

SAN DIEGO GAS & ELECTRIC COMPANY

Risk Assessment and Mitigation Phase

2025 Report

Chapter: SDG&E-Risk-8

Number: SDG&E-R08-CWP

Cybersecurity Capital Workpapers

SAN DIEGO GAS & ELECTRIC COMPANY

May 15, 2025



2025 Risk Assessment & Mitigation Phase

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Risk Chapter 1CR08: SDG&E-RISK-8 CYBERSECURITY

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Summary of Risk Chapter: 1CR08 - SDG&E-Risk-8 Cybersecurity

In 2024 \$ (000s) Incurred Costs												
	Adjusted Recorded					Adjusted Forecast						
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Control/Mitigation	15,315	15,928	7,278	5,007	4,013	13,938	3,700	3,700	15,115	3,700	3,700	5,158
Alternative Mitigation	0	0	0	0	0	27,878	7,400	7,400	30,230	7,400	7,400	10,316
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-8 Cybersecurity**
Risk ID: **1CR08**

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
A801	Alternative Portfolio 1	Users Prote	0	0	0	0	0	13,939	3,700	3,700	15,115	3,700	3,700	5,158
A802	Alternative Portfolio 2	Users Prote	0	0	0	0	0	13,939	3,700	3,700	15,115	3,700	3,700	5,158
C802	Internal Defenses	Users Prote	11,945	8,743	4,718	2,250	116	1,374	0	0	1,415	0	0	1,458
C803	Sensitive Data Protection	Users Prote	0	5,290	666	29	0	0	0	0	0	0	0	0
C804	Operational Technology (OT	Users Prote	3,369	1,896	1,894	2,729	3,897	3,664	3,700	3,700	3,700	3,700	3,700	3,700
C805	IT Infrastructure Modernizati	Users Prote	0	0	0	0	0	8,900	0	0	10,000	0	0	0

Units

Mitigation		Unit Measure	Adjusted Recorded					Adjusted Forecast						
ID	Name		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
A801	Alternative Portfolio 1	Users Prote	0	0	0	0	0	25,000	25,000	25,000	25,000	25,000	25,000	25,000
A802	Alternative Portfolio 2	Users Prote	0	0	0	0	0	25,000	25,000	25,000	25,000	25,000	25,000	25,000
C802	Internal Defenses	Users Prote	25,000	25,000	25,000	25,000	25,000	25,000	0	0	25,000	0	0	25,000
C803	Sensitive Data Protection	Users Prote	0	25,000	25,000	25,000	0	0	0	0	0	0	0	0
C804	Operational Technology (OT	Users Prote	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
C805	IT Infrastructure Modernizati	Users Prote	0	0	0	0	0	25,000	0	0	25,000	0	0	0

Note: Totals may include rounding differences.

Supplemental Workpapers

San Diego Gas & Electric Company
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1CR08A801 - SDGE-Risk-8 Cybersecurity Alternative Portfolio 1

Forecast Yr	Description	Mitigation	Non-Labor	Labor	Total	Portfolio Impact
2025	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,114,377	549,596	3,663,973	High
2025	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,168,212	206,155	1,374,367	High
2025	Investment in our enterprise licenses for our firewalls which function as our primary perimeter defense capability.	IT Infrastructure Modernization	8,900,000	-	8,900,000	High
2025 Total			13,182,589	755,751	13,938,340	
2026	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2026 Total			3,145,000	555,000	3,700,000	
2027	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2027 Total			3,145,000	555,000	3,700,000	
2028	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2028	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,203,258	212,340	1,415,598	High
2028	Investment in our enterprise licenses for our firewalls which function as our primary perimeter defense capability.	IT Infrastructure Modernization	10,000,000	-	10,000,000	High
2028 Total			14,348,258	767,340	15,115,598	
2029	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2029 Total			3,145,000	555,000	3,700,000	
2030	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2030 Total			3,145,000	555,000	3,700,000	
2031	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2031	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,239,356	218,710	1,458,066	High
2031 Total			4,384,356	773,710	5,158,066	

Mitigation Level Units: 25k Users Protected

San Diego Gas & Electric Company
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1CR08A802 - SDGE-Risk-8 Cybersecurity Alternative Portfolio 2

Forecast Yr	Description	Mitigation	Non-Labor	Labor	Total	Portfolio Impact
2025	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,114,377	549,596	3,663,973	High
2025	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,168,212	206,155	1,374,367	High
2025	Investment in our enterprise licenses for our firewalls which function as our primary perimeter defense capability.	IT Infrastructure Modernization	8,900,000	-	8,900,000	High
2025 Total			13,182,589	755,751	13,938,340	
2026	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2026 Total			3,145,000	555,000	3,700,000	
2027	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2027 Total			3,145,000	555,000	3,700,000	
2028	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2028	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,203,258	212,340	1,415,598	High
2028	Investment in our enterprise licenses for our firewalls which function as our primary perimeter defense capability.	IT Infrastructure Modernization	10,000,000	-	10,000,000	High
2028 Total			14,348,258	767,340	15,115,598	
2029	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2029 Total			3,145,000	555,000	3,700,000	
2030	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2030 Total			3,145,000	555,000	3,700,000	
2031	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2031	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,239,356	218,710	1,458,066	High
2031 Total			4,384,356	773,710	5,158,066	

Mitigation Level Units: 25k Users Protected

San Diego Gas & Electric Company
2025 RAMP
Capital Workpapers

1CR08C802 - SDGE-Risk-8 Cybersecurity Internal Defenses

Forecast Yr	Description	Mitigation	Non-Labor	Labor	Total	Portfolio Impact
2025	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,114,377	549,596	3,663,973	High
2025	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,168,212	206,155	1,374,367	High
2025	Investment in our enterprise licenses for our firewalls which function as our primary perimeter defense capability.	IT Infrastructure Modernization	8,900,000	-	8,900,000	High
2025 Total			13,182,589	755,751	13,938,340	
2026	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2026 Total			3,145,000	555,000	3,700,000	
2027	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2027 Total			3,145,000	555,000	3,700,000	
2028	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2028	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,203,258	212,340	1,415,598	High
2028	Investment in our enterprise licenses for our firewalls which function as our primary perimeter defense capability.	IT Infrastructure Modernization	10,000,000	-	10,000,000	High
2028 Total			14,348,258	767,340	15,115,598	
2029	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2029 Total			3,145,000	555,000	3,700,000	
2030	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2030 Total			3,145,000	555,000	3,700,000	
2031	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2031	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,239,356	218,710	1,458,066	High
2031 Total			4,384,356	773,710	5,158,066	

Mitigation Level Units: 25k Users Protected

San Diego Gas & Electric Company
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1CR08C803 - SDGE-Risk-8 Cybersecurity Sensitive Data Protection

Forecast Yr	Description	Mitigation	Non-Labor	Labor	Total	Portfolio Impact
2025	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,114,377	549,596	3,663,973	High
2025	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,168,212	206,155	1,374,367	High
2025	Investment in our enterprise licenses for our firewalls which function as our primary perimeter defense capability.	IT Infrastructure Modernization	8,900,000	-	8,900,000	High
2025 Total			13,182,589	755,751	13,938,340	
2026	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2026 Total			3,145,000	555,000	3,700,000	
2027	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2027 Total			3,145,000	555,000	3,700,000	
2028	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2028	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,203,258	212,340	1,415,598	High
2028	Investment in our enterprise licenses for our firewalls which function as our primary perimeter defense capability.	IT Infrastructure Modernization	10,000,000	-	10,000,000	High
2028 Total			14,348,258	767,340	15,115,598	
2029	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2029 Total			3,145,000	555,000	3,700,000	
2030	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2030 Total			3,145,000	555,000	3,700,000	
2031	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2031	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,239,356	218,710	1,458,066	High
2031 Total			4,384,356	773,710	5,158,066	

Mitigation Level Units: 25k Users Protected

San Diego Gas & Electric Company
2025 RAMP
Capital Workpapers

1CR08C804 - SDGE-Risk-8 Cybersecurity Operational Technology (OT) Cybersecurity

Forecast Yr	Description	Mitigation	Non-Labor	Labor	Total	Portfolio Impact
2025	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,114,377	549,596	3,663,973	High
2025	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,168,212	206,155	1,374,367	High
2025	Investment in our enterprise licenses for our firewalls which function as our primary perimeter defense capability.	IT Infrastructure Modernization	8,900,000	-	8,900,000	High
2025 Total			13,182,589	755,751	13,938,340	
2026	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2026 Total			3,145,000	555,000	3,700,000	
2027	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2027 Total			3,145,000	555,000	3,700,000	
2028	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2028	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,203,258	212,340	1,415,598	High
2028	Investment in our enterprise licenses for our firewalls which function as our primary perimeter defense capability.	IT Infrastructure Modernization	10,000,000	-	10,000,000	High
2028 Total			14,348,258	767,340	15,115,598	
2029	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2029 Total			3,145,000	555,000	3,700,000	
2030	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2030 Total			3,145,000	555,000	3,700,000	
2031	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2031	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,239,356	218,710	1,458,066	High
2031 Total			4,384,356	773,710	5,158,066	

Mitigation Level Units: 25k Users Protected

San Diego Gas & Electric Company
2025 RAMP
Capital Workpapers

1CR08C805 - SDGE-Risk-8 Cybersecurity IT Infrastructure Modernization

Forecast Yr	Description	Mitigation	Non-Labor	Labor	Total	Portfolio Impact
2025	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,114,377	549,596	3,663,973	High
2025	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,168,212	206,155	1,374,367	High
2025	Investment in our enterprise licenses for our firewalls which function as our primary perimeter defense capability.	IT Infrastructure Modernization	8,900,000	-	8,900,000	High
2025 Total			13,182,589	755,751	13,938,340	
2026	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2026 Total			3,145,000	555,000	3,700,000	
2027	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2027 Total			3,145,000	555,000	3,700,000	
2028	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2028	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,203,258	212,340	1,415,598	High
2028	Investment in our enterprise licenses for our firewalls which function as our primary perimeter defense capability.	IT Infrastructure Modernization	10,000,000	-	10,000,000	High
2028 Total			14,348,258	767,340	15,115,598	
2029	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2029 Total			3,145,000	555,000	3,700,000	
2030	Investments in security technologies, platforms and services that enable security controls, visibility of threats and vulnerabilities within our operational technology ("OT") environments	Operational Technology (OT) Cybersecurity	3,145,000	555,000	3,700,000	High
2030 Total			3,145,000	555,000	3,700,000	
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2031	A security tool that protects users and data when they access cloud applications	Internal Defenses	1,239,356	218,710	1,458,066	High
2031 Total			4,384,356	773,710	5,158,066	

Mitigation Level Units: 25k Users Protected

Appendix A: Forecast Methodology

Mitigation ID	Mitigation Name	Labor	Non-Labor	NSE	Units
A801	Alternative Portfolio 1	Zero-Based	Zero-Based	Zero-Based	Zero-Based
A802	Alternative Portfolio 2	Zero-Based	Zero-Based	Zero-Based	Zero-Based
C802	Internal Defenses	Zero-Based	Zero-Based	Zero-Based	Zero-Based
C803	Sensitive Data Protection	Zero-Based	Zero-Based	Zero-Based	Zero-Based
C804	Operational Technology (OT) Cybersecurity	Zero-Based	Zero-Based	Zero-Based	Zero-Based
C805	IT Infrastructure Modernization	Zero-Based	Zero-Based	Zero-Based	Zero-Based

Risk Chapter: **SDG&E-Risk-8 Cybersecurity**
Risk ID: **1CR08**

Appendix B: Unit Measure

Mitigation ID	Mitigation Name	Unit Measure
A801	Alternative Portfolio 1	Users Protected
A802	Alternative Portfolio 2	Users Protected
C802	Internal Defenses	Users Protected
C803	Sensitive Data Protection	Users Protected
C804	Operational Technology (OT) Cybersecurity	Users Protected
C805	IT Infrastructure Modernization	Users Protected