standby Power Programs (HFTD Tier 2)	0	0	0
Wildfire	SDG&E-Risk-1-C17 / M12-T1-T3	Overhead Distribution Fire Hardening – Bare Conductor (HFTD Tier 2)	0	0	0
EII	SDG&E-Risk-2-C10-T3	Underground Cable Replacement Program (Proactive) – North Harbor Project	0	0	0
EII	SDG&E-Risk-2-C16	GO 165 Manhole, Vault Restoration Program	0	0	0
EII	SDG&E-Risk-2-New 07	Torrey Pines 12kV Breaker Replacements	0	0	0.1
EII	SDG&E-Risk-2-New 08	El Cajon 12kV Breaker Replacements	0	0	0.1
Employee Safety	SDG&E-Risk-8-C14	Enhanced Safety in Action Program	0	0	93
Wildfire	SDG&E-Risk-1-C24-T1-T2	Distribution System Inspection – IR/Corona (HFTD Tier 3)	0	0	0
Wildfire	SDG&E-Risk-1-C27-T2	Distribution System Inspection – HFTD Tier 3 Inspections (HFTD Tier 2)	0	0	0